

● *USER GUIDE FOR TAKING VM BASED AUTO-GRADED ASSESSMENT*

1. Login into assessment by providing relevant information

The screenshot shows the YAKSHA assessment platform registration page. The browser address bar displays the URL: `assessments.yaksha.com/ihtinternal/account/test-taker/pre-assessment/ZjI5MjE5YjktNjg0My00OGYzLWJlZjQ0OWViODgyY2U3Yzc3LzUw`. The page features a blue header with the YAKSHA logo and a navigation bar with buttons for '180 Mins', '1 Sections', '1 Skills', '1 Questions', and '1 Total Attempts'. A progress bar indicates 70% completion towards the cut-off. The main content area is divided into two columns: 'System Requirements' and 'Link Validity and Cut-off Details'. The 'System Requirements' section lists: 'Recommended Browser (Chrome, Safari, Etc)' and 'Javascript should be enabled in the browser'. The 'Link Validity and Cut-off Details' section lists: 'Link Validity Start Date and Time - 24/5/2023, 7:00 PM' and 'Cut Off Date and Time - 31/12/2023, 3:00 PM'. The 'Registration Details' section on the right contains input fields for 'First Name', 'Last Name', 'Email', and 'Phone (Optional)', along with a reCAPTCHA 'I'm not a robot' checkbox. A 'Start Assessment' button is located at the bottom right of the registration details. The footer includes a 'Description' section with 'Allowed attempt - 1' and 'Pass_Percentage-70%', and an 'Activate Windows' watermark.

Assessment Platform

assessments.yaksha.com/ihtinternal/account/test-taker/pre-assessment/ZjI5MjE5YjktNjg0My00OGYzLWJlZjQ0OWViODgyY2U3Yzc3LzUw

(211) Without Ads... Code.org - New Da... Angular Inbox (5,804) - defi... Assessment Platform

YAKSHA

180 Mins 1 Sections 1 Skills 1 Questions 1 Total Attempts

0 70% | -CutOff 100%

System Requirements

- Recommended Browser (Chrome, Safari, Etc)
- Javascript should be enabled in the browser

Link Validity and Cut-off Details

- Link Validity Start Date and Time - 24/5/2023, 7:00 PM
- Cut Off Date and Time - 31/12/2023, 3:00 PM

Registration Details

First Name * Last Name *

First Name Last Name

Email * Phone (Optional)

Email Phone

☐ I'm not a robot reCAPTCHA Privacy Terms

Start Assessment

Description

Allowed attempt - 1

Pass_Percentage-70%

Activate Windows
Go to Settings to activate Windows.

Type here to search

12:07 PM
19-06-2023

2. After login a landing page would be redirected, wherein you will have
 - a. Instruction for assessment.
Make sure you thoroughly go through them.
 - b. Option to Launch the assessment environment

The screenshot shows a web browser window with the URL `assessments.yaksha.com/ihtinternal/app/test-taker/test/NTAvZj5MjE5YjktNjg0My00OGYzLWJiZjQ0OWViODgyY2U3Yzc3L3FueC4yMEBtYWlsLmNvbS9paWh0...`. The page title is "EMI-Calculator-Template". At the top right, there is a "Instructions" link. Below the title bar, there is a "Project" tab and a "Time Remaining: 00:00:00" timer, along with a "Submit Assessment" button. The main content area is divided into two columns: "Question" and "Instructions". The "Question" column contains a blurred image of a document. The "Instructions" column contains the following text:

Introduction
This is a project-based assessment, in which you will be provided with a template code to work. You will be provided with a pre-configured Virtual Machine (VM) to develop the case study.

Launch
You can launch VM by clicking "Launch Assessment Environment". It will take around 5-10 mins to launch the VM.

Configuration
Once launched, if you see any configuration screen, skip it.

Cloning
Once VM is up, it will take another 30 sec-1 min to clone your project template on desktop of your VM. Please wait till then.

Document
The project will be cloned in a folder, named same as your email ID. The folder contains template code and case study document. You are required to open the case study document and thoroughly go through it to understand project and mandatory process.

Development
To develop use case all IDEs, Database required are available in VM. There is a README file on desktop containing any credentials you need.

Submission
Before you do final submission of your code there are 2 mandatory things you have to follow, else your evaluation result would be affected

1. RUN TEST CASE (AS MENTIONED IN DOCUMENT)
2. PUSH CODE TO GIT (AS MENTIONED IN DOCUMENT)

At the bottom of the "Instructions" column, there is a blue button labeled "Launch Assessment Environment". To the right of this button, there is a "Activate Windows" watermark with the text "Go to Settings to activate Windows."

The Windows taskbar is visible at the bottom of the screen, showing the search bar, task view button, and several application icons (Chrome, VS Code, etc.). The system clock shows 01:17 PM on 19-06-2023.

3. Once clicked on Launch Assessment Environment it will start loading the same.

The screenshot displays a web browser window with the URL `assessments.yaksha.com/ihtinternal/app/test-taker/test/NTAvZjISMjESYjktNjg0My00OGYzLWJlZjQ0OWVlODgyY2U3Yzc3L3FueC4yMEBtYWIsLmNvbS9paWh0...`. The page title is "EMI-Calculator-Template". The interface includes a "Project" tab, a "Time Remaining: 00:00:00" timer, and a "Submit Assessment" button. The main content area is divided into two sections: "Question" and "Instructions".

Question: Q1. 5 marks EMI-Calculator of Money Control

Instructions:

- Introduction**
This is a project-based assessment, in which you will be provided with a template code to work. You will be provided with a pre-configured Virtual Machine (VM) to develop the case study.
- Launch**
You can launch VM by clicking "Launch Assessment Environment". It will take around 5-10 mins to launch the VM.

The right side of the interface features a diagram showing a cloud icon connected to a monitor icon. Below the diagram is a progress bar with six steps: 1. VM Creation, 2. VM Allocation, 3. Power Check, 4. VM Booting, 5. VM Tools Running, and 6. Obtaining IP. A red message states: "Please wait. It will take 5 to 10 minutes to provision your environment. Kindly don't refresh the page". At the bottom right, there is a "Activate Windows" watermark with the text "Go to Settings to activate Windows."

4. Once loaded it will ask to start the Labs

The screenshot shows the 'EMI-Calculator-Template' lab interface. On the left, there is a 'Question' section and an 'Instructions' section. The 'Instructions' section includes an 'Introduction' and a 'Launch' section. The 'Launch' section states: 'You can launch VM by clicking "Launch Assessment Environment". It will take around 5-10 mins to launch the VM.' On the right, there is a progress bar with steps: 'VM Creation', 'VM Allocation', 'Power Check', 'VM Booting', 'VM Tools Running', and 'Obtaining IP'. The lab status is 'Running' and the lab IP is '172.19.16.2'. A 'Start Lab' button is visible. The top right corner shows 'Time Remaining: 02:58:12' and a 'Submit Assessment' button. The bottom of the screen shows a Windows taskbar with various application icons.

5. Once done it will provision a VM. You can use option of Toggle FullScreen to get VM in FullScreen mode. To move out of Full Screen, you can use Esc.

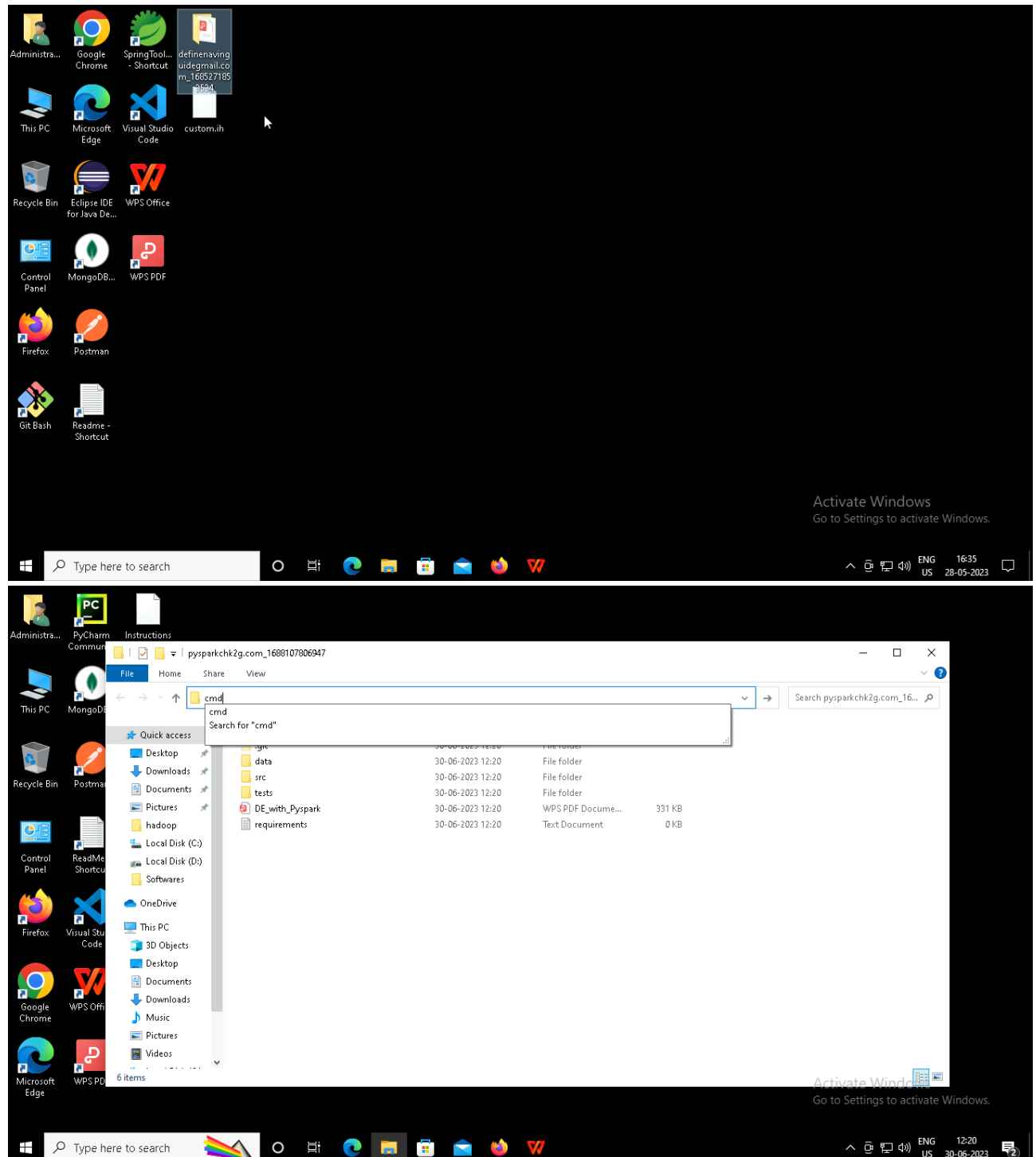
The screenshot shows the 'EMI-Calculator-Template' lab interface in full-screen mode. The interface displays a Windows desktop environment with various application icons like Google Chrome, Spring Tool Suite, Visual Studio Code, and others. The lab status is 'Running' and the lab IP is '172.19.16.2'. A 'Save & Exit' button is visible. The top right corner shows 'Time Remaining: 02:57:50' and a 'Submit Assessment' button. The bottom of the screen shows a Windows taskbar with various application icons.

- On Your VM Desktop you will find a folder named with your Email ID. This contains the template code and Use case Document.

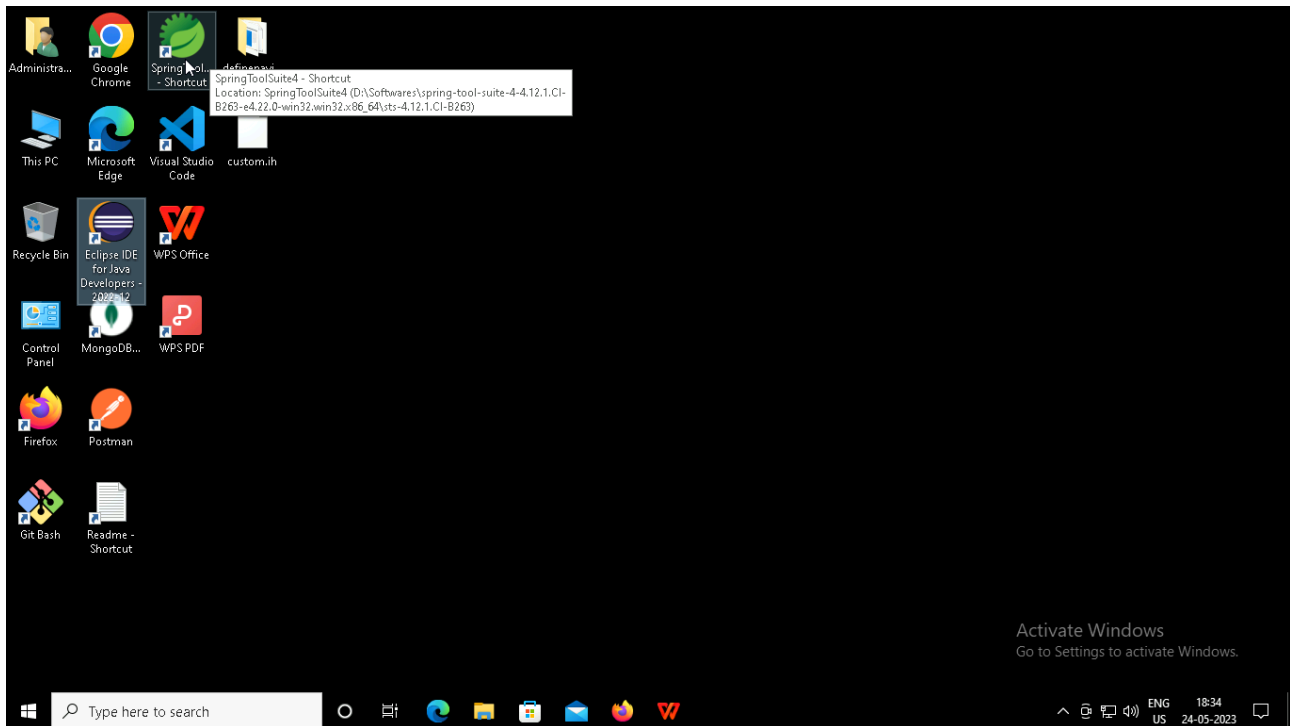
Make sure you open the document and thoroughly go through it to understand the SRS and expectations.

Note: It will take 30 sec to 1 min to clone the project folder on your desktop.

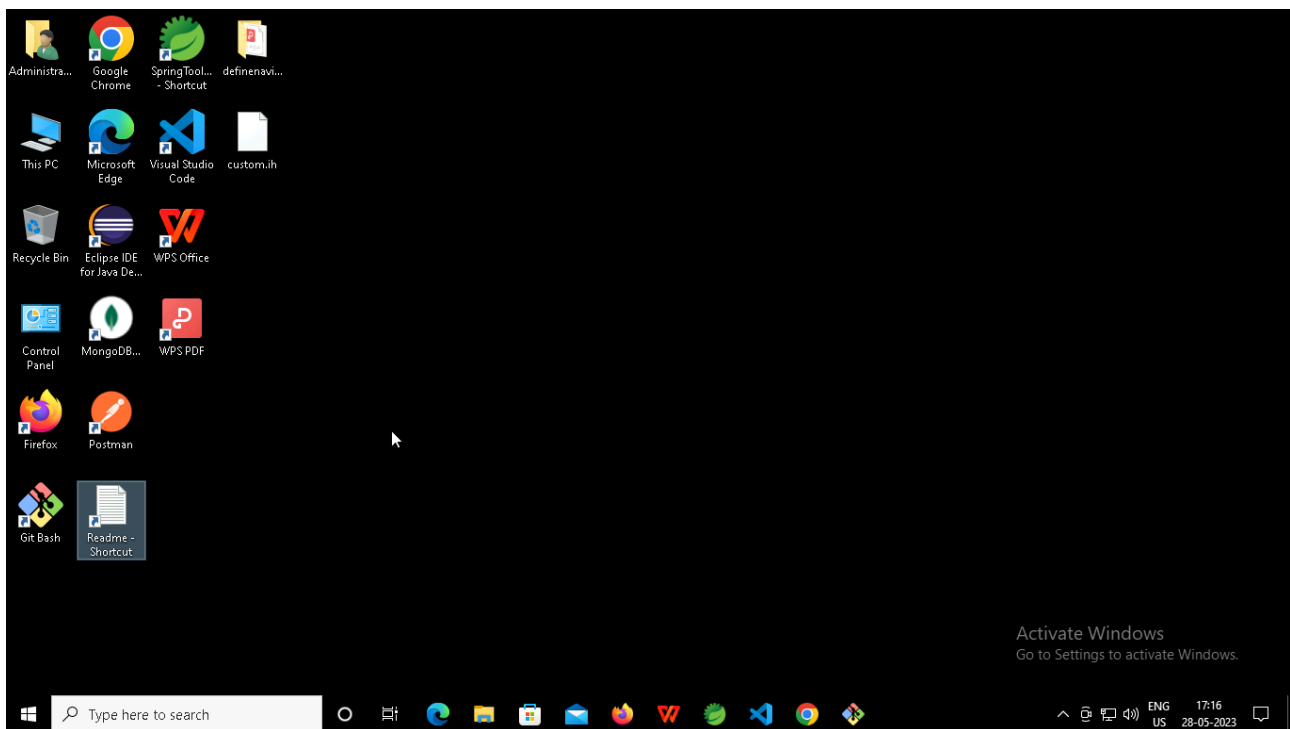
Please wait



7. Search for IDE you want to use for development (or any tool you need). You may find shortcuts of few of them on desktop also.
 - a. For Java based project, you will have Eclipse and STS.
 - b. For Angular/React project, you will have VS Code IDE
 - c. For .NET based, you will have Visual Studio
 - d. For Python based, you will have Pycharm/Jupyter/VS Code

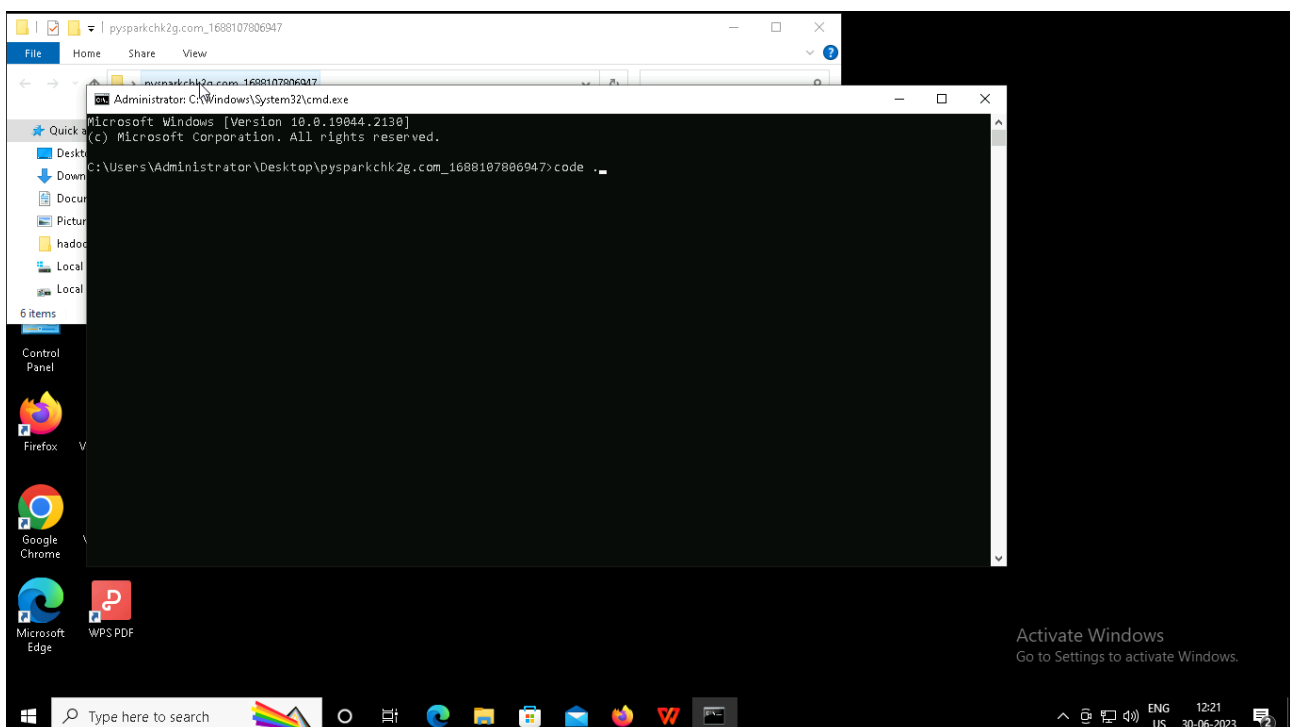
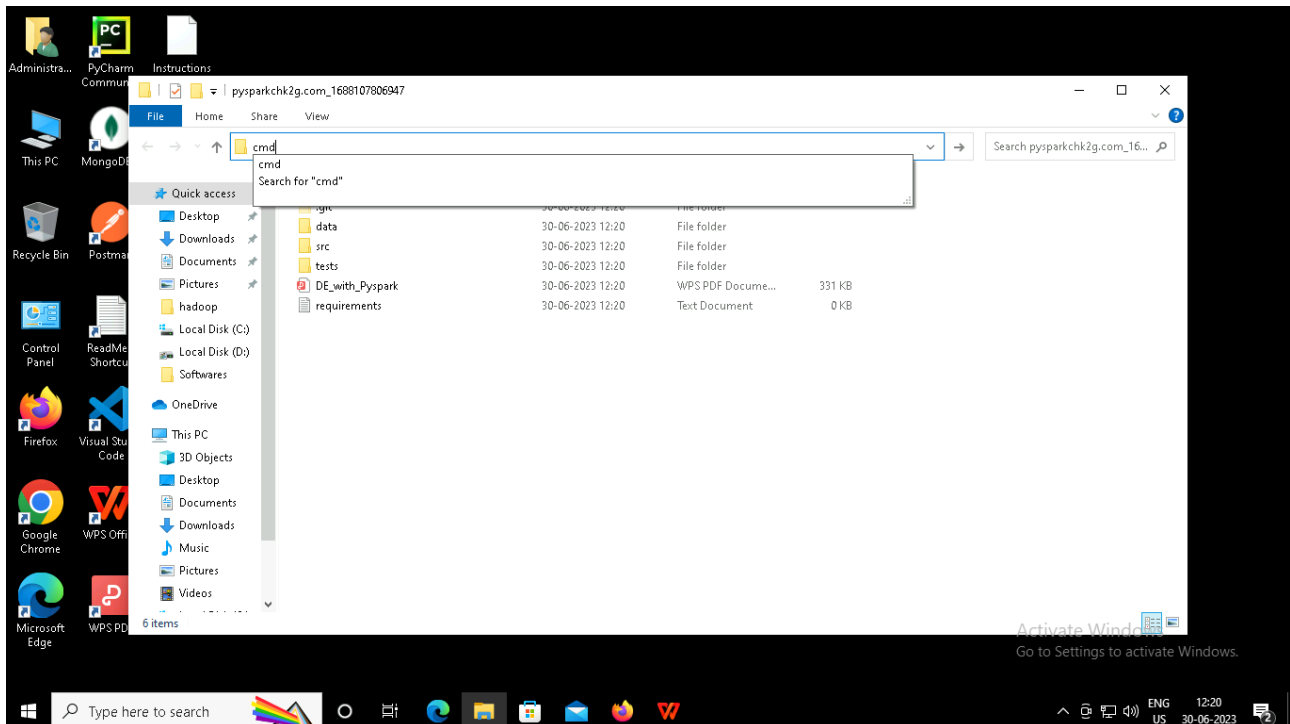


8. All credentials needed for any DB connections are available on desktop in Readme file



9. Opening PySpark Project.

- Get into the project folder
- Launch Command Terminal
- Launch VS Code



The screenshot shows a Visual Studio Code editor window with a Jupyter Notebook open. The Explorer sidebar on the left shows a project structure with files like `__init__.py`, `constants.py`, `DE_with_pyspark.ipynb`, `tests`, `DE_with_Pyspark.pdf`, and `requirements.txt`. The main editor area displays the Jupyter Notebook content, which includes two code cells and a section header.

```
src> DE_with_pyspark.ipynb> import pyspark

+ Code + Markdown | Outline ...

import pyspark

from pyspark.sql.functions import udf
from pyspark.sql.types import ArrayType, StringType, IntegerType
from pyspark.sql.types import StructType, StructField, DoubleType

import sys
from pathlib import Path
sys.path.append(str(Path.cwd().parent))

# initiate spark session
spark = pyspark.sql.SparkSession.builder.appName("appName").config("spark.driver.extraClassPath", "C:\\mysql-connector-j-
```

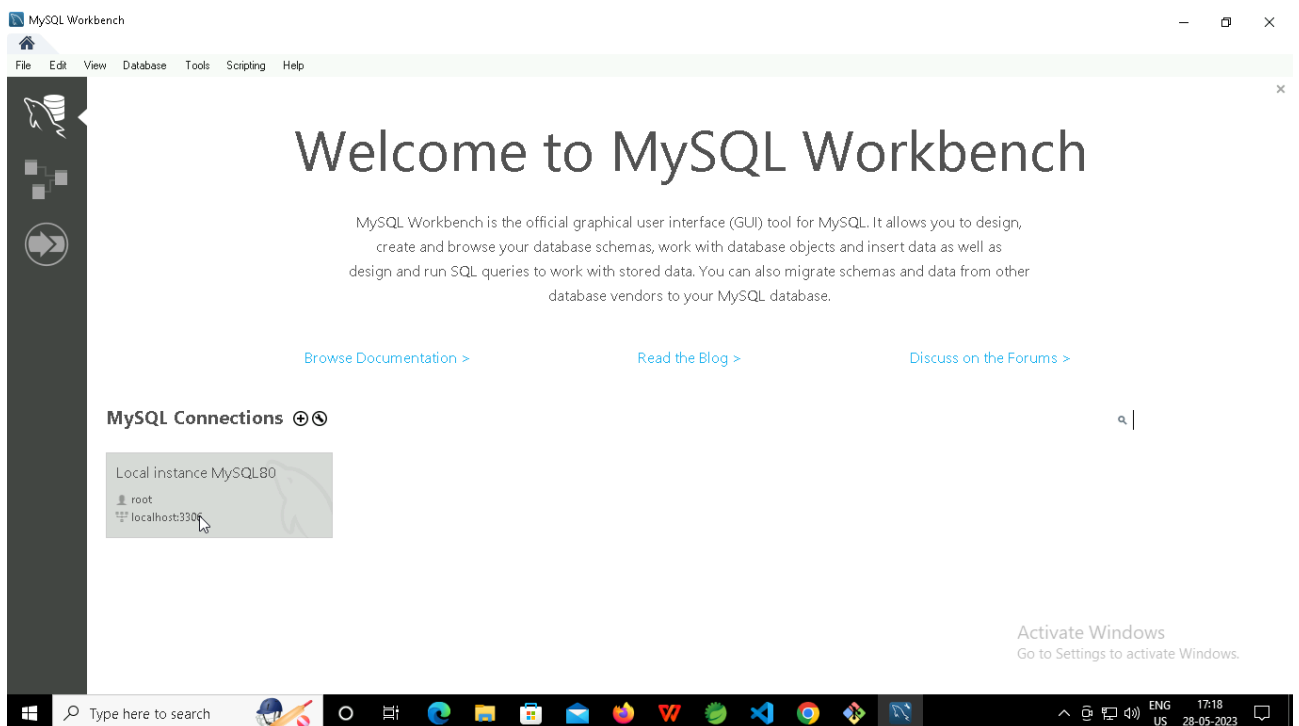
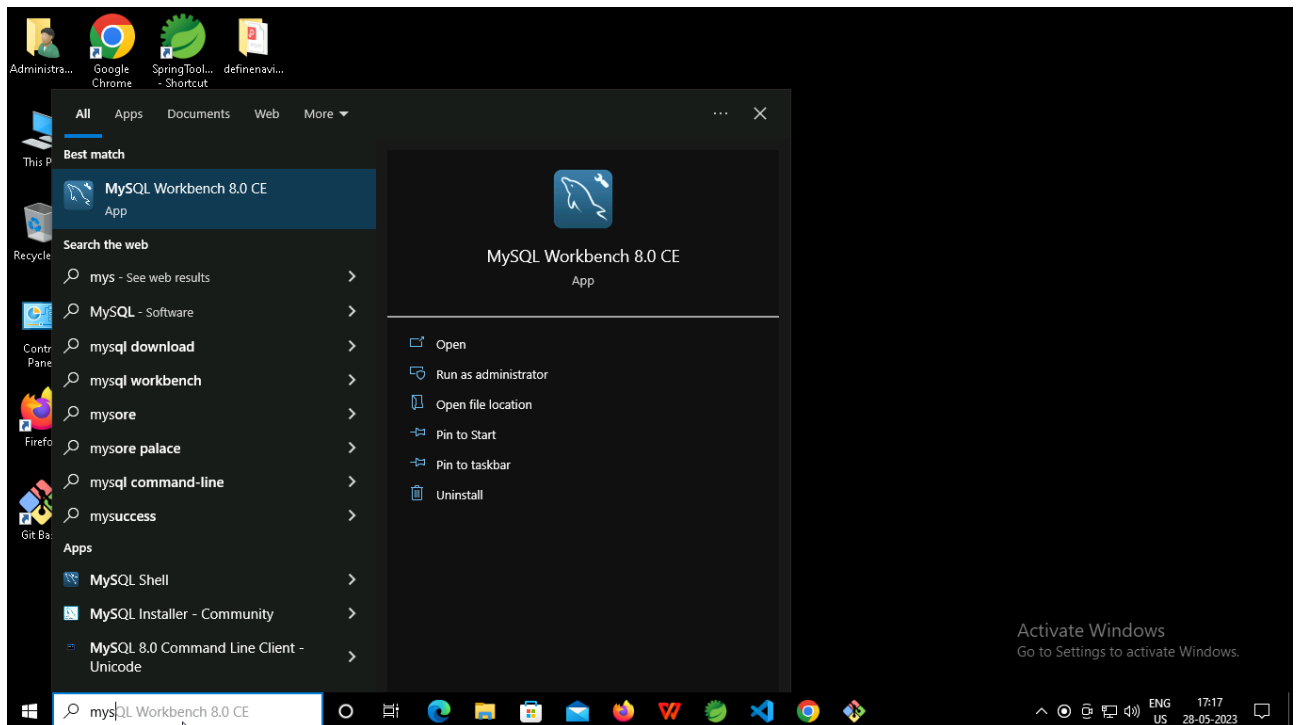
1. Load data

Q1) 1.1 Load data from MySQL

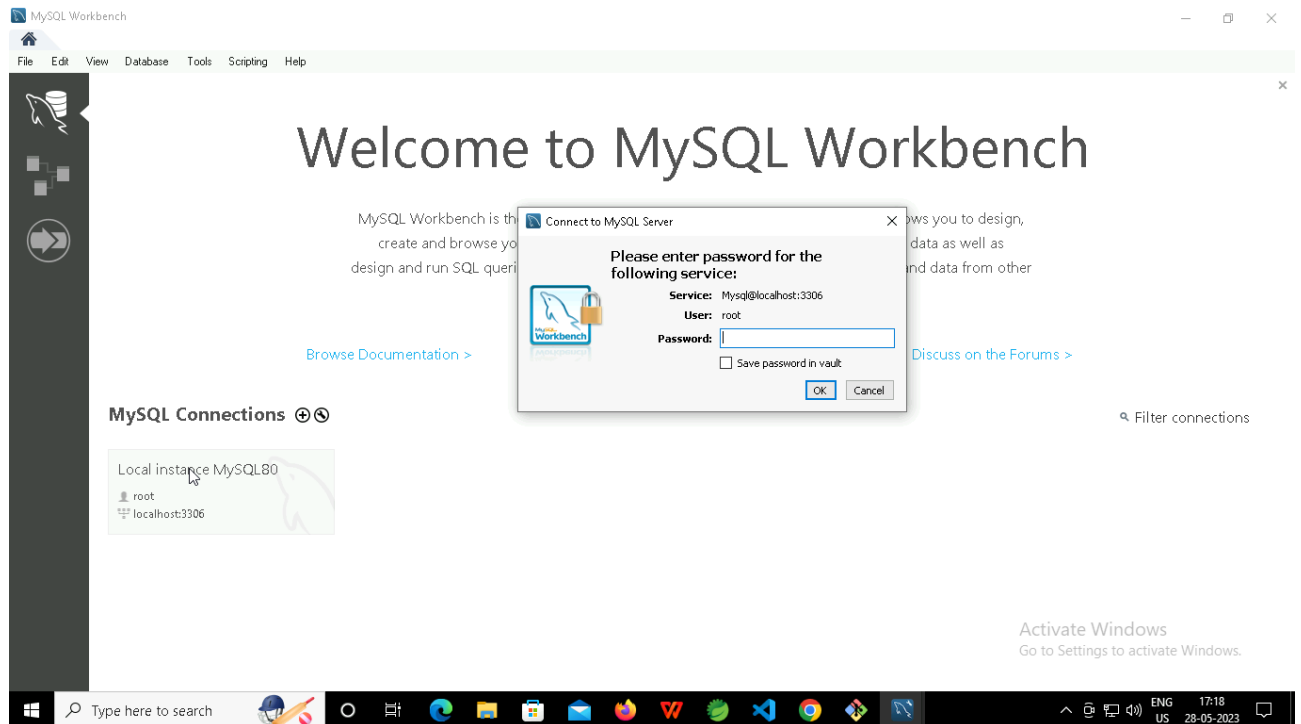
```
def load_data_from_mysql(spark :pyspark.sql.SparkSession, db_name :str, table_name :str) -> pyspark.sql.DataFrame:
```

At the bottom of the editor, a status bar shows "Jupyter Server: Local" and "Cell 1 of 31". The Windows taskbar at the very bottom includes a search bar, task view, and system tray with the date "30-06-2023".

10. You can open MySQL workbench from start option



- a. Use Credentials provided in README file (on desktop) to login into MySQL instance

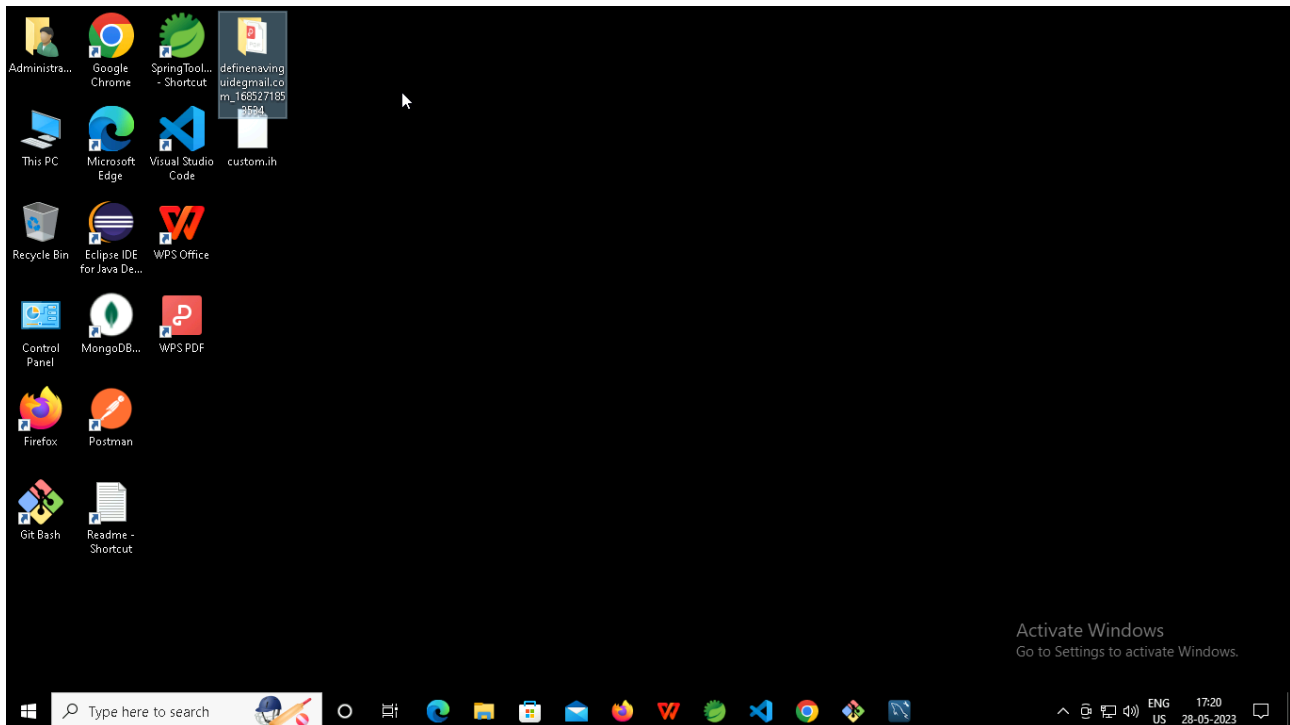


11. It is mandatory to run test cases on your project for scores to be evaluated before submission.

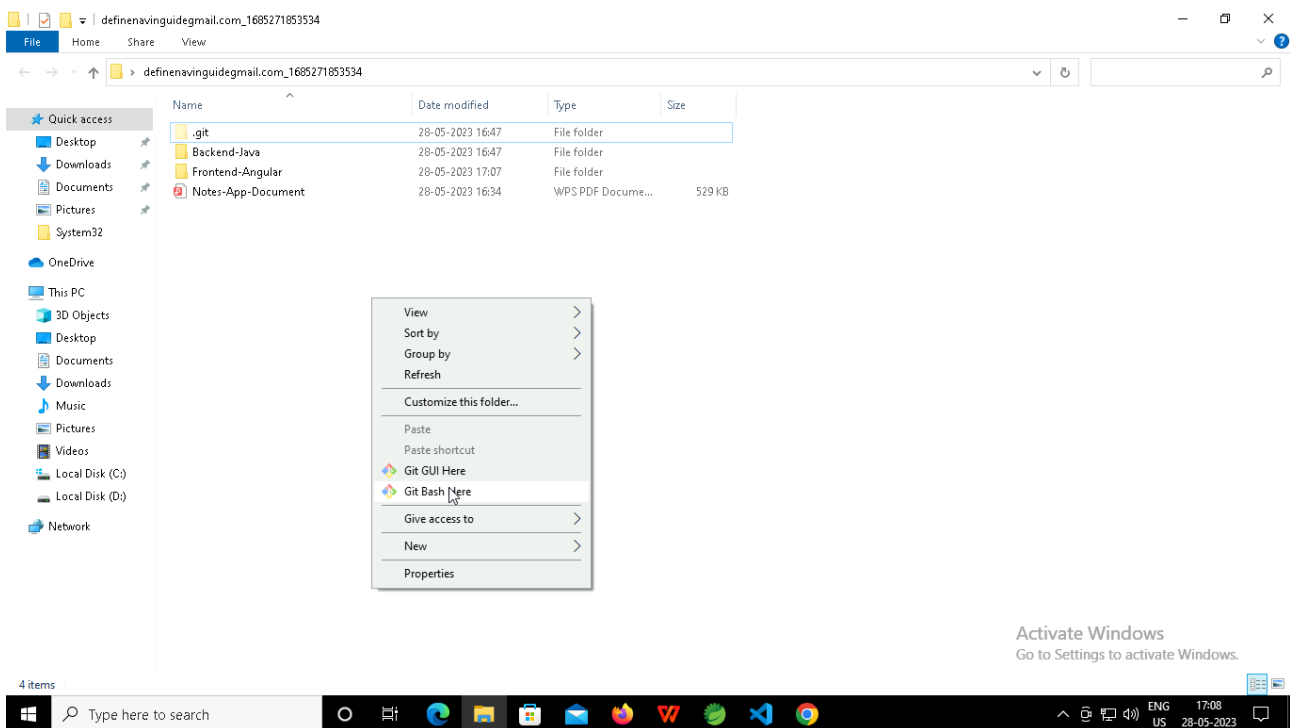
To run Test cases, use following command
python -m pytest tests

You can run test cases as many numbers of times and at any stage of development, to check how many test cases are passed/failed and accordingly refactor your code.

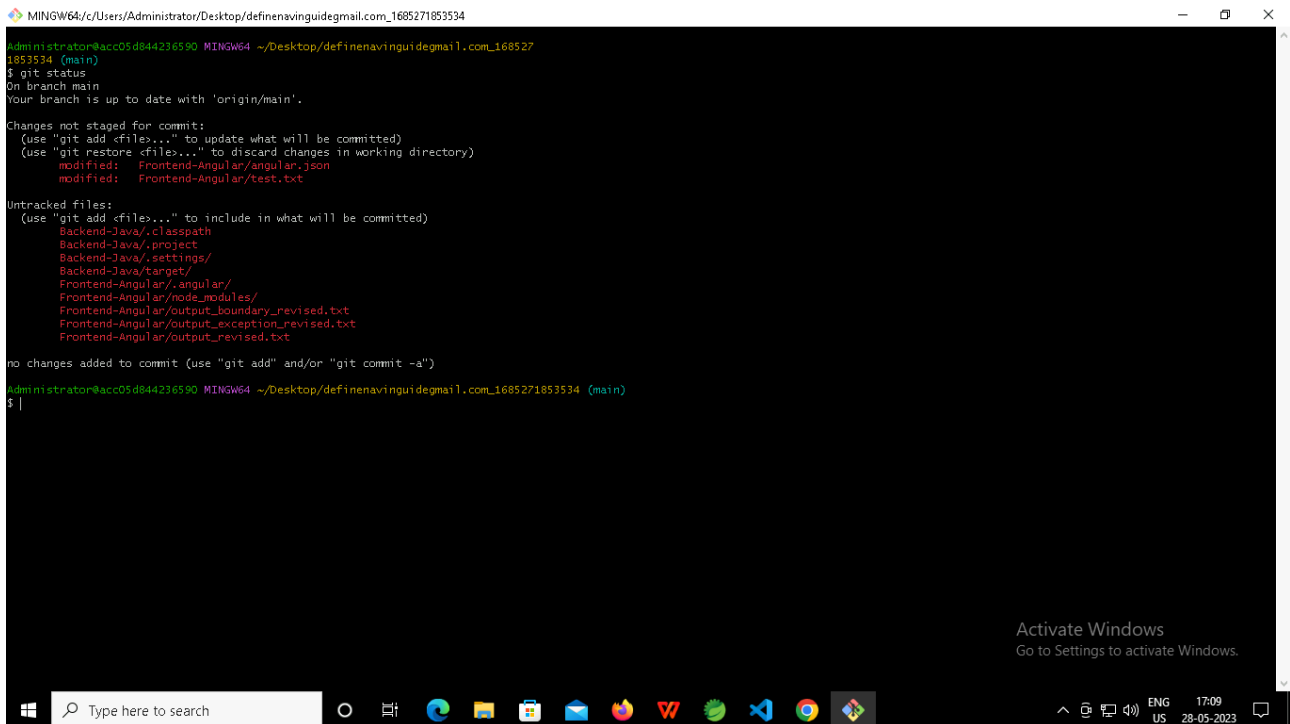
12. **Make sure before final submission you commit all changes to git.** For that open the project folder available on desktop



a. Right click in folder and open Git Bash



- b. In Git bash terminal, run following commands
- c. git status



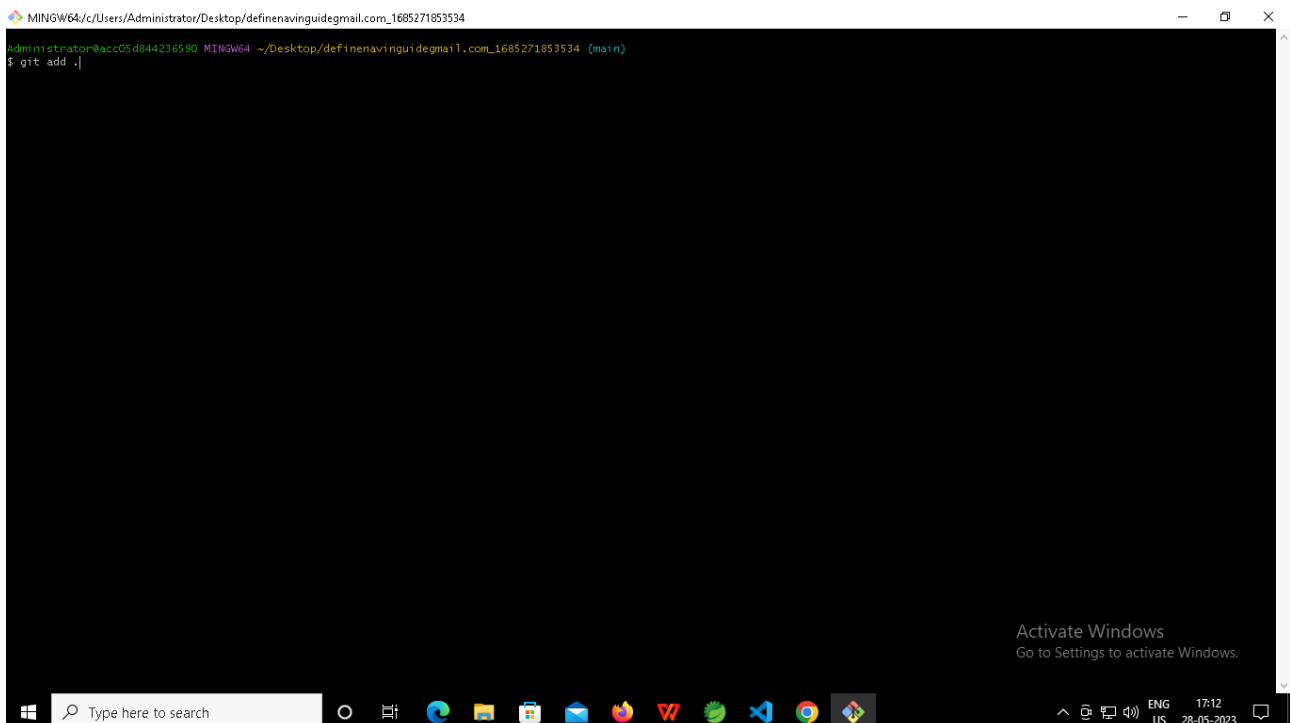
```
MINGW64/c:/Users/Administrator/Desktop/definavinguidegmail.com_1685271853534
Administrator@acc05d844236590 MINGW64 ~/Desktop/definavinguidegmail.com_1685271853534 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   Frontend-Angular/angular.json
        modified:   Frontend-Angular/test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Backend-Java/.classpath
        Backend-Java/.project
        Backend-Java/.settings/
        Backend-Java/target/
        Frontend-Angular/.angular/
        Frontend-Angular/node_modules/
        Frontend-Angular/output_boundary_revised.txt
        Frontend-Angular/output_exception_revised.txt
        Frontend-Angular/output_revised.txt

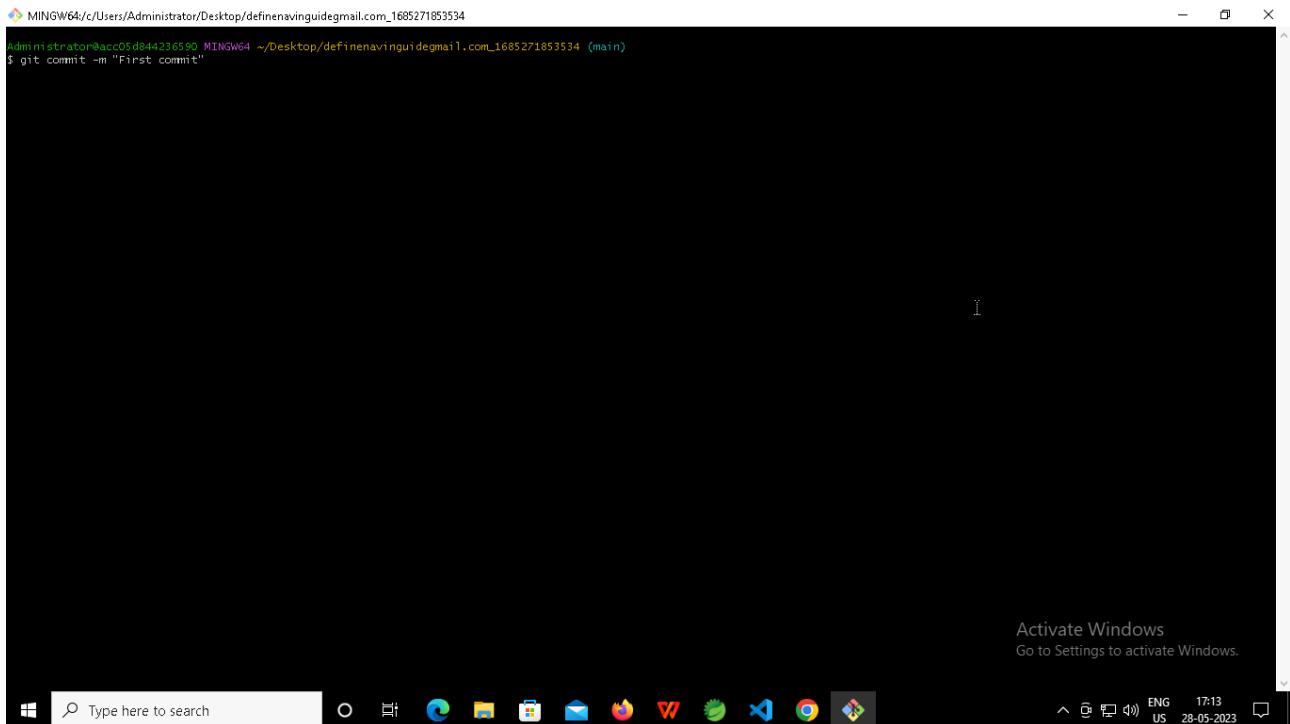
no changes added to commit (use "git add" and/or "git commit -a")
Administrator@acc05d844236590 MINGW64 ~/Desktop/definavinguidegmail.com_1685271853534 (main)
$ |
```

- d. git add .



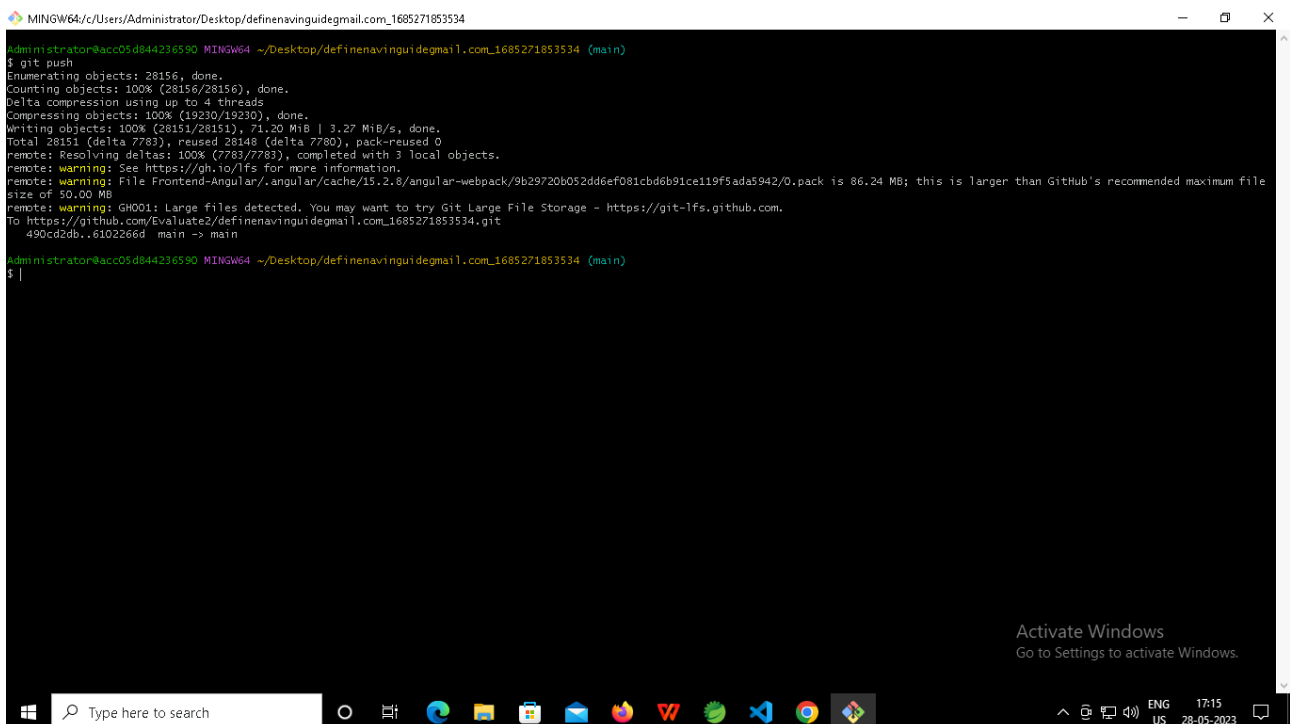
```
MINGW64/c:/Users/Administrator/Desktop/definavinguidegmail.com_1685271853534
Administrator@acc05d844236590 MINGW64 ~/Desktop/definavinguidegmail.com_1685271853534 (main)
$ git add .
$ |
```

- e. `git commit -m "First commit"`
(You can provide any message every time you commit)



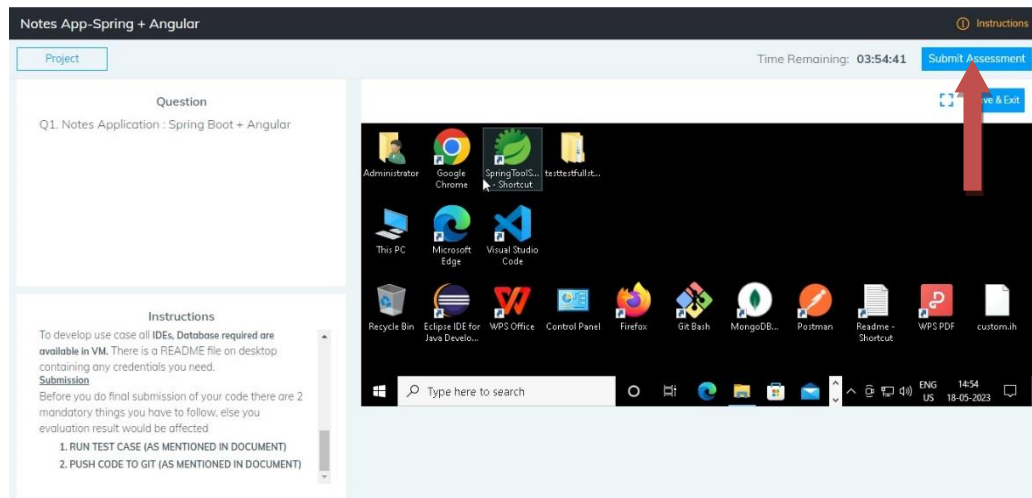
A screenshot of a Windows terminal window. The title bar shows the path "MINGW64/c/Users/Administrator/Desktop/definavinguidegmail.com_1685271853534". The terminal content shows the prompt "Administrator@acc05d844236590 MINGW64 ~/Desktop/definavinguidegmail.com_1685271853534 (main)" followed by the command "\$ git commit -m 'First commit'". The terminal is mostly empty, indicating the command has been executed. The Windows taskbar is visible at the bottom with various application icons and a search bar. An "Activate Windows" watermark is present in the bottom right corner of the terminal window.

- f. `git push`



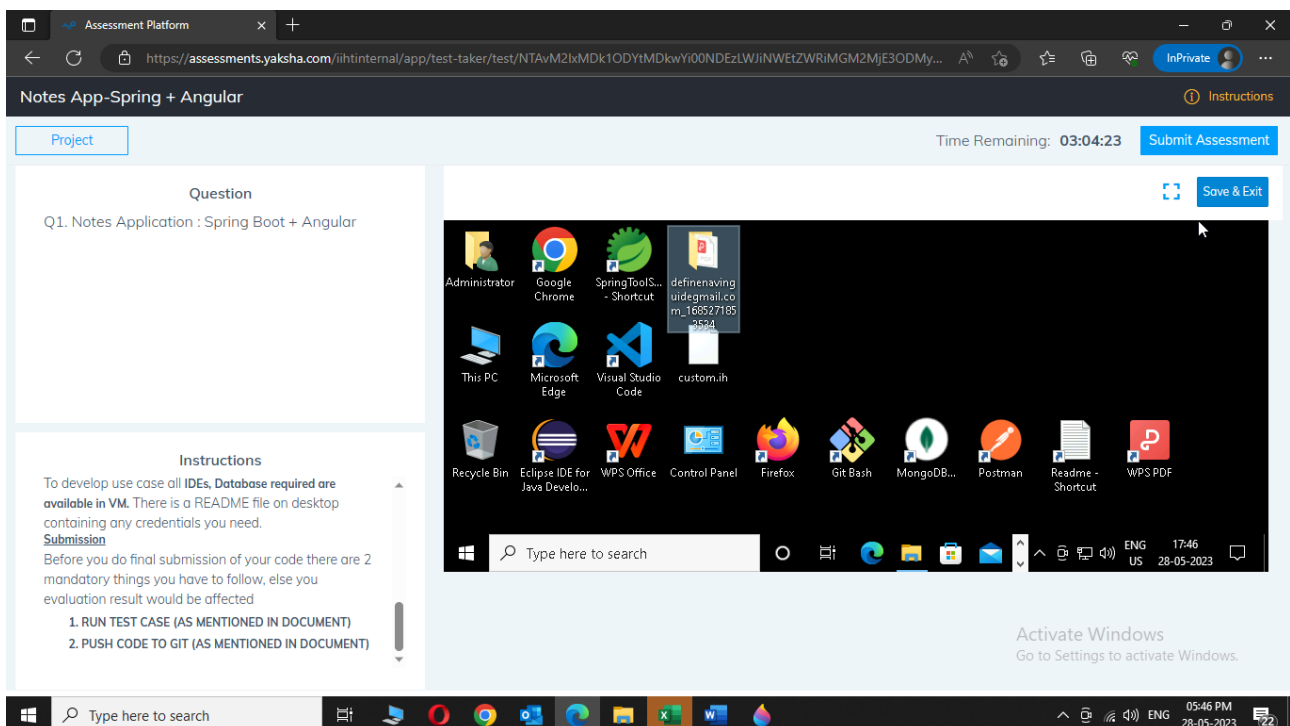
A screenshot of a Windows terminal window showing the output of the "git push" command. The title bar is the same as the previous screenshot. The terminal content shows the prompt "Administrator@acc05d844236590 MINGW64 ~/Desktop/definavinguidegmail.com_1685271853534 (main)" followed by "\$ git push". The output includes progress bars for enumerating, counting, and compressing objects, and a warning about a large file size (86.24 MB) exceeding GitHub's recommended maximum (50.00 MB). The terminal ends with the prompt "\$ |". The Windows taskbar and "Activate Windows" watermark are also visible.

13. Once you are ready to do the final submission, click on Submit assessment after moving out of Full Screen mode

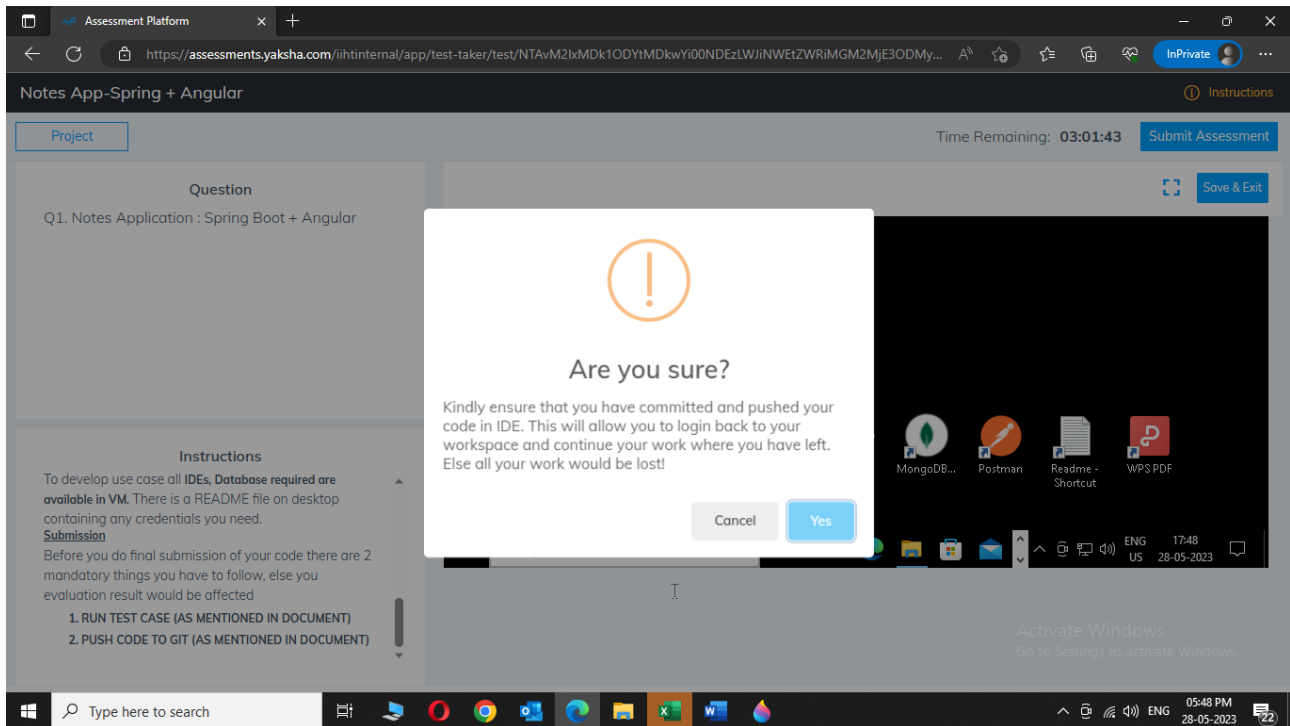


14. Logging Out without submitting:

- a. You have an option to logout in between without submission. The option is available as “Save & Exit” once you move out of fullscreen mode



b. Make sure you have done the mandatory activities before you logout



c. Once you logout the timer will stop. You will be able to login back in assessment using the same credentials. Your timer will restart and you will be able to continue your assessment from the point you have left