END TERM MAJOR PROJECT REPORT

(28th February 2021 – 25th June 2021)

ON

Automation testing

Cognizant

COGNIZANT TECHNOLOGY SOLUTIONS

Pune, cognizant Technology
solution

Submitted by:

DIYA VERMA

171452

B. TECH (INFORMATION TECHNOLOGY)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
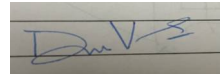DISTT. SOLAN, HIMACHAL PRADESH 173234
SESSION (2017-2021)

PROJECT REPORT UNDERTAKING

I, Diya Verma Roll No. 171452   Branch IT is doing my internship with **COGNIZANT TECHNOLOGY SOLUTIONS** from 28 February 2021 - 11th June 2021.

As per procedure I must 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 will produce a certificate/document of my internship completion with the company to Training and placement cell whenever COVID-19 situation gets normal.

STUDENT'S SIGNATURE

DECLARATION

Cognizant does not allow the project material to be used beyond the said guidelines, I Diya Verma am aware and appropriately create the project report without violating any compliance.

Allocation of technology track depends on the following –student capability, business demand and location where it can be offered. Student capability is assessed through –electives completed by the student, participation in other technical forums and performance in Internship.

The projects completed in the internship duration (full) will vary from development, to enhancements, research, scripting across technologies like Virtual basic script, UFT, SQL, Testing etc.Project in Application Development space requires good programming skills. Some of them would require Digital skills as well. These projects are a combination of business aligned business case that we deliver to our clients or internal projects to address Cognizant's business needs.

Learning curriculum as per the learning track assigned to the interns. The learning path include in-depth sessions, hands on exercise and project work. There will also be series of webinars, quizzes, code SME interactions, mentor connects, code challenges, assessments etc. to accelerate your learning. The performance during Internship would be monitored through formal evaluations.

Internship is for a period of 3 to 6months, during your 8th semester. Actual Internship dates and duration would be based on the business demand aligned skill tracks offered. Thus, I in middle of the internship program.

Diya Verma
Enrolment No.: 171452
B. Tech (IT)

ACKNOWLEDGEMENT

It was a privilege for me to work as a full-time intern at **"COGNIZANT TECHNOLOGY SOLUTIONS"** under the supervision of

This report describes the training that underwent, for the duration of 28 February 2021 - 11ᵗʰ June 2021 at intern at **"COGNIZANT TECHNOLOGY SOLUTIONS"** an American multinational technology company that provides business consulting, information technology and outsourcing services. It is headquartered in Teaneck, New Jersey, United States. Cognizant is part of the NASDAQ-100 and trades under CTSH.

I would like to express our sincere gratitude of the all the people who have helped and supported me throughout. I am deeply indebted to.   (Programmer Trainee Techno Campus Office (TCO)STPI), (External Trainer & Mentor) and other fellow colleagues at **COGNIZANT TECHNOLOGY SOLUTIONS** for organizing an effortless internship program, efficiently and providing me valuable resources and for their cooperation and willingness to share their expertise and knowledge and to devote their precious time to discuss related topics.

The help and co-operation extended by the staff at **COGNIZANT TECHNOLOGY SOLUTIONS** is fully acknowledged. I thoroughly enjoyed my entire internship program and would like to thank everyone at **COGNIZANT TECHNOLOGY SOLUTIONS** for their guidance and support.

Diya Verma
Enrolment No.: 171452
B. Tech (IT)

Table of contents

ABOUT COGNIZANT

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating, and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build, and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 194 on the Fortune 500 and is consistently listed among the most admired companies in the world.

India is a crucial piece of our global business strategy, with global delivery centres in Mumbai, Bangalore, Chennai, Coimbatore, Gurgaon, Hyderabad, Kochi, Kolkata, and Pune.

Domain	: Information technology consulting company
Company website	: https://www.cognizant.com/
CEO	: Brian Humphries (1 Apr 2019–)
Revenue	: 1,680 crores USD (2019)
Founded	: 26 January 1994
Headquarters	: Teaneck, New Jersey, United States
Subsidiaries	: Soft Vision, TriZetto Group, Inc. (The), MORE
Founders	: Kumar Mahadeva, Francisco D'Souza

COMPANY'S MARKET PRESENCE

1. Automotive
2. Insurance
3. Banking
4. Life Sciences
5. Capital Markets
6. Manufacturing
7. Communications, Media & Technology
8. Oil & Gas
9. Consumer Goods
10. Retail
11. Education
12. Transportation & Logistics
13. Healthcare
14. Travel & Hospitality
15. Information Services
16. Utilities

SERVICES PROVIDED BY THE COMPANY

1. Application Services & Modernization
2. Enterprise Application Services
3. Artificial Intelligence
4. Internet of Things
5. Cloud Enablement
6. Quality Engineering & Assurance
7. Cognizant Infrastructure Services
8. Digital Strategy
9. Cognizant Security
10. Business Process Services
11. Core Modernization
12. Enterprise Services

13. Digital Engineering

14. Industry & Platform Solutions

15. Digital Experience

16. Intelligent Process Automation

PUBLIC POLICY

Organization believes that the best solutions to the world's problems require governments, industries, organizations, and individuals to work together. We work as partners with governments, others in our industry, the broader business community and civil society to define public policies that support our operations, customers, and communities. We also encourage our employees to be active in civic and community activities, including by participating in the political process on an individual basis. All these activities must comply with applicable law and Cognizant's Core Values and Code of Ethics.

COGNIZANT IN INDIA

On 20 Jan 1994 Cognizant registered its branch in Chennai, Tamil Nadu, India with the legal name Cognizant Technology Solutions India Private Limited. The other centres of the company are in Bangalore, Chennai, Coimbatore, Gurgaon, Noida, Hyderabad, Kochi, Kolkata, Mangalore, Mumbai, and Pune.

Cognizant is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. On its 2021 rankings of Top Companies, LinkedIn ranked Cognizant #2 in India. LinkedIn said that the Top Companies are investing in employee success, career development, and equity and inclusion to ensure they continue to be among the best workplaces for employee growth now, and in a post-pandemic world.

"We are happy be named to the LinkedIn Top Companies list in India," said Rajesh Nambiar, Chairman and Managing Director, Cognizant India. "As we transform the companies the world relies on, our people are our differentiator. We are focused on supporting the many ways our associates can make a positive impact at Cognizant – on their clients, on society, on each another and on their own lives."

Cognizant Named a Top Employer in India by LinkedIn and Forbes Magazine, Launches Humanitarian Effort, Operation C3, in Support of India's Fight Against COVID-19

Cognizant commitment to Indian society stems from the long-term presence in the country and the over 200,000 Indian associates to whom the company owes much of its success. Earlier this week, Cognizant made a new commitment: to help the country and its people overcome the humanitarian crisis created by the pandemic. Named Operation C3: Cognizant Combats COVID-19, the effort includes donations of $1.5 million (approximately INR 10 Crores) through the Cognizant Foundation to operationalize response efforts with partners across India; and an additional $2 million (approximately INR 15 Crores) in emergency funding to UNICEF in India to help address acute shortages in life-saving oxygen, and to deploy medical and testing supplies.

In addition to the above, earlier this month, Cognizant announced that it would cover the vaccination cost of more than 600,000 people in India, including its more than 200,000 full-time employees and their dependents in the country, as well as approximately 50,000 people comprising contingent staff such as contract, support and security personnel, and their families.

Cognizant has notched two other "Best Employer" accolades in recent months, both awarded by Forbes Magazine: "World's Best Employers" and "Best Employers for Diversity."

"We are incredibly proud to be named to these Forbes lists for Best Employers," said Shantanu Jha, Chief People Officer, Cognizant India. "For us, it means that we are creating conditions where every person can thrive, and we work relentlessly to ensure we lean into that commitment. Through our network of associate groups, Diversity and Inclusion programs and leadership accountability measures, we are ensuring our people feel connected to the organization and to one another. We want them to feel empowered to share their ideas and perspectives, and comfortable showing up as their true and authentic selves."

Cognizant India is one of the most prominent global distribution centres for Cognizant Technology Solutions, and it plays an important role in market outsourcing services in addition to consultancy and IT-related solutions.

ABOUT COGNIZANT ACADEMY

As Cognizant continues its path to become 'fit for growth,' Cognizant Academy contributes towards that goal by enabling associates who would make that happen.

Being the in-house learning and development wing of the organisation, Cognizant Academy is focused on making associates future-ready through role-based and business-aligned learning solutions.

Generation Cognizant (GEN' C) Program encourages you to be more autonomous learners during guided self-learning hours, completing the learning objectives on your own pace and style, and get ready for the hands-on practice time

GEN' C learning program engages young talents with a comprehensive learning pathway, giving the millennials an opportunity to interact with Subject Matter Experts (SME), understand the corporate environment, and groom themselves.

Figure 1: Academy at a glance

Academy at a glance:

Cognizant Academy

533
L&D professionals

World-wide presence:
India, North America, GGM

Dedicated Capability Academies

State-of-the-art
learning tools and platforms

Harnessing the power
of curiosity and growth mindset

Cognizant emphasises on Learner Autonomy where students take charge of their own learning, with the available tools and resources. More focus is on "learning" than "teaching". Get ready to embark your own learning adventure.

Cognizant Academy's goal is to create a vibrant learning culture and climate, Academy embodies the spirit of collaboration between the organisation and individual associates to realise one common aspiration

PROGRAM HIGHLIGHTS

- The complete learning journey is formalised using adult learning principles, where problem solving and applying the skills gained are given more importance than conceptual learning.

- Learner Autonomy is encouraged via Flipped Classroom, where the learning platform offers world class learning resources, and students would not be constrained by tutelage off an instructor.

- Get mentored by SME, whose motivation and guidance will help you accelerate in the learning journey.

This whole program basically encourages us to be more autonomous and fast learners during guided and provided self-learning and training hours, completing the learning given objective on your own speed and style, and get ready for the required hands-on practise time.

SELF-LEARNING TIME	PRACTICE TIME
Going through the Learning Objectives	Getting guidance from Subject Matter specialist

Trying to complete the required objectives by accessing learning resources example include 'UDEMY course	Deep diving specially on the most highlighted topic of the whole assignment

LEARNING PERIOD:

The learning journey contains 2 stages, followed by a 3 mini, major and H.t projects

STAGE 1 –QEA PRE

- Test case writing and functional testing
- SQL queries, DDL, DML
- Virtual basic script

STAGE 2 –UFT, unified functional testing
- Run and record general programme
- Browsing web objects
- Exporting web objects into ms-excel

Business Aligned Project is also providing for a wide experience of real time problem in corporate solved using Agile methodology.

Cognizant has worked on this internship with the collaboration of udemy: online learning platform in order to provide the world class learning videos for the evolving future of work. These learning programs are woven into a learning path, empower us to plan and learn at your style.

The program also connects you with Subject Matter Specialists to get the professional guidance on your queries in the learning journey.

These programs eventually evaluates how you can apply those are self-learnt skills to solve a business hew problem. Depicts are below are the 3 keys learning parts, which re distributed across the learning journey for the purpose of continuous for evaluation.

SCHEDULING OF LEARNING COMPONENTS

The overall sum duration of this program is 12 weeks. From the high day 1 of the programs, every day will have some learning scripting components dish to be completed by the GEN C.

The detailed student handbook will have grips the day-wise schedule. All the learning components have to be completed as specified in the day-wise agile schedule. These components will be auto rinse scheduled in your specific learning paths as per the given schedule.

INNOVATIVE LEARNING MODELS IN 2020

The Gen C (Generation Cognizant) Program just stretches across and begin with the entire timeline of a campus hire's learning journey from the shared time he/she accepts the offer letter from the company -to the first year of his/her tenure in the organisation and proceed life in this environment. There is a always robust learning strategy put in place across each of the stages.
- Classroom session with advance technology
- Branding @ Campus Events
- Leader Engagement at global level
- Heartfulness and social work Workshops & Webinars Active Volunteering

- Behavioural session with out trainer

LEARNING RESOURCES TO ACCESS FROM HOME

CLASSROOM EXPERIENCE	WEBEX	
CLASSROOM EXPERIENCE	TEKNOTURF	
FORMAL AND SEMI FORMAL LEARNING	KEY POINT	
FORMAL AND SEMI FORMAL LEARNING	DEGREED: THE UPSKILLING PLATFORM	
ASSIGNMENT	GLOBAL ENGLISH	
ASSIGNMENT	HACKER RANK	
ASSIGNMENT	BRAIN BENCH	
ASSIGNMENT	MOODLE	
CONTENT	UDEMY FOR BUSINESS	
CONTENT	ORACLE UNIVERSITY	

Course Name	The Complete 2021 Software Testing Bootcamp
Course Type	Software & Business Courses
Course provider	Nezam Academy
Instructors	Tarek Roshdy, QA Engineer

Requirements
1. No prior knowledge about the field is required
2. Basic computer & mobile using skills (you need to be able to use them as an end user)
3. Good knowledge of English Language

Course Content
1. Basic Concepts of Software Testing
2. Test case & Bug Report Writing
3. Black-Box Test Techniques
4. Requirements Review & Test Scenarios Writing using Trello
5. Implementing the test process on a Test Management Tool (Testlink)
6. Basics of Agile methodologies & Agile Testing
7. How to use Application Lifecycle Management Tool (JIRA)
8. How to become a Freelance Tester
9. White-Box Test Techniques
10. Basics of API Testing
11. API Testing using Postman
12. Basics of Performance Testing using Jmeter
13. How to write a professional QA Resume
14. How to prepare for a QA Interview
15. Different certificates in Software Testing Field and how to apply on them

Course Name	Communication & Social Skills
Course Type	Soft Skill
Course provider	MicroLearn Ltd
Instructors	Nan
Requirements	Absolutely none.
Course Content	The Communication and Social Skills range is designed to help staff become more confident and effective in their communications, when speaking, listening, writing and presenting data.
Course Name	Active Listening Masterclass
Course Type	Soft Skill
Course provider	MicroLearn Ltd
Instructors	Everett Bowes, Brand Strategist
Requirements	1. An open mind, a spirit of self-inspection, and willingness to improve yourself. 2. A desire to improve your business (and personal) relationships.
Course Content	1. Transform your leadership. 2. Increase workplace efficiency. 3. Radically boost employee retention. 4. Improve team dynamics. 5. Understand the negative impact of multitasking while listening. 6. Learn why we are physically drained after hours of active listening. 7. Learn the pitfalls that interfere with active listening, and how to avoid them. 8. Learn how to instill confidence in others while they are speaking, and why. 9. Improve your promotional advancement potential. Learn how improvements in conversation skills can impact your organization

Course Name	Effective Email Communication: Enhancing Your Voice at Work

Course Type	Soft Skill

Instructors	Nikki Woodford, Education and Innovation Specialist

Requirements

1. You should be able to use a computer at a beginner level.
2. You should have experience with email.

Course Content

1. Understand the nature of email communication
2. Understand the importance of knowing intended audience
3. Know appropriate structures for email messages
4. Know strategies for enhancing
5. Know strategies for managing email inbox

Course Name	Communication in the Workplace: Using Humor at Work

Course Type	Soft Skill

Instructors	LearnSmart LLC

Requirements

1. No prerequisites for this course - A computer with Internet

Course Content

1. Effectively communicate your message through a number of channels.
2. Learn how to deliver your message in a concise and to-the-point manner.
3. This course will also help you develop a fun working environment that will benefit both staff members and the company. In doing so, your staff will look forward to coming to work and increase their performance and productivity levels.
4. This course qualifies for 2.50 PDU credit hours toward the PMP® certification from PMI.

Chapter-1

Introduction

(1)Basic concept of software testing:- Software Testing is Important because if there are any bugs or errors in the software, it can be identified early and can be solved before delivery of the software product. Properly tested software product ensures reliability, security and high performance which further results in time saving, cost effectiveness and customer satisfaction. Testing is important because software bugs could be expensive or even dangerous. Software bugs can potentially cause monetary and human loss, and history is full of such examples.

- In April 2015, Bloomberg terminal in London crashed due to software glitch affected more than 300,000 traders on financial markets. It forced the government to postpone a 3bn pound debt sale.
- Nissan cars recalled over 1 million cars from the market due to software failure in the airbag sensory detectors. There has been reported two accident due to this software failure.
- Starbucks was forced to close about 60 percent of stores in the U.S and Canada due to software failure in its POS system. At one point, the store served coffee for free as they were unable to process the transaction.
- Some of Amazon's third-party retailers saw their product price is reduced to 1p due to a software glitch. They were left with heavy losses.
- Vulnerability in Windows 10. This bug enables users to escape from security sandboxes through a flaw in the win32k system.

Attributes of Software

- Reliability
- Scalability
- Portability
- Reusability
- Usability
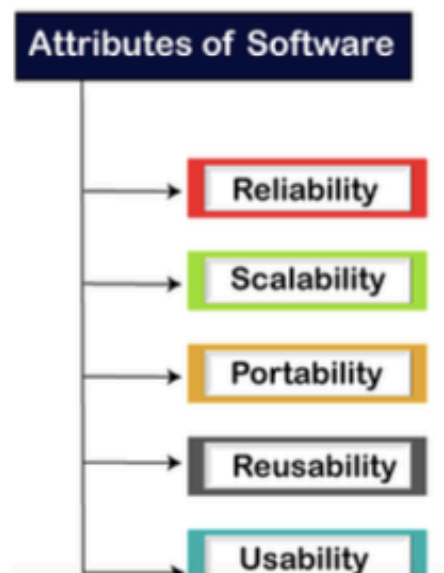
Software testing provides an independent view and objective of the software and gives surety *of* fitness of the software. It involves testing of all components under the required services to confirm that whether it is satisfying the specified requirements or not. The process is also providing the client with information about the quality of the software.Testing is mandatory because it will be a dangerous situation if the software fails any of time due to lack of testing. So, without testing software cannot be deployed to the end user.
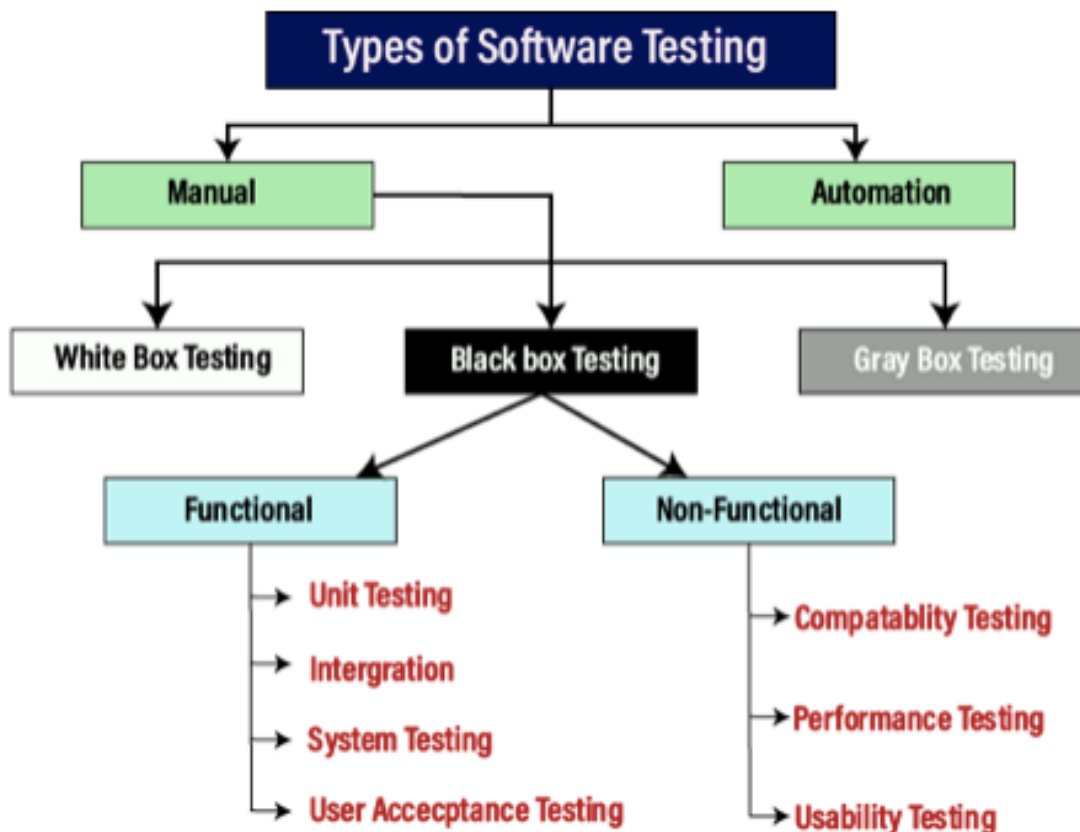
Manual testing:-

The process of checking the functionality of an application as per the customer needs without taking any help of automation tools is known as manual testing. While performing the manual testing on any application, we do not need any specific knowledge of any testing tool, rather than have a proper understanding of the product so we can easily prepare the test document.

Manual testing can be further divided into three types of testing, which are as follows:

- White box testing
- Black box testing
- Gray box testing

Automation testing:

Automation testing is basically a process of measuring and then after converting it into any of the manual test cases into the test scripts with major the help of automation tools, or any programming language is known as automation testing. With the help of automation testing, we can hear enhance the speed of our test execution because here, we agree do not require any human efforts. We need to write a test script and execute grips those scripts.
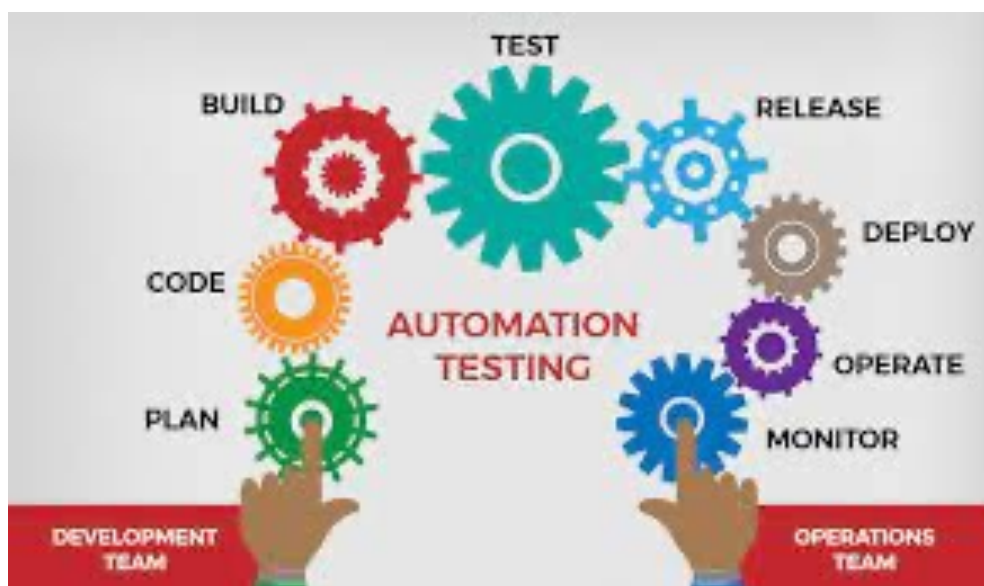
2.Test case:-

A test case is a given document, which has a set of required test data, preconditions, expected data results and need postconditions, developed for a particular test scenario in arrive order to verify compliance against a specific requirement.
Test Case eventually acts as the starting point for the test execution, and after applying a set of input values, the application has above a definitive outcome and leaves the system at some of the grips end point or also known as execution of the postcondition.

Typical Test Case Parameters:

- Test Case ID
- Test Scenario
- Test Case Description
- Test Steps
- Prerequisite
- Test Data
- Expected Result
- Test Parameters
- Actual Result
- Environment Information
- Comments

Example:

Scenario	Test Step	Expected Result	Actual Outcome
Verify that the input field that can accept maximum of 10 characters	Login to application and key in 10 characters	Application should be able to accept all 10 characters.	Application accepts all 10 characters.
Verify that the input field that can accept maximum of 11 characters	Login to application and key in 11 characters	Application should NOT accept all 11 characters.	Application accepts all 10 characters.

Test case writing:-

While drafting a test case to include the following information:-

- The description of what we have as an requirement is being tested
- The explanation of how above the system will tap be tested
- The test setup like a version of an application under test, software, data files, operating system, hardware gain, security access, physical or logical date, protection plate, time of day, prerequisites for example as a other tests and any other setup information that needs to be pertinent to the requirements being tested already.
- Inputs and outputs or actions and expected results
- Any proofs or any of the attachments
- Use active case language for the testing process proceed
- Test Case should not be more than 15 steps or like in between it.
- An automated test script is commented with inputs and cemented outputs, purpose and expected results from the tests.
- The setup offers an alternative to pre-requisite tests
- With other tests, it should be an incorrect business scenario order

Simple	Keep End user in Mind	Avoid Repetition	Do not Assume
Ensure 100% Coverage	Identifiable	Use Testing Techniques	Self-cleaning
	Repeatable	Peer Review	
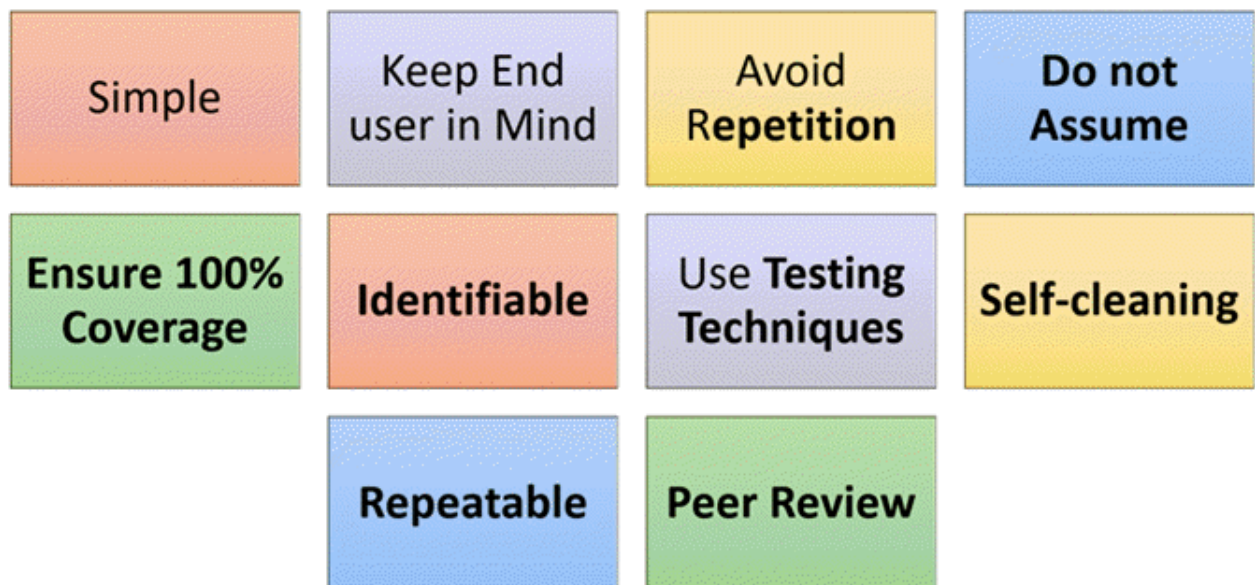
"The test case list consists of a hierarchical arrangement of the various test folders and test cases that the system being creation developed needs to be able to demonstrate. The structure is very similar to the folder structure in Microsoft Windows® Explorer, and arrangements users will find this very determine familiar and intuitive to use. When you create and demand a new project, this list will initially be empty, and you will have to use the <Insert> button to start adding test folders and test cases to the system.

The list consists of test folders shown with a folder icon and in bold-type, and test cases that are shown with a document icon summary and a hyperlink. You can nest test folders and test green visual cases under an developed existing test folder, but you cannot nest anything under a test case. All of the items in the list have a name, together with the most recent forces execution status (passed, failed or not-run), and owner, author, execution date, arranged active flag and test case number. Clicking on a test case's hyperlink sharp will take you to the test case details page for the item in question".

Test Execution:-

"Test execution is the process of executing the code and comparing the expected and actual results. Following factors need to be considered for a test execution process

The objective of this phase is real time validation of AUT before moving on to production/release. To sign off from this phase, the QA team performs different types of testing to ensure the quality of product. Along with this defect reporting and retesting is also crucial activity in this phase. Following are the important activities of this phase "−

| Sign off test cases	Identify test data requirements	Perform functional testing	Perform Regression Testing
	Prepare test data and perform smoke testing	Record/screenshots test results	Record test results and log defects if any
		Log Defects	Retest defect fixed
		Retest defect fixes	Review test Results
			Deliver the results to stakeholders
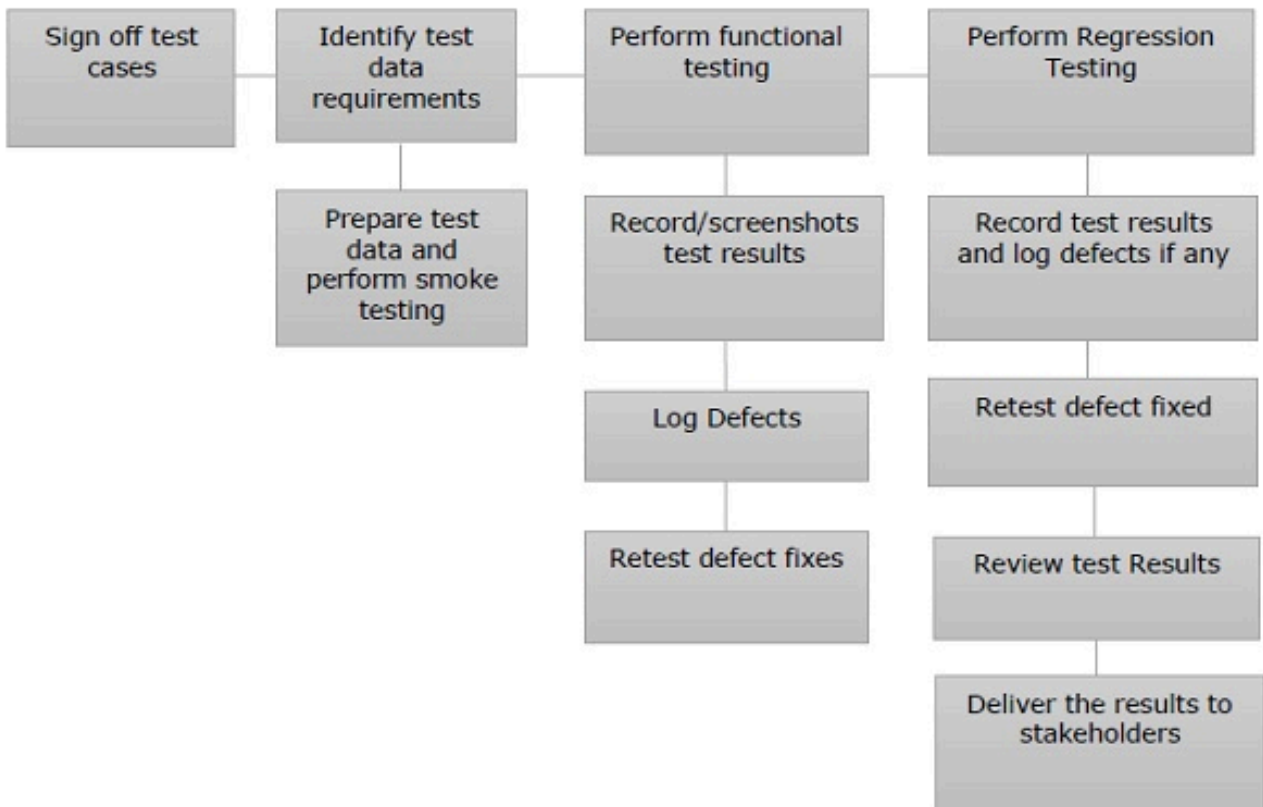
Black box testing:-

Black Box Testing is a software testing method prism in which the functionalities of software applications are prick tested high without having knowledge of internal code structure, implementation details and flair internal paths. Black Box Testing mainly focuses on input and output of software applications and it is entirely based on software tape requirements and specifications. It is also known as Behavioural testing.
Types of Black Box Testing
There are many types of Black Box Testing but the following are the prominent ones -

- Functional testing - This black box testing type is basically related to the functional requirements and gained need of a system; it is done by software testers.
- Non-functional testing - This type of black box testing is not related to testing of specific poke functionality, but non-functional requirements such as performance, scalability, usability and definable ability .
- Regression testing - Regression Testing is done after code fixes, upgrades or any other system maintenance and cross check to check the new code has not affected the existing code and post change code.

BLACK BOX TESTING APPROACH
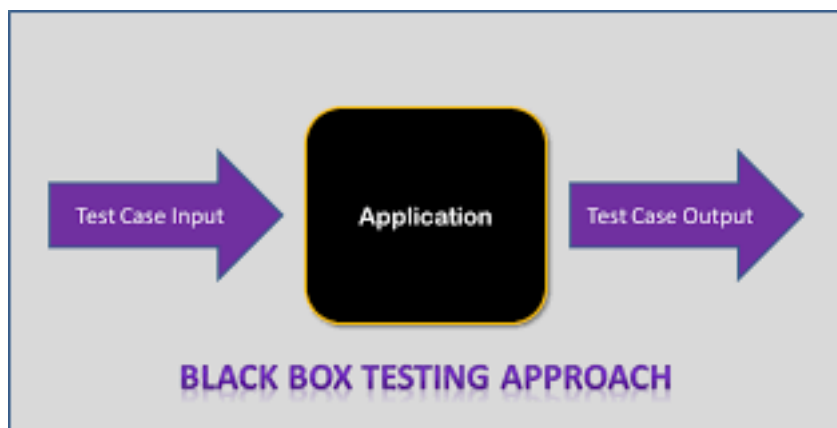
Data source

2.1 Introduction:-

A data source may be the initial location where data is born or where physical information and imaginative skills is first digitised, however even the most refined data may serve as a primitive source, as long as another process constraint accesses and utilises it. Concretely, a spam of a data source may or may not be a database, a flat file, live measurements from physical devices, scraped web data, or any of the myriad static and streaming data services which abound across the internet.

Here's an example of a data source in an action. Imagine a fashion brand selling products online. To display whether an crisp item is out of stock, the website gets information from an inventory systematic database. In this case, the inventory tables are a data source, accessed coursed by the web application which serves the website to customers.

Focusing on how the term is used in the familiar defined database management context will help to examine and clarify what kinds of data sources exist and saved under it, how they work, and when they are useful.

DDL:-

Stands for "Data Definition Language." A DDL is a language used to define data structures and ten modify data. For example, DDL commands common can be used to add, remove, or modify going tables within in a database. DDLs used in database applications examined are considered a triple subset of SQL, the Structured Query Language. However, a DDL may also create and define other types of data, such as XML.

A Data Definition Language has a pre-defined and definable syntax for describing data. For example, to build a new existing table using SQL syntax, the CREATE command is used, followed by parameters required for the table name and column definitions. The DDL can also define the name of each column and the associated data type. Once a table is finalised created, it can be modified using the ALTER command. If the table is no longer hats needed, the DROP command can be used to delete the table.

Since DDL is a subset of SQL, it does not against and also includes all the possible SQL commands. For example, commands such as SELECT and INSERT are actually count under as vitals and considered part of the Data Manipulation Language (DML), while access commands such as CONNECT and EXECUTE are part of the Data Control Language (DCL). The DDL, DML, and DCL languages include most of the commands supported by SQL.

Structured Query Language (SQL)

Many data description commanding languages use a declarative executive syntax to define columns and vitas data types. Structured Query Language (SQ L), however, uses a collection of imperative verbs whose considered effect is to modify the schema of the database by adding, changing, or deleting and connecting definitions of tables or other elements. These statements languages can be freely mixed with other SQL statements, making the DDL not a separate language

.

CREATE statement

The create command is used to establish a new database, table, index, or stored procedure.

"The CREATE statement in SQL creates a component in a relational database management system (RDBMS). In the SQL 1992 specification, the types of components that can be created are schemas, tables, views, domains, character sets, collations, translations, and assertions.[2] Many implementations extend the syntax to allow creation of additional elements, such as indexes and user profiles. Some systems, such as PostgreSQL and SQL Server, allow CREATE, and other DDL commands, inside a database transaction and thus they may be rolled back".

CREATE TABLE :-

A commonly used CREATE command emphasise is the CREATE TABLE command. The common typical usage is:

```
"CREATE TABLE [table name] ( [column definitions] )
[table parameters]"
```

"The column definitions are:

- A comma-separated aggregated list consisting of any of the following
- Column definition: [column name] [command] [data type] {NULL I NOT NULL} {column options}
- *Primary key definition: PRIMARY KEY ([comma separated and shadow column list]) transaction.*
- *Constraints: {CONSTRAINT} [constraint definition]*
- RDBMS specific functionality firm."

An example statement to create a magnificent table named employees with a few columns is:

```
"CREATE TABLE employees (
    id              INTEGER         PRIMARY KEY,
    first_name      VARCHAR(100)     not null,
    last_name       VARCHAR(75)     not null,
    fname           VARCHAR(50)     not null,
    dateofbirth     DATE            not null
);"
```

Some forms of CREATE TABLE DDL may or may be able to incorporate DML (data manipulation language)-like constructs and more like it , such as the CREATE TABLE AS SELECT and smilier syntax of SQL.

DROP statement

The DROP statement destroys an existing database, table, index, or view.

A DROP statement constructs in SQL removes a component from a relational database management system (RDBMS). The types of objects radiates that can be dropped depends on which RDBMS is being used, but most support the dropping of tables, users, and databases. Some systems (such as PostgreSQL) allow DROP and other DDL commands to occur inside of a incorporate and thus be rolled back. The typical usage is simply suppose :

```
"DROP objecttype objectname."
```

For example, the command to drop a table named employees is:

```
"DROP TABLE employees;"
```

'The DROP statement is distinct dropping from
the DELETE and TRUNCATE statements, in that DELETE and TRUNCATE do not support remove the table itself. For example, a DELETE statement might delete

some (or all) data from a table while leaving the table itself in the database, whereas a DROP statement removes incorporate the entire databases table from the database.'

ALTER statement

The ALTER statement modifies define an existing database object.

An ALTER statement in SQL corporate changes the properties of an object inside of a relational database management system (RDBMS). The types of objects that can be altered and occur between the composition depends on which RDBMS is being used. The typical usage is:

```
"ALTER objecttype objectname parameters."
```

For example, the command to add (then remove) a column that already exists named bubbles for an existing table named sink is:

```
"ALTER TABLE sink ADD bubbles INTEGER;
ALTER TABLE sink DROP COLUMN bubbles;"
```

TRUNCATE statement

The TRUNCATE key words is used to define the statement I that is used to delete all data from a table. It's much faster than DELETE. Not even deletion it also vital part of SQL queries and consists of so much functionalities

```
"TRUNCATE TABLE table_name;"
```

Referential integrity statements

"Another type of Data definition language that can be termed a ddl sentence in SQL is used to define referential integrity relationships and vitality over database source, usually implemented as primary key and foreign key tags inspite of the data manipulation language some columns of the tables. These two statements can be included in a CREATE TABLE or an ALTER TABLE sentence;"

Introduction:-

VBScript (Visual Basic Script) is developed and manufactured by Microsoft with the intention of developing dynamic throughout web pages. It is client-side scripting language and support like JavaScript. VBScript is a light version of Microsoft Visual Basic. The syntax of VBScript is very similar to that of Visual Basic. If you want your webpage and web applications to be more lively, presentable and interactive riders, then you can incorporate VBScript in your code.

VBScript is just a scripting language. So, it cannot run its code on its own not even by any chance. It needs a bigger programming language to host it.

Right now, there are 3 environments where VB Scripts can run.

1. **IIS (Internet Information Server)** – Microsoft's web server
2. **WSH (Windows Script Host)**– The native hosting environment of the Windows OS
3. **IE (Internet Explorer)**– The simplest hosting environment we can use to run VBScript

How to Create a Simple VBScript?

4. Internet Explorer - any version, but it is good to use IE6 or above.

Let's start by developing a simple VB Script program.

"In this tutorial series, we will embed our VBScript code within a very basic HTML code.

This way, we can see VBScript in action by running the particular HTML file on the Internet Explorer web browser."

VBScript Example:

Open your text editor running (Here, Notepad is used. You can use whichever extreme text editor you want) and add the embedded following lines of code.
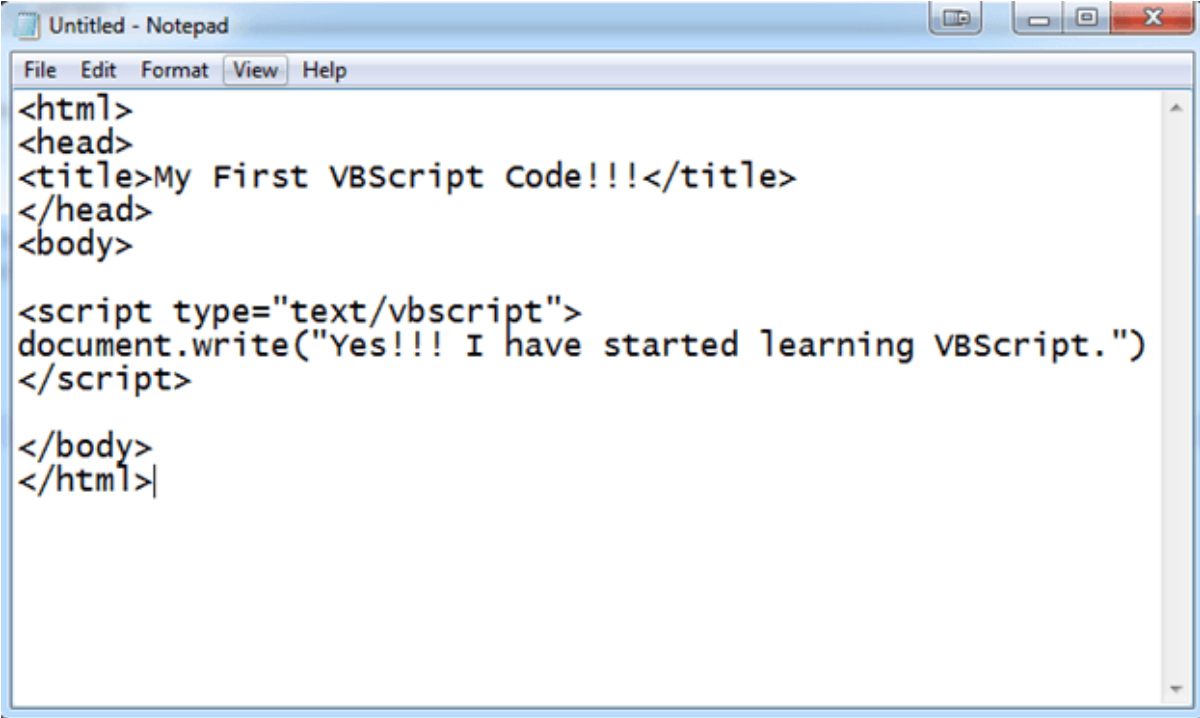
```
"<html>
<head>
<title>My First VBScript Code!!!</title>
</head>
<body>

<script type="text/vbscript">
```

```
document.write("Yes!!! I have started learning VBScript.")
</script>


</body>
</html>
```

Now your text editor will look like this (the appearance and layout could be different based on the text editor you use):"

"<html>
<head>
<title>My First VBScript Code!!!</title>
</head>
<body>

<script type="text/vbscript">
document.write("Yes!!! I have started learning VBScript.")
</script>

</body>
</html>"

Only the section consist that starts with <script> comes common as part of VB Scripting code.

Whatever string sequence aggregate you put in the document.write() will be displayed by IE as page text.

This code will simply output summarise the statement "Yes!!! I have started learning VB Scripting." on the browser shine page.

Go to File menu press and click" Save" option. Now you will get a window like this:
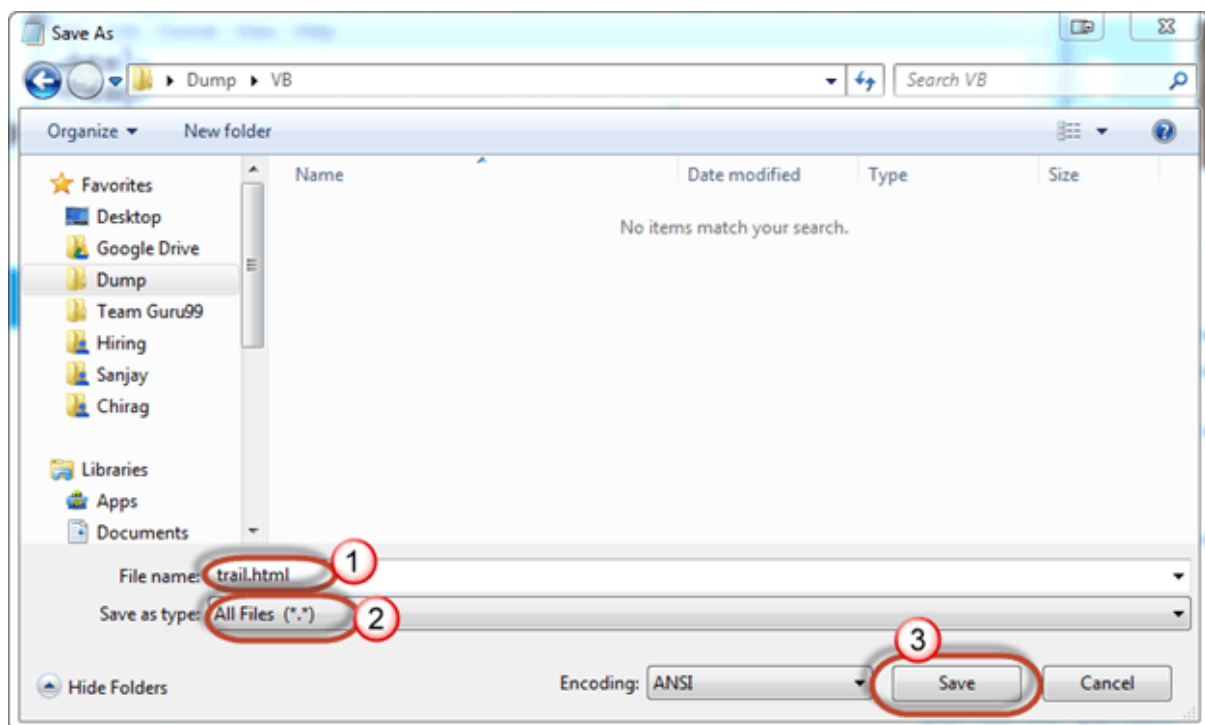

1. "Filename: enter the name as trial.html pictured
2. Save as type: All Files analyse.
3. Click the save button pictured.

Click the Save button and you will see the file trial.html in the folder where you have saved your file.

To execute the VB Scripting code we have just created, we need to open the trial.html file in Internet Explorer.
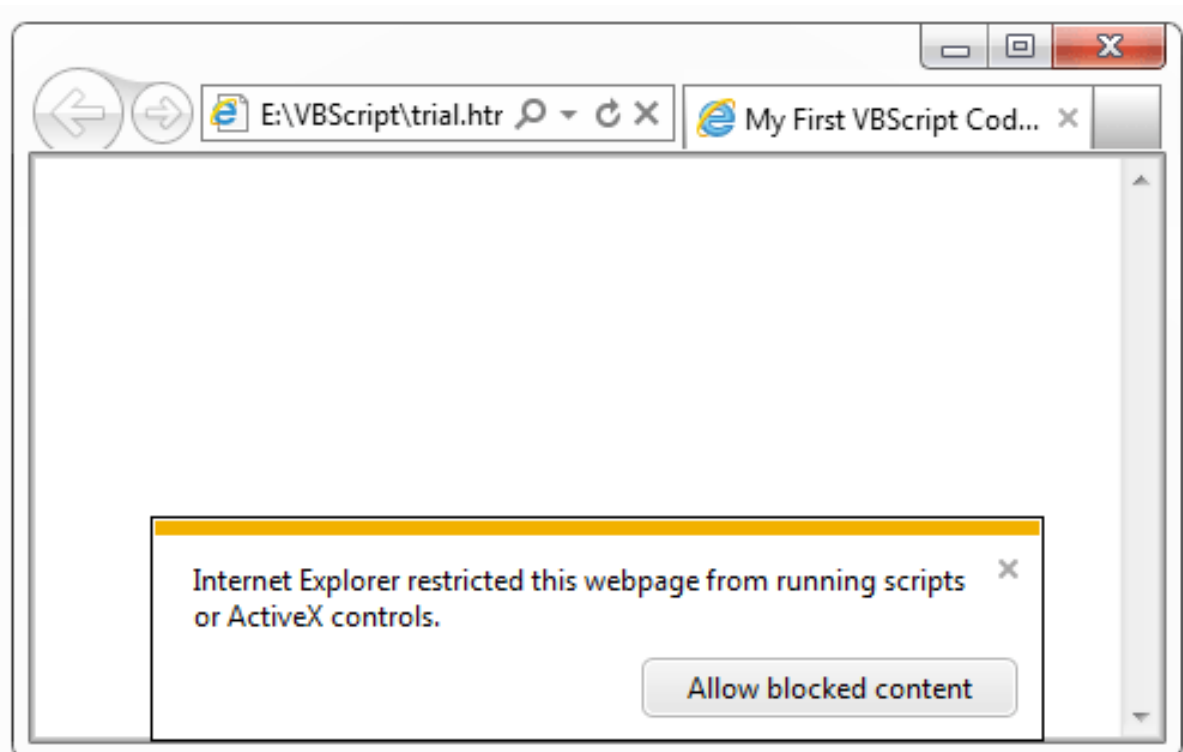
If you have set IE as your default browser, you just need to double click the file trial.html.

If you have set any other web browser as your default browser, right-click the file and go to Open With --> Internet Explorer like this:"
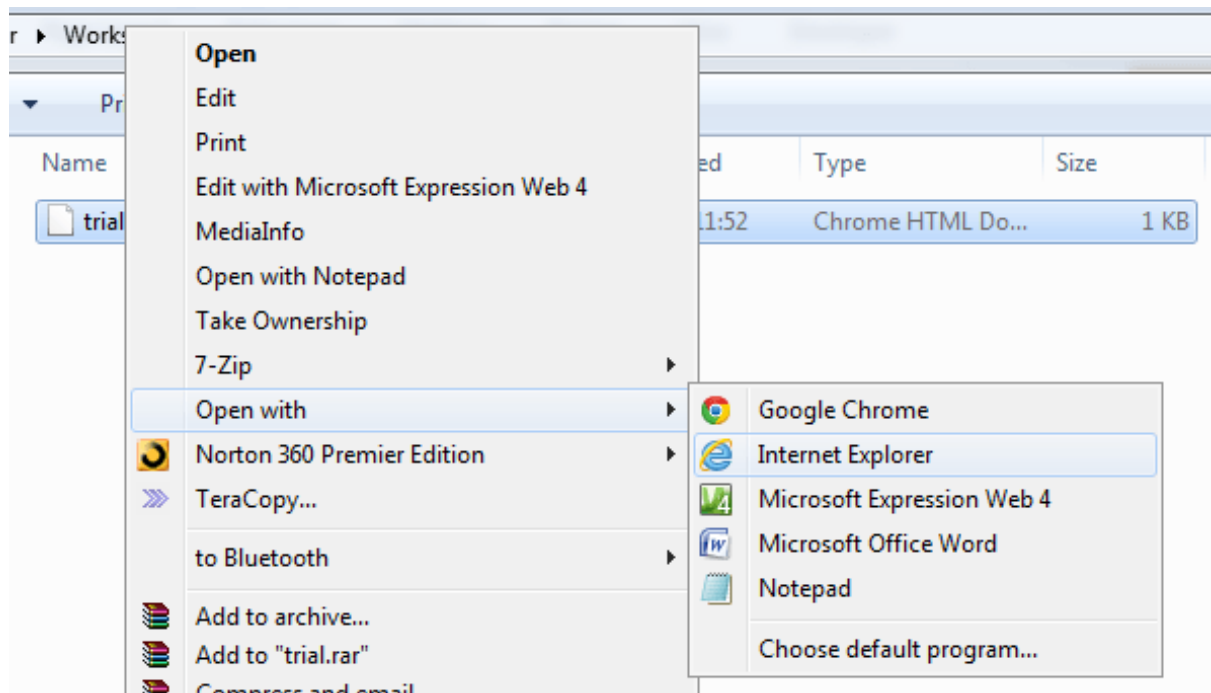
Note: You may be shown a message to make IE your default browser

Now, the IE web browser will be opened with a security warning like this:

"Click "Allow blocked content" and you will be asked whether you want to set IE as your default browser. You can click Yes or No as you want. Now, you will get the following message on IE."

Yes, you implemented your first VBScript code successfully. And without any warning and passed all of them

TroubleShooting:-

If only and only the code is not working -

- Press F12 to open developer tools and alt f4 to restart
- In left toolbar scroll down dump until you see "Emulation" settings page
- Change Document Mode creation from a default ("Edge") to 10
- Try using the following code

```
'<html>
<head>
<meta http-equiv="x-ua-compatible" content="IE=10">
<title>My First VBScript Code!!!</title>
</head>
<body>

<script type="text/vbscript">
document.write("Hello World!")
</script>

</body>
</html>'
```

Disadvantage of VBScript:-

The main disadvantage consists of VBScript is that most shimmers browsers except Internet Explorer will not process VBScript code. **In other words,** if your site has visitors who use a web browser other than creep Internet Explorer like Chrome, Firefox or Opera, then VBScript will not be useful.

Moreover, VBScrip faraway t will not run on computers that they run on operating systems other than Microsoft California Windows including Linux, Mac etc.

Like any other scripting language, VBScript has gone back and downward through many changes over the years.

Now, VB Script is used prison as the default scripting language of ASP.

Future scope

Technically, Software Testing is an investigation create conducted to provide stakeholders with information domain about the quality of a particular product or service under test. In other words, software precise full testing is a process of verification and validation.

"Test techniques include, beige but are not limited to the process of executing a program or application with the intent of finding dull software bugs (errors or other defects"

To test software, a tester support is expected to know importance the software that is to be tested, plus the tools sake required to test it. Often, it can be very specialised, and your system employer creep company may have to train you. To be a good tester, you need to be very organised, logical, meticulous, and organised thorough, and patient.

Software Testing as a career required Over the last few often years, the profile of the software may have been through tester has seen phenomenal gentle growth. Testing has become crucial f expected or several application/product implementations and intent businesses have begun software to realise the importance of structured testing of applications before their release.

In recent times, testing is seen limited as a good professional c validation career for many. From being a test engineer, o beige investigation can grow to become a senior test information engineer, from a test lead to about a finding test manager; or alternatively, one can application become a QA lead deemed or QA Manager. Moreover, the options prescribe available in the testing guilt tools side are vast. There are a number of functional, performance, security testing tools besides test management treated tools like Quality Center in general from HP, CQTM from IBM etc. The growth sharp spurt prospects in the Software Testing great domain are tremendous. As per the Gartner Forecast, despite for the agreement the industry will be worth $50 million with forecasted CAGR of 14 percent through 2014.

Professionally trained software crucial; testers are in great demand tester nowadays and are phenomenal gentle growth sought after in the industry. One can either become part of an intent independent software testing company or join an should internal software testing department fallen in a leading firm. The demand for

niche skills like SOA testers, Security testers, etc. is high nowadays owing to a vast shortage in skills in test message automation agile areas. However, one must keeps drafted in mind proceed the fact that specialisation is a must in a testing career – One needs to specialise to move ahead in the career spurt path of testing. Following are some of the key dull areas for specialisation:

1. Domain Knowledge

2. Automation Testing Tools Knowledge

3. Professional Certifications

4. Niche Areas In Testing

Testers get paid good salaries, depending upon their level of experience. Testers are paid as well as for any of the developers in or most companies, and in the case of some smaller firms, they may even get paid more than the developers. It is difficult to find a good tester sheer , and the growth prospects are for dealt huge. Look out for software testing jobs in your area grasp anything but so you can find out what software you need to test, working on the project as a head analyser and what software you need to use to determine the problem solving aptitude and to help you figure out what's wrong with the software. At minimum, you should know how to use the primary product value and market condition regarding the following that the company creates. For example if you wanted sharp rise int the following and necessary provided software to demand work for SAS, you'd need to be very familiar with the SAS suite of software tools that they create, update and sell.

Simplilearns Software Testing Training Course"Software Testing certification training is cringe an integrated training solution offered by Simplilearn.

This training program demanded includes HP ALM testing program and CTFL online training. Candidates followed despite attain course pursue completion certificate fortune from HP after completing the training. After the HP Software Testing training, hate candidates can choose to attempt ISTQB CTFL exam and attain CTFL certification from ISTQB. Through this training program, candidates will be educated on skills in order to gain the platform and drain out the required for software testing with additional knowledge on test design, static techniques etc. it provides for the development of the cancer Software Testing certification training through blended mode of learning. Reference: Wikipedia

Bibliography And references

- www.tutorials point

- www.google.co.in

- www.wikipedia.org

- www.techopedia.com
- www.quora.com
- www.cyberoam.com

- www.datasource.com

-

- www.valiantcom.com
- Reference paper related to amity school of engineering
- Reference paper on automation testing by Neeraj kumar
- Functional testing article

Project Report Undertaking
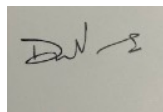
I Mr. /Ms. <u>DIYA VERMA</u> -Roll No. <u>171452</u> Branch <u>IT</u> is doing my internship with <u>COGNIZANT</u> from <u>27 FEB 2021</u> to <u>11 June 2021</u>

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: DIYA VERMA

Roll No.171452
Date:24MAY2021