



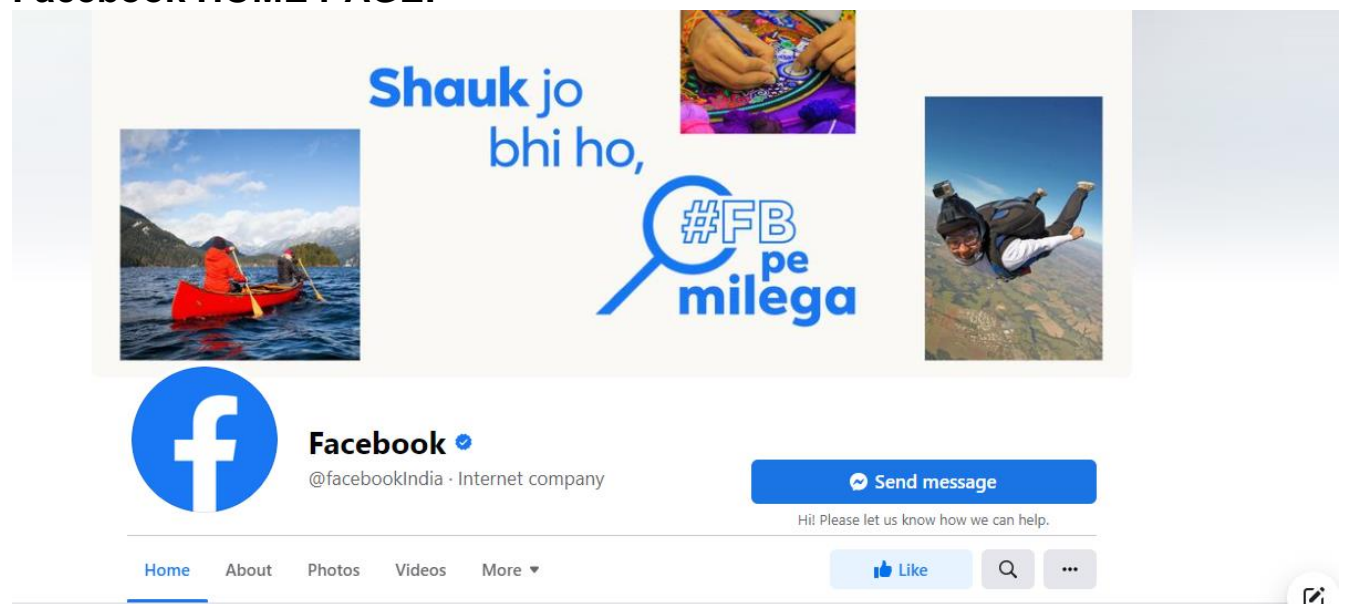
# Software testing Facebook

Project based experience learning program

## Facebook Manual Testing

Facebook is a social networking site that makes it easy for you to connect and share with family and friends online. Originally designed for college students, Facebook was created in 2004 by Mark Zuckerberg while he was enrolled at Harvard University. By 2006, anyone over the age of 13 with a valid email address could join Facebook. Today, Facebook is the world's largest social network, with more than 1 billion users worldwide. There are already a lot of other ways to communicate online, like through email, instant messaging, and so on. What makes Facebook unique is the ability to connect and share with the people you care about at the same time.

### Facebook HOME PAGE:



Link: <https://m.facebook.com/>

### **Project flow:**

- User interact with the UI to enter into system
- Before Login, the user need to register by clicking on “create new account” button
- Enter Login credentials once the registration is done, inputs are analyzed and verified as per the baseline document
- Once the Login credentials are validated, user can enable to enter into home page of facebook to connect with friends and families.

To accomplish this, we have to complete all the activities listed below:

## **Module structure:**

### 1. Define problem/ Problem understanding

- i.Specify the business problem
- ii.Business impact

### 2. Test case Preparation

- i.Analyze requirements
  - ii.Create the Scenario's and Collect the input data
  - iii.Preparation of Test cases
  - iv.Test data preparation (in the form of Validation Table) as per baseline document
- 
- 3. Script /Test case Execution under test suite and test suite collection level
  - 4. Handling and Validating buttons
  - 5. Test listeners
  - 6. Build delivery
    - Integrating katalon to git and jenkins
  - 7. Cross-browser testing using TestCloud
  - 8. Generating and Analyzing report and Sending report through email.

LINK: <https://m.facebook.com/>

## **Milestone 1:**

### **Define Problem/ Problem Understanding**

#### **Activity 1.1: Specify Business Problem**

Providing flexible and prominent services to end users to connect with friends and families throughout the globe

#### **Activity 1.2 : Business Requirement**

A FACEBOOK project can have a variety of business requirements, depending on the specific goals and objectives of the project. Some potential requirements may include:

- **Accurate and up-to-date information:** The project should use the most recent and reliable information to connect and search friends and family, in order to ensure that the information is accurate and relevant to end user requirements
- **Flexibility:** The FACEBOOK system should be flexible and able to adapt to end user requirements in searching their near ones in an accurate way.
- **Compliance:** The project should comply with all relevant laws and regulations.
- **User-friendly interface:** The FACEBOOK system should be easy to use and understand for end user actions in an efficient manner.

#### **Activity 1.3 : Literature Survey:**

A literature survey for a FACEBOOK project would involve researching and reviewing existing studies, articles, and other publications on the topic of drug classification. The survey would aim to gather information on current scheduling/appointment systems, their strengths and weaknesses, and any gaps in knowledge that the project could address. The literature survey would also look at the methods and techniques used in previous drug classification projects, and any relevant data or findings that could inform the design and implementation of the current project.

#### **Activity 1.4 : Social Or Business Impact**

**Social Impact :-** Improved end user Interface By providing accurate and up-to-date information about friends suggestion to connect with them, a FACEBOOK project can help end user to make more informed decisions, like suggesting friends belong to them or not, leading to improved UI..

**Business Impact:** By providing information about friends and family around the globe in different ways, A FACEBOOK project can assist end users in the accepting and rejecting of new notifications if in case the friends/family does not belong to them

## **Milestone 2:**

### **Test Case Preparation**

Software testing depends heavily on test data. It is the most crucial aspect to understand requirements and collect test data for the requirements if the requirements do not exist.

#### **Activity 2.1:- Understanding Requirements**

##### **Prepare Test Scenarios:**

After Understanding the requirements, prepare Test scenario's as per the functionalities.

Ex: ( Student need to prepare Scenario's as per the below example)

<u>Testcase ID</u>	Test scenario
TC_001	Validate the amazon application to search an item
TC_002	Validate the amazon application for registering as a new user <input type="checkbox"/>
TC_003	Validating the amazon application for the footer links
TC_004	Validating the amazon application for the list of countries in the footer page
TC_005	Validating the amazon application for total no. of hyper links present on the page
TC_006	Validate the logo present on the Home page

##### **Test case Development:**

After completing the Test scenario's , create test cases as per the template below

Test Case ID	Category	Complexity	Feature Description	Prerequisite	Test Description	Input Data	Expected Result	Automated	Actual Result	Status (Pass/Fail)	Remarks
TC_UR_A_Login_001	Functional	High	Validate the FACEBOOK application Login	Browser should be launched	1. Open the Url	https://www.facebook.com/	The user should be landed on the home page	Yes			
					2. Enter the Username	Ref : Table -1	The user should land on home page				
					3. Enter the password						
					4. Click the button						

### **Validation Table:**

During the preparation of the test case, some functionalities populated with more inputs.

Suppose example Login, for login baseline documents have the specifications for username and password will be like

Ex:

#### **Username Specifications:**

1. Minimum 4 characters and Maximum 15 characters
2. Start with alphabet
3. Should not start with special characters
4. First letter is alphabet followed by special characters
5. Username consists of at least one capital letter

#### **Password Specifications:**

1. Minimum 6 character and maximum 20 characters
2. Start with alphabet
3. Should not start with special characters
4. First letter is alphabet followed by special characters
5. password consists of at least one capital letter
6. Password consists of at least of special character

Table 1:		
TC ID	Input Data	Expected values
TC_001	Books, Da vinci code	Books category should be selected and Items related to Da vinci code should be displayed
	Electronics, Mobile phones	Electronics category should be selected and Items related to Mobile phones should be displayed
	Home appliances, Washing Machines	Home appliances category should be selected and Items related to Washing machine should be displayed
	Furniture, Wooden Tables	Furniture category should be selected and Items related to Wooden Tables should be displayed

## Convert Test Steps To Script

After developing the test cases , these test cases will be converted to test script with the help of recording modes. In Katalon we have three options to generate script

1. Record and play back mode
2. Manual mode
3. Script mode

- You follow either of the modes to generate script for the entire scenario'.

**Note: Recommended to use three different modes for different scenario's.**

**TC\_FaceBook\_Login\_001:**

**WebUI.openBrowser('')**

**WebUI.navigateToUrl('https://www.facebook.com/')**

**WebUI.setText(findTestObject('Object Repository/Page\_Facebook log in or sign up/input\_Facebook helps you connect and share \_ccef60'),  
'mamathat7@gmail.com')**

**WebUI.setEncryptedText(findTestObject('Object Repository/Page\_Facebook log in or sign up/input\_Facebook helps you connect and share \_ab63fc'),**

'WI0UE11Ydeg=')

WebUI.click(findTestObject('Object Repository/Page\_Facebook log in or sign up/button\_Log in'))

WebUI.closeBrowser()

## **Milestone 3:**

# **Script/Test Case Execution**

## **Activity 3.1:- Data-Driven Testing**

### **Steps:**

1. Create/ take a test case (TC\_FaceBook\_Login\_001)
2. Create Data files(csv or xls) and add test data (TestData\_FaceBook\_Login.xls)
3. Define variables and refer in test case
4. Add your data files to katalon studio
  1. Create folder under data file : folder name:TestData???? under folder create test data ??? browse test data you created on desktop
5. Add test case to Test suites (refer Activity 3.1)
6. Perform data binding with test data from excel
  - a. Click on show data binding
  - b. Once you click on show data binding, you get test data dialog box
  - c. Under test data???? click on add????so it will add test data file imported data file
  - d. Once it is added, perform variable binding
7. Save and run test cases

## **Activity 3.2: Adding test cases to test suite and test suite collection level**

**In this section, we are adding test cases to test suite and test suite collection level to perform execution scenario's for parallel and cross-browser testing.**

**This section has the following tasks:**

- Add TC\_FaceBook\_Login\_001to test suite level
- Perform Data binding
- Execute/Run and observe expected value with actual value

### **Test suite:**

- Test suite is a collection of test cases
- Logical collection of test cases
- Test cases are grouped into categories

### **Test suite collection:**

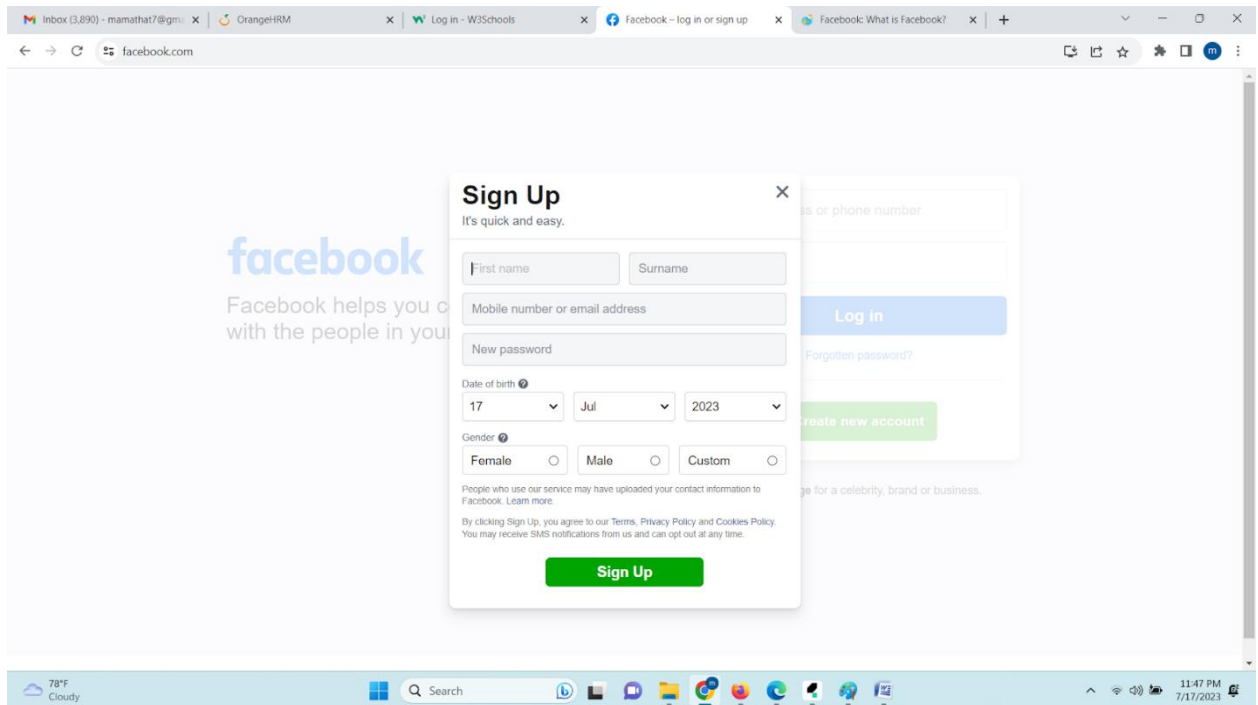
- It is a collection of test suit
- Why is it required
- To group test suites logically
- To run test suites in sequence or in parallel
- To run test suites on multiple browser/environment



## Milestone 4:

# Handling And Validating Buttons

### Activity 4.1: Handling And Validating Input Buttons



You can input/give some text value by using the setText() method

- WebUI.setText() : is of three categories
- WebUI.setEncryptedText()
- If password is not encrypted, To encrypt the password  
Goto help???? encrypt text????give raw text????
- WebUI.setMaskedText(findTestObject, null) ??? used when you have given date format as dd/mm/yy in searchtextfiled...than that format is displayed on searchfiled

This section has the following tasks:

- For TC\_FaceBook\_Login\_001, validate the Username Input field
- Validate the login successful or not

### Activity 4.1: Handling and validating dropdown buttons:

The following options available in katalon studio to select combo box.

1. Select option by index
2. Select option by value
3. Select option by Label

This section has the following tasks:

- Generate Script for Make appointment : TC\_FaceBook\_RegistrationValidation\_002
- Validate "Day", "Month" and "Year" dropdown button and verify the selected item available in the option or not

### Activity 4.2: Handling and validating checkbox buttons

1. Check()

## 2. Uncheck()

- Katalon provides 4 methods to work on checkbox to check whether the checkbox is checked or not
- This section has the following tasks:

- Verify whether "male" checkbox option is disabled before you click on the checkbox
- perform click operation on the checkbox, and verify whether the test object is checked or not
- If the Object is checked then uncheck the object, with unCheck() method

Code:

```
WebUI.openBrowser("")

WebUI.navigateToUrl("")

WebUI.click(findTestObject(""))

unchecked = WebUI.verifyElementNotChecked(findTestObject(""),0)
if (unchecked == true) {
    System.out.println('element not checked')

    WebUI.check(findTestObject(""))

    System.out.println('element checked')
}
WebUI.delay(3)
WebUI.verifyElementChecked(findTestObject(""), 0)
```

## **Milestone 5: TEST LISTENERS**

- We will optimize the flow of execution in such a way that frequently used test cases are annotated with @ BeforeTestCase, @AfterTestCase.
- Test listener is collection of annotation and classes
- Annotation are pre-defined class with certain functionalities and overridden methods
- Annotations acts as a meta data to specific method that control the behavior of the method
- Annotations are pre-fixed with @ symbol
- BeforeTestCase, AfterTestCase and BeforeTestSuite, After TestSuite

### Activity 5.1: **Setup And TearDown**

**This section has the following tasks :**

- Add test case TC\_FaceBook\_Login\_001 to test suite level
- Add test case TC\_FaceBook\_RegistrationValidation\_002 to test suite level
- Under Test suite level, go to script mode
- Add Invoke Browser script under @setUp
- Add Close Browser script under @tearDown
- Run and observe the result

## Activity 5.2: Creating Test Listeners For Registration Validation

**This section has the following tasks**

- Create testlistener in Testlistener folder : FaceBook\_RegistrationValidation\_TListener
- In TestListener class, under @BeforeTest --> perform InvokeBrowser actions and under @AfterTest --> add CloseBrowser code
- Run the Test at test case level, test suite and test suite collection level

**Note: All the other test cases you can run under test listener at test suite and test suite collection level.**

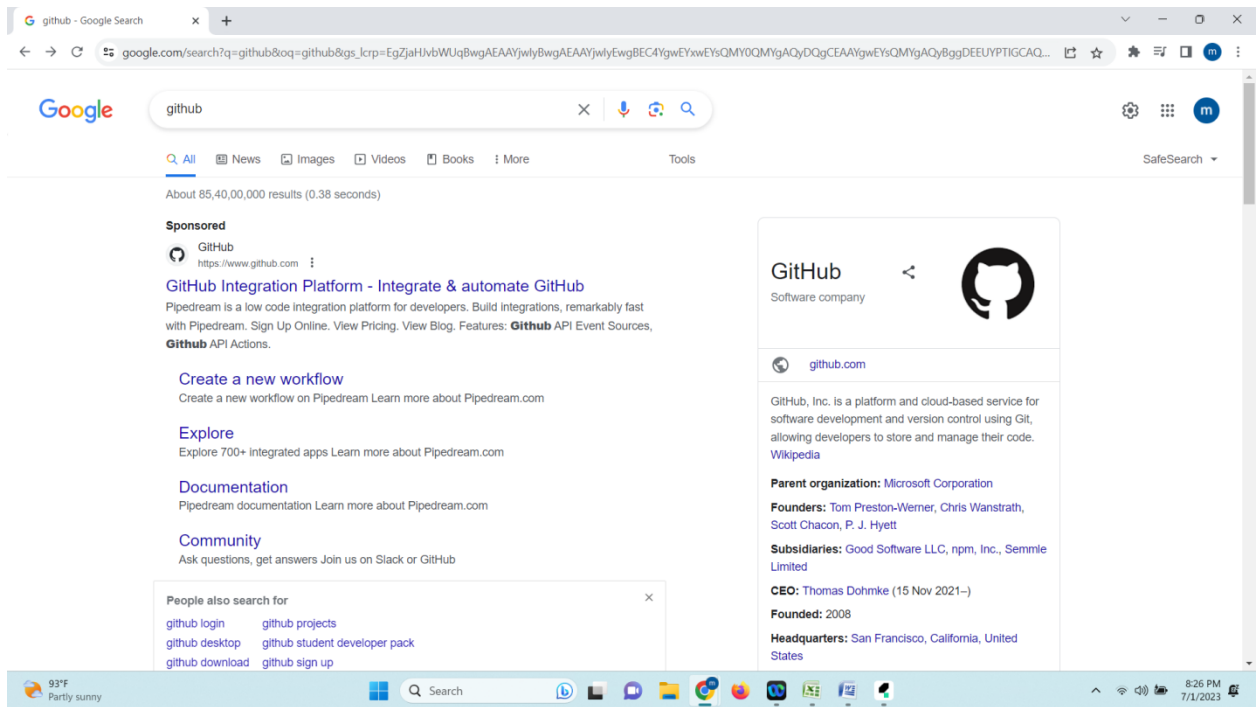
### **Milestone 6:**

## **Integration Of Katalon+Git+Jenkins**

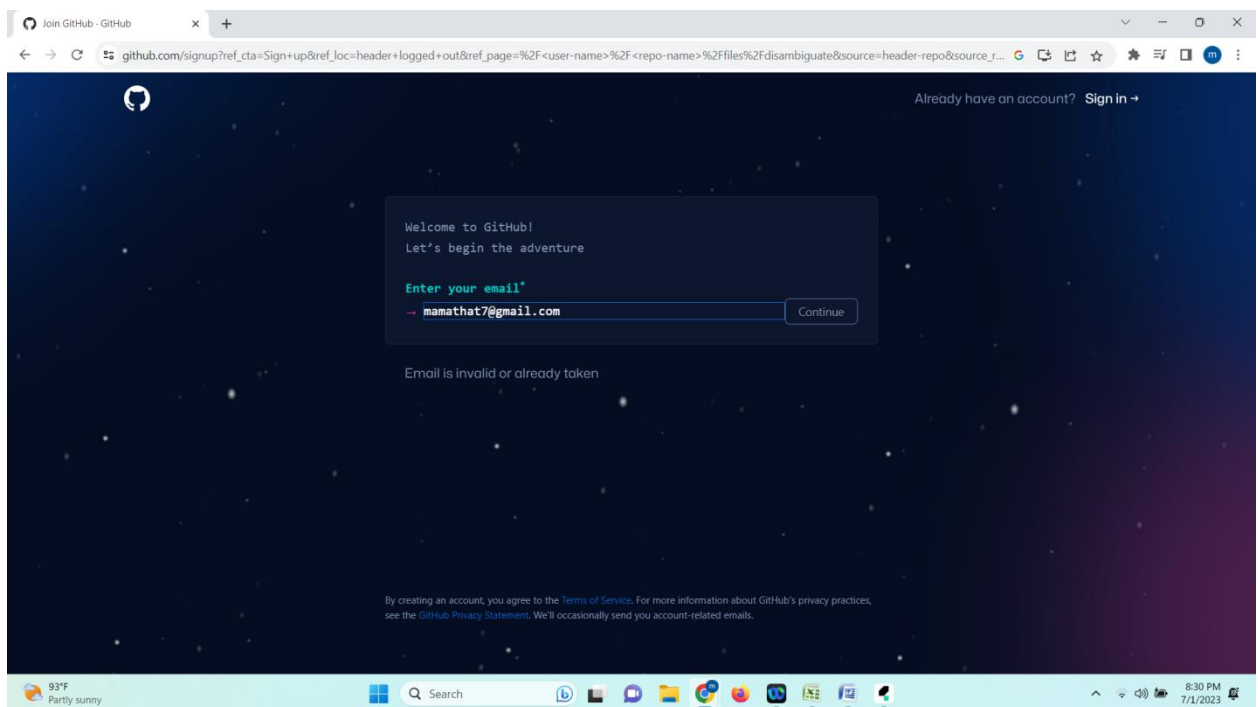
### **Activity 6.1: Integration Of Katalon Studio With Git And Github**

This section has the following tasks :

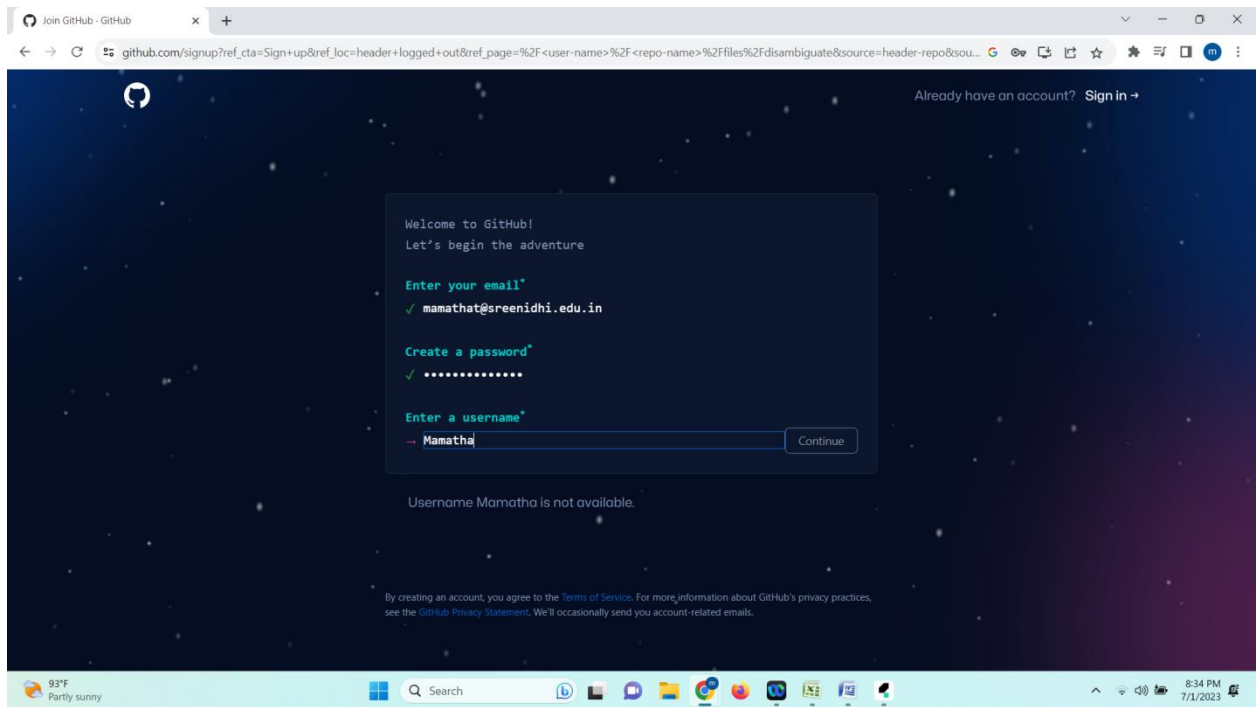
- Go to google, and type github as below and click on the link



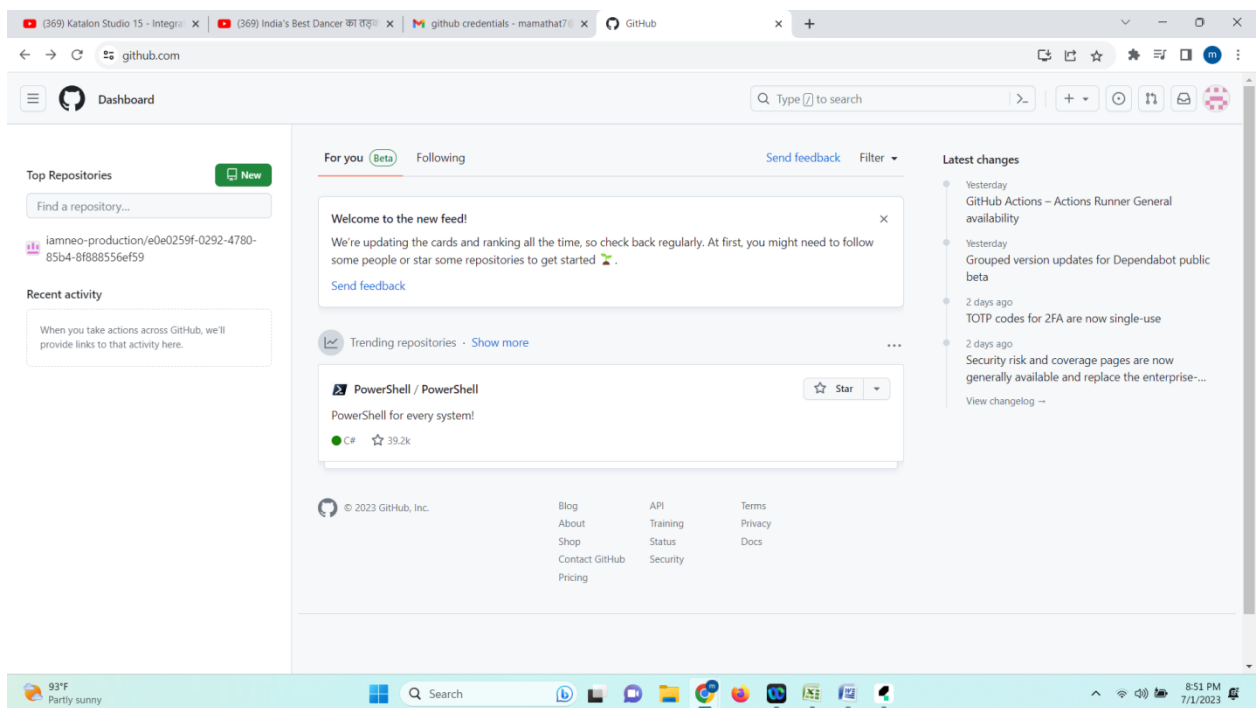
- When you click on link, your heading towards the official site
- Click on sign In, if you have account otherwise click on create new account or sign up
- New account ??? sign up



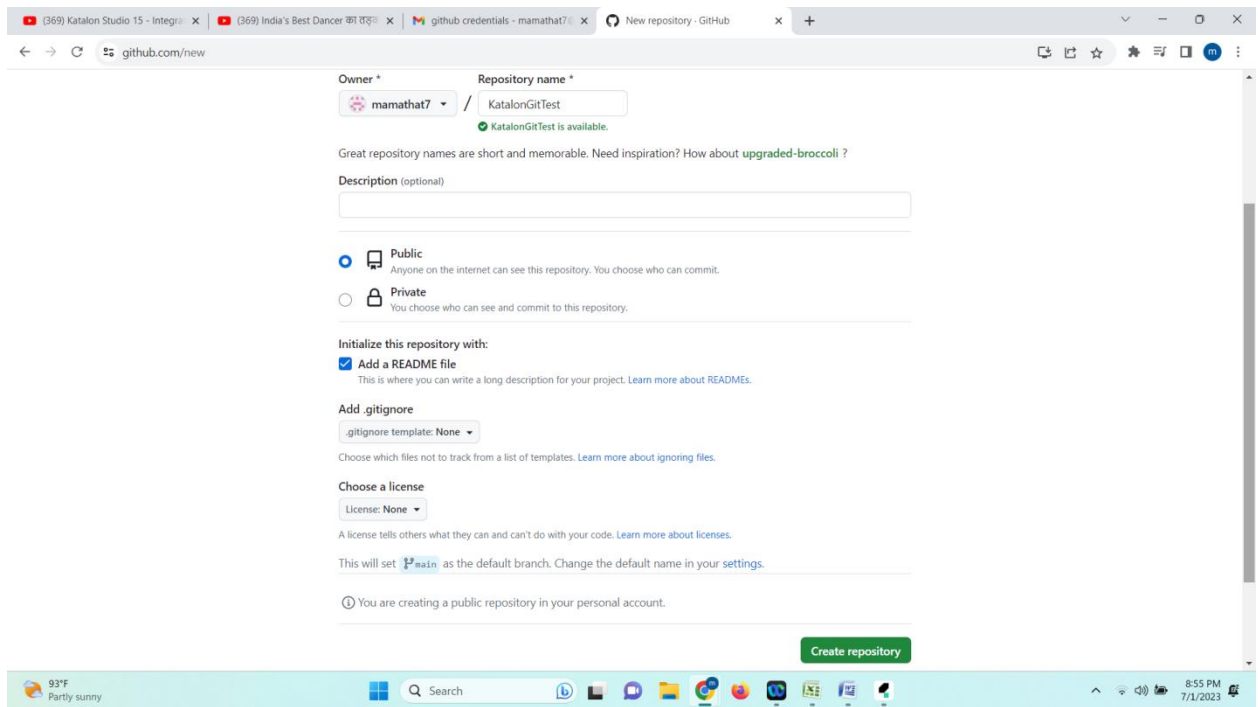
- Give your mail-ID and click on continue
- Give your new password and click on continue
- Enter username



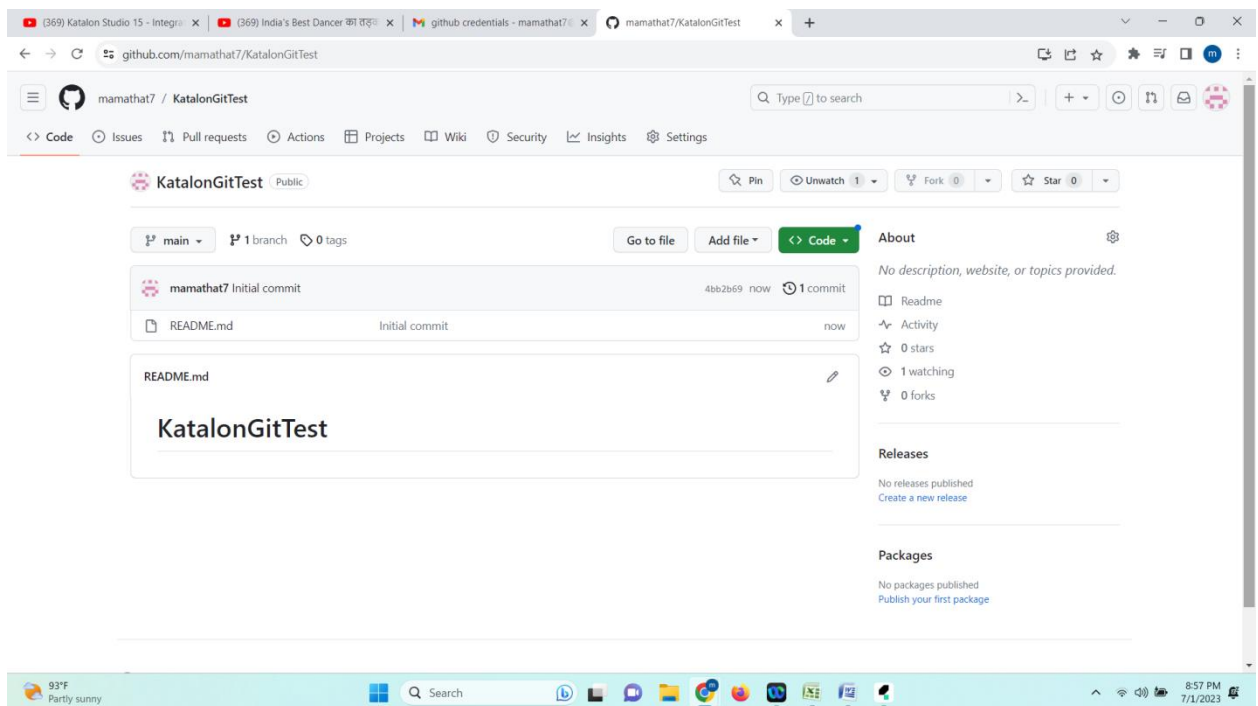
- Creating a new repository on github: Click on (+) icon on top right corner



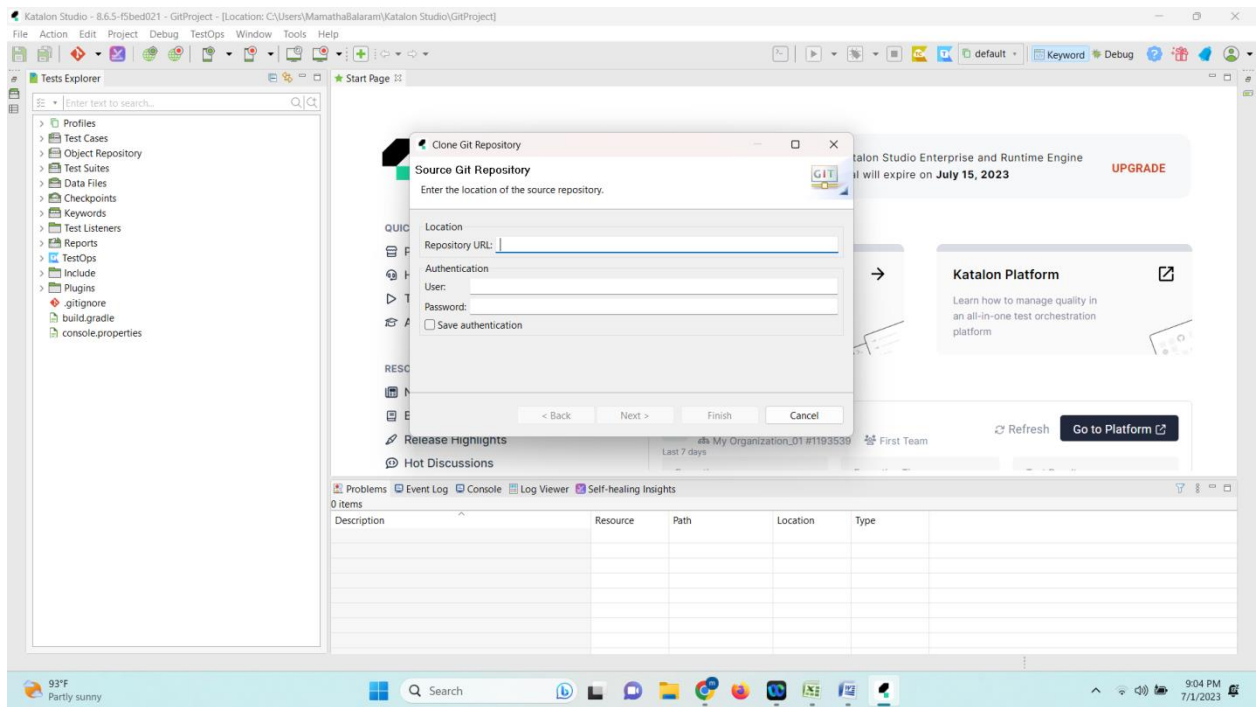
- Give Repository name: KatalonGitTest\_Integration
- Click on add a README File , Initialize this repository



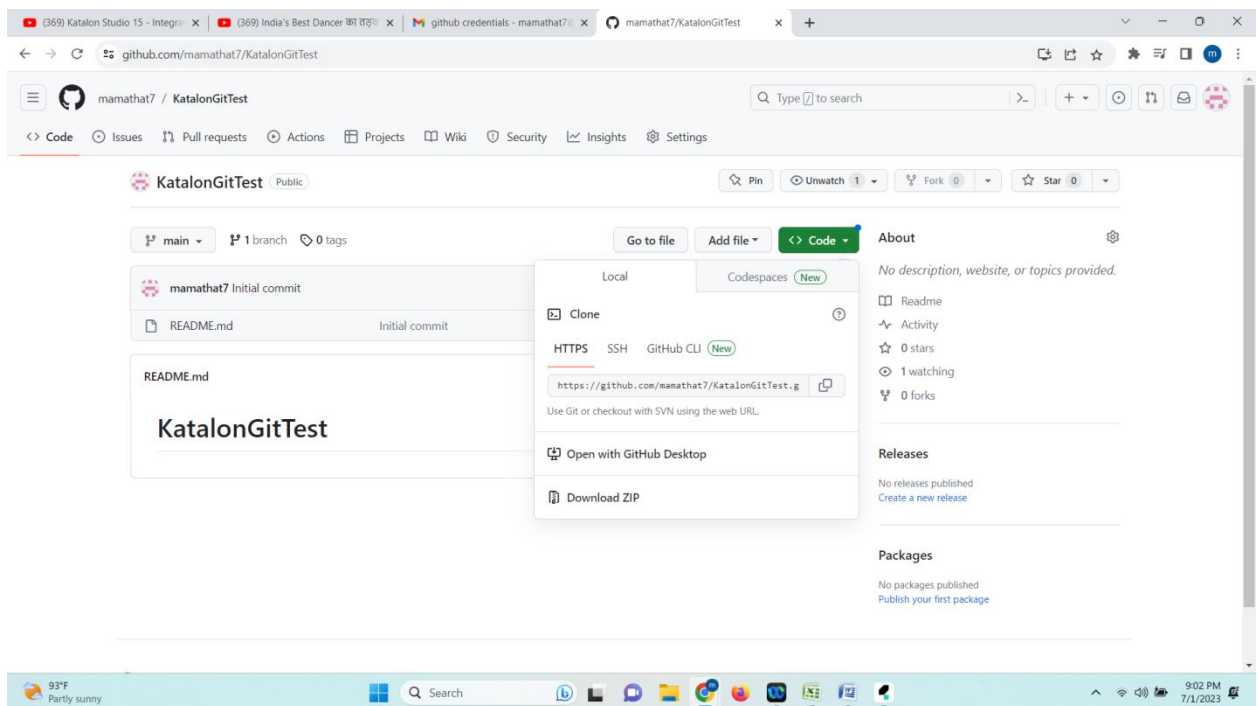
- Click on create repository



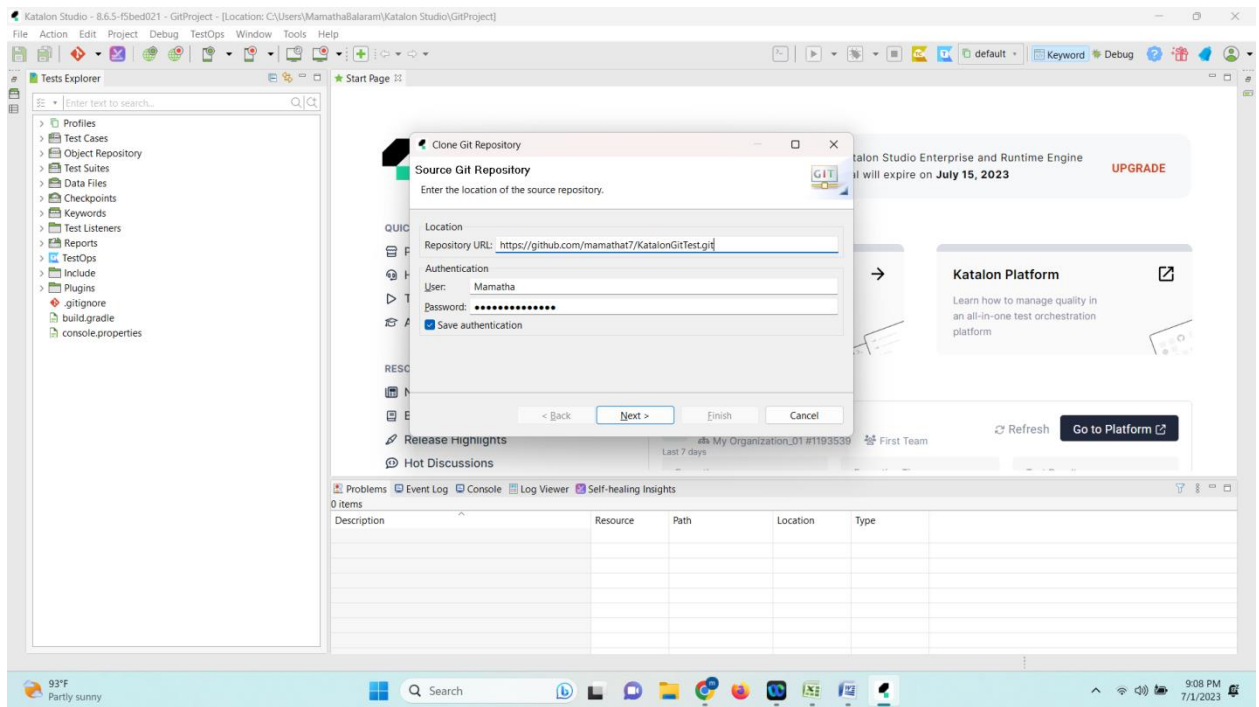
- In katalon studio create a new project ??? click on git icon???select clone project???window appears as below



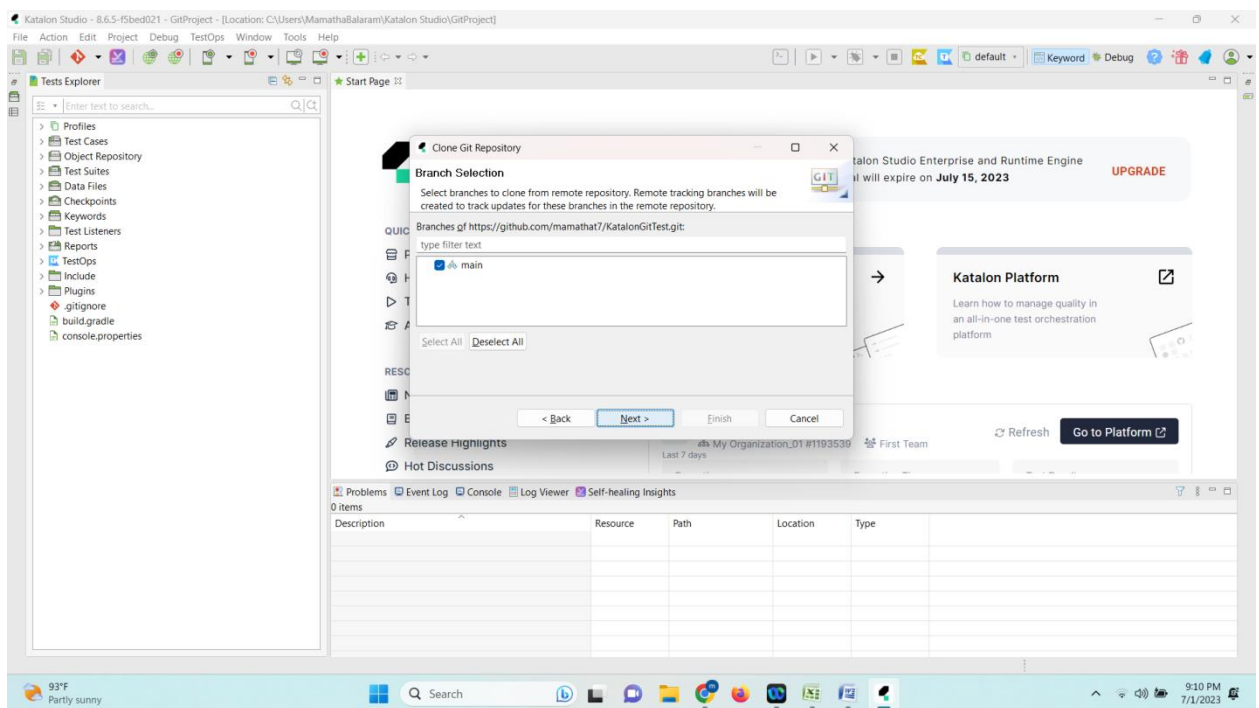
- Goto github, and click on code and copy the URL and paste in above



- Give url and user name and password as below

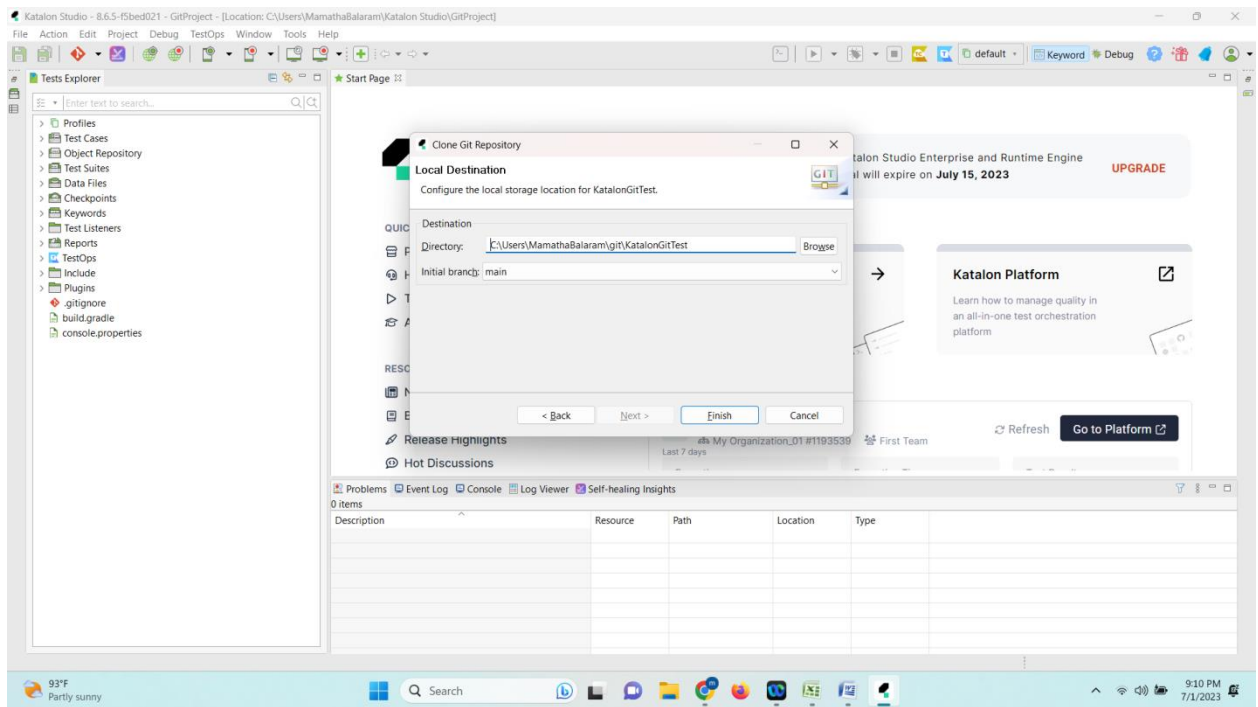


- Next



- Finish





- If you see, ur title of katalon location is changed to git location
- Now goto github???? you can see you have only one readme file is there so goto katalon studio ???select git????click on commit

## Activity 6.2: Git Integration

- > version control system
- > source code management

**This section has the following tasks :**

1. Enable git in your katalon studio
2. if not enable  
window-->katalon studio preferences-->katalon--> git-->enable git
3. github.com --->signup -->newuser
4. github.com-->signin
5. create a repository
  1. click on (+)
6. In katalon create a new project
7. Clone the project (git????clone project)
8. git commit
9. Goto github repository and refresh the page to see the project added

## Activity 6.3 : Integration With Jenkins

**Installation:**

- 1) download jenkins.war file from jenkins.io official site
- 2) Keep jenkins.war file in specified folder (preferably C: )
- 3)run java -jar jenkins.war under jenkins.war location
- 4) copy the password store in notepad (password generated during installation)
- 5) Open browser --> in address bar give-->http://localhost:8080
- 6) username :admin
- 7) pwd: 63d5b178406e49e387522b4af94a541

### Integration of Jenkins with katalon:

- 1) Jenkins should be downloaded--> extract to specified folder (C:)
- 2) Jenkins installation and setup
- 3) Download and activate katalon runtime engine (KRE)
  - > used for scheduling test
  - > integrating with CI/CD
  - > Execute your tests with distributed server
- 4) katalon studio integration with jenkins
  - 4.1) create a sample test case --> add in test suite --> add in test suite collection
- 5) Execute command line generated for test suite/ test suite collection from katalon studio in Jenkins
- 6) At test suite level, click on BuildCMD icon to generate command , copy the command and close dialog box
- 7) In command line, goto the location of our KRE
- 8) paste the generated command at KRE location
- 9) Run the test

### Activity 6.4:

## Integration With Katalon Git, Github And Jenkins

1. Open Jenkins/start Jenkins
2. Click on manage Jenkins >>>plugins>>>installed >>>git plugin (check whether git plugin available or not)
3. Manage Jenkins>>>tool >>>git>>> path to git execution: c:\programfiles\git\
4. Click on apply and save button
5. Create a project in jenkins (refer activity 3)
6. In General Description select : Git hub Project
7. Goto source code management , select git option
  1. Add URL ( from github clone and download)
  2. Add credentials
  3. Specify branch : main/master
8. Goto Build Trigger
  - 8.1 schedule your execution under pollSCM
9. Goto Build
  - 9.1 Under Build select : Execute under window command line
10. Goto katalon studio >>> test suite level>>> click on BuildCMD>>> generate command>>>copy and close
11. Open a note pad, copy the command to notepad and other corresponding commands as below:

```
cd "c:\Users\MamathaBalaram\git\SamplegitIntegration\SamplegitIntegration"
git pull "https://github.com/mamathat7/demosample.git "
cd "C:\katalonRuntimeEngine\Katalon_Studio_Engine_Windows_64-8.6.5 "
katalonc -noSplash -runMode=console -projectPath="C:\Users\MamathaBalaram\Katalon
Studio\KatalonAutomationTesting\KatalonAutomationTesting.prj" -retry=0 -testSuitePath="Test
Suites/Jenkin_testsuite_sample" -browserType="Chrome" -executionProfile="default" -apiKey="0d717ad6-
0eab-4dbb-b878-969cf75a8c10" --config -proxy.auth.option=NO_PROXY -proxy.system.option=NO_PROXY
-proxy.system.applyToDesiredCapabilities=true
cd "c:\Users\MamathaBalaram\git\SamplegitIntegration\SamplegitIntegration"
git status
git add *.*
git commit -m "change for test on jenkins"
git push -u "https://github.com/mamathat7/demosample.git" main
echo Sucess
```

12. Run
13. Observe report generated under Report folder

## Module 7: Cross-Browser Testing Using TestCloud

This task is used when your organization does not have enough resources to perform manually, katalon test\_cloud automation test scripts across the most popular browsers in different environments.

This section has the following tasks:

- Take TC\_CURA\_MakeAppointment\_002
- Integrate katalon studio with testcloud projects-->settings--> katalon test cloud (or)  
Simply click on Tool bar icon
- select testcase at Testsuite level
  - Run -->testcloud

## Module 8: Report Generation And Sending Report To Developers

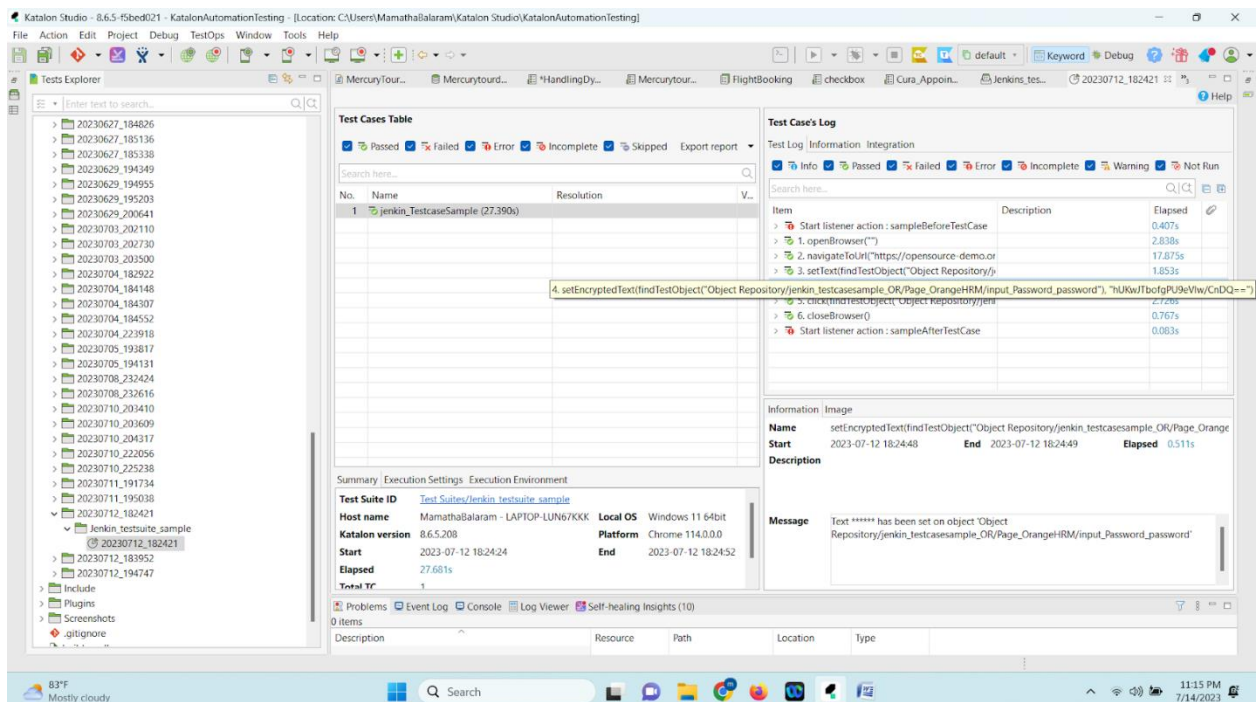
The final step of the katalon step process is to generate report and analyze the report for Quality of the product by discussing with different stakeholders in the project under testing for next actions and eventually whether or not ready for the market release.

### Activity 1: Send report through email

- Goto project ???settings???email ???fill all required fields???apply and save ???close

### Activity 2: Test Email Notification

- Goto test suite??? Open execution information???mail recipients??? add emails???ok



**Troubleshooting:** List common issues that may occur during project setup or test execution and provide possible solutions.

**Conclusion:** Facebook application is easy to be used by the user. Facebook allows user to navigate easily and fast. Other than that, Facebook is an interactive platform help user to chat with others, can get updates of events, can find old friends and schoolmates. When friends go away to any other place, we often don't get the chance to communicate with them. But now Facebook gives us the opportunity to communicate with our Old friend very easily without any cost. Surely, it is going to make you feel happy to see your old friend sharing some happy photos from another part of the World. Facebook is free and it's one of the best medium for communication. You can send message , start a video call, upload photos and videos for free.