Task 1

Dataset:

Assuming we are using Microsoft SQL Server Table:

Table Name: AUPINVTR

1st Column AutoID [No input need]

2nd Column SyndicateID

3rd Column InvestorID

4th Column Amount

5th Column TransectionDate

Example :

TRID	TRSYNID	TRINVID	TRAMT	TRDATE
1	1	1	500	12/31/2022
2	1	1	1000	12/31/2022
3	2	1	1234	12/31/2022
4	1	1	3450	12/31/2022
5	1	3	2232	12/31/2022
6	4	1	5678	12/31/2022

Optimize Sql Query for finding Top 5 investors who have invested in the highest number of unique syndicates along with total they have invested

```sql
Select top 5 t2.TRINVID,t2.total_synd,t3.total_amount from
(Select t1.TRINVID,COUNT(t1.TRSYNID) total_synd from
(Select Distinct TRINVID,TRSYNID from AUPINVTR) t1
group by t1.TRINVID) t2
LEFT JOIN (select TRINVID,SUM(TRAMT) total_amount from AUPINVTR group by TRINVID)
t3
on t2.TRINVID=t3.TRINVID
ORDER BY t2.total_synd desc
```

Source:

GITHUB Link: https://github.com/rahul063020/auptimate/tree/main/Task1

GITHUB Link (Java Code): https://github.com/rahul063020/auptimate/tree/main/Task1/JavaCode

SQL /Dataset link : https://github.com/rahul063020/auptimate/blob/main/Task1/script.sql

Import Sql into Database

Create a Database in your instance naming "MLBD"

Open new Query Manager => run the scripts

Steps to Run the Java Code:

Download / Pull Source Code

Open "application.properties" file

Give proper connection string for MSSQL Server

Go to project directory and run the below commands after one by one:

⇨ "mvn clean insatall"
⇨ "mvn spring-boot:run"
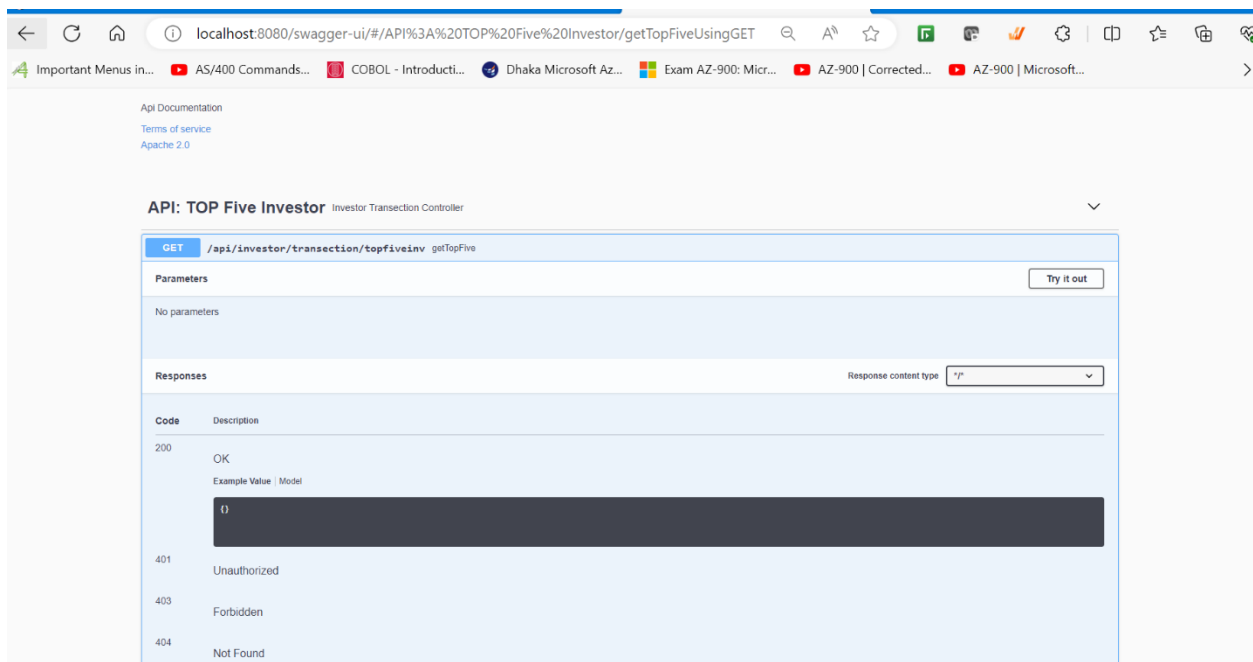
Open Swagger:

After successfully run the application

Open Browser (any) and go to the link➔Swagger UI

Then click on First Navigation "API: Top Five Investor"

Select "Try IT OUT"

Select "Execute"

Then Result will be shown

API: TOP Five Investor Investor Transection Controller ⌄

`GET` `/api/investor/transection/topfiveinv` getTopFive

Parameters Cancel

No parameters

Execute	Clear

Responses Response content type `*/*` ⌄

Curl

```
curl -X GET "http://localhost:8080/api/investor/transection/topfiveinv" -H "accept: */*"
```

Request URL

```
http://localhost:8080/api/investor/transection/topfiveinv
```

Server response

Code	Details

Server response

Code	Details
200	**Response body**

```
[
  {
    "InvestorID": 4,
    "TotalSydicate": 4,
    "TotalAmount": 400
  },
  {
    "InvestorID": 5,
    "TotalSydicate": 3,
    "TotalAmount": 300
  },
  {
    "InvestorID": 1,
    "TotalSydicate": 3,
    "TotalAmount": 11862
  },
  {
    "InvestorID": 2,
    "TotalSydicate": 2,
    "TotalAmount": 200
  },
  {
    "InvestorID": 3,
    "TotalSydicate": 2,
    "TotalAmount": 5799
  }
]
```

Download

Response headers

```
connection: keep-alive
content-type: application/json
date: Fri20 Oct 2023 10:43:39 GMT
keep-alive: timeout-60
transfer-encoding: chunked
```

Responses