System Requirements Specification Index

For

Kafka with python

Order processing system and analysis

Version 1.0

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Problem Statement : Real-Time order processing and analysis

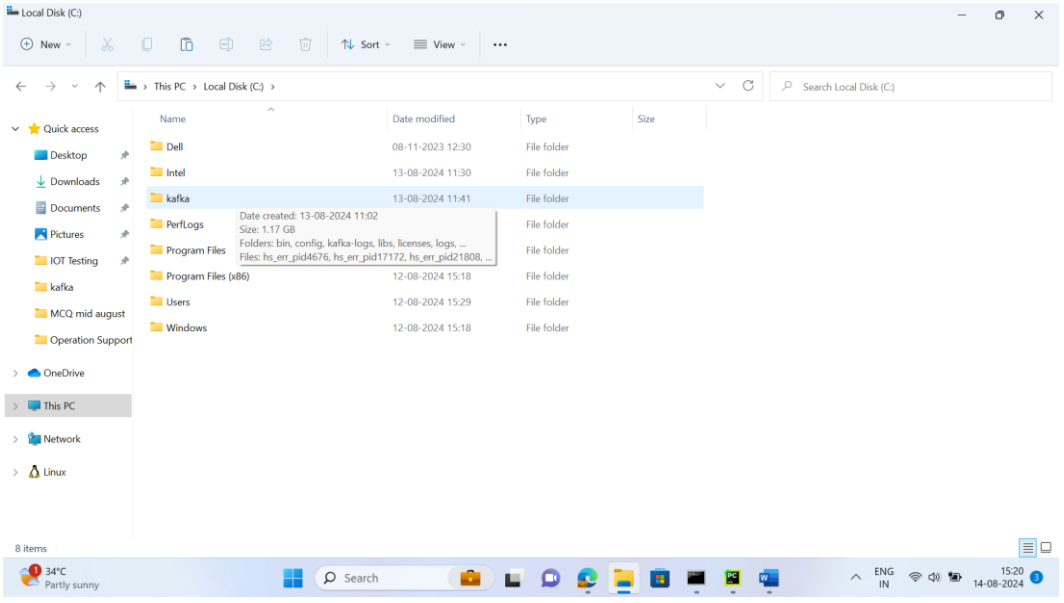
Description : Use relevant methods operations toperform specified activities which are given in the instructions.

Use case problem statement

An e-commerce application processes orders placed by customers. The orders contain product details like name, quantity, price, and category. The application is responsible for producing these orders as messages (perhaps for further processing in a message broker or downstream service) and for analyzing these orders to derive insights.

Kafka setup

You can see the kafka setup in the download folder



1. Extract Kafka:

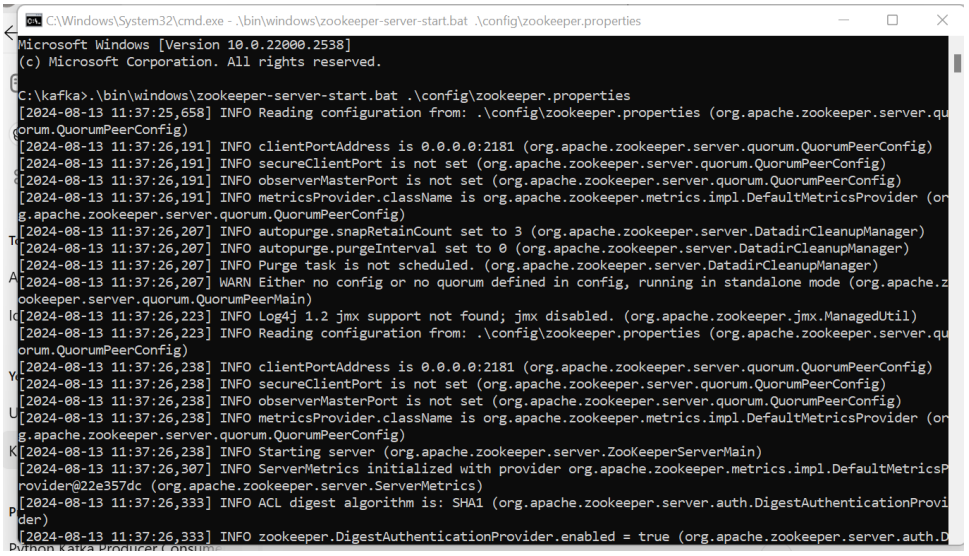
- Extract the downloaded Kafka binaries into a directory of your choice (e.g., C:\kafka).

2. Set Up Zookeeper:

- Kafka uses Zookeeper to manage distributed brokers. Zookeeper is included in the Kafka distribution.

In the command prompt type the following command .

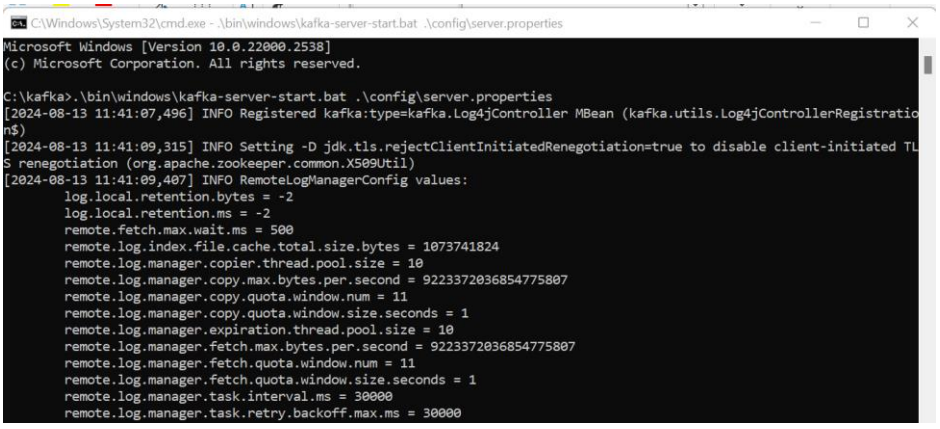
.\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties



In an another command prompt

Start Kafka Broker:

.\bin\windows\kafka-server-start.bat .\config\server.properties



Create partitions with the count of 2 #[important step]#

To create partitions

kafka-topics.bat --create --topic order_topic--bootstrap-server localhost:9092 --partitions 2 --replication-factor 1

```
C:\kafka\bin\windows>kafka-topics --describe --topic order_topic --bootstrap-server localhost:9092
[2024-09-19 18:32:43,445] WARN [AdminClient clientId=adminclient-1] The DescribeTopicPartitions API is not supported, using Metadata API to describe topics. (org.apache.kafka.clients.admin.KafkaAdminClient)
Topic: order_topic      TopicId: vk7urQnlTXamH65Vh6NC-w PartitionCount: 2       ReplicationFactor: 1    Configs:
        Topic: order_topic      Partition: 0    Leader: 0       Replicas: 0     Isr: 0  Elr: N/A        LastKnownElr: N/A
        Topic: order_topic      Partition: 1    Leader: 0       Replicas: 0     Isr: 0  Elr: N/A        LastKnownElr: N/A
```

Question using the template provide your are requested to create python code

Implement the logic Use[order_id]as the key to control which partition the message goes toSend even order_ids to one partition, odd to another

- Calculate how many messages are sent to the consumer
- What is the Total revenue from orders ?
- Which product has the highest revenue for the business
- What is the average price of electronic items?
- How many personal care products are available in the dataset .
- What is the standard deviation of prices.
- Identify the produce with the minimum-price.

Execution Steps to Follow:

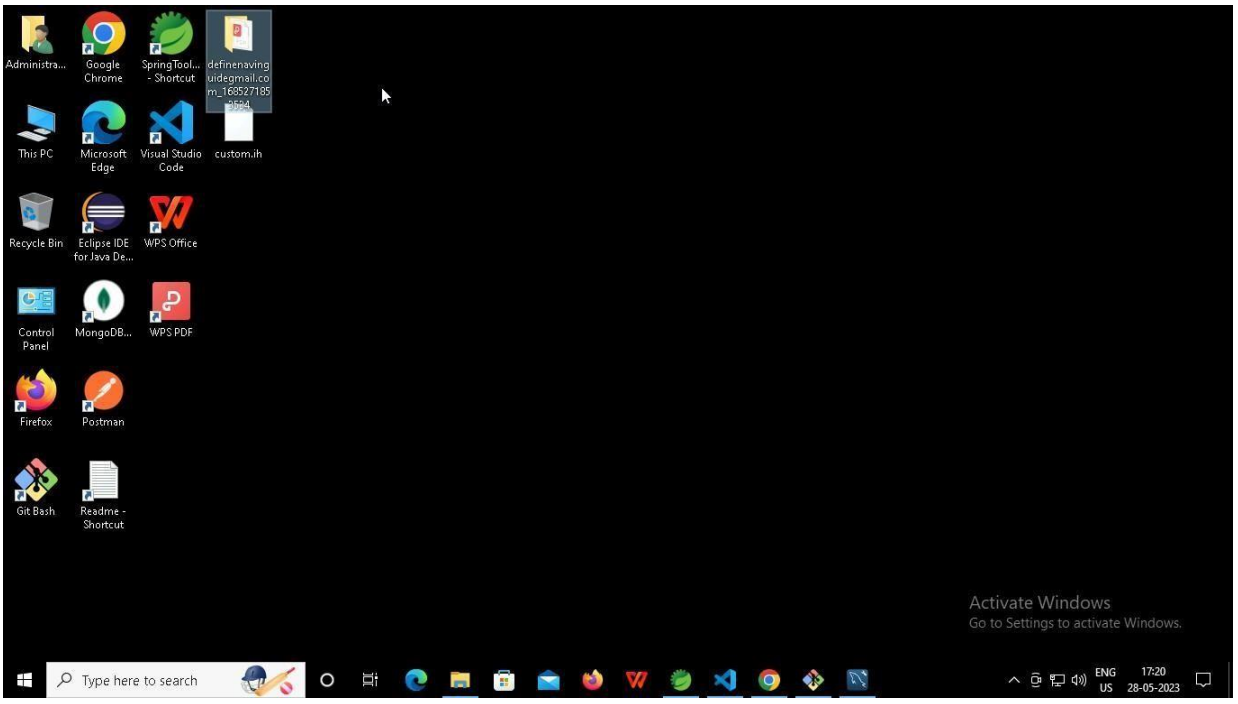
1. Use the same dataset in Json file
2. Capture the data from producer to consumer
3. Perform all the methods
4. Upload the code to the Github
5. Submit the code the get the test auto graded

Python libraries to be installed

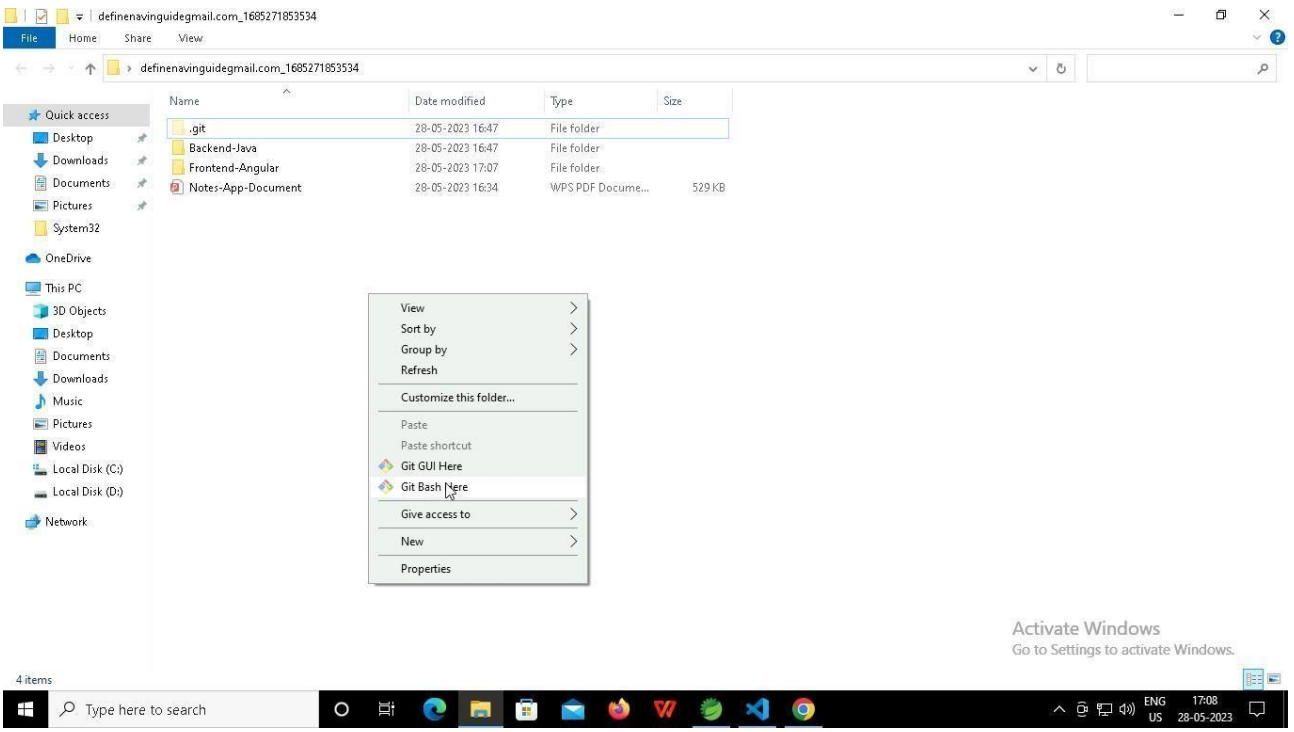
- pip install confluent_kafka
- pip install requests
- To run the unittest for the program
- Python -m unittest

Steps to upload the code to github

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

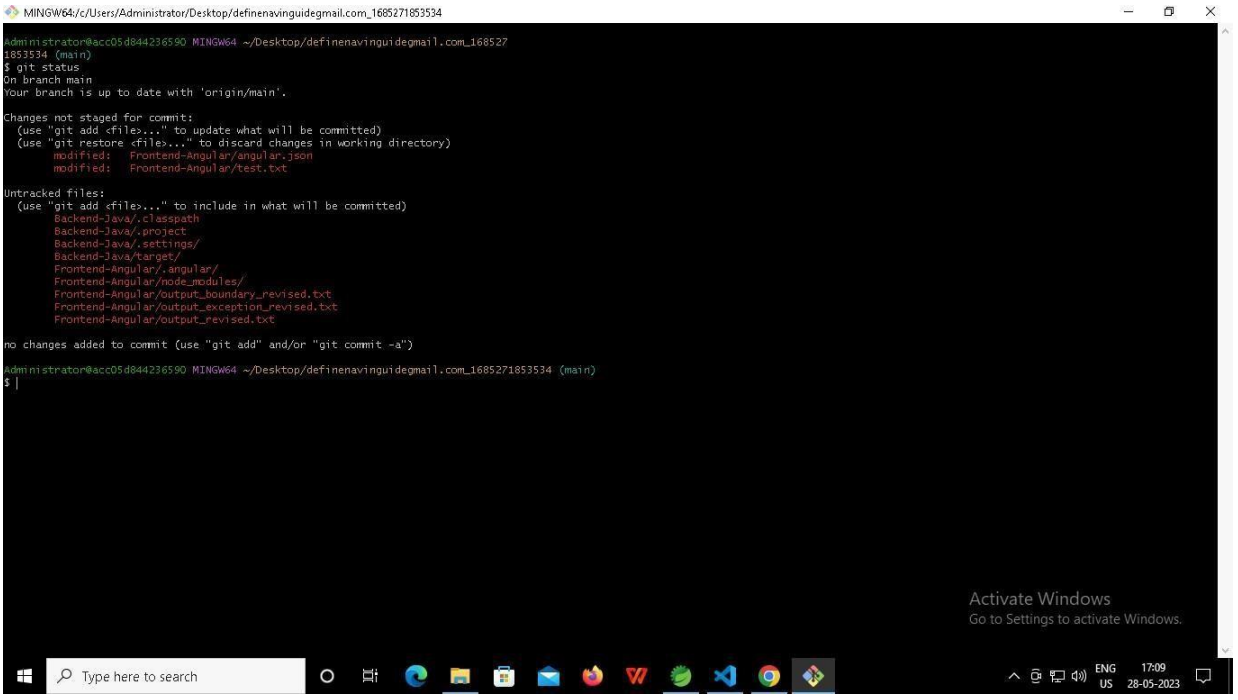

Administra...
Google Chrome
SpringTool... - Shortcut
definenavinguidegmail.com_1685271852524
This PC
Microsoft Edge
Visual Studio Code
custom.ih
Recycle Bin
Eclipse IDE for Java De...
WPS Office
Control Panel
MongoDB...
WPS PDF
Firefox
Postman
Git Bash
Readme - Shortcut
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
17:20
28-05-2023

a. Right click in folder and open Git Bash

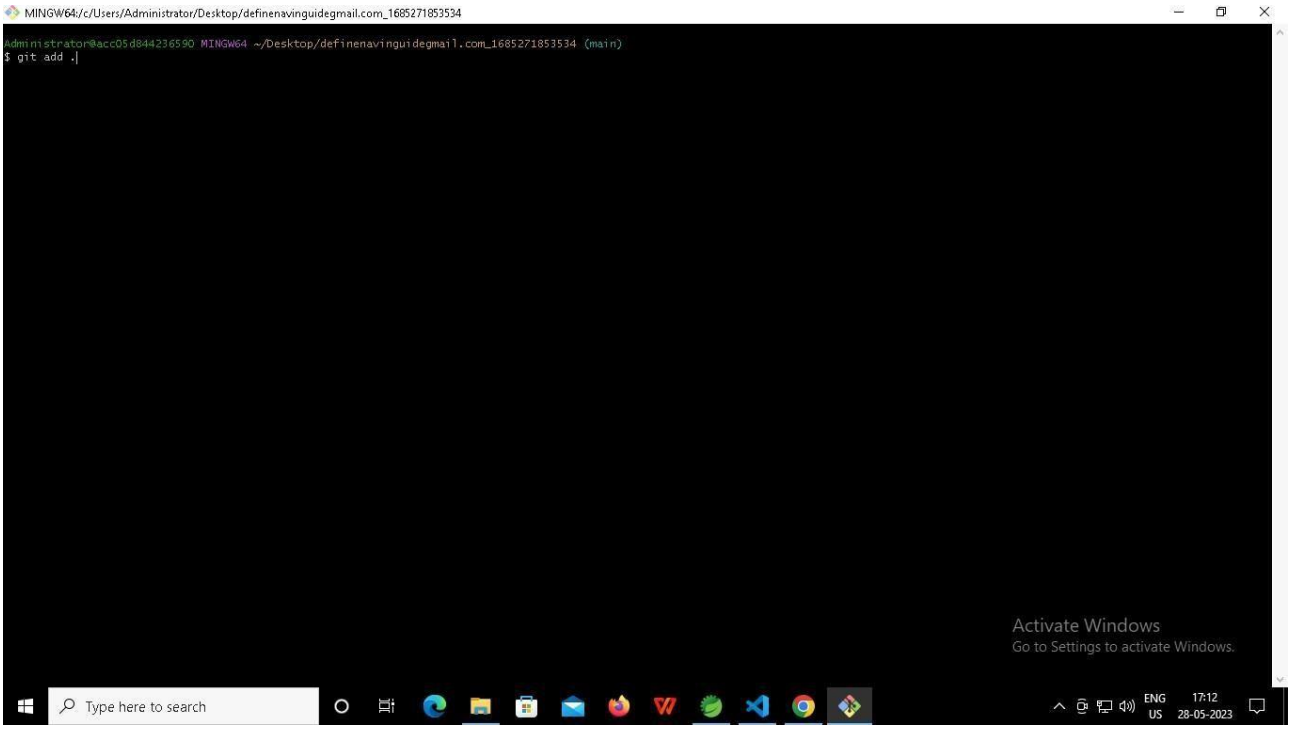


b. In Git bash terminal, run following commands

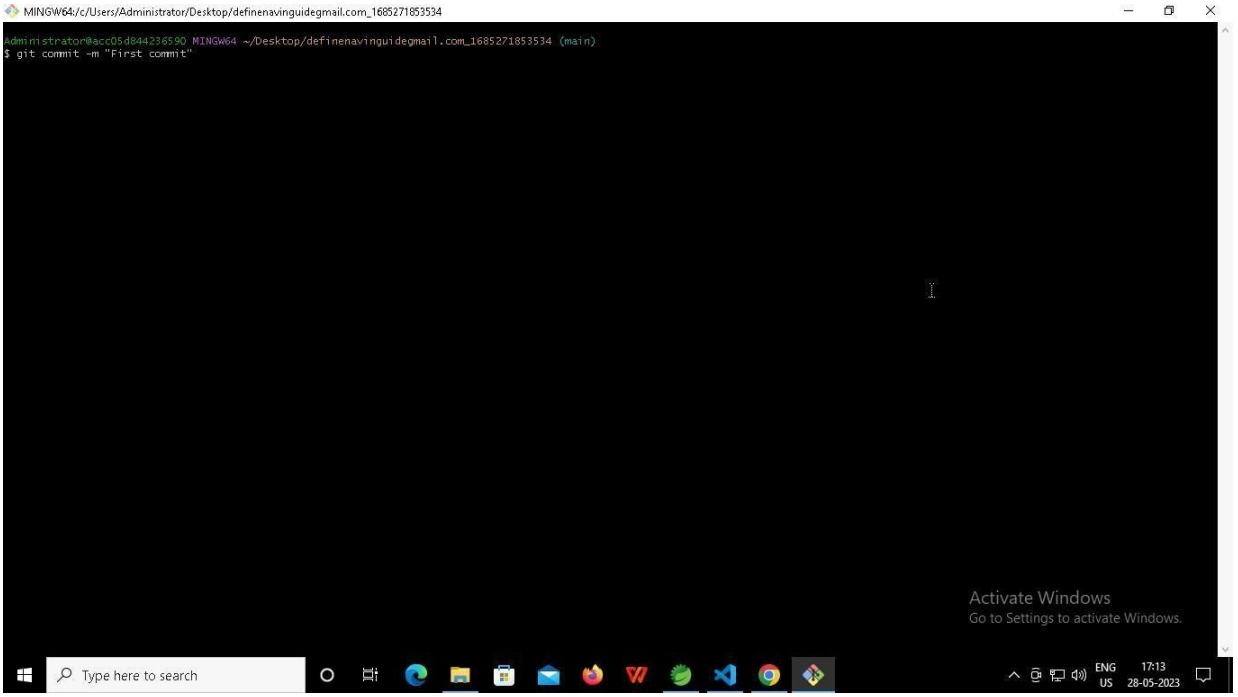
c. git status



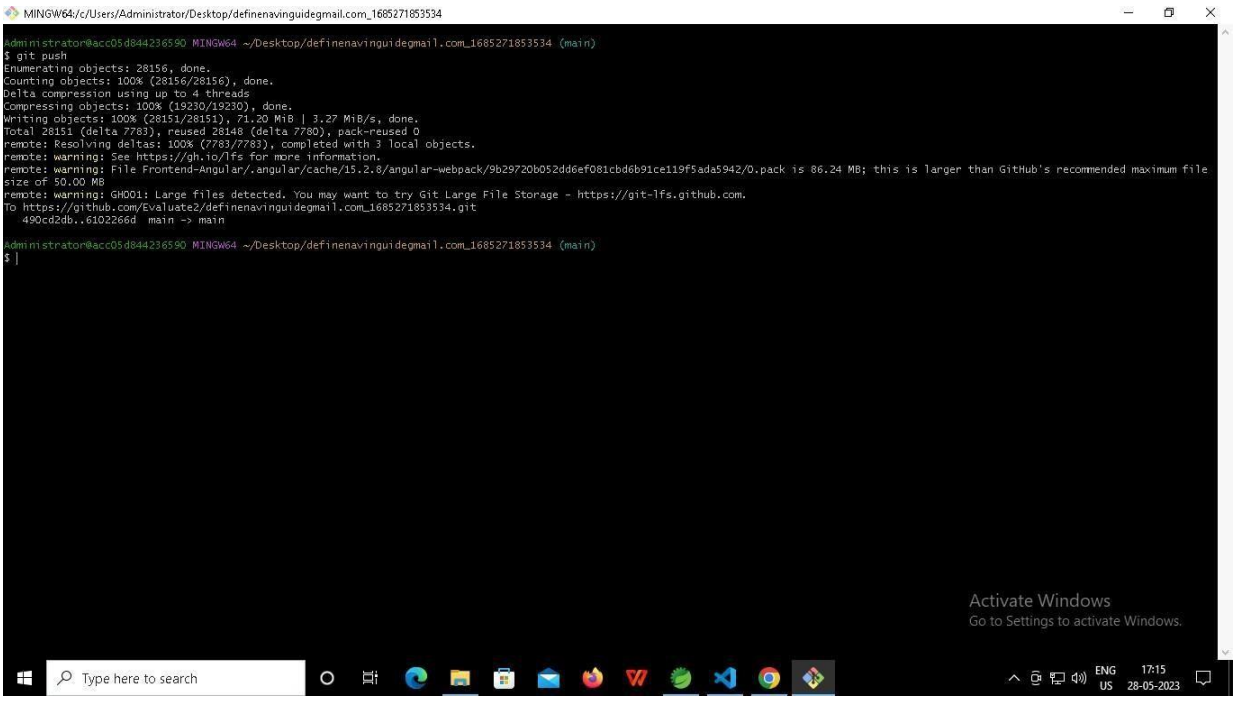
d. git add .



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



f. git push


MINGW64:/c/Users/Administrator/Desktop/definenavinguidegmail.com_1685271853534
Administrator@acc05d844236590 MINGW64 ~/Desktop/definenavinguidegmail.com_1685271853534 (main)
$ git push
Enumerating objects: 28156, done.
Counting objects: 100% (28156/28156), done.
Delta compression using up to 4 threads
Compressing objects: 100% (19230/19230), done.
Writing objects: 100% (28151/28151), 71.20 MiB | 3.27 MiB/s, done.
Total 28151 (delta 7783), reused 28148 (delta 7780), pack-reused 0
remote: Resolving deltas: 100% (7783/7783), completed with 3 local objects.
remote: warning: See https://gh.io/lfs for more information.
remote: warning: File Frontend-Angular/.angular/cache/15.2.8/angular-webpack/9b29720b052dd6ef081cbd6b91ce119f5ada5942/0.pack is 86.24 MB; this is larger than GitHub's recommended maximum file size of 50.00 MB
remote: warning: GH001: Large files detected. You may want to try Git Large File Storage - https://git-lfs.github.com.
To https://github.com/Evaluate2/definenavinguidegmail.com_1685271853534.git
490cd2db..6102266d main -> main
Administrator@acc05d844236590 MINGW64 ~/Desktop/definenavinguidegmail.com_1685271853534 (main)
$
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
17:15
28-05-2023

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