AUTOMATION TESTING

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

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

By

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UNDER
COGNIZANT

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

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DECLARATION

I hereby declare that the work reported in the B.Tech Project Report entitled **"AUTOMATION TESTING "** submitted at **Jaypee University of Information Technology, Waknaghat, India** is an authentic record of our work carried out under "**COGNIZANT**" during my training period **. I** have not submitted this work elsewhere for any other degree or diploma.

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(171065)

ACKNOWLEDGEMENT

I would like to express my deep and sincere gratitude to my company **COGNIZANT** for providing their valuable guidance throughout . Their dynamism, vision, sincerity and motivation have deeply inspired me . They has taught me the methodology to carry out the project work and to present it as clearly as possible. It was a great privilege and honor to work and study under their guidance. I am also thankful to all those who have assisted us by supplying the requisite help.

LIST OF ACRONYMS AND ABBREVIATIONS

SQL : Structured query langugae
UFT : Unified functional testing
UI: User interface
API : Application programming interface
SDLC : Software development life cycle
VB : Virtual base
ER: Entity relationship
HTML:Hypertext markup langugae
XML: Extensuble markup langugage
IE: Internet explorer
GUI : Graphical user interface

LIST OF FIGURES

Figure 4.7 Add Ins

ABSTRACT

This programme encouraged me to be more autonomous learners during guided self-learning hours, completing the learning objectives on my own defined quantity and manner, and get set for the hands-on activity time.

The training was followed by code challenges, handson ,ICT and quizes with the apt psychological feature of various softwares that were taught through the weekly Specialized sessions by mentors whose motivation and substance helped to deepen in the journey.

The program was followed as :
WEEK 1 : FUNCTIONAL TESTING
WEEK2 : SEQUENTIAL QUERY LANGUAGE &XML
WEEK 3: VB SCRIPT
WEEK 4 ,5,6&7: UNIFIED FUNCTIONAL TESTING
WEEK 8: HC FACETS BASICS

CHAPTER 1
FUNCTIONAL TESTING

1.1 FUNCTIONAL TESTING

It is a kind of software program trying out that validates the software program system against the useful requirements/specs. The reason of practical checks is to check each function of the software software, with the aid of offering suitable input, verifying the output against the functional necessities.

Functional testing specifically pertain black box testing and it isn't involved about the supply written language of the usage. This trying out exams user Interface, APIs, Database, protection, patron/Server communique and other capability of software beneath test. The testing can be execute both hand-operated or the usage of high technology.

1.1.1 What do you test in Functional Testing?

The high goal of functional trying out is checking the functionalities of the software program system. It specially concentrates on -

1. **Mainline capabilities**: trying out the main role of substitute

2. **fundamental Usability**: It includes fundamental usability trying out of the system. It tests whether user can freely navigate thru the displays without any problems.

3. **Accessibility**: exams the accessibility of gadget for personmistakes situations: utilization of trying out strategies to test for mistakes situations. It assessments whether or not appropriate blunders messages are displayed.

1.1.2 How to do Functional Testing ?

Following is a grade by grade system on how to do useful testing :

1. Recognize the useful necessities
2. Identify take a look at enter or check statistics based on necessities
3. Compute the anticipated outcomes with decided on take a look at input values
4. Execute take a look at instances
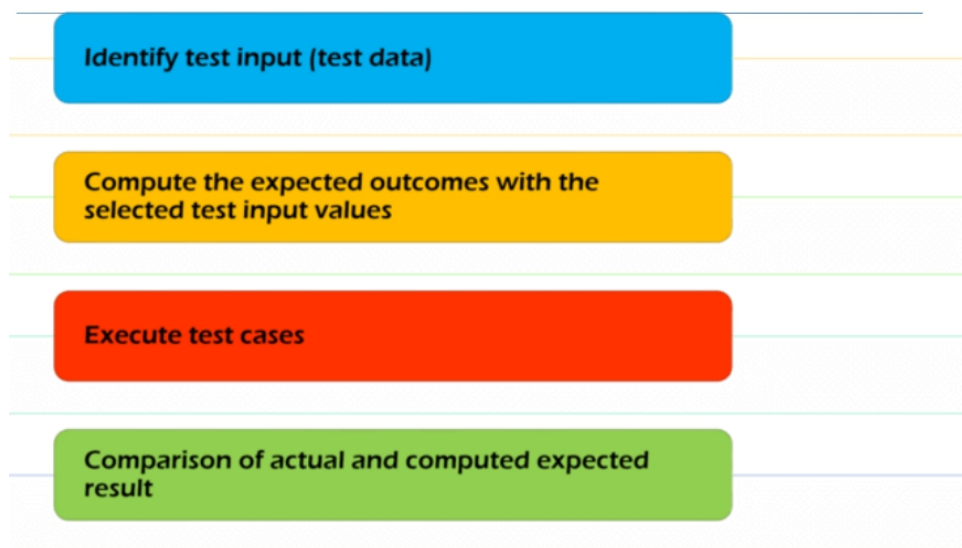5. Examine real and computed expected consequences

FIGURE 1.1 FLOW CHART OF TESTING

1.2 Functional Vs Non-Functional Testing

Functional Testing	Non-Functional Testing
Functional testing is performed using the functional specification provided by the client and verifies the system against the functional requirements.	Non-Functional testing checks the Performance, reliability, scalability and other non-functional aspects of the software system.
Functional testing is executed first	Non-functional testing should be performed after functional testing
Manual Testing or automation tools can be used for functional testing	Using tools will be effective for this testing
Business requirements are the inputs to functional testing	Performance parameters like speed, scalability are inputs to non-functional testing.
Functional testing describes what the product does	Nonfunctional testing describes how good the product works
Easy to do Manual Testing	Tough to do Manual Testing
Examples of Functional testing are • Unit Testing • Smoke Testing • Sanity Testing • Integration Testing • White box testing	Examples of Non-functional testing are • Performance Testing • Load Testing • Volume Testing • Stress Testing • Security Testing

1.3 WATERFALL MODEL

Every software program advanced is distinct and calls for a appropriate SDLC technique to be observed based totally on the inner and external factors. a few situations wherein the use of Waterfall version is maximum appropriate are −

1. Necessities are very well documented, clean and glued.
2. Product definition is solid.
3. Technology is known and is not dynamic.
4. There aren't any ambiguous requirements.
5. Enough resources with required knowledge are available to guide the product.
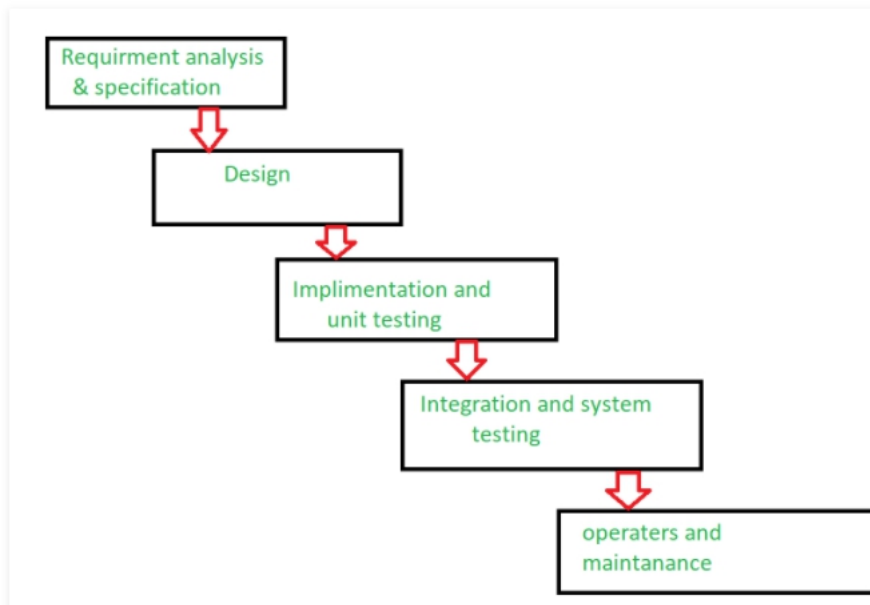6. Challenge is short.

FIGURE 1.2 WATERFALL MODEL

1.4 AGILE MODEL

The Agile SDLC hypothesis is a unit of twinned and additive process models with a engrossment on adaptability and client amends with fast delivery of active software consequence.

Agile methods interruption the product into a small thriving construction. This construction is given in recurrent event. Each iteration usually lasts about one to three period of time.

Every loop exclude practical groups working at the same time in various domain such as -
1. Planning
2. Needs Analysis
3. Design

4.   Coding
5.   Unit inspection again
6.   Admission Test.

At the end of the repetition, the active product is shown to key customers and stakeholders.

1.4.1 What is Agile?

The Agile Model accept that every work needs to be managed other than and the existent methods need to be adjusted to best fit the needs of the project. In Agile, tasks are separated into time boxes (small frames) to deliver circumstantial output dimension.

A deviation method is taken and the construction of the operating software is delivered after each duplication. Each construction rises according to features; the final design holds all the features a customer needs.

FIGURE 1. 3 AGILE MODEL

1.5 ITERATIVE AND INCREMENT MODEL

This Model, initially, the partial implementation of the complete program was built to be in a delivery situation. Additional practicality is added. Errors, if any, from previous deliveries are corrected and an effective production delivered.

The process is repeated until all product development is completed. Repetition of these processes is called iterations. At the end of every iteration, product delivery is delivered.
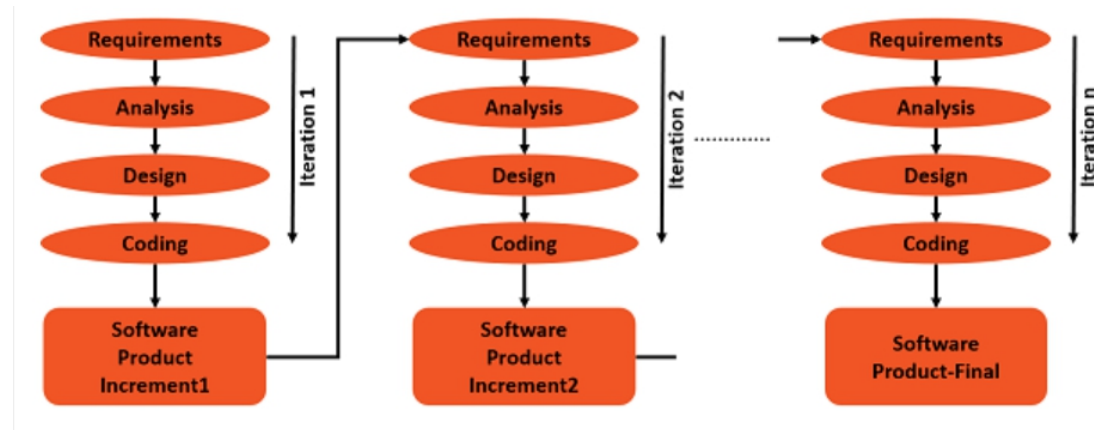

FIGURE 1.4 ITERATIVE AND INCREMENT MODEL

ADVANTAGES

1. You can start to improve the requirements.
2. Initial product delivery is fast.
3. Customers get valuable performance ahead of time.
4. Reduces initial delivery costs.
5. Each release is a product promotion, so that the customer has an active product nearby at all times.
6. The customer can provide feedback on the rise of each product, thus avoiding surprise at the end of the development.
7. Changes in needs can be easily addressed.

DISADVANTAGES

1. It requires good repetitive planning.
2. It requires a functional configuration to ensure the necessary installation and subsequent changes.
3. It requires a precise description of a complete and fully functional system to allow for an explanation of the escalation.
4. Well-defined communication facilities are needed, as some are built long before others are upgraded.
5. The total cost of the full program is not less.

USES

1. Most of the needs are known in advance but are expected to change over time.
2. Needs are prioritized.
3. There is a need for access to basic services delivered immediately.

4. The project has long development plans.
5. The project has new technology.
6. The domain is new to the group.

1.6 V MODEL

The V version is an SDLC version in which the technique takes vicinity in a V-shape collection. also referred to as the verification and validation version.

The IV-version is a waterfall version extension and is based totally on a take a look at section company in every of the corresponding improvement ranges. because of this in each degree of the improvement cycle, there may be a right away phase of the test. this is a completely important version and the subsequent segment starts best after the crowning glory of the previous section.

1.6.1 V-model - layout

under the V-version, the corresponding take a look at segment of the improvement segment is in addition prepared. therefore, there are verification clauses on one aspect of the 'V' and affirmation clauses on the other. The Coding section joins each sides of the V-model.
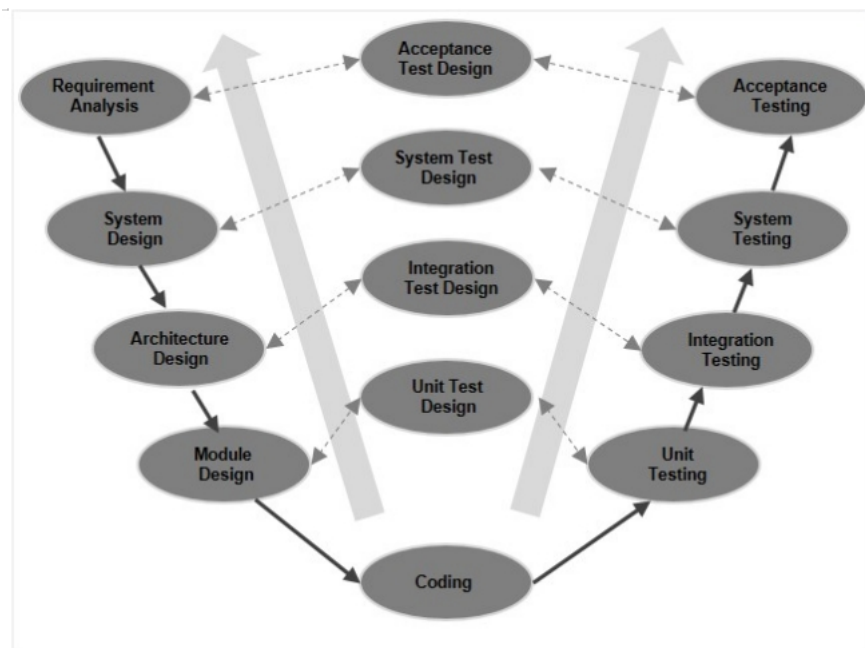

FIGURE 1.5 V MODEL

CHAPTER 2
STRUCTURED QUERY LANGUAGE

2.1 SQL

A relevant feature of SQL is the object Explorer, which permits the consumer to browse, pick, and act upon any of the objects in the server. it could be used to visually look at and examine query plans and optimize the database performance, amongst others.

SQL Server management Studio can also be used to create a new database, adjust any present database schema by means of including or editing tables and indexes, or analyze performance. It consists of the query home windows which offer a GUI primarily based interface to write down and execute queries.
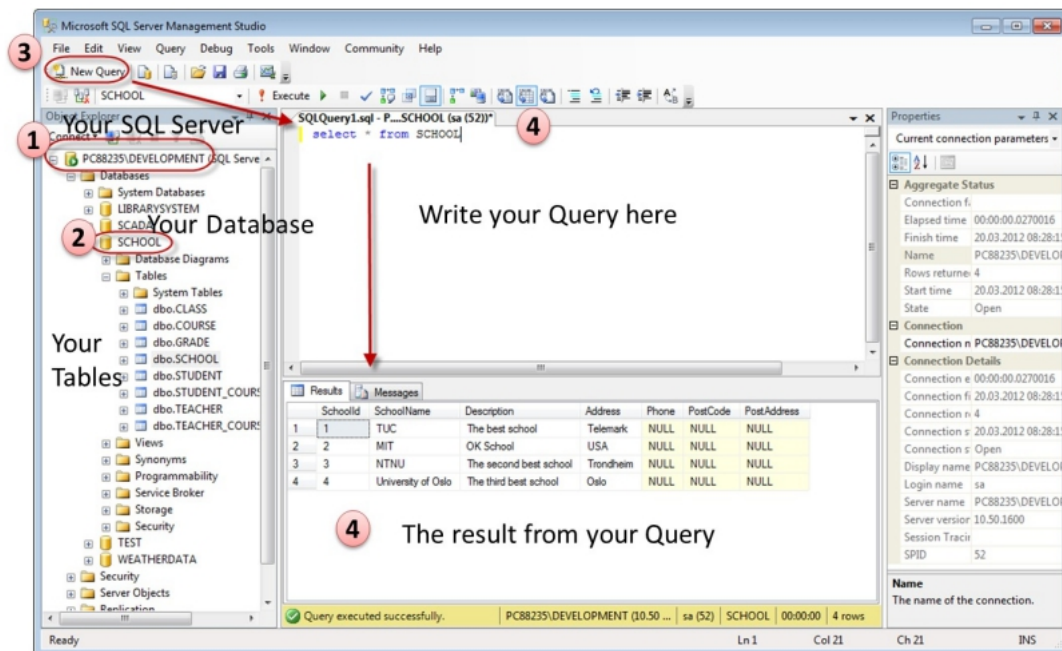

FIGURE 2.1 SQL STUDIO

While growing SQL commands and queries, the "question Editor" (pick "New query" from the Toolbar) is used (shown within the parent above).

With SQL and the "query Editor" we are able to do almost the entirety with code, but now and again it's also a great concept to apply the unique tools in square to help us do the work with out coding (a lot).

2.1.1 CREATE A NEW DATABASE

It's far quite simple to create a brand new database in Microsoft sqL Server. simply right-click on on the "Databases" node and select "New Database…"
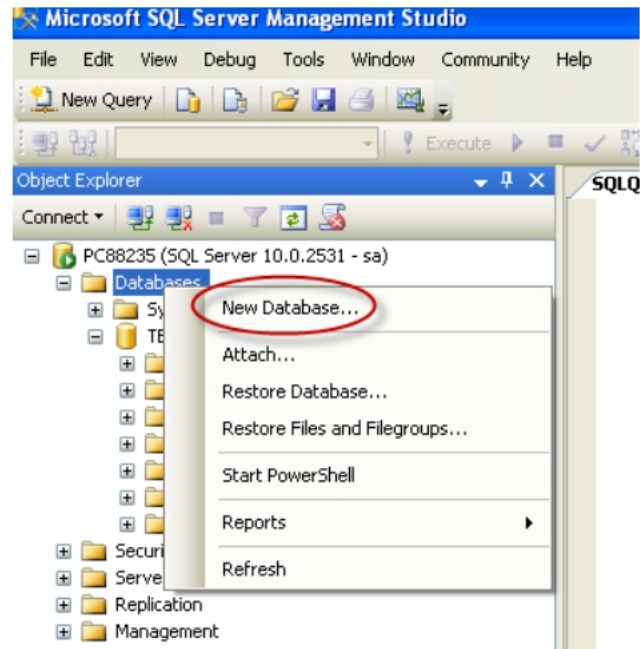
FIGURE 2.2 CREATING DATABSE

There are plenty of settings you may set regarding your database, however the only facts you must fill in is the call of your database:
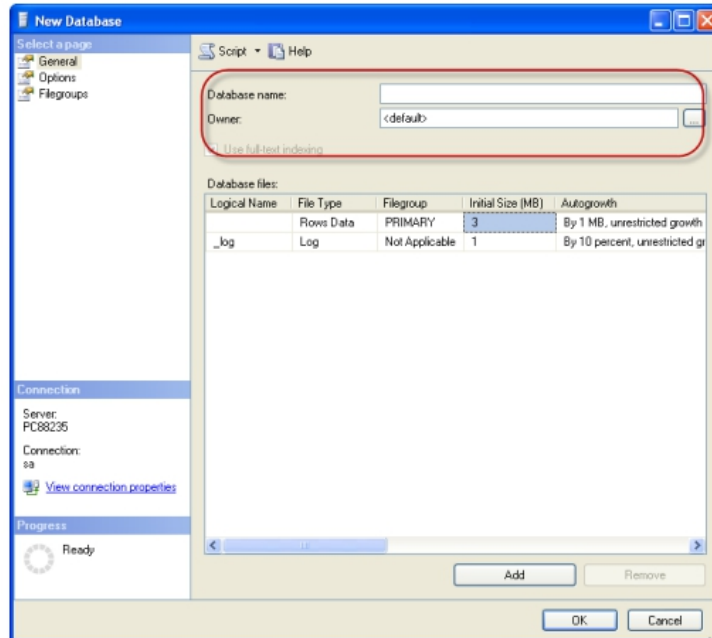

FIGURE 2.3 SETTINGS IN DATABASE

you may also use the SQL language to create a new database, but once in a while it's far less complicated to just use the integrated functions inside the management Studio.

2.1.2 QUERIES

A query is a query or inquiry about a fixed of records. We use dependent question Language (sq.) to retrieve meaningful and applicable statistics from databases. when constructing a structure, we pull facts from tables and fields. The fields are columns within the database table, while the real statistics makes up the row

what's Syntax? The time period syntax refers to strict structural patterns used whilst developing a question. As soon as you enter the hunt criteria using the suitable syntax, the question have to execute, and the requested facts retrieved from the target database.

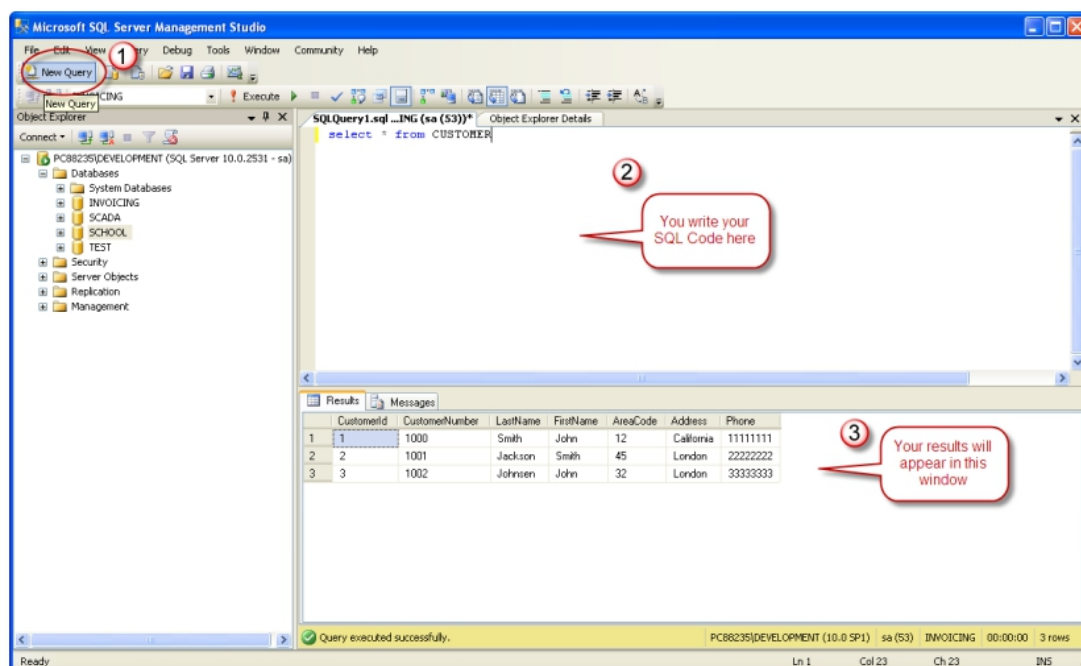On the way to make a brand new SQL query, pick the "New query" button from the Toolbar.

FIGURE 2.4 SELECTING QUERY

Here we are able to write any type of queries this is supported by means of the SQL language.

In sq., we without a doubt have key phrases that healthy our statement. we can say choose, (move get from the database), FROM (which table are you looking at?), and in which (what standards?).

```
1  SELECT albumTitle FROM tblAlbums
2  WHERE rating >= 9;
```

2.2 CREATING TABLE

Before you begin imposing your tables in the database, you must usually spend some time design your tables nicely the use of a design tool like, e.g., ERwin, Toad records Modeler, PowerDesigner, Visio, and many others. this is known as Database Modeling.
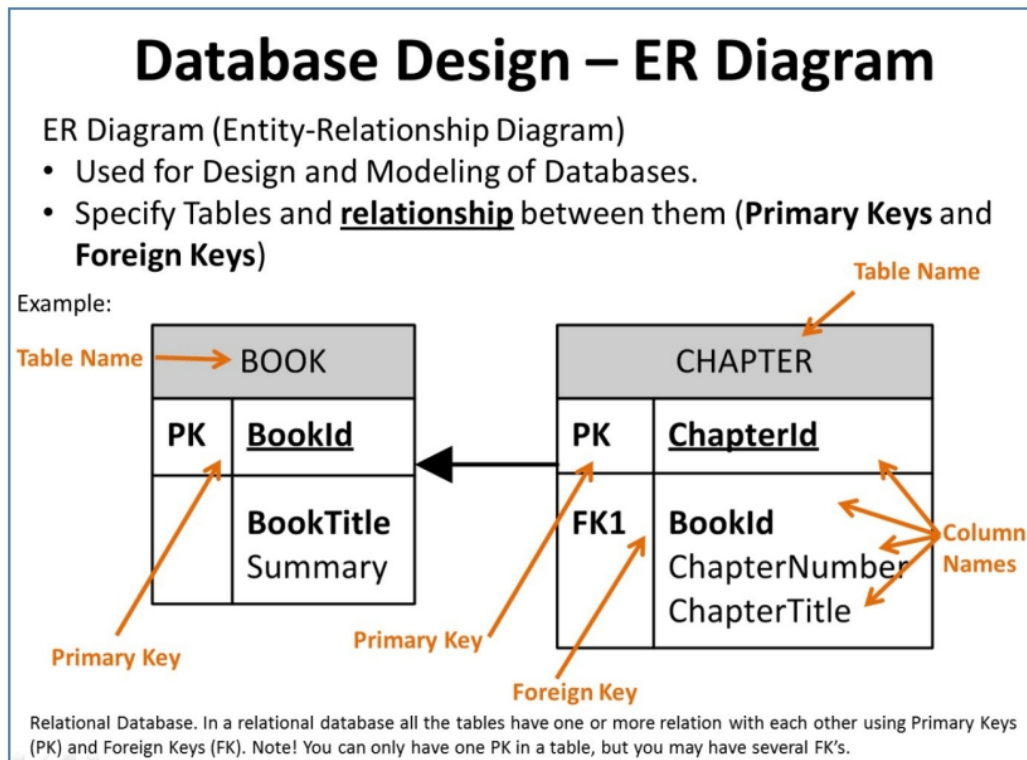

FIGURE 2.5 ER DIAGRAM

The **CREATE** table declaration is used to create a desk in a database.

 Syntax:
The information kind specifies what type of data the column can maintain.

```
CREATE TABLE table_name
(
column_name1  data_type,
column_name2  data_type,
column_name3  data_type,
....
)
```

You have unique statistics kinds for numbers, textual content dates, and so on.

Examples:

1. Numbers: int, flow
2. textual content/Stings: varchar(X) – wherein X is the period of the string
3. Dates: datetime
   and many others.

Instance:

We want to create a table referred to as "customer" which has the subsequent columns and information kinds:

	Column Name	Data Type	Allow Nulls
🔑	CustomerId	int	☐
	CustomerNumber	int	☐
	LastName	varchar(50)	☐
	FirstName	varchar(50)	☐
	AreaCode	int	☑
	Address	varchar(50)	☑
	Phone	varchar(20)	☑
			☐

FIGURE 2.6 CUSTOMER TABLE

```
CREATE TABLE CUSTOMER
(
     CustomerId int IDENTITY(1,1) PRIMARY KEY,
     CustomerNumber int NOT NULL UNIQUE,
     LastName varchar(50) NOT NULL,
     FirstName varchar(50) NOT NULL,
     AreaCode int NULL,
     Address varchar(50) NULL,
     Phone varchar(50) NULL,
)
GO
```

BEST PRACTICE

while creating tables you must take into account following those hints:
- Tables: Use top case and singular form in desk names – now not plural, e.g., "student" (not college students)
- Columns: Use Pascal notation, e.g., "StudentId"
- **Primary Key**:

1. The desk call is "path", call the primary Key column "CourseId", and so forth.

2. "Constantly" use Integer and identification(1,1) for primary Keys. Use specific constraint for different columns that wishes to be unique, e.g. RoomNumber

- Specify Required Columns (no longer NULL) – i.e., which columns that want to have statistics or not

- Standardize on few/these statistics kinds: int, go with the flow, varchar(x), datetime, bit
- Use English for desk and column names
- keep away from abbreviations! (Use RoomNumber – not RoomNo, RoomNr, ...)

2.3 DATABASE MODELLING

A database version is a kind of facts version that determines the logical shape of a database. It essentially determines in which way information may be stored, prepared and manipulated. The most famous instance of a database model is the relational model, which uses a table-primarily based layout

In addition, unique fashions apply to special levels of the database layout procedure. high-level conceptual statistics fashions are quality for mapping out relationships between statistics in ways that people perceive that information. record-based totally logical fashions, then again, greater intently replicate ways that the records is stored on the server.

Selecting a information model is also a depend of aligning your priorities for the database with the strengths of a particular model, whether or not those priorities consist of velocity, price discount, usability, or something else.

As mention in the starting of the CHAPTER , you ought to always start with database modelling before you start imposing the tables in a database gadget.
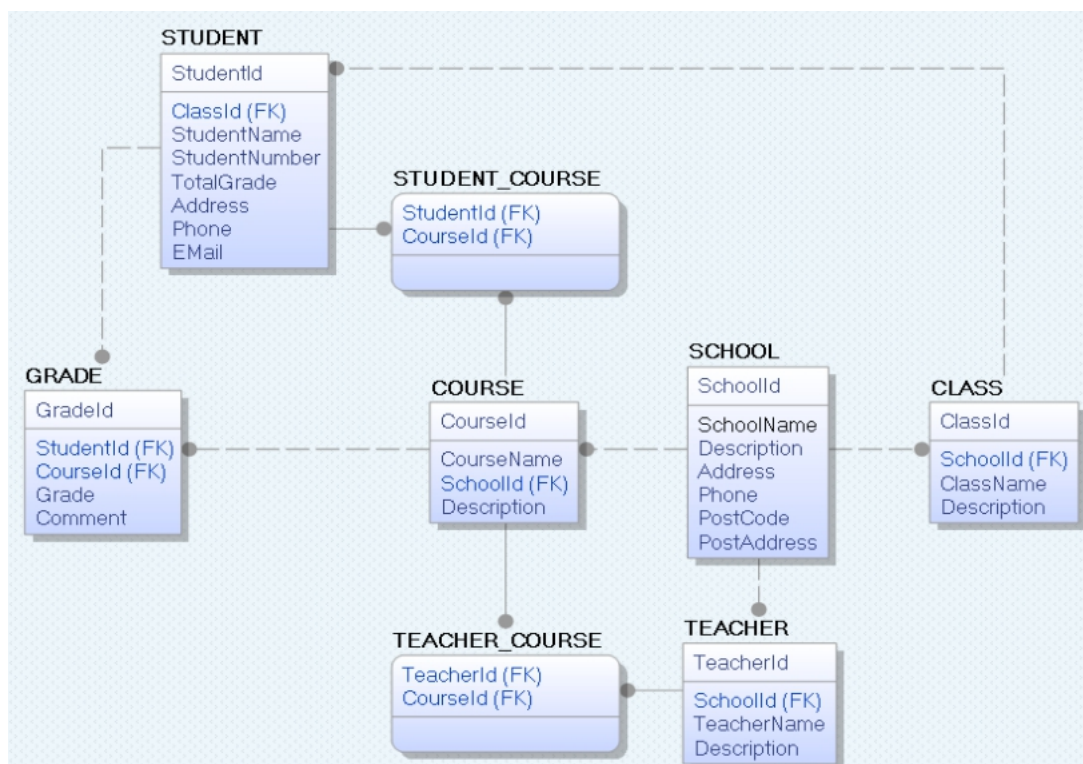beneath we see a database version in created with ERwin.

FIGURE 2.7 DATABASE MODELLING

Under we see the equal tables in the design tool in SQL Server.

FIGURE 2.7 RESULT OF DATA MODELING

FIGURE 2.8 TIPS AND TRICKS (SQL)

2.4 PRIMARY VS FOREIGN KEY

SCHOOL:

```
CREATE TABLE SCHOOL
(
    SchoolId int IDENTITY(1,1) PRIMARY KEY,
    SchoolName varchar(50) NOT NULL UNIQUE,
    Description varchar(1000) NULL,
    Address varchar(50) NULL,
    Phone varchar(50) NULL,
    PostCode varchar(50) NULL,
    PostAddress varchar(50) NULL,
)
GO
```

CLASS:

```
CREATE TABLE CLASS
(
    ClassId int IDENTITY(1,1) PRIMARY KEY,
    SchoolId int NOT NULL FOREIGN KEY REFERENCES SCHOOL (SchoolId),
    ClassName varchar(50) NOT NULL UNIQUE,
    Description varchar(1000) NULL,
)
GO
```

Primary Key - In a database, a table will have simplest one primary key which can not have a NULL fee. It usually represents a clustered index in a database desk and facilitates to organize the series of clustered index. primary key can be associated with some other tables as a foreign Key and you could observe car Increment fee for a primary key but car increment is not mandatory.

Foreign Key - It is only a referential constraint between or greater tables. If a primary secret's used in the some other desk then it'd be realize within the every other desk as overseas key that could take delivery of more than one null price. overseas key usually generates after primary key. hence they do not automatically increments. It supports clustered or non-clustered indexes and you may have multiple foreign key in a table.

CHAPTER 3
VB SCRIPTING

3.1 VB SCRIPT

Microsoft VB Script (visual simplex Script) is a preferred-reason, prizefighter and lively scripting language formed with the aid of Microsoft this is modeled on visual primary. nowadays,VBScript is the number one scripting language for quick test expert (QTP), that's a check automation device. This will train you a way to use VB Script for your daily life of any net-based or automation duty assignment devolution.

Audience

This has been for beginners to assist and recognize the simple-to-superior functionality of VB Script. After finishing this , you may locate yourself at a moderate stage of understanding in the use of Microsoft VB Script from in which you could take your self to the following plan.

Prerequisites

If one want to have terrific know-how of any computer programming language in order to make maximum of this educational. when you have finished programming in any client-side languages like Java script, then it is going to be quite smooth to be able to research the ropes of VB Script.

VB Script stands for visual fundamental Scripting that forms a subset of visual fundamental for packages (VBA). VBA is a product of Microsoft that is covered now not best in different Microsoft merchandise consisting of MS challenge and MS office but also in 0.33 birthday party equipment along with CAD.

3.1.1 Functions of VB Script

1.VB Script is a light-weight scripting language, which has a lightning speedy interpreter.

2.VB Script, for the maximum element, is case insensitive. It has a very smooth syntax, easy to examine and to position into effect.

3.no longer like C++ or Java, VB Script is an item-primarily based scripting language and not an item-orientated Programming language.

4.It uses thing item version (COM) with a purpose to get right of entry to the elements of the environment wherein it's far executing.

Successful execution of VB Script can appear most effective if it's far accomplished in Host environment such as net Explorer (IE), internet facts services (IIS) and windows Scripting Host (WSH)

3.1.2 VB script version history

VB Script become introduced by Microsoft manner back in 1996 and its first version turned into 1.0. The cutting-edge stable model of VBN Script is five.eight, which is to be had as a part of IE8 or windows 7. The VB Script utilization regions are aplenty and not restricted to the under list. VB Script is used as a scripting language in one of the popular Automation checking out equipment – quick take a look at expert

abbreviated as QTP home windows Scripting Host, which is used mainly through windows device directors for automating the windows computer.

3.1.3 where VBScript is nowadays ?

The modern model of VBScript is 5.eight, and with the modern-day improvement of .internet framework, Microsoft has determined to offer destiny assist of VBScript inside ASP.internet for net development. therefore, there will not be any more .

New versions of VBScript engine but the entire ailment fixes and protection issues are being addressed by using way of the Microsoft keeping Engineering group. however.

VBScript engine is probably shipped as a part of all Microsoft domestic home windows and IIS with the resource of default best the section that starts with <script> comes as a part of VB Scripting code.

3.2 Extension in VB SCRIPT and opening with EXPLORER

Some thing string series you placed in the file.write() might be displayed by using IE as page text.

Go to File menu and click" Save" option. Now you will get a window like this:
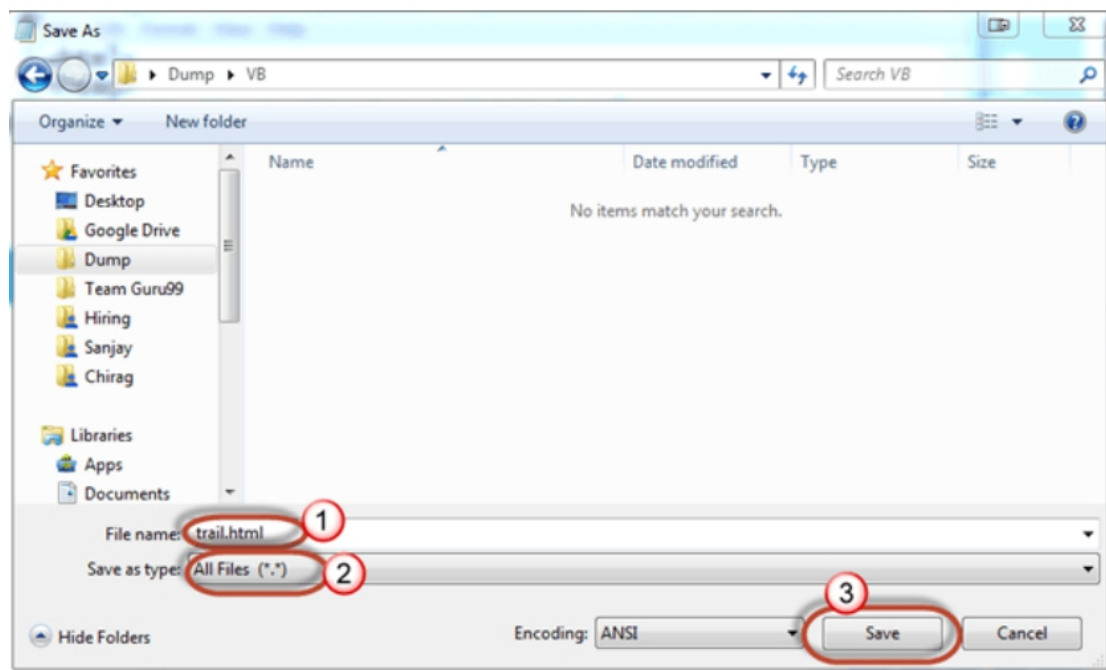
FIGURE 3.1 EXTENSION IN VB SCRIPT

1.Filename: enter the name as trial.html

2.Save as kind: Wholly

3.Click the shop button

Click the keep button and you'll see the document trial.html in folder in which you have got stored document.

To execute the VB Scripting code we have to just create, we need to open the trial.html report in internet Explorer.

When you have set IE as your default browser, you simply need to double click the document trial.html.

When you have set another net browser as your default browser, proper-click on the document and visit Open With --> net Explorer like this:
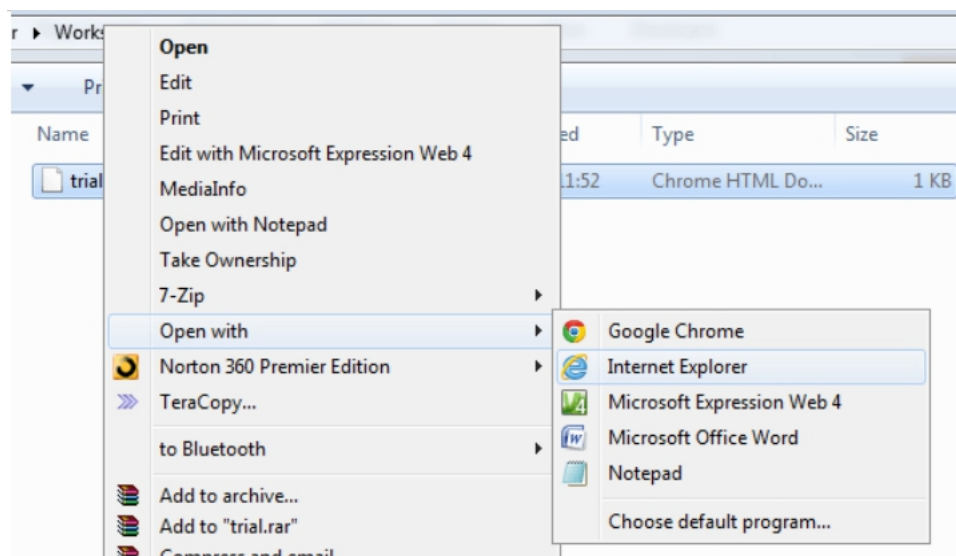

FIGURE 3.2 OPENING WITH EXPLORER

Note: you'll be proven a message to make IE your default browser

Yes, you implemented your first VB Script code effectively.
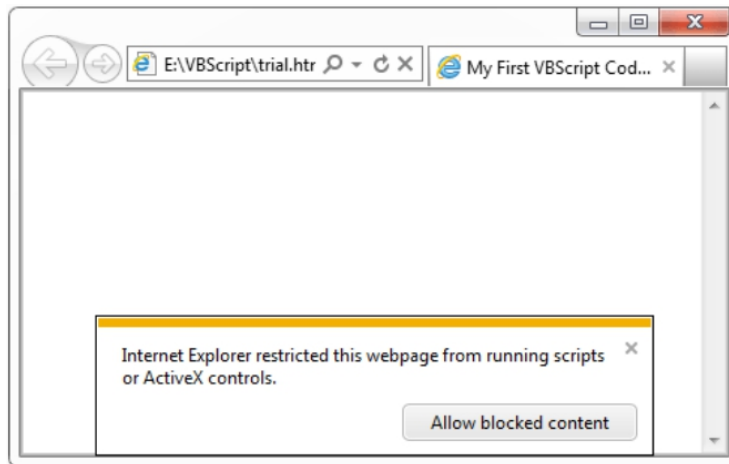
FIGURE 3.3 WARNING MESSAGE

Click on "allow blocked content material" and you'll be asked whether or not you want to set IE as your default browser. you may click on yes or No as you need.
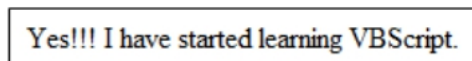
FIGURE 3.4 MESSAGE RECEIVED

3.3 Trouble shooting

Troubleshooting is the method of diagnosing the source of a trouble. ... The basic idea of troubleshooting is that you start with the most popular (and frequently most obvious) possible problems, after which slender it all the way down to greater precise problems. Many product manuals have a "Troubleshooting" segment in the returned of the manua

Now, the IE internet browser will be opened with a protection warning like this:
If the code isn't running -
● Press F12 to open developer equipment
● In left toolbar scroll down till you spot "Emulation" settings page
● Alternate report Mode from a default ("side") to ten
● Try using the subsequent code

3.4 VB Script Placement in HTML File

There is a flexibleness given to view VBScript code anywhere in an HTML written document. But the most preferable way to consider VBScript in your HTML file is as follows:

    Playscript in <head>...</head> subdivision.
    Playscript in <body>...</body> subdivision.
    Playscript in <body>...</body> and <head>...</head> bout.
    Playscript in an external file and then include in <head>...</head> subdivision.
In the following section, we will be noticing how one can put VBScript in antithetic ways:

```
<html>
<head>
<script type="text/Vbscript">
<!--
Function sayHello()
    Msgbox("Hello World")
End Function
//-->
</script>
</head>
<body>
<input type="button" onclick="sayHello()" value="Say Hello" />
</body>
</html>
```

3.4.1 VBScript in ExternalFile

As you start to paintings greater extensively with VBScript, you will probably find that there are instances.

```
<html>
<head>
<script type="text/vbscript" src="filename.vbs" ></script>
</head>
<body>
.......
</body>
```

```
Function sayHello()
    Msgbox "Hello World"
End Function
```

3.5 VARIABLES

It uniquely identifies an character and tells a programmer how that can be used in your code that a particular person is working on at that moment of time.

Regulations for maintaining Variables:
1. Variable name have to begin with an letter.

2. Variable name can not exceed 255 characters.
3. Variable ought to no longer contain a period (.)
4.   Variable name need to be particular within the alleged circumstance.

3.6 ARITHEMATIC AND COMPARISION OPERATORS

Operator	Description	Example
+	Adds two operands	A + B will give 15
-	Subtracts second operand from the first	A - B will give -5
*	Multiply both operands	A * B will give 50
/	Divide numerator by denominator	B / A will give 2
%	Modulus Operator and remainder of after an integer division	B MOD A will give 0
^	Exponentiation Operator	B ^ A will give 100000

Operator	Description	Example
==	Checks if the value of two operands are equal or not, if yes then condition becomes true.	(A == B) is False.
<>	Checks if the value of two operands are equal or not, if values are not equal then condition becomes true.	(A <> B) is True.
>	Checks if the value of left operand is greater than the value of right operand, if yes then condition becomes true.	(A > B) is False.
<	Checks if the value of left operand is less than the value of right operand, if yes then condition becomes true.	(A < B) is True.
>=	Checks if the value of left operand is greater than or equal to the value of right operand, if yes then condition becomes true.	(A >= B) is False.
<=	Checks if the value of left operand is less than or equal to the value of right operand, if yes then condition becomes true.	(A <= B) is True.

3.7 Dim, messagebox , inputbox

1. Dim: Its used in variable declartion

2. Messgebox : It is used in print the format of the statemnt that you actually want to be there in your code

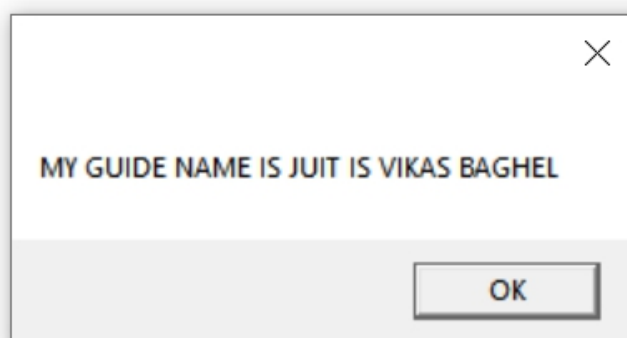**3. Inputbox** : If you want to have an input from the user.

EXAMPLE:

DIM C
C= INPUTBOX("ENTER A YOUR GUIDE NAME")
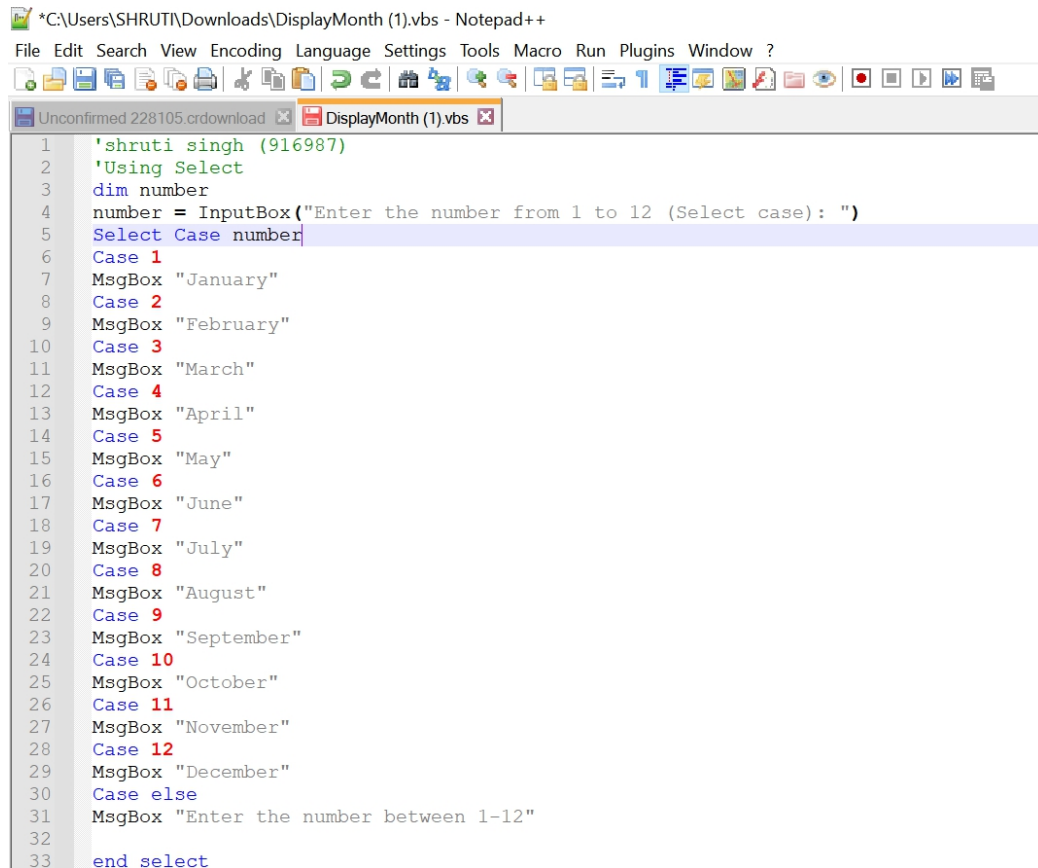MESSAGEBOX ("MY GUIDE NAME IS JUIT IS :" &C)
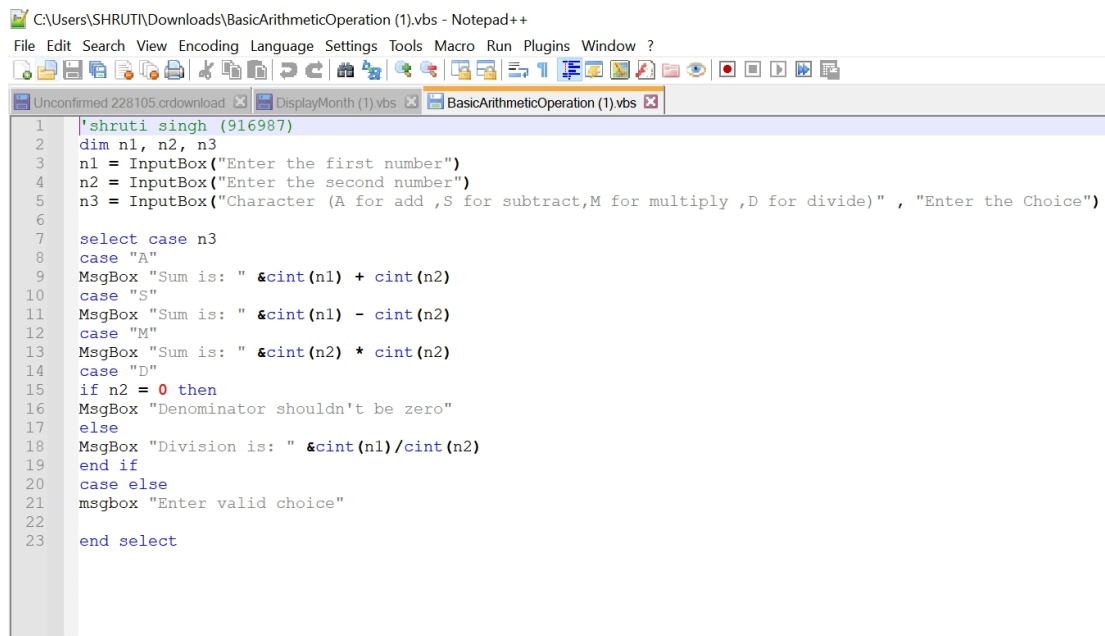
OUTPUT:

When you press ctrl+f5
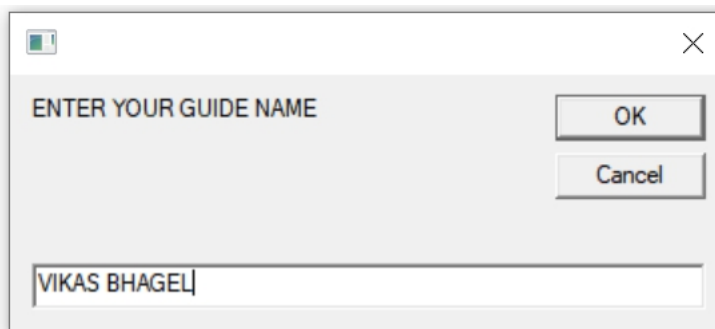
Final message :

3.8 CODE

Here are some of handson that we did during our training in cognizant. Some of them are:


```
'shruti singh (916987)
'Using Select
dim number
number = InputBox("Enter the number from 1 to 12 (Select case): ")
Select Case number
Case 1
MsgBox "January"
Case 2
MsgBox "February"
Case 3
MsgBox "March"
Case 4
MsgBox "April"
Case 5
MsgBox "May"
Case 6
MsgBox "June"
Case 7
MsgBox "July"
Case 8
MsgBox "August"
Case 9
MsgBox "September"
Case 10
MsgBox "October"
Case 11
MsgBox "November"
Case 12
MsgBox "December"
Case else
MsgBox "Enter the number between 1-12"

end select
```

FIGURE 3.5 DISPLAYING MONTH IN NOTEPAD ++


```
'shruti singh (916987)
dim n1, n2, n3
n1 = InputBox("Enter the first number")
n2 = InputBox("Enter the second number")
n3 = InputBox("Character (A for add ,S for subtract,M for multiply ,D for divide)" , "Enter the Choice")

select case n3
case "A"
MsgBox "Sum is: " &cint(n1) + cint(n2)
case "S"
MsgBox "Sum is: " &cint(n1) - cint(n2)
case "M"
MsgBox "Sum is: " &cint(n2) * cint(n2)
case "D"
if n2 = 0 then
MsgBox "Denominator shouldn't be zero"
else
MsgBox "Division is: " &cint(n1)/cint(n2)
end if
case else
msgbox "Enter valid choice"

end select
```

FIGURE 3.6 BASIC OPERATIONS IN NOTEPAD ++

FIGURE 3.7 SORT STRING IN NOTEPAD ++

FIGURE 3.8 FILE SYSTEM CREATION IN NOTEPAD ++

CHAPTER 4
UNIFIED FUNCTIONAL TESTING

4.1 UFT WINDOW

Before you begin developing your test, make yourself familiar with the main UFT window. The picture underneath indicates a UFT window as it might appear right when you create a test, with the check flow proven in the canvas, and with the toolbar, Toolbox pane, facts pane, and properties pane displayed.
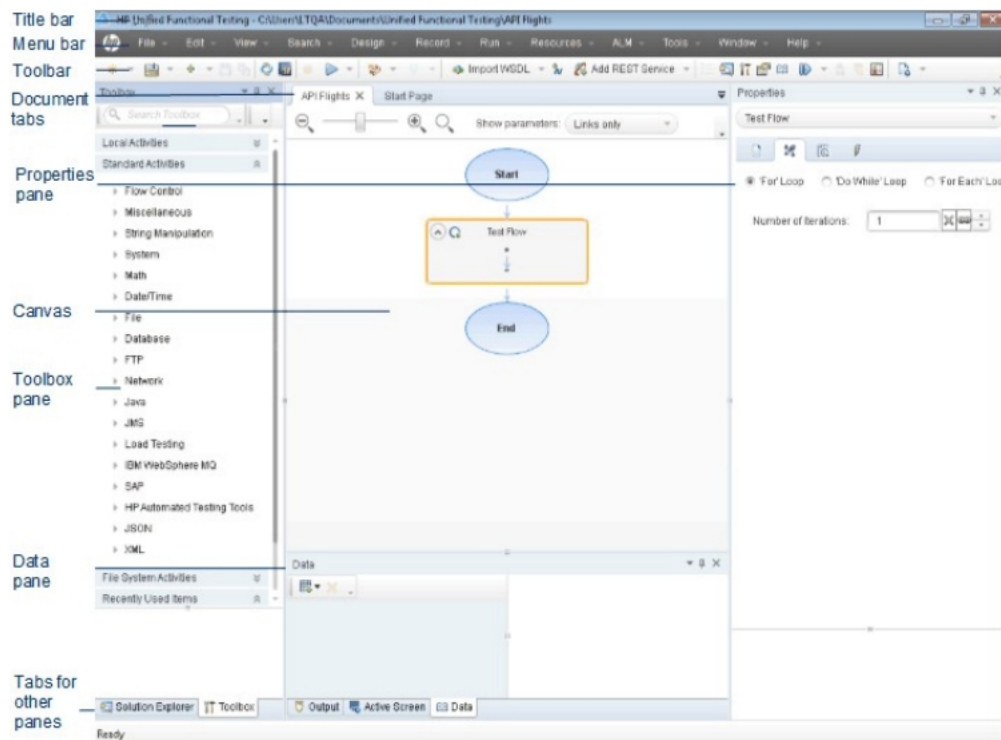

FIGURE 4.1 UFT WINDOW

Take a couple of minutes to explore the additives of the UFT window. you may then hold to investigate the software you may be trying out in this academic.

The UFT window presentations the subsequent elements:
document sorts

UFT shows open files inside the file pane. Use the record tabs located just below the toolbar to navigate to open files and bring them into focus
The record pane can show the following varieties of files:

Exams/enterprise additives: you can create, view, and alter your test or enterprise aspect in the canvas, which permits you to edit the waft of your check or thing steps.

Consumer Code documents : permits you to go into your custom code as an event handler for an current check step (inside the TestUserCode.cs file) or in other files you import into UFT.

Start web page: Welcomes you to UFT and affords hyperlinks to recent files, descriptions of new capabilities, product forums, and different support links. you could use the shortcut buttons to open new and current documents.

Inner Browser pages: enables you to open internet pages for forums and different product related pages, along with the ones accessible from the start page or the help menu.

4.2 The Flight API application

The first step is to invoke the sample flight software so that it will be available in your take a look at.

1.make certain you have got administrator privileges. those are required by windows to run the pattern HP Flights provider.

2.select begin > (All) packages > HP software program > HP Unified useful checking out > sample packages > Flight API > sample software. A Command window opens indicating that the application is to be had.
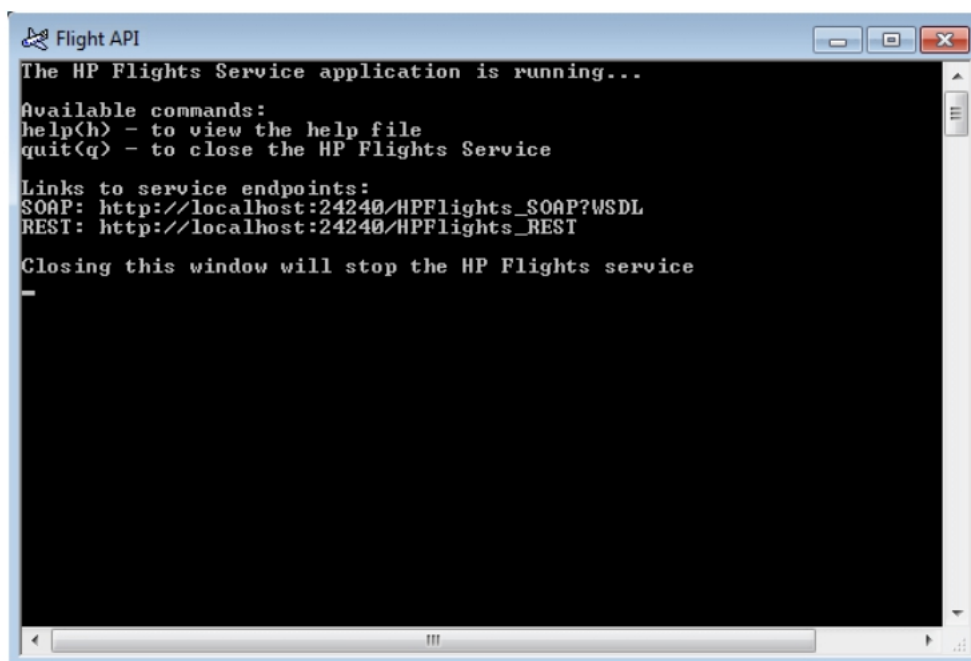
Note: When working in Windows 8 or Windows Server 2012, you can access UFT and UFT tools directly from the **Start** screen. For more information about working with UFT in Windows 8, see the *HP Unified Functional Testing User Guide.*

FIGURE 4.2 OPENING FLIGHT APPLICATION

3.If the window problems a message that the default port 24240 is unavailable, edit the<installation_directory>SampleApplication\HPFlights_Service.exe.config document in a text editor. in the appSettings segment, update the 24240 port key with a valid one.

4.type help within the command window to view the methods covered in the software.

As you explore the listing of strategies included in the software, be aware the assets information furnished for every technique. you will need this facts later in this educational to offer property
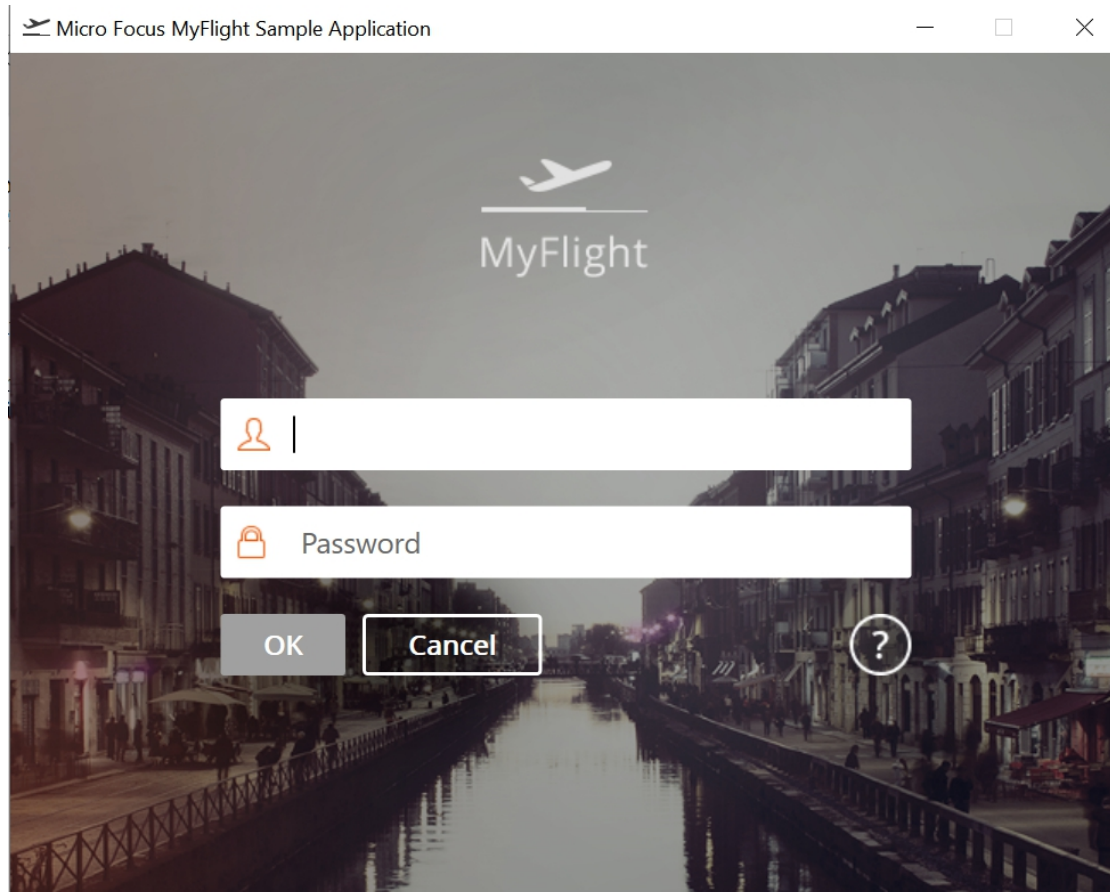

FIGURE 4.3 MY FLIGHT APPLICATION

In case you don't want to open it directly through web application . You can also use the extension sytemutil.run"path where your application has been present". You simply don't need to download it . It is automatically downloaded as soon as you download the version of uft in your pc or laptop. This application can run on mac as well.

4.3 RECORD AND RUN

Further we are going through various features in our uft software for the better understanding of the software such as record,run….etc . Either you can access them from titlebar wrong you can also use shortcuts for them.

RUN

1. click on the Run button or press F5 to open the Run dialog box.

2.within the Run dialog field, click options to enlarge the conversation container.

3.pick the brief run effects folder option.

4.click on Run to collect and run the test.

RECORD

whilst recording, UFT One:

1. stores the test objects within the check or thing's neighborhood item repository.

2. provides the operations you carry out as steps to the chosen test movement or aspect.

3. Enters an appropriate methods, and argument values for the objects to your software.

4. add checkpoint and output cost steps whilst recording to check or retrieve values out of your App
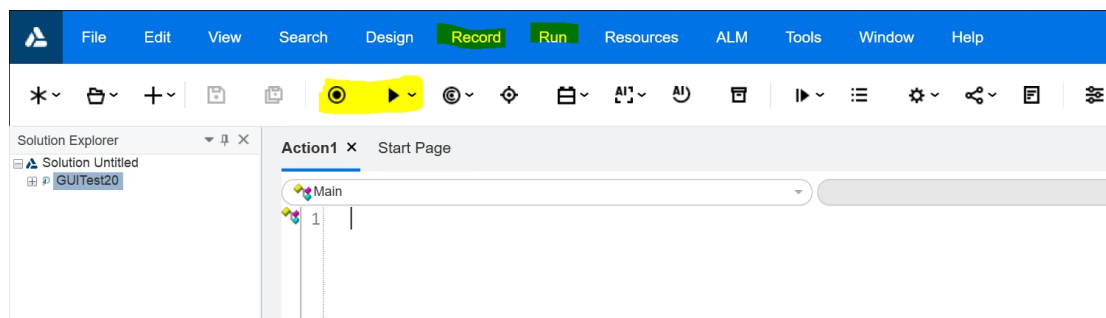

FIGURE 4.4 RECORD AND RUN

4.4 VIEWING RESULTS

After your check runs, the Run effects Viewer opens.

1. Pick out View > amplify All or click on the amplify All toolbar button to view all the take a look at steps.

2. Inside the test step hierarchy in the left pane, click on the trade text node. The step outcomes for the alternate textual content step are displayed inside the end result details and Captured facts panes.

3.Inside the Captured statistics pane, view the supply and substitute strings and notice the end result string, goodbye world. this is in reality the expected string—the check exceeded.

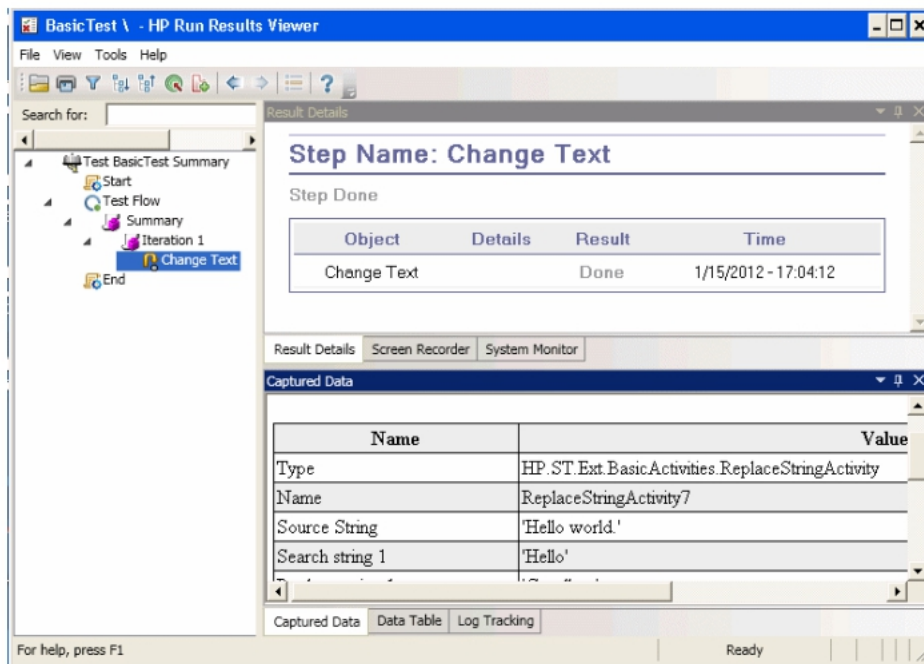Whilst you are completed reviewing the consequences, near the Run consequences Viewer

FIGURE 4.5 RESULT VIEWER

4.5 CREATING STEPS

You create check steps with the aid of dragging activities from the Toolbox pane into the canvas and putting the step properties inside the properties pane.
on this phase you'll create a easy take a look at step to demonstrate the usage of the Toolbox and residences panes.
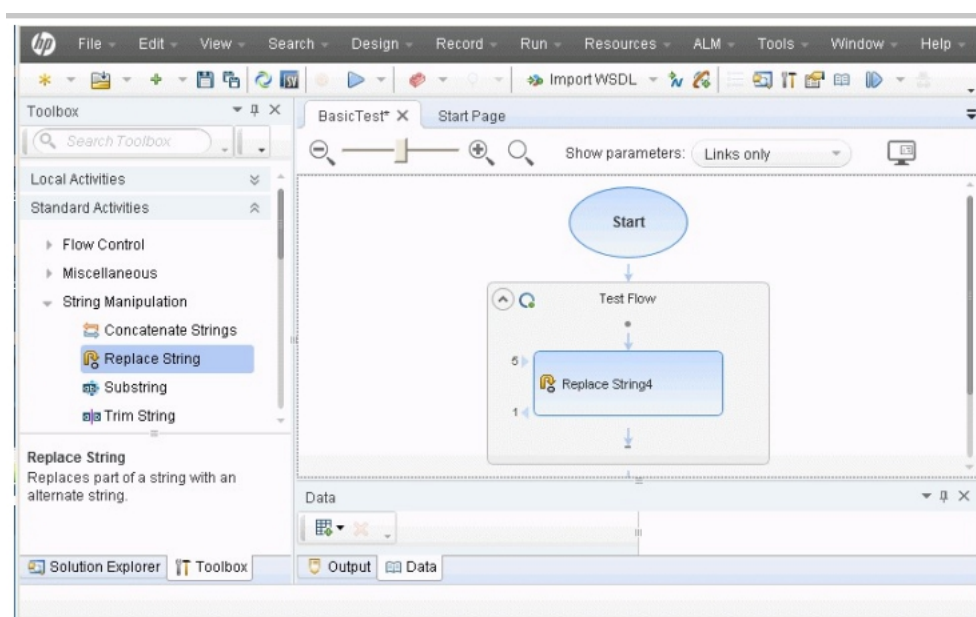

FIGURE 4.6 CREATING STEP

1.Discover the update String hobby.
a.Click the Toolbox tab to show the Toolbox pane.
b.In the Toolbox pane, increase the String Manipulation category and locate the update String string pastime.

This hobby searches for a exact text string and replaces the string with change textual content. The textual content strings to discover and replace could be certain inside the properties pane.

2.Create a step.
From the Toolbox pane, drag the update String interest onto the canvas and drop it within the
take a look at drift place.

3.Alternate the step's show name.
a.Select View > homes to show the properties pane.
b.Choose the update String step in the canvas.
c.Within the residences pane, click on the overall tab .
d.Inside the call row, kind trade textual content and press enter. This modifications the step call within the canvas.

4.Set the input properties for the exchange text step:
In the houses pane, pick out the enter/Checkpoints tab. input the following values inside the input phase of the input/Checkpoints tab:

● source string: hey world..

● search string: hello

● replace string: goodbye

4.5.1Creating check Steps to your take a look at - overview

After analyzing your application and planning what you want to check, you want to create test steps for your take a look at. You create test steps with the aid of dragging available sports from the Toolbox pane to the canvas to make a take a look at flow.
UFT has extraordinary forms of activities to be used on your check:

● Fashionable API sports

● UFT helps some of trendy API sports that version not unusual application methods, together with:

● Waft control activities, including Wait, destroy, and Conditional steps.

● String Manipulation activities, such as Concatenate String and replace String.

● File system sports for processes concerning file machine approaches

- Database sports, to your utility's interplay with a database

- FTP activities for application tactics that contain using FTP (file switch Protocol)

- Network activities, including HTTP Request and cleaning soap Request

- JSON and XML string activities for application processes that require conversio of XML and JSON

Math and Date/Time activities Different Miscellaneous activities, along with custom Code activities, Run and cease software activities, and record sports.

- A name Java elegance interest to apply Java-based utility procedures

- JMS (Java Message service) sports

- IBM Websphere MQ sports

- SAP activities to get right of entry to an SAP iDOC or RFC from a SAP server

Load checking out activities to enable your check to run in HP LoadRunner

HP automatic checking out tools activities, which enable you to name a GUI take a look at or action, API check or movement, or virtual user Generator script from UFT, QuickTest expert, service check, or LoadRunner to use as a part of your take a look at.

Iternet provider techniques those sports are saved in a WSDL report that you import into UFT . RRest carrier methods. those sports are created using UFT's relaxation provider editor after which used for your take a look at.

web software methods. these sports are saved in a WADL record which you import into UFT.

consumer-designed activities: those sports are consumer-created the usage of UFT's activity Wizard, and then imported right into a test.

Internet meeting sports. these activities are created whilst you import a .net meeting in a take a look at. Thee usage of those sports, you can create test steps for plenty specific sorts of utility processes.
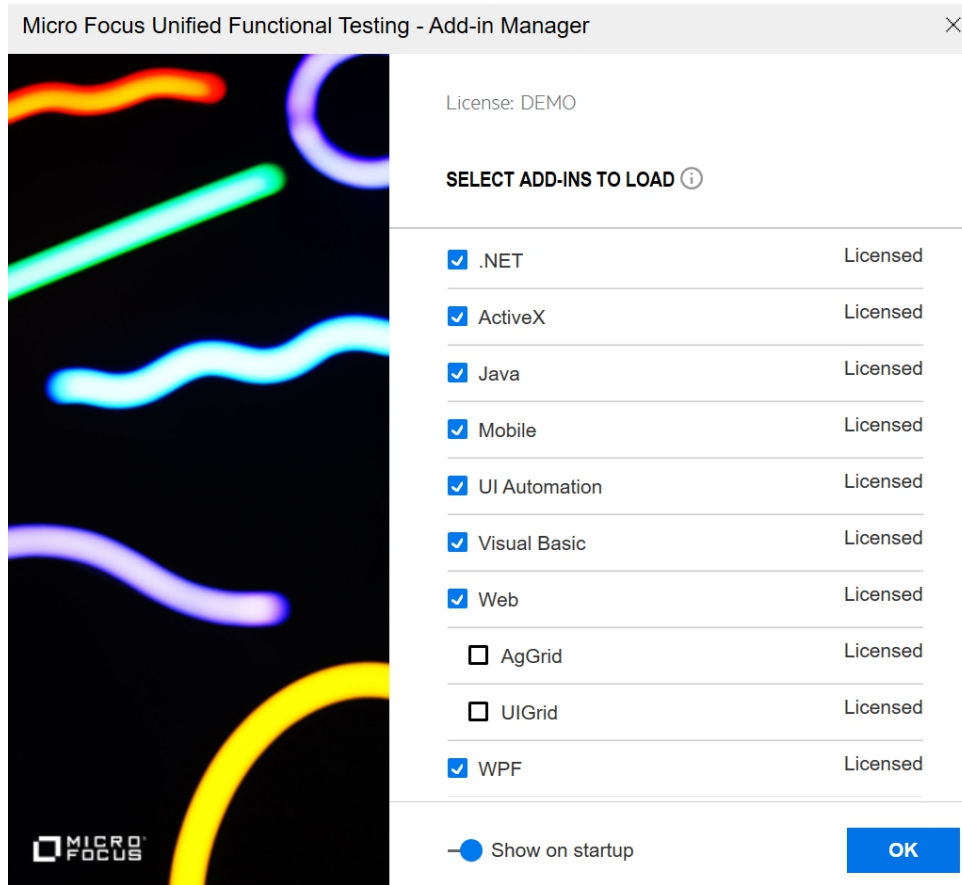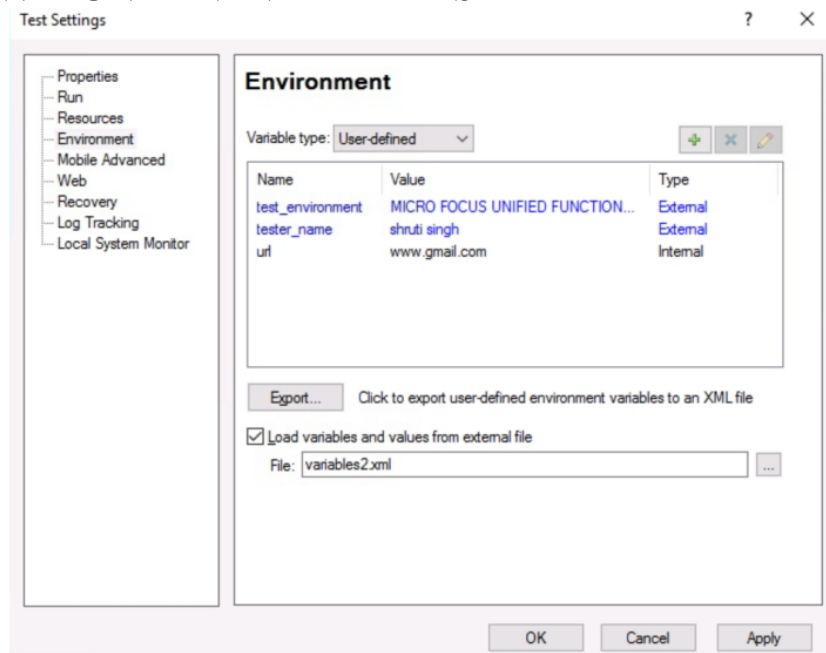
FIGURE 4.6 ADD IN 'S

4.6 CODE

4.6.1 ENVIRONMENT VARIABLES

XML CODE FOR ENVIRONMENT


```
variables2.xml - Notepad
File   Edit   Format   View   Help
<Environment>
        <Variable>
                <Name>test_environment</Name>
                <Value><![CDATA[MICRO FOCUS UNIFIED FUNCTIONAL TESTING]]></Value>
        </Variable>
        <Variable>
                <Name>tester_name</Name>
                <Value><![CDATA[shruti singh]]></Value>
        </Variable>
</Environment>
```
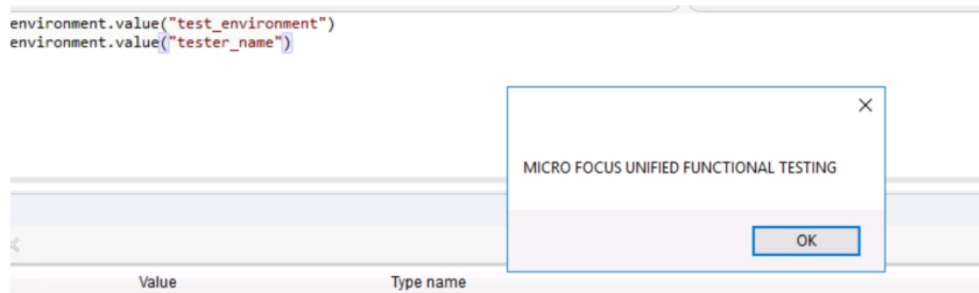

Above mentioned are the xml code and outputs of the environment variables.

4.6.2 DataTable Object Methods

1. Create an excel sheet

principal	rate	time
232	3.26	4
2556	7.00	5
1322	6.50	6
32.21	3.32	4.4

2. Open UFT one Import this excel to the script


```
Action1  X   UFT Report : subroutine - Res36     Start Page

Main

1   datatable.AddSheet "si1"
2   datatable.ImportSheet "C:\Users\Administrator\Documents\Unified Functional Testing\Book1.xlsx","si","si1"
3   i = datatable.GetSheet("si1").GetRowCount
4   j = datatable.GetSheet("si1").GetParameterCount
5   msgbox "The number of rows are : " & i & " The number of columns are : " & j
6   datatable.GetSheet("si1").SetCurrentRow(2)
7   p = datatable.Value("principle","si1")
8   r = datatable.Value("rate","si1")
9   t = datatable.Value("time","si1")
10  msgbox r & "," & p & "," & t
11
```

3. Run the script

   OUTPUT

4.6.3 Array Implementation

1. Open UFT one

2. Create an array

3. Add values to the array

4. Retrieve the array values
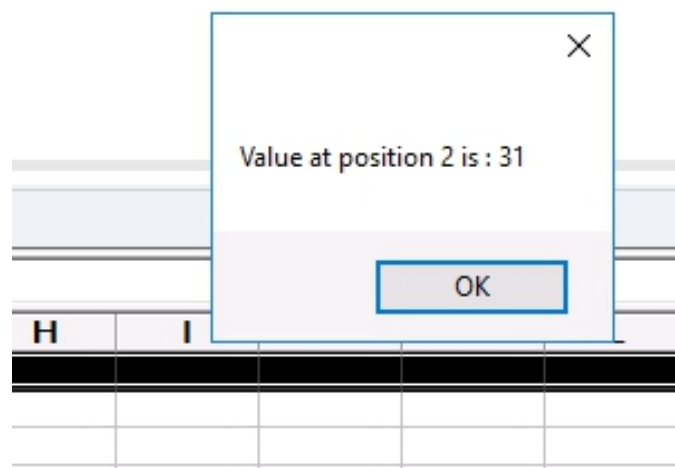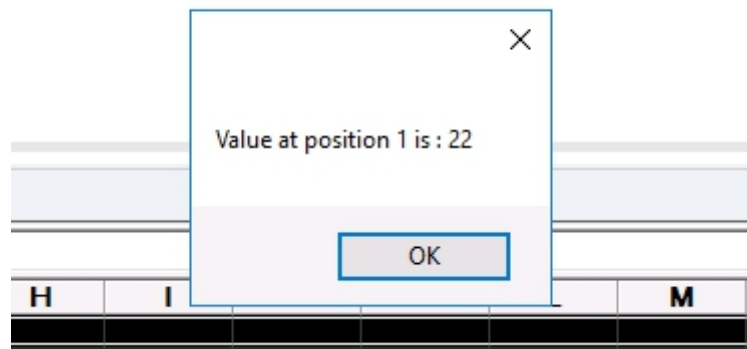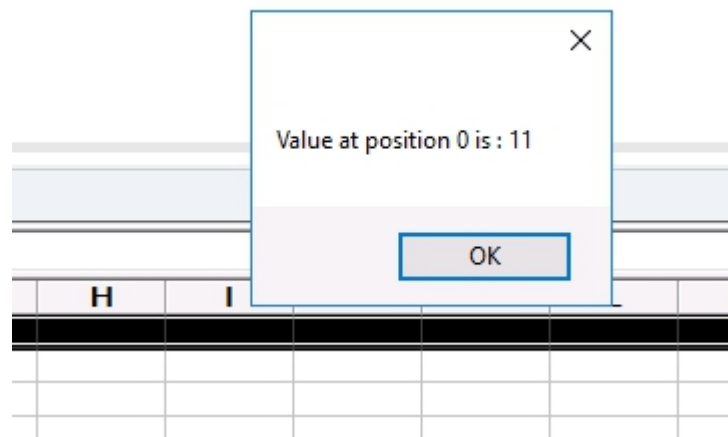
Value at position 0 is : 11
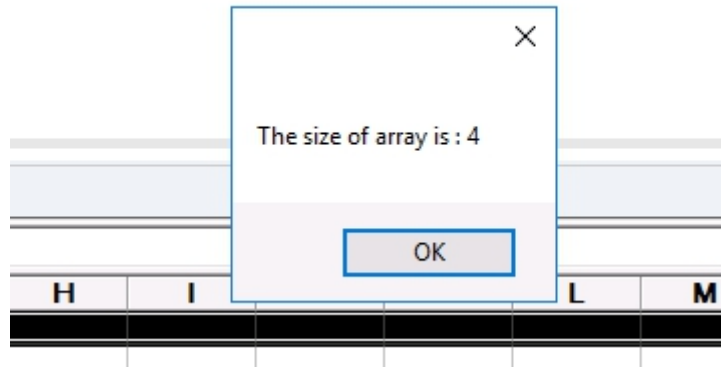
OK

Value at position 1 is : 22

OK

Value at position 2 is : 31

OK

5.The size of array

The size of array is : 4

OK

```
Main
   datatable.GetSheet("si1").SetCurrentRow(2)
7  p = datatable.Value("principle","si1")
8  r = datatable.Value("rate","si1")
9  t = datatable.Value("time","si1")
10 msgbox r & "," & p & "," & t
11
```

7%,2556,5

OK

	principle	rate	time	D	E	F	G	H	I		L	M
1	232	3.26%	4									
2	2556	7%	5									
3	1322	6.50%	6									
4	32.21	3.32%	4.4									
5												

A2 | 2556

Global Action1 si1

Data Breakpoints

CHAPTER 5
FUTURE WORK

In the upcoming weeks of my training I will be learning more abouts unified functional software which doesnt require any of the prior knowledge of the coding and will be submitting various handson and will go through quizez , hackerthons and code challenges and ICT . After completing with it will go through the topic HC FACETS . And will be submittong various handson and quizes regarding the same

CHAPTER 6
CONCLUSION

Cognizant has collaborated with Udemy to provide world class learning videos for the evolving future of work. These Udemy programs are woven into alearning path, empowering you to plan and learn at your style. The program also connects with Subject Matter Experts to get the professional guidance on your queries in the learning journey.

The program continuously evaluates if you are able to apply those self-learnt skills to solve a business problem. Depicted below are the threekey learning components,which are distributed across the learning journey for the purpose ofcontinuous evaluation.

Everyone have to score a minimum of 70% in each of the key components

REFERENCES

- https://www.guru99.com/functional-testing.html

- https://www.guru99.com/functional-testing.html

- https://www.researchgate.net/publication/320410672_Using_VBScript_For_Perfecting_Statistical_Report

- https://www.w3schools.com/sql/

- https://www.microfocus.com/en-us/products/uft-one/overview

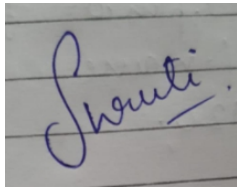- https://www.guru99.com/quick-test-professional-qtp-tutorial.html

Project Report Undertaking

I Ms. **SHRUTI SINGH**-Roll **171065** No. **7895909198** Branch **ELECTRONICS AND COMMUNICATION** is doing my internship with **COGNIZANT** from **27 FEB 2021** to **11 JUNE 2021**

As per procedure I have to submit my project report to the university related to my work that I have done during this internship.

I have compiled my project report. But due to COVID-19 situation my project mentor in the company is not able to sign my project report.

So I hereby declare that the project report is fully designed/developed by me and no part of the work is borrowed or purchased from any agency. And I'll produce a certificate/document of my internship completion with the company to TnP Cell whenever COVID-19 situation gets normal.

Signature :
Name : SHRUTI SINGH
Roll no : 171065
Date : 20 may 2021