HEALTHZONE: A HEALTH MANAGEMENT APP

Project report submitted in partial fulfillment of the requirement for the degree of Bachelor of Technology

in

Computer Science and Engineering/Information Technology

By

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to

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Certificate

Candidate's Declaration

I hereby declare that the work presented in this report entitled "Health Zone" in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Computer Science and Engineering/Information Technology** submitted in the department of Computer Science & Engineering and Information Technology**,** Jaypee University of Information Technology Waknaghat is an authentic record of our own work carried out over a period from July 2016 to November 2016 under the supervision **of Dr. Ravindara Bhatt (Assistant Professor (Senior Grade), Department of Computer Science & Engineering and Information Technology).**

The matter embodied in the report has not been submitted for the award of any other degree or diploma.

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This is to certify that the above statement made by the candidate is true to the best of my knowledge.

Dr. Ravindara Bhatt

Assistant Professor (Senior Grade)

Department of Computer Science & Engineering and Information Technology

Dated:

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ABSTRACT

Life is. ending up excessively caught up with, making it impossible to get therapeutic arrangements face to face and to keep up an appropriate social insurance. The fundamental thought of this work is to give straightforwardness and solace to patients while taking arrangement from specialists and it likewise settle the issues that the patient needs to confront while making an arrangement. Today there are lots of Chat applications available in market that are useful for communication and sharing of data between doctor and patient. But in all available chat applications both doctor and patient must know mobile numbers of each other. The objective of this project is to build a system where patient can communicate and share his data with doctor without knowing mobile number of doctor. This paper presents an application that is developed based on the Android operating system, using Android Studio and Firebase. The. programming language. is Java. The project is tested on an Android Emulator which is a tool. that allows developers to easily test an application without having to install the application on a real device.

CHAPTER : 1

HEALTH ZONE: AN INTRODUCTION

1.1. Introduction

The authority is enrolled straightforwardly with the Firebase server and the patient can get to the application. To start with, it relies upon expert CV, because of the calm exchange of expert CV. In the event that a specialist finds a superfluous demand, you can trade data and offer it. In the event that there is a need to go to a specialist to affirm that somebody is wiped out, they have to remain in the wellbeing focus and remain until the point that the master ends up accessible. The patient is likewise web based amid the agreement. On the off chance that a specialist has rejected an agreement for reasons unknown, it might make a break of agreement and patient except if he goes to a treatment focus. As advancement in multilateral correspondence is growing progressively, versatile applications can be utilized to conquer these issues and animating patients. There are numerous sentences this way. The premise of a brilliant based administrator contract is where the patient arrangement is adjusted to the patient.

Android development fundamentals in this course you are going to learn about Android application development from very scratch this particular slide that contains in the introduction to Android this contains this will tell you about Android ecosystem the Android platform architecture Android versions challenges which we face in Android application development and the basic building blocks of Android itself first of all let's just start off what exactly is Android well I'm not its operating system you guessed it right but is that all it is it is actually a stack base linux kernel under the hood there is a Linux kernel what exactly is kernel we all know it is it act as the interface between your hardware and your software so here we are using linux kernel not Mac not Windows as Android is an open source environment or open source ecosystem what are other things like you can have a cool user interface like touch screen sensors and we all know an order is covering more than 80 pulses market right now when it comes to smartphones and we have different ways to connect your Android now not just as smartphones we have cool Android watches or we call it and reveals TVs in an Android auto also in your cars and vehicles and there are more than two million Android apps in the Google Apps Play Store now the cool thing the best thing which is which developers going to like it Android is highly customizable so if you

have a particular device you can mold your Android according to your own will so when it comes to user interaction what exactly what are the different user interaction you can swipe you can tap you can pinch zoom out and we have a virtual keyboard here now you know which gives you pretty much cool features like numbers typing numbers character emoticon all those cool faces you see you get it from your virtual keyboard and support to high-tech hardware's like Bluetooth USB controller as Wi-Fi adapters and all so all these things all these cool things you can starch and you can work on work around with your Android device so Android when we talk about Android sensors and how exactly those sensors are connected but well we have sensors like proximity sensors accelerometer sensors so all these sensors work you must have seen when you rotate your device you know in your games and all when you rotate your device your object your clear rotate how exactly that is happening because there are sensors already placed inside your Android device and your Android operating system helps us cut that device or health that the sensor to connect with your own application so we can position into a map on a particular location and we can do the navigation and well we can even you know steer a virtual car or a toy so all these things can be done with the help of your Android operating system so when we talk about Android we always see that home screen okay that home screen is what that home screen is itself an application.

It creates an application which will run in 2.3 also but if I'm going all the way down to 2.3 I might have to sacrifice with many features which I really want to add in my Android application development which will give a real look and feel to my Android application development but that's not going to happen because you are going all the way down to your older version of 2.3 so we have to make a balance here we have to target or we have to put a minimum Android version for our application element so that I can cover majority of people so for example right now most of the people of the world you can see that they are at least using Ice Cream Sandwich there will be very less percentage of people who will be using 2.3 so we are going to skip that particular mob and we are going to target our application development to 4.0 and above so this will give this will give us complete majority of people which we really want to target next marketing now marketing of course it's it totally it's upon your upon the it's upon you that how exactly you want to market marketing can be expensive if you want to know put that all the advertisement all over the place it can be expensive also but it can be cheap also I mean you can just add there are libraries for that also you can add those but now it all depends upon how

exactly how well you want to market your application so those are few challenges which you will be facing when you will be creating any application so we will address those challenges also so when we talk about Android building blocks so what are those building blocks Android is not all about Java I mean Java is one thing you will be doing you will be putting all the functionality with the coding but as a Java language but it's not all about Java they are you guys there is layouts there are images there are XML files so all these things are known as resources so resources will be there along the way to help you out to design your application plus there will be components activities services helper classes model classes and the manifest file now manifest file is one of the most important file in your Android.

Application development it is the very first file which your Android device sees whenever you download an application it gives you the information about your application itself what your application contains how many screens it contains what other services it contains so all the information is being written in your manifest file it's kind of a configuration file which you see in your or any other application the next thing which you really want to look at is your apk now this is this is the end product which you get whenever you are developing we are done with your application development so this is this apk file is the one which you will be uploading to your Google Play Store and this is the file which everyone out there will be downloading and this is your application.

Next components of Android now whatever you see all those application out there they are built with these four components on me nothing is outside these components in the Android so first is activity what is an activity is anything which you see on your screen even your lock screen is an activity your home application you see the very first home screen is an activity so anything which you can see on your screen and a user can enter with it is an activity services doesn't have UI unlike your activity they run in the background for example your music play you play your music and your music start playing and now you can switch to other applications and still your music is playing in the background so where exactly your music is being played in the service so a service doesn't need a UI unlike your activity so it runs in the background content provider in Android 2 application cannot share data because of the Linux kernel which provides you a sandbox model under the hood so how can you do that - how can you share the data well that's when content provider comes in content providers are the mechanism or you can take classes which help you share data between two applications broadcast receivers broadcast receivers are

the classes which listens for a particular set of messages for example if somebody sends you a message over or any other application now there will be a broadcast receiver contained in that application who will listen for that particular message well the message is being transmitted to the entire device but only word SAP application is the one who will pick that up but other applications broad carry C will ignore that particular message.

There are certain services which you request you can invoke them with the help of intents which we are going to go through in further slides now there are services which requires your presence for example that let's say you want to register for us your hotel registration so that requires your presence so that's what activities like your you are or there are services which doesn't require your presence for example laundry so that you can that you can compare with your services now you get a call that your package has arrived now that's you can compare with your broadcast receiver then you get the excess of the city map all these X's which you are getting you can correlate with Android.

1.2. Problem Statement

The authority is enrolled straightforwardly with the Firebase server and the patient can get to the application. To start with, it relies upon expert CV, because of the calm exchange of expert CV. In the event that a specialist finds a superfluous demand, you can trade data and offer it. In the event that there is a need to go to a specialist to affirm that somebody is wiped out, they have to remain in the wellbeing focus and remain until the point that the master ends up accessible. The patient is likewise web based amid the agreement. On the off chance that a specialist has rejected an agreement for reasons unknown, it might make a break of agreement and patient except if he goes to a treatment focus. As advancement in multilateral correspondence is growing progressively, versatile applications can be utilized to conquer these issues and animating patients. There are numerous sentences this way. The premise of a brilliant based administrator contract is where the patient arrangement is adjusted to the patient.

Launcher icons app self-updating widgets are there multiple pages are they we even see that okay Google so all these things are nothing but your whatever you see on your screen up your home screen itself is an application and your home screen is known as activity which we are

going to discuss in further chapters what exactly an activity but for now understand that the screen itself is actually a part of your application so if I have to give you some examples you must have come across these pretty famous applications Pandora a great music player which is going to create hive right now right and Facebook Messenger so you can build all these cool apps once you learn about how exactly or the basing can ism of Android itself so you can build all these apps so what exactly or how exactly you are going to develop your Android applications for to do that you need Android SDK .

SDK is known as software development kit this is specifically for Android application developers and for that the prerequisites are Java we are going to go through all the prerequisite which you need for that in a bit but as of right now let me tell you what exactly are the different tools which we will be getting here you will be getting development tools like debugger monitors editors there will be libraries here leverage for your variables Maps and there will be the documentation if you need any hub we have the documentation everything chatted down in your developer.android.com and there will be sample codes also and the best thing or cool thing about when we are developing Android application development is you get emulators virtual device so you don't even need to get a real device for the testing purpose you get a virtual device and anything you want to develop anything any application develop you can test it in you virtual device which will give you exactly the feel of a real device so uh when we talk about Android studio this is how your Android studio looks like well most of most of you are already familiar with Eclipse or any other IDE so there is not much change but when we install our Android studio and when we get to that Android studio ID we will talk more about it but let me tell you what exactly n-words to you beforehand provides you it provides you a environment where you can develop it provides you with your running features and debugging your app right testing and all the packages inbuilt you can monitor your performance you can monitor your memory usage and all those things and the virtual device itself which I just talked about you all those emulators whether it is running in Android 6.0 or 5.0 that you can get them and your with the help of your Android device you have different views or if I if I should call it we call it project here also so you can always go through different ways of viewing your whole project so we will Agent based systems have also been developed for the hospital service, for searching and fixing appointment over mobile phones which gives a direct reply when the appointment is made or the next available date(s) or cancelled. However, no facility like priority appointment of patients has been

developed. Also the appointment does not take into consideration emergency situations like Accidents and so on and the scheduling reported is only for general patient appointment only.

1.3. Goal

A youthful specialist will make an agreement as vital. He offers an Android application to remind patients that Bell's course of events is typical and solid. It likewise incorporates specialists and facilities searching for superb subjects alongside opportune treatment. He is proposing an Android based design in the oversaw Google API and API based log. It tends to be utilized in blend with different changes dependent on extra alterations.

The PC application perceives the assertion by sparing them in the Google Calendar synchronized telephone directory. The client gets an alert as indicated by the time slipped by before the agreement date. It gives sensors to talk by its steady accumulation of wellbeing track bases, information, and oversees data on sites for perusing more concurrent networks. A few online systems are valuable right now and have a few disservices. With the end goal to beat these disadvantages, you will get a patient's online arrangement framework utilizing a complete suite of projects that empowers close field remote correspondence (NFC) and Android.

This standard depends on contract enrollment and arranging of NFC related records of government disability for patients and social insurance experts. There is another intriguing test in self-examination framework and illness enlistment through that also when we when we see the whole Android studio in action and we have a visual editor so you don't have to worry about do I need to learn the coding specifically for designing a UI no that's that has been taken care for you by visual editor or you can say the visual layout editor so you just have to drag and drop you need to know what you really need to what you really want to design and that's it they are you know views for you there are layouts where you just have to drag and drop so this is Google please - so like I said there you need to create an account which works $25 lifetime which will give you a access of official place - or you can see a market where you can publish your app and Google Play Store is an official market where you can publish all your apps and they it will be provided all over the world people can see right and that's why you will be publishing the internet initially revolutionized communication and access to information; however, in more recent times it has been the rapid improvements in mobile technology that has further expanded the communicative abilities of individuals and businesses alike. These mobile technologies,

combined with the use of the internet have pushed mankind to a new frontier of information distribution and gathering. Recently there has been system developed for health care service towards searching and appointment using J2Me mobile handset.

Application see there are ways you can get this application to the people by providing them with mail and providing them with USB drives and all but it would cover the whole market so we have this market here specifically for publishing your app all over at the majority or large scale so before we get more into Android we need to know what it exactly or how exactly your Android has been what is the internal structure or the architecture of Android let's just understand what exactly Android looks like from inside if you remember I told you or in this starting only Android is a stack based operating system so what did I meant by that so stack based means it is layer upon layer.

The layers are stacked like layer upon layer so when we talk about nystagmus at the very bottom we have Linux kernel then we have HCL hardware abstraction layer then above that we have allele which can two things that is native C and C++ library and Android runtime and then we have Java API framework and above that we have system apps or user apps so let's just go through with them each one of them you know greet very briefly so see how when we talk about system apps or user app these are the apps which comes with your application in built systems our system apps are in build application like your call application your SMS application or your Google Chrome application right so all those app which comes within your device when you purchase your device for the very first time those are known as system apps user apps which you install separately from the Google Play Store for example Whatsapp for example Facebook for example any game which you are installing from your Google Play so or you can develop your own app and install it in your device also so those are known as user apps there so next is Java API framework so this is the API which we Android developers will be working vigorously because all the APRs which we need for our application development is inside the Java API framework this is also known as Android SDK.

1.4. Methodology

The proposed work in this paper is an Online Hospital Management Application that utilizes an android stage that makes the assignment of making an arrangement from the specialist simple

and dependable for the clients. Android based online medical checkup application contains two modules. One module is the application intended for the patient that contains a login screen. The patient needs to enlist himself before signing in to the application. In the wake of signing in, the patient can choose a doctor's facility and can see the healing facility points of interest. The patient has the choice of choosing a specialist from the rundown of specialists and can see the specialist's points of interest. The patient can ask for an arrangement on his/her favored day/time. The chose day/schedule vacancy will be held and patient will get the notice of the effectively included arrangement.

The patient can see the area of the healing center on guide. What's more, the patient can contact to the clinic and the specialist by making a call or may send an email to the specialist. The second module is the administrator module that is structured on the site. The administrator sees all points of interest of specialists and all arrangements by the administrator. The administrator can include specialist, see patient's points of interest and specialist's subtle elements and can see arrangements too. Every one of the specialists of the explicit center are enrolled by the administrator. Specialists can't enroll themselves. Rest of the paper is sorted out as pursues. Part 2 clarifies the structure interface and the devices which have been utilized. As examines the usage and screen captures.

Developers which work in this layer are also known as SDK developers Android SDK developer so if you want to design an application you will make use of all these classes so we have view classes here for designing your layouts in android any um UI you see any layout of any application you see it has been designed from this particular API you have notification manager all the notification which you see all cool notification when you while you are using your social applications and all they are being designed from this API only your activity manager all the screens itself are being designed from this content providers sharing of data again from this so there are a lot more classes which are there in Java API and we are going to make use of all these classes when we go and start making our applications again next is our Android runtime what exactly is Android runtime well this is where all our application runs so inside your Android runtime there are there are compilers like DVM or a RT well all the new devices now use a RT before Android 4.4 we used to have DVM but a RT was introduced and now all the apps all the high version you will see Android sample zero six one zero.

The health care industry now is one of the largest and most important industries in most countries. It provides individuals access to medical and non-medical services that are aimed at improving that individual's quality of life. In many health care facilities, however, there exists a severe need for improvement in quality of service and patient waiting times. These needs must be met with an efficient and a practical solution. This solution must make use of the hospitals‟ valuable resources, such as medical experts‟ time, in the most efficient manner. Hospitals are continuously fighting a scheduling problem that causes either a waste in medical experts‟ time or a decrease in patient satisfaction and staff morale.

RT right so we will talk about a RT also when we get into our actual difference between your Gradle build system and Eclipse build system so just know for now Android runtime is the place where all your application come and run C and C++ library or also known as native libraries this is the section where all your system libraries are being placed and they are written in C and C++ now we have developers for this particular libraries also but they are known as NDK developers. Android NDK developers known as native development kit developers now as for this course we will be working on SDK developers but there are developers which work on directly C and C++ now what exactly the C and C fulfill every contain this will contain all your you know high end libraries like graphic libraries OpenGL ES your secure socket layer SSL and your WebKit OS so all those levels which are very hard to write in your Java and easy to write in C and C++ you will be using inside C and C++ or native library section next is hardware abstraction layer now this layer has been particularly written or particularly charted down to access your hardware from your application itself so there are predefined methods which are there to use or which are provided to you to exist for example if you want to use camera application or if you want to open up a camera or Bluetooth or Wi-Fi there is already a hardware extraction layer methods predefined methods which are defined in hardware abstraction layer you just have to use those methods in your application and you will get the excess of your camera so next is our Linux kernel now Linux kernel act as any kernel which you see in any other operating system it handles.

CHAPTER : 2

LITERATURE SURVEY

2.1. An Android-based Instant Message Application

App that's drawing in users that's great but how do you communicate with users once they're in your app sure it's not so hard to display a pop-up dialog in your app but what if you want to customize that message for certain users or figure out which of these messages are most effective in driving the desired behavior or your marketing people want to change the creative creating meaningful messages in your app quickly goes from a couple of lines of code to a major headache now with firebase you can easily send messages to people while they are actively using your app to encourage them to complete key in-app actions you can use these messages to guide people through your app send promotions or ensure they see important updates firebase Annette messaging makes it easy to set up and run in app messaging campaigns you have the power to target messages to specific audiences trigger messages based on user behavior and tailor the design of the message to suit user interests and your brand whether you want to set up recurring campaigns or send a one-time alert firebase.

Messaging supports a variety of use cases for example you may want to encourage users to make a purchase in your app you can trigger an in-app message to appear offering a deal when they add an item to their cart then in the firebase console you can see if the offer paid off or you may want your users to check out a new feature invite a friend to use the app or subscribe to a service firebase in-app messaging makes it easy to set up all of these campaigns to meet your apps goals and then monitor progress and in-app messages are built right in the firebase console which means members of your marketing team can customize the look and behavior of any campaign without getting your engineers involved from the console you can choose the messaging layout background in text colors and an optional image to accompany your message so messages feel like a natural extension of your app you can see a preview of your message in the console so you know exactly what your users will see and you can choose who will see your message select audiences for message targeting with just a few clicks once your campaign is live you can track daily messaging impressions clicks and conversion events then you can tweak your campaigns to

maximize results firebase in-app messaging is a great way to deepen engagement with active users increased session time spur conversions.

2.2. Design And Implementation Of On-Line Chatting Application Using Android

To build a text messaging app using the 2008 P I in just a few minutes so the first thing we're going to do is to create the user interface and I'm going to change the title here to text messaging and then for the user interface I'm going to need an input component for the phone number and a text area component for the message itself and then finally a button to send the message we can style the button we can even give it an icon and that's all there is to the user interface the next thing I need to do is to create a service so I can configure the integration and in order to define the URL I need to go to my website now you need to create account.

I've already created an account with twitter you can do the same and then go to the api explorer and then look at the documentation for this send message and we need to copy this URL here and paste it onto our project and this is going to be a post not a get and then the request content type it's going to be URL encoded this is just what Tulia requires the other thing here is that doesn't support cross domain calls so we need a proxy you can learn more about cross domain service calls in our dev center under cross domain service calls take a look.

To add our credential from 2000 and on that same page you need to click here in order to discover the token and then just copy/paste it on to the URL and just because this is a demo we're going to put it right on the URL don't forget to add an add sign at the end for a real production app we recommend that you use our secure proxy so that the credentials for the API are not exposed to the client where they could be compromised you can learn about that in the dev Center but now we need to define the request parameters for the API call and CLIA requires a from a to antibody and the from it's just going to be my phone number.

The use of ICTs in health care led to a new term called Health Telematics (this term is used in Europe), and other now popular terms of e-Health and Telemedicine.

When you create my phone number when you create an account with Tullio you're going to be assigned your own phone number as well this is going to be the default for my application because all messages sent by my users are going to be coming out of my own Twitter account the

other two parameters are going to be defined in runtime by the user of course now rather than to create a response by hand we have a cool feature or we can test the API and then automatically create the response let me show you so I'm going to send a message to my Google Voice phone number and you heard the message beep on my phone this is the JSON that came back from and now rather than create the response from scratch I can just import it as a response and you can see that the service response was created successfully.

We can look at it here it saves us a lot of time possibly also a lot of errors so now I can go back to the user interface and bind this service that I just created to the page that I created earlier and I need to map the screen the fields in the screen itself with the service request itself so we know that the first text input is going to be the phone number and then the text area is going to be the body and we're almost done what I need to do now is I need to tell the app what to do when somebody clicks the send button and so in the events tab I select the click event and I set it to invoke the service I just created and that's it my app is ready to run I'm going I can now test that I'm going to make it public so that you can test it as well and I'm testing it at this point in the browser so again I'm going to send a message and hello from opera IL and in a minute we should get my phone beeping again and there it is I just received the message you can test this app from your phone by reading this QR code and then obviously you can also export the app.

2.3. Design of Chatting Application Based on Android Bluetooth

You can see our first input type is phone and the second is text camp sentences in X multiplying with a max lines of five and our button contains one on click method on sand so before we start add permission for sending an SMS and after that we're going to create one avoid matting for our button and next month will be boolean for checking definition with parameter string and let's create integer we'll check self-promotion the second parameter will be our string as a parameter and we are going to return this check if it's equals to permission granted so now that we have our permission check method let's create the one constant for a request code which we 0 and let's create variables for our UI elements to add text and one button and after that we're going to find the idea of each of the element now that we have done that we are going to check permission in our own correct method and we'll say if check permission we'll pair the parameter manifest dot permission dot send SMS if it is true then we are going to enable our button again and in else

block we are going to request the permission using the activity comfort or just activity if you don't use backwards compatibility so as [Music] second parameter we're going to add manifest permissions and SMS and for third parameter we're going to add our request code which we added earlier and now we can start on working on our on send method we are going to create two strings for getting the text from each of the edit text and convert it to string next we're going to check again for permission and if but before we do that we'll win to check if the fields are empty or now and in that case we're just going to return and down below we're going to add again permission check and if permission is granted then we're going to create SMS manager object and then we're going to use its method send text message a first parameter is phone number second now third parameter is message fourteen fifth are now and we're going to display a simple toast message and as else block we're going to add a different toast message containing permission denied and that's all you need to know you need to create one simple application we had more codes for checking permission.

2.4. A Complete Study of Chatting Room System dependent on Android Bluetooth

This application enables two Android gadgets to complete two-way text talk over Bluetooth. APIs remotely interface applications to other Bluetooth gadgets, empowering point-to-point and multipoint remote highlights.

Low-level memory management it handles your resource management it handles all the security features and it also includes the drivers right if somebody wants to call camera application he has to first go-to like we discussed then a chisel in turn will go to the drivers which are written in your Linux kernel which are there in your Linux kernel and it will give you the access of your actual camera hardware so and the Linux kernel has the supreme write in android application of room for example let's say if you see if you see whenever you see that there is your application is getting stuck or application is not responding you must have seen you must have seen a dialog box appearing up right away and it is saying application not responding so who is actually popping up that dialog box is actually Linux kernel at any point of time.

Linux kernel sees that your any application is going is taking too much resources and it's not allowing any other application to run freely so Linux kernel have the right to kill that application of course it will ask you in this starting that this particular application is taking this much space or this much memory and you if you want to wait for this application to respond or not but if it really goes if it if the memory really goes out of them if that application takes too much memory and it really goes out of the memory and then your application in excursion has the right to restart your device itself so next you see all these cool Android versions well Android starts from Android.

The proposed work in this paper is an Online Hospital Management Application that uses an android platform that makes the task of making an appointment from the doctor easy and reliable for the users. Android based online doctor appointment application contains two modules. One module is the application designed for the patient that contains a login screen. The patient has to register himself before logging in to the application. After logging in, the patient can select a hospital and can view the hospital details. The patient has the option of selecting a doctor from the list of doctors and can view the doctor's details. The patient can request for an appointment on his/her preferred day/time. The selected day/time slot will be reserved and patient will receive the notification of the successfully added appointment. The patient can view the location of the hospital on map. In addition, the patient can contact to the hospital and the doctor by making a call or may send an email to the doctor.

Versions you can see over here that which have code names the latest one you see is nugget and there is a very interesting thing here which we will see that each code name of each Android version names start with an alphabetical order H I J so and each code is a desert name and the one more thing which I really want to discuss here is API level so each version is working on a particular API level and API level our application programming interfaces so there are set of classes which are being provided at each android version which you will be using to develop your android application at that particular or for that particular version like if i want to develop application for KitKat I will be using the API 19 - 20 and if I'm developing for my latest version so it will be API level 24 well when I want to develop an application I really want to keep this in mind that there is always a maximum level of API.

That is the latest one so that all the new users can make use of my application plus I also want to set a minimum version of Android so that even though even the users which hoodoos it who doesn't have the latest API right now or version right now in their device they can also still use it right so we will talk about it more when we start making our application we will set a minimum version there and we will set a maximum motion there and you will see that in your application itself now how exactly how application development is done.

2.5. Patient Monitoring System Using Android Technology

This obligation explains the experience; the system and the various structural perspectives that need to be considered to be successful in the telemedicine monitoring system. This method enters the database with important patient characteristics such as ECG, pulse, respiration, temperature, SpO2. It is then sent to an e-mail server and sent to the specialist by phone using the ANDROID Innovation. It also allows experts to send their class to a medical service.

What patient-care challenges do you face today are you looking to simplify life for a clinical staff stretch to the limit remove complexity as a barrier to faster decision-making reduce variability and care delivery integrate emerging technologies with your IT systems and EMR no matter what your challenges they all revolve around your ability to watch over your patients and provide the best care possible wherever it takes place Philips patient monitoring is more than a network of bedside and mobile devices strung together and connected to a central station it's an integrated solution that fits securely into your hospitals IT environment to help drive clinical and economic outcomes it captures a steady stream of patient data from monitors and medical devices then feeds it automatically to your EMR for virtually gap-free patient records from admission to discharge even during transport Philips patient monitoring solution taps the power of advanced clinical decision support tools to help you detect the onset of critical events like sepsis and pneumonia so clinicians can make informed care decisions and it gives on-the-move caregivers virtually anywhere anytime visibility to a patient's vital signs waveforms and alarms so they can communicate and collaborate to decide on the best course of care and the right caregiver to provide it Philips bedside transport and mobile monitors all share the same interface to reduce complexity minimize training and support the consistent delivery of quality care at every level of acuity plus this comprehensive patient monitoring solution works with your current IT system to help you make the most of your investment while risk-based defense-in-

depth security helps protect the privacy of patients and integrity of data Philips works with you right from the start and at every stage of ownership to help you customize and standardize your patient monitoring solution to your hospital your protocols and your people Philips patient monitoring is a total solution designed around your challenges and backed by ongoing consulting training service and support to help you achieve your clinical and economic goals so you can confidently deliver quality care everywhere it matters at Philips there is always a way to make life better innovation.

2.6. Doctor Patient Communication System – Android Application

This application is useful to patients to inquire questions and express their worries to specialists with respect to their wellbeing condition. This app will indulge the patients to with special doctors without making any physical, however confined to just a single for every previous day getting. In the event that the patient gets a reaction from the relating specialist, the patient is permitted to send another message. More over utilizing this application, the patient can make an arrangement to meet the specialist in facility/healing center.

Android is not just one screen there are so many screens which you see you click on one screen you get to next screen so we will see all those how exactly we go to exactly we design one screen how they are going to go to the next screen but how what exactly we use under the hood we use Java programming that's right Java programming close XML but don't worry about XML we don't have to be an expert on XML but yeah you do need to know how exactly we use XML to design our layouts so well now there will be a complete go through for this XML part also when we will be doing our UI design and of course you will be needing your Android SDK as your software development kit and the Android libraries and now these libraries gives you some extra features which you are not how you are not having as if right now in your SDK so this particular libraries will give you the X for example the material design is the newest addition in your Android 5.0 and if you want to make use of your material design in devotions below your 5.0 you won't have the XS for that purpose we have Android libraries or to be more precise we have app compact libraries for that which will give you the access of that particular material design feature even in your lower versions so we'll talk more about it when we get into the development path and we have an Android runtime virtual machine here or you can say a RT which has been

you know your run time machine is executed at their RT which will be very helpful when you are running your or testing your application so what are the challenges you face when you are doing your application of them well most of it you are going to face that you are designing for a particular screen that UI is whatever you have designed for that particular screen is not looking the same in that different screen resolution or different screen size so we have a way to fix that also and the performance most of the time if your if your app is using you know all those classes which takes which are using extensive use of graphics networking and internet.

There may be there might be a chance that your application is taking long to open especially in the case where your device is not high tech device your processor of the device is not in that much powerful so you will face you will face the challenge at the performance level also so you can always you know rectify those performance errors or and you can make your application faster that also you will see in best practices or performance security you can always keep more security or encrypt your application whenever you know with the ProGuard files which you have in your Gradle in your Android application development now in your application itself so you can always make your application more secure video program files compatibility now that's an issue or challenge which you will be facing a lot that's because you will be targeting for a particular version.

CHAPTER : 3

SYSTEM DEVELOPMENT

3.1. Patient Module

In this module tolerant needs to enlist the insights about himself in case he/she is quiet generally any individual from family can enlist themselves from same number. At that point persistent needs to login by choosing as patient module. The specialists list is furnished with specialization, among the rundown patient can choose the specific specialist. In the event that tolerant is far from the specialist and he all of a sudden harmed, patient will ready to send his wounds photograph, documents, xrays, reports to specialist and afterward specialist will give him a remedy of medical aid. As you probably are aware numerous individuals dread to talk with specialist for some illness straightforwardly like HIV so with the assistance of this visiting office they can examine their basic issue.

This is a demonstration of gsm-based patient health monitoring project so this is an Iran system that allows the doctor or the relatives of a patient to check the health status of the patient remotely so this system constantly monitor the patient health that is a we are monitored to parameters the patient's heartbeat and the body temperature if either one of them goes above a particular limit above or below a particular limit the system sounds an alarm in the form of an SMS message and this message is sent to the registered mobile number now this mobile number can be of the doctor or the patient relative or any concerned person for that you know more ting and for this purpose video using AVR family microcontroller which is interfaced to an LCD display and also interface to a heartbeat sensor and a temperature sensor and we also connected a GSM modem to send this data remotely to the person and the system is powered by a 12 volt transformer here we also have some push buttons to set the heartbeat rate you know the doctor can set the rate so that if the person's heart beat rises above or falls below a particular rate it will send an SMS message alert so let's see how the system works let's power on the system the system has been turned on and the GSM modem has now been connected so it's a GSM initialized and it's waiting for the call so once we call on this number the number from which we call gets registered and whenever an SMS is to be sent it is sent this number that we register in the system so let's give a call at this particular number so the call has been received and the

number has been configured in the system and now it will start monitoring so before muttering it asks whether to you know directly start or have to you need to change the setting so and you can see the number configure the message has also been displayed on the system so whenever you configure a number it also sends a confirmation message on that particular mobile number that the number has been configured so now let's you know choose from the menu and let's enter the setting menu so once we go into setting menu it allows us to set the lower as well as upper limits so these are the default values you can change this as dessert so let's go to the upper limit so this is the upper limits 120 heart beats per second the doctor can change this by using the up and down Keys as dessert so no let's set this to 130 similarly you can change it and let's now start the system so the system has now started watering so it's smattering the heartbeat as well as the temperature so you know if constantly three values matter out of that particular range it sends the SMS you know if one value you know may sometimes go above a limit so you know it register keeps muttering values and if three where is continuously go about that were your range then it sends an SMS so let's do one thing let's simulate a temperature rise so we can't tell you know manually increase our own heartbeat here but we can increase the temperature to check the feature so this way we can simulate as the patient temperature rising so as you can see as soon as it detected know that the patient's temperature went above a particular limit it has sent an SMS message as you can see here that the temperature is higher so similarly if the heartbeat is high enough it sends that message above the heartbeat so you know let's take one more feature there's also manual help button if the patient you know doesn't have any such the temperature rise or his heartbeats are you know normal but he has some other issues so he can still call for help using this button here because he needs to call the doctor for some other purpose so even this option is there so in this way the system is very helpful for patients to you know for doctors to monitor their health as well as they can call for a help directly and also there is one more feature in the system where the doctor or the monitoring person can send a particular SMS with the letter S in the message S is for status so even if the doctor wants to check the status of the patient at particular time he can send an SMS message with this in the message so as you can see we have sent an SMS message here and we'll wait for the message to be issued so it's saying that SMS is received and sending the status now so as you can see they also received the message here about the status so as you can see the status at that particular time interval when we send the message so this is the status here 84 and temperature New Zealand went to 2 degree Celsius so this is how

the system efficiently monitors patient health parameters and constantly updates the monitoring person or a doctor about their status of the person so this is how the project works .

The front end design is simple and user-friendly. Once the application is started the patient will register himself and then he will be able to log in into the application. The patient can make an appointment by selecting the preferred doctor, date and time. The appointments are managed by the admin through a website. The admin also registers a doctor.

3.2. Doctor Module

In this module the subtle elements of the specialist are embedded from server side, and username and secret phrase is given to each specialist of that specific healing facility. Specialist login through cell phone and all the demand from patient are appeared in a specialist dashboard. On the off chance that ask for is acknowledge, a notice is sent to the specialist and further the association is begun with specialist. Not at all like a customary framework specialist give remedy utilizing paper and pen however in this framework specialist give solution utilizing this application.

Health monitoring system these days everyone is very clean and very particular when it comes to health because health is directly proportional to your diet and exercise so we present a system with take care of your food you consume over the day and help you in filtering the fats carbohydrate and protein intake side by side provide facilities like step counter slip intake and water intake this application has the AI artificial intelligence which helps in calculating the total calories consumption and needed calories of the day and also help in suggestion of different types of food with high amount of protein consumption and less amount of fat consumption so let's begin the application part before accessing the app this application you need to register for so you need to enter height weight gender etc since I have already created an account so let's begin with login part you can see here my consume calorie and needed calorie of the day and below that protein intake fat intake and carbohydrate intake you can see the profile option it will calculate your BMI and it will show the status of your BMI like it's showing overweight in diet monitoring system by adding the food it will manage my diet plan on daily basis you can see here by total intake is 793 catalyst it will suggest died it will suggest some food also with less

amount of fat and how high amount of protein it will calculate step counter it will also provide facilities like slave suggestion and water along.

3.3. Firebase

What is firebase where it can be used and what you need to learn in order to master the firebase what are its close competition and how good actually the firebase is so let's get started here in this channel we talk about programming web apps mobile apps and pretty much everything related to programming and technology so in case you are new here consider subscribing because we discuss a lot about these things so let's move on and answer the question that we are having but in order to answer that question first we need to ask a proper question so what is the question in here now when you design apps like mobile apps like iOS or Android or maybe web application the database is kind of a big problem and not because it's hard to design of course it's little bit tricky.

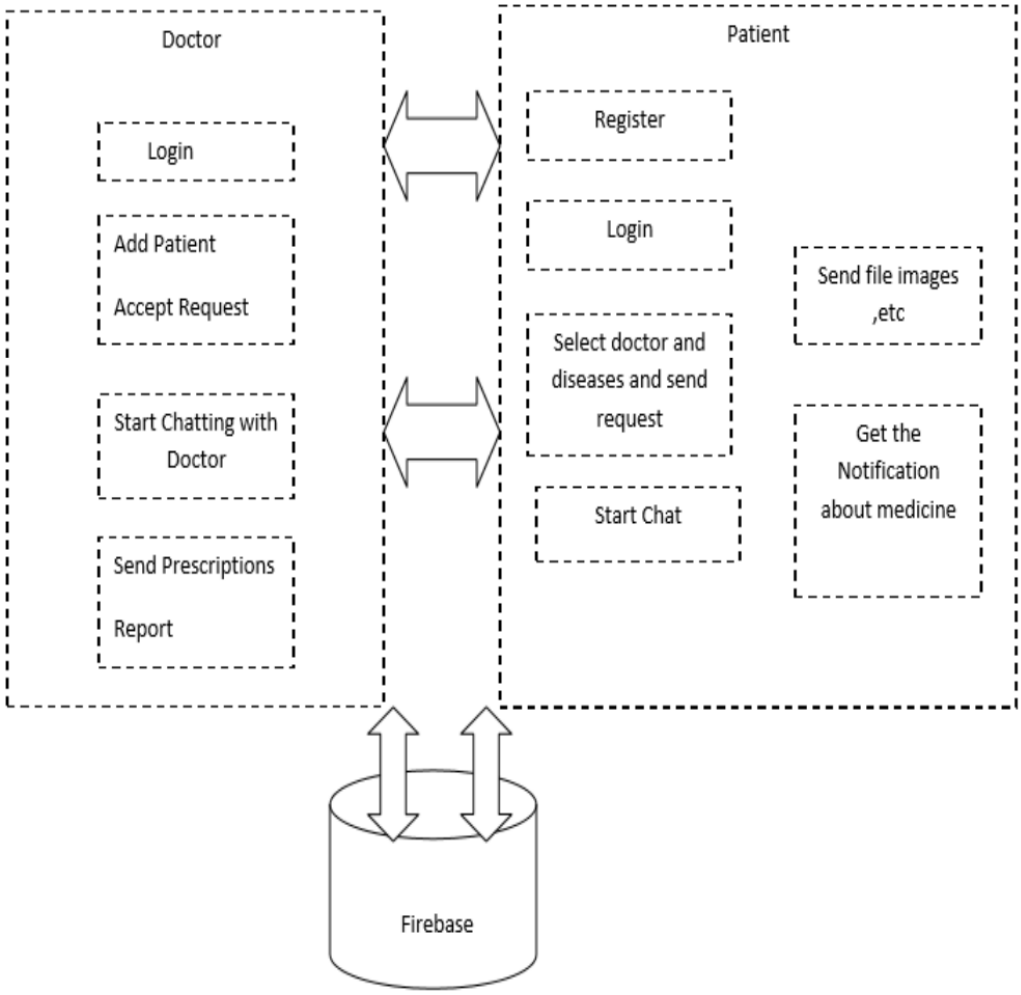
To design as well as sometime it consumes a lot of bandwidth trafficking between a database and your applications front end is kind of a big issue on top of that the host page is again a problem imagine if your app is having photo sharing things and you want to access all the photos there so it's not easy to maintain all of these things now on top of that managing your own authentication system is also a tricky bit either because everybody needs authentication from Facebook maybe Twitter maybe Google or even a simple login system is not easy to design from the scratch of course it's possible but it's not easy to design now what firebase gives you firebase gives you a complete solution about how things can be take down now it's a very good complete back-end solution that you can put up there now with the firebase you can do all sort of authentication most common ones are by user name email and password but you can of course use a log in the Twitter login with Facebook log in with Google accounts and github and all the things that you can imagine which are most popular there so apart from authentication it also manages a very good problem of database it gives you a real time database.

The user will clicked in and you have written a code that the database entry should be done there it does it in the real time you can just see the things magically appear there and that is very awesome for debugging and rolling out increased level in your application so this is not about authentication and database here this does the job really neatly nicely and awesomely but it can do a lot of other things as well like cloud messaging app notifications your advertisement

programs and there are tons of things that you can see in the feature page there but again I would say I love firebase man in case you might have attended some of my boot camps in iOS or maybe react or any other as well I always like to use firebase another close competition of Facebook is parsed now you might have seen that parts was really growing and in fact I was one of the close followers of the past parts really did a very good job but somehow

Facebook decided that we are not going to work on this project and the team that was working on the part we want to dedicate that team on to some different good things I don't know what they come up with that good thing I think that was probably just for the first purpose maybe that team design kind of a snapchat inside the water but again that was not all about it now pus is a very good competition for firebase but now things are changed now it's not like Facebook has completely closed down the past it has actually moved it onto the open source and now in order to use the park you have to take your own Amazon Web Services AWS servers there and host your parts on yourselves.

You have to maintain it on your own the good part about the part is you get much more control there but the good part about the firebase is you don't have to even look out for your database and manage bandwidth and everything you don't have to do anything so everything is being given to you for the small scale apps I think that firebase takes an upper hand because for the small scale apps like from hundred to hundred thousand users it can manage flawlessly everything and in case your app is having more than hundred thousand users you probably would have money to pay for the bigger plants as well so this was a quick overview about the parts and one more important question before I go off from this video what you need to learn in order to master the firebase now you do not need to learn anything yep I'm saying correct you do not need to learn anything if you are working in the Swift you can use it in the Swift language as well it has a complete API that works in v if you had an Android developer you can use that in the Android there is a specific guidelines for Android as well in case you are working with JavaScript based application or web application then you can use the entire firebase in JavaScript as well so again you do not need to let anything your existing language will work really great it has API.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Add Patient
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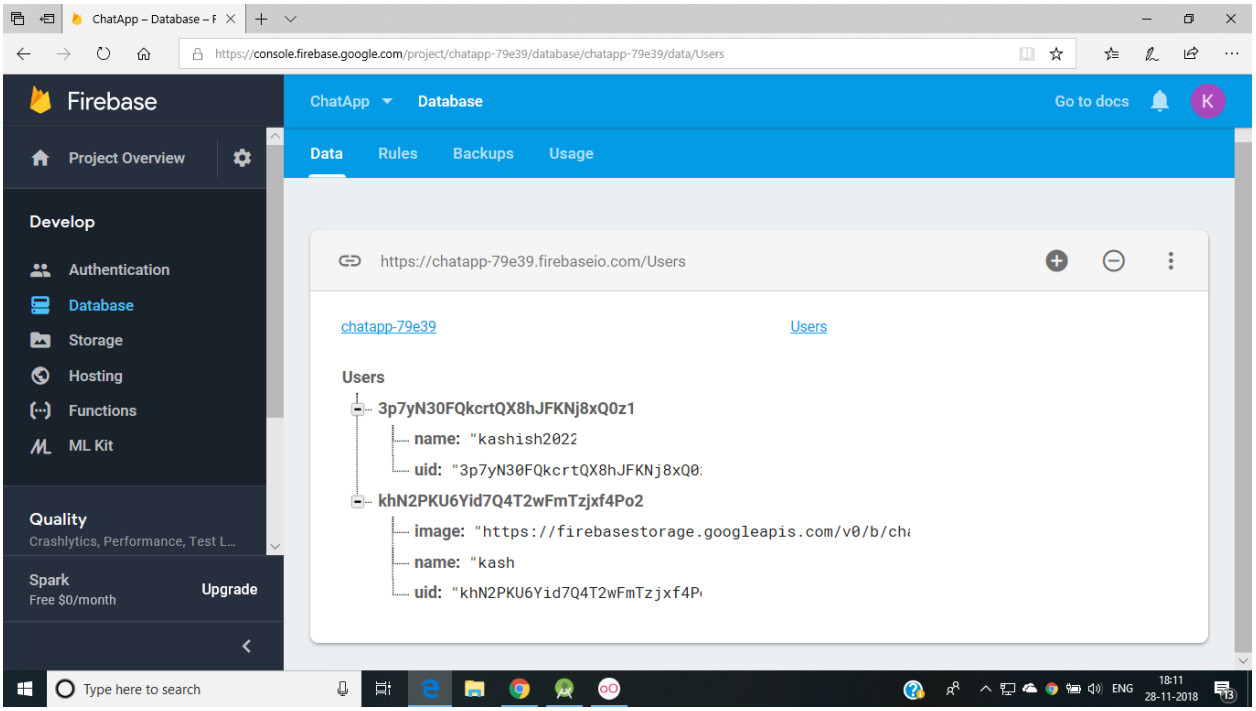
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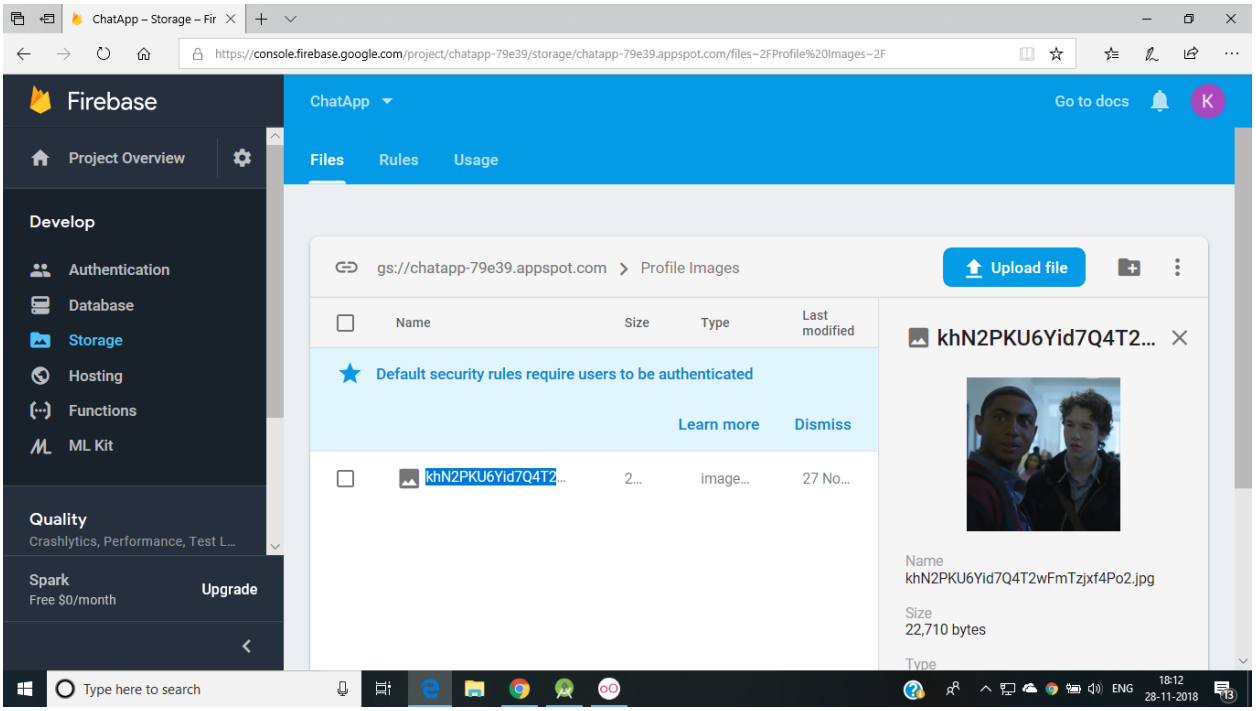
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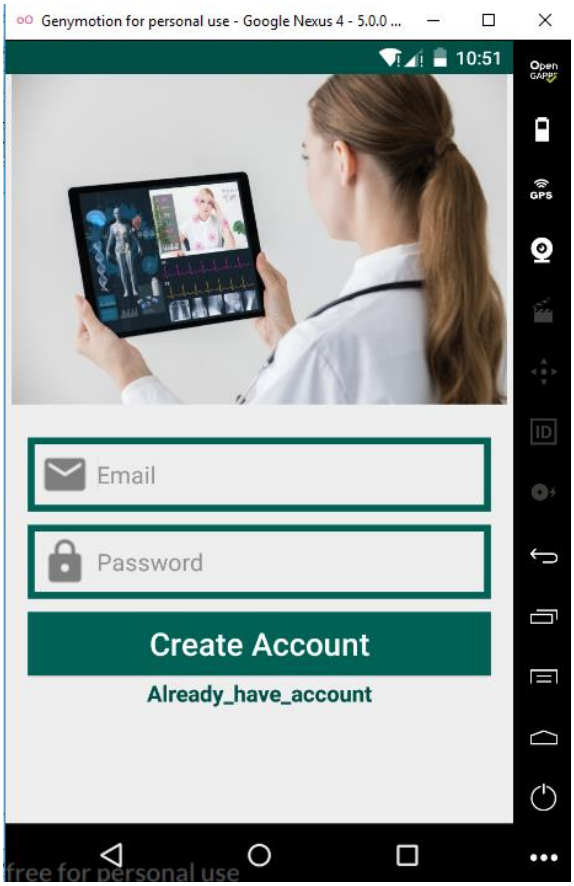
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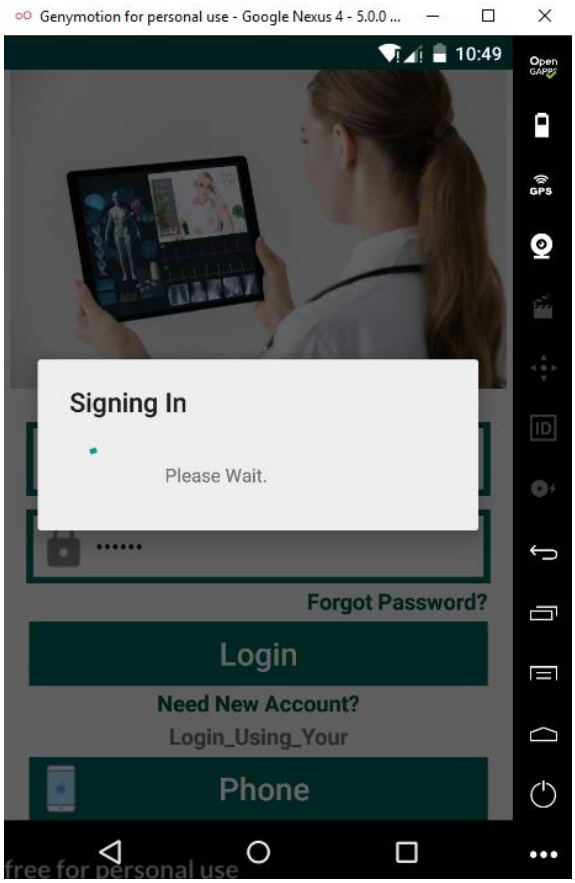
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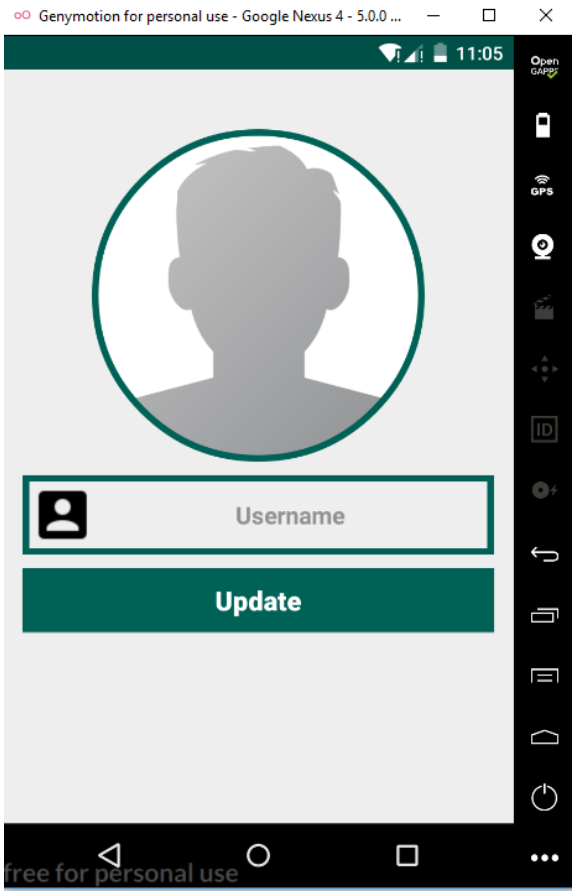
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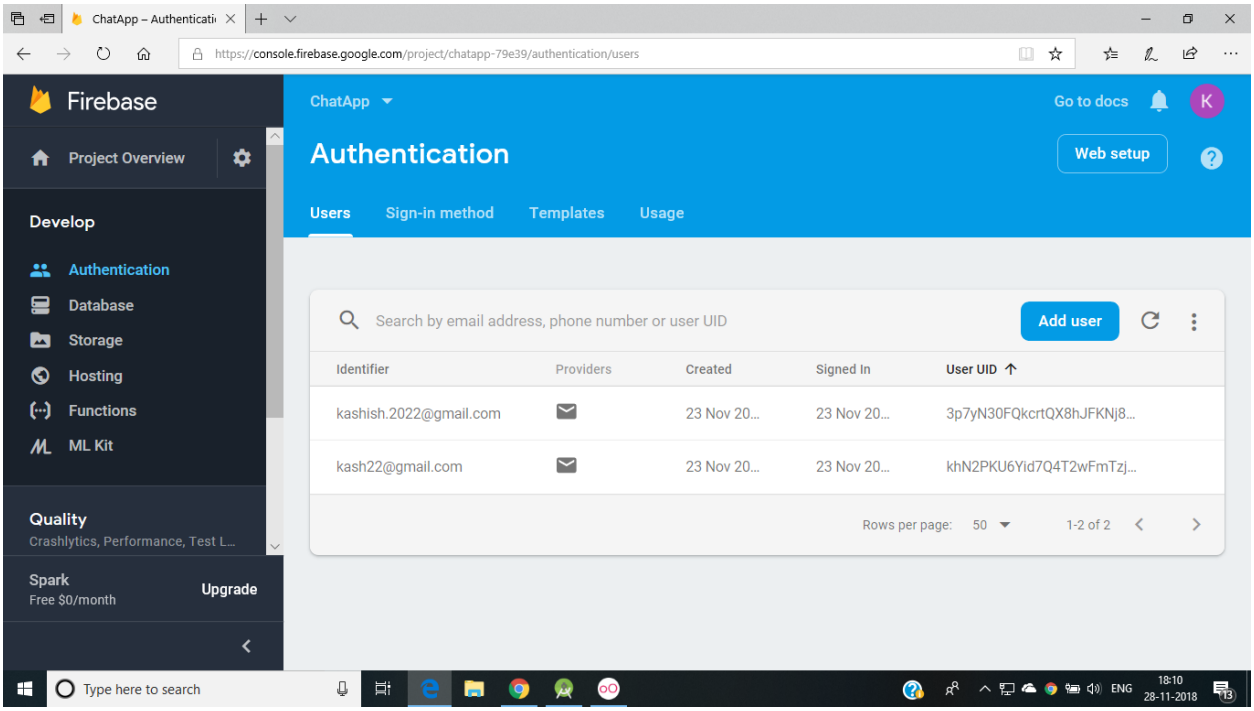
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im fine thanks
12:29 PM - May 01, 2019
what about
12:29 PM - May 01, 2019
you ??
12:29 PM - May 01, 2019
Type message here...
Message Sent Successfully...

CHAPTER : 4

ALGORITHM

We have seen the block cipher encryption algorithm that is Dias data encryption standard so in 30 is the he size of the plain text is a 64 bit and the size of key is 64 bit and the cipher text is processed in16 rounds then in each round we have to use a separate sake and the subtree size is 48 bit so from the 64 bit key we have to generate 16 48 bits sub keys so that we will process each key in each row so we will use the each key in the is ROM so in the next session and in this today's session let us have a look on one more block cipher algorithm that is AES algorithm advanced to the encryption standard yes so area stands for advanced encryption standard so similar to the devious algorithm here also the plaintext is processed in blocks so that means here also there will be a block size so we will not process the entire plain text or the cipher text first of the plaintext will be divided into different blocks so anytime we'll process each block so here the block size is 128 bit 128-bit block size that was here the plaintext and next here also we will use a key in each and every lump and similar to the des algorithm yes in AES algorithm also the plaintext is processed in number of rounds to get the cipher text so here the number of mounts the gray text is processed is 10 ohms 10 ohms so in the DA's were performing 16 ohms.
Little built or volleyball one more astatically four bytes that means 4 into a bit of activity and in each round we are going to use four keys for Serkis each round we are going to use full sub keys that means the size of key in each round is for some reason is falling to 32 at least 128 or four words or 16 bytes so we can represent in other bits or words or buts so in each round we have to use for some keys so how many rooms the tamarins in each room for circus total 40 sub keys so before starting the wrong function we have to use it for good words so pre route calculation so for in the pre room calculation we will use for burst that means one sorry one son sorry so for sub keys will be used that means one will be a bit or four words or sixteen bytes.

The size is 128 bit or forwards of 16 bits so 16 bytes and before applying the wrong function we have to use a form or it's sub keys so totally 4 into 10 40 plus 444 sub keys will be generated from the master key 128 so this is all the summary about this is algorithm so finally the cipher

text the cipher text will be obviously 1 1 year which is again forwards all 16 bytes so this is all about the summary of other now let us move to the block diagram of a s algorithm first of all consider the plaintext so which is 128-bit which is 128 bit and this is applied to and round key so we have to apply that Adam kid that was just exaltation so here we will use four words so that whiskey monkey let us represent low which is in terms of course I mean if we represent in terms of words we can write it as words co2 good tea so what zero one two three word for words so that means one key one 48-bit so after applying this add round key next we have to apply substitute bytes substitute bytes so which we call it as yes boxes in our DSL ever feel this substitute bytes are equal to boxes and after applying the S boxes.

Write the block diagram and another block diagram then we will move on to the each and every operation so what will be happening in this s boxes and what will be happening in the around key and one by one will see faster before that first we will see the roll paper so first let's substitute bags so for all the main rooms we have to apply the four processes so s box shift rows mix columns and add round key in the second round also we have to up in the fourth only in the tantrum that misses the last rung we can ignore the mix columns we need not perform the mix columns so hope you understood this block diagram so let us continue with the each and every process so before going to each and every process first let us look on about the representations what about the representations here the 128-bit plaintext is stored in input arrays so here the input array is represented as four by four table in each I mean in each and every column is represented as one byte so input is stored in input array so which is a four by four even four by four table here we can have input 0 input 1 input 2 input 3 input 4 5 6 7 8 9 10 11 12 13 14 and 15 so this is how we will represent the plaintext so here the each column represents one byte so total 16 bytes so 16 bytes so which is equal to 16 into 8 that is 128 bit so intermediate results a story state added which can be resented s s0 0 yes 1 0 yes to 0 yes 3 0 similarly yes 0 1 yes 0 5 1 1 s 2 1 yes 3 1 similarly s 0 to s 1 to s 1 3 yes 1 4 zero three one this is the state where the intermediate results will be so here this representation is also four by four that means 16 bytes so in each block the sizes and in each column the sizes sit bucks I mean eight bits so this means 128 total size of the state arrays what would you and similarly the outputs will be stored in output array similarly output array so which is again for before so I will put 0 output 1 output 2 similarly I'll come for how to find out six output 7 I will put 8 9 10 13 14 15 this is a output array

which is again represented in four by four ten so each column represents one but so important we get 128 so input array storing an input is stored in input array so each block will be consists of 1 byte so total 16 bytes.

Then we have seen the first week and the last bit representation I mean the decimal value of the first of it and the last of it will be representing the row number and the in-between four bits representation will be in the column number and we have people consider the corresponding value and we will again convert into binary so that we will get the form is out here from the eight bits first four bits is represented with row number and the next four bits represents the phone number first four bits represents the row number second fork which represent the column number so that's why again so what is a maximum number using this four bits it's just 16 or 15.

One word so forwards and from the forwards we are expanding it to 40 forwards from W 0 to W 43 so this is the key expansion so coming to this yes box is so consider rough one block and 8 bits that means one block size is 8 bits in the read bits first four bits I represents the row number and column number so this is the S box that is 16 into 16 s boxes that means 16 rows and 16 columns so corresponding value we have to get so again the representation will be in 8 bits and we will save it in the corresponding word number I may draw a block number so this is the S box in alias algorithm so sixteen thousand sixty columns so if you consider if you consider that the example these are the 8 bits right so if you consider these are the 8 bits from the S box input first represent a whole number second four represent a number so remember is do all members file we have to get the value from 0 through fifth core so here in this example see so zero through fifth column it is 52 0.
Through fifth column it's a 52 so the result is 52 which is again converted into 8 0 1 0 0 1 0 so this is the output from s box with a value 0 0 0 0 0 1 0 1 so this is the input of s box and this is the output from the so this will be stitched I mean this will be stored in state array so according to this we have to find the output so we have to apply the same procedure for all the blocks with 8 bytes so first consider the first block with s 1 s 0 0 so find out the corresponding right shift 1 1 1 2 1 3 and 1 0 and coming to the second row 2 bits we have to shift so initially it is 2 0 2 1 2 2 2 3.

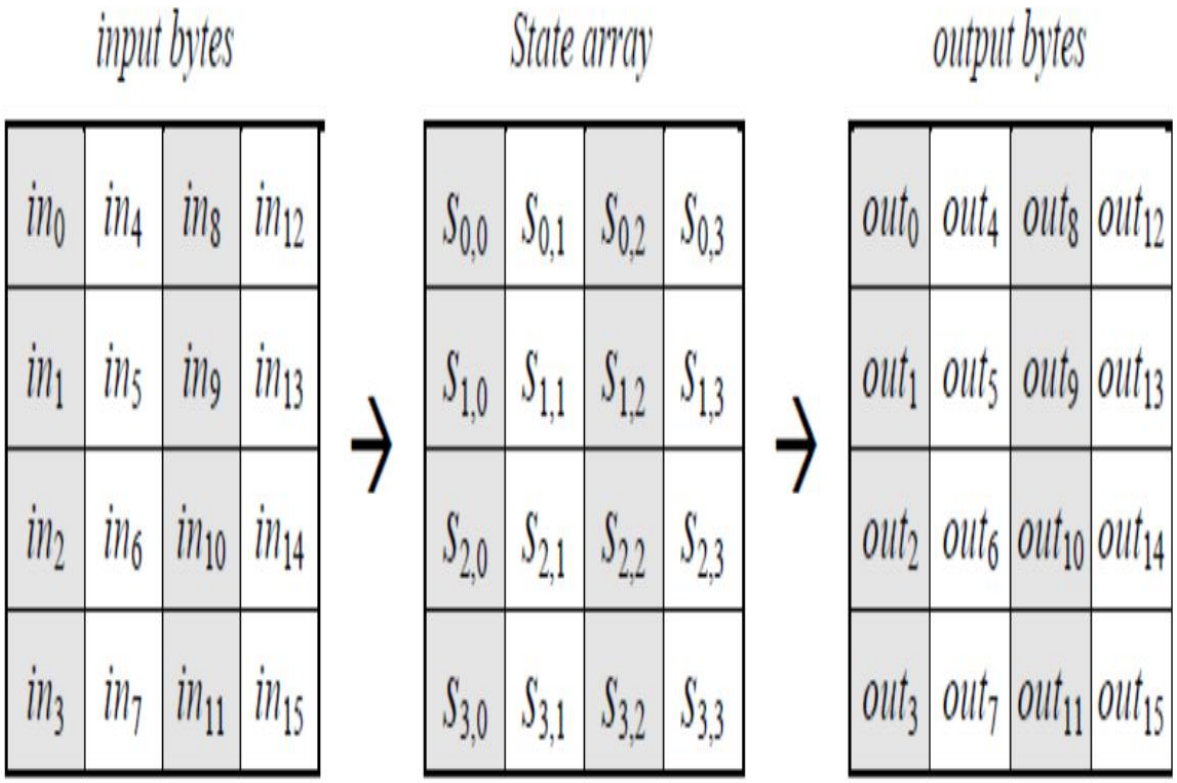
After performing the right shift it becomes 2 2 2 3 2 0 2 1 and it is a whole number 3 3 bits we have to shift right shift so before applying this shift operation the value is 3 0 3 1 3 2 3 3 and after performing the shift operation we will get 3 3 3 0 3 1 3 2 so similar way we have to perform the shift operation so we have to apply this shift operation based upon the row number row number 0 0 piece 1 number 1 1 bit number 2 two bits whatever 3 limits and the result will also be slowly shift X so this is about shift goes and after applying this shift rows next we have to perform mix columns the next process is mix of mix-columns so initially again consider the mix-columns so take the state array so this is the output for the shift cross.

Multiplication stored in the second column of resultant air a third column apply the matrix stored in third column of resultant matrix is I mean resultant array and the fourth column again perform the multiplication and save in the fourth column of the resultant and so in this way we have to apply the mix columns so after applying the mix columns again the state and that means the result from this mixed columns will be given to the wrong key where we have to add four keys so here the next process is and round key so when we are adding here adding which eggs all right here adding means performing the exhort operation XOR operation with state array which is output from mix columns exhort with key so which is again Humpty - I mean four words.
first round first we have to add the key that means zero two three four zero two word three we have to apply the at home key so hope you understood this so initially we are using a donkey zero to three and round one words from four to seven similarly in the round mind a solid round.

Bits so in that eight bits input first four bits will be conserved as a row column and the next four bits are concerned I said called remember row number and column number so we get the corresponding value and again we have to convert it into a bit representation so similarly we have to consider each eight bits and convert it and against to the result in the resultant state added so this is the S box so after applying the S box the output will be given as input to the shift rose so it depends upon the whole number we have to apply the circular and right shift so row 0 0 0 bits will be shifted and first row 1 bit will be shifted second rows 2 bits will be shifted.

The third row 3 bits will be shifted so after applying this shift operation we have to give the input to the mix columns so here in the mixed columns again we have to apply so we have to consider

each word and apply to perform the multiplication operation with the four by four predefined matrix and we will get 1 by 4 by 1 resultant which is told in the first column of resultant matrix so similarly in the in the same should be followed repeated for every word so after applying these mix columns we have to apply the add round key so here we have to apply the four words exert with each word in the resultant and so consider each word exam with each word and store it in the each column so consider this poem as one word so I am once again repeating consider the column as one word consider the first word XOR with word zero and I mean the first word of the key we are in the key we are using four words the first word of the key and resultant word will be saved in the first column of the resultant air so this is an example for s-boxes.



CHAPTER : 5

PERFORMANCE ANALYSIS

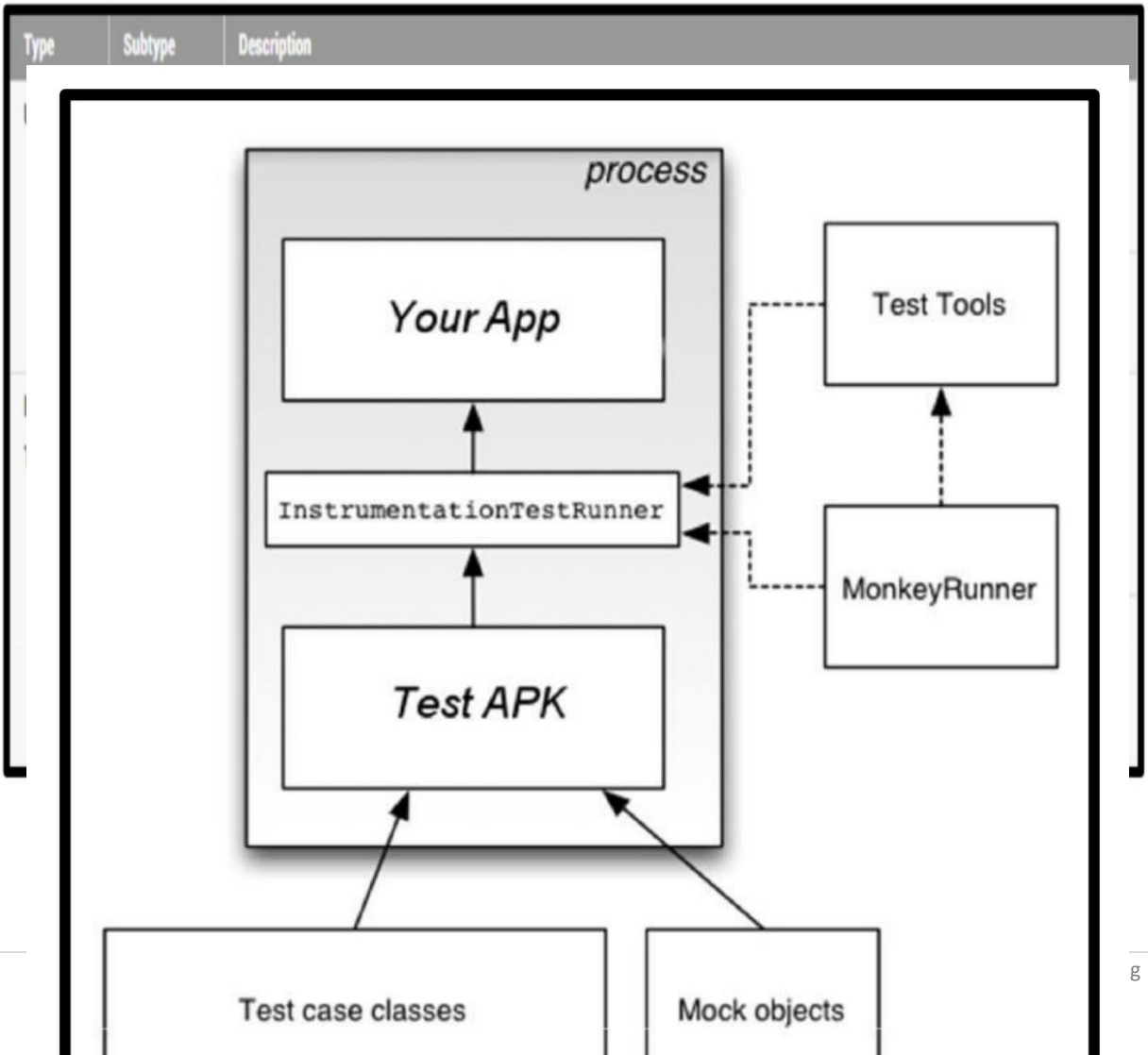
5.1 Testing Fundamentals

Fundamentals of software testing so let's get started with the importance of software testing you know what has obtained its life it's a set of instruction or a program which tells computer to do some people use software everywhere to do that have shame thee nor the domains like banking healthcare insurance with the end entertainment the three layers of this I use some examples are banking domain for - of these are used to perform financial and non-financial transactions in healthcare Asian Administration system software's are there pushbutton management software's are there so everyone expects an output from a softer and that output should be select software digits not performing up can lead to many problems which can be loss of reputation loss of business lights practically being exercised ok let's see some examples of software failure this is small we decides to my unique new mobile phone he chooses to my stomach famous online shopping website after visiting the worse thing we notice is that the company website has come speeding the tape in the deck so he decides to put off the top of the app looks unprofessional.

5.2 Testing Concepts

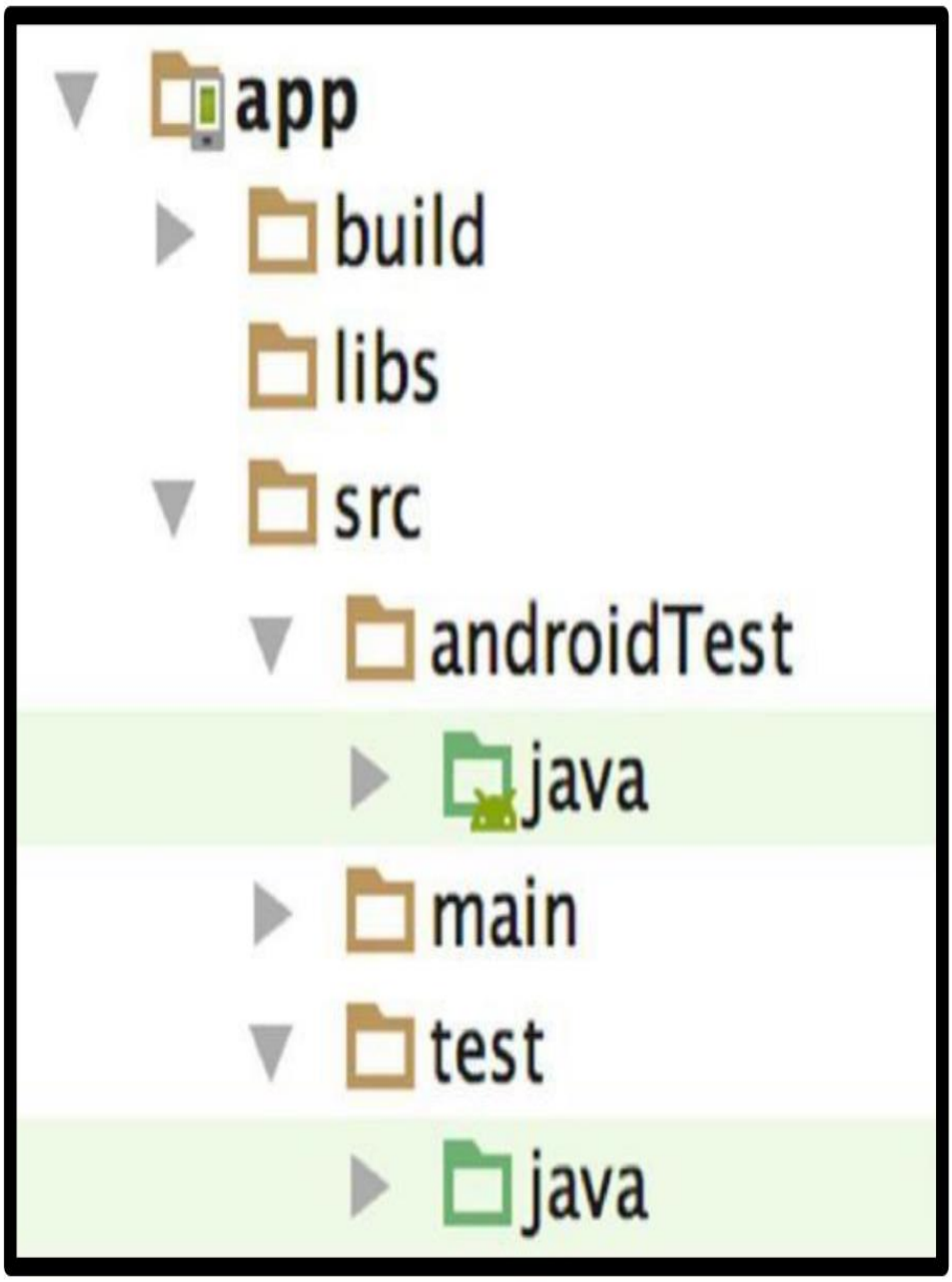
Testing can show this obscure person but it doesn't mean the software is defect free testing helps to describe many defects as possible the third principle is exhaustive testing is impossible test everything is not possible except trivial cases instead testing should be focused and prioritized the fourth principle is the shade cluster deferred tend to cluster this appears as an area of a code can be particularly complex and fatigue focusing tests on these hotspots helps in unearthing the shape as Elysees itself the first principle is justified paradox if the same test conditions are repeated over and over again eventually the same set of test cases no longer find any new bugs to alter this pesticide paradox focus of testing should always change and move the Schism should to create the next principle is this thing is context dependent testing is performed the friendly in various contexts examples it was banned in software is tested differently form an e-commerce website testing the final principle is absence of errors policy finding and fixing the deferred design helps if the software is not built according to the specification these are the seven principles of software testing

Testing developer of the software can perform the testing mostly they will be constellated on component testing which is the components of the program the pairs of the developer within the development team can perform the test so it's easy to find out the fault in the pole it is tested by someone other than that all independent testing unit from the same development organization can also perceive the system as it is structured by an independent during the chances of finding more defects would be very high our soy testing unit from different organization can do the testing since it's a different organization the competition would be very high to find out the show and to impress the customer to summarize in this session we have seen fundamentals of software testing we have covered importance of software testing the causes of to be friends what is software testing then we should stop software testing what are the seven principles of software testing and who can perform so collecting hope this session helps everyone to understand about the basics of software testing.



Regularly, an Android part keeps running in a lifecycle that the framework decides. For instance, an Activity protest's lifecycle begins when an Intent initiates the Activity. The framework calls the protest's onCreate() technique, on then the onResume() strategy. At the point when the client begins another application, the framework calls the onPause() strategy. In the event that the Activity code calls the complete() strategy, the framework calls the onDestroy() technique. The Android structure API does not give a path to your code to conjure these callback techniques specifically, however you can do as such utilizing instrumentation. The framework runs every one of the parts of an application in a similar procedure. You can permit a few parts, for example, content suppliers, to keep running in a different procedure, yet you ordinarily can't drive an application onto indistinguishable process from another running application. Instrumentation tests, be that as it may, can stack both a test APK of your test classes and your application's APK into a similar procedure. Since the parts of your application and their tests are in a similar procedure, your tests can summon strategies, and adjust and look at fields in your application.

The following diagram summarizes the testing framework:


app
build
libs
src
androidTest
java
main
test
java

Tests in the androidTest/ source set are common to all your build variants. However, you can create additional source set directories for tests that are specific to certain build variants:

For example, when building a test APK for the flavor1 version of your app, Gradle uses both the androidTestFlavor1/ and androidTest/ source sets. By default, all tests run against the debug build type. You can change this to another build type by using the testBuldType property in your module-level build.gradle file, as shown in the following code snippet.

Gradle automatically generates manifest files for your androidTest/ source sets. Optionally, you can create your own manifest, for example, to specify a different value for minSdkVersion or register run listeners just for your tests. When building your app, Gradle merges multiple manifest files into one manifest.

Testing APIs:

In your JUnit 4 test class, you can call out sections in your test code for special processingby using the following annotations:

For more annotations, see the documentation for JUnit Annotations and the Android- Specific Annotations.

You use the JUnit Assert class to verify the correctness of an object's state. The assert methods compare values you expect from a test to the actual results and throw an exception if the comparison fails. Assertion Classes describes these methods in more detail.

Monkey

This is a direction line apparatus that sends pseudo-irregular floods of keystrokes, contacts, and signals to a gadget. You run it with the Android Debug Bridge (adb) instrument, and utilize it to push test your application, report back mistakes any that are experienced, or rehash a flood of occasions by running the device on numerous occasions with a similar irregular number seed.

monkeyrunner:

This is an API and execution condition for test programs written in Python. The API incorporates capacities for interfacing with a gadget, introducing and uninstalling bundles, taking screen captures, contrasting two pictures, and running a test bundle against an application. Utilizing the API, you can compose an extensive variety of substantial, incredible, and complex tests. You run programs that utilization the API with the monkeyrunner direction line instrument

CHAPTER : 6

CONCLUSION

This application improves the communication between doctor and patient. In this app Patient can communicate with doctor without knowing his or her mobile number. It reduces the extra paperwork, delay in timing. The proposed online arrangement framework has been actualized in android studio for application advancement and site is created utilizing HTML and PHP. The errands engaged with this work are isolated into modules. The information is drawn closer and shared by utilizing API'S between the site and the android application. The proposed framework is effective and has benevolent UI. Expansion of the administrator and specialist modules in the android application are incorporated into future work. That would assist the specialist with registering on the application and play out every one of the undertakings on the application. The administrator would have the capacity to utilize the application for dealing with the subtle elements of the patients and the specialists as opposed to utilizing the site. An installment or some sum might be charged to the clients/patients while making an arrangement to maintain a strategic distance from the deceptive clients. The same number of clients just enlist themselves only for the sake of entertainment and has no worry by making an arrangement. Some more future headings are the enhancements in the patient's module which incorporates setting updates for the arrangements and sparing the arrangement date to the date-book.

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