Project :- 2-Tier Architecture
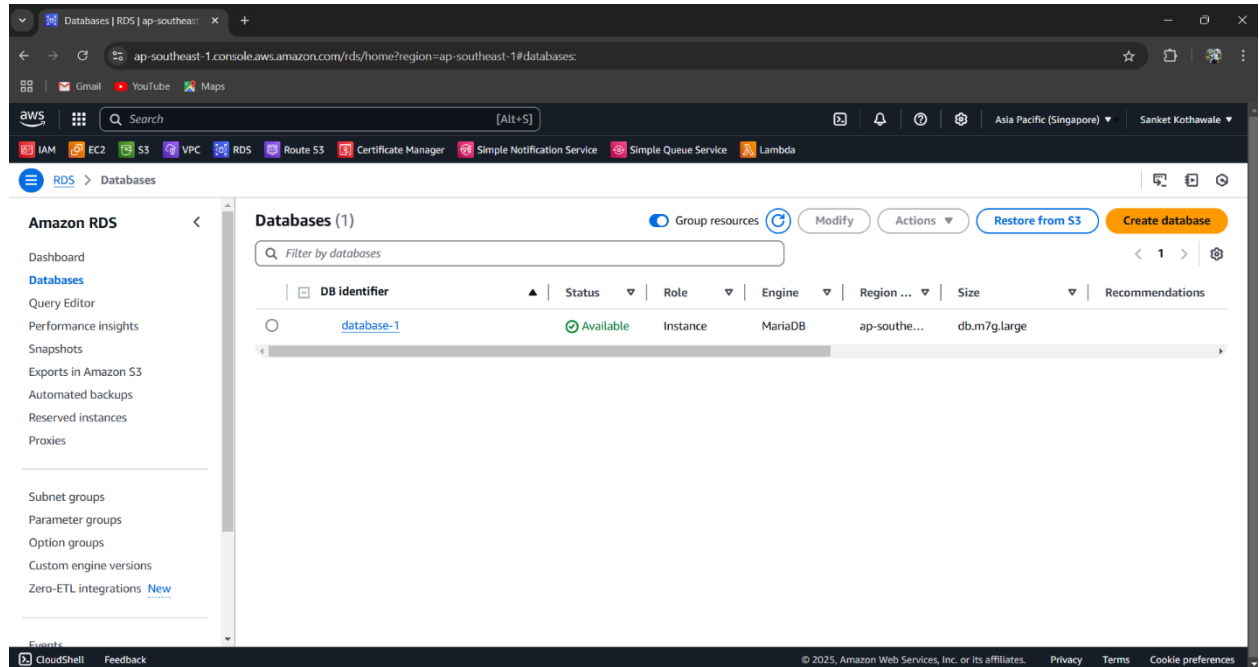
Database create with RDS
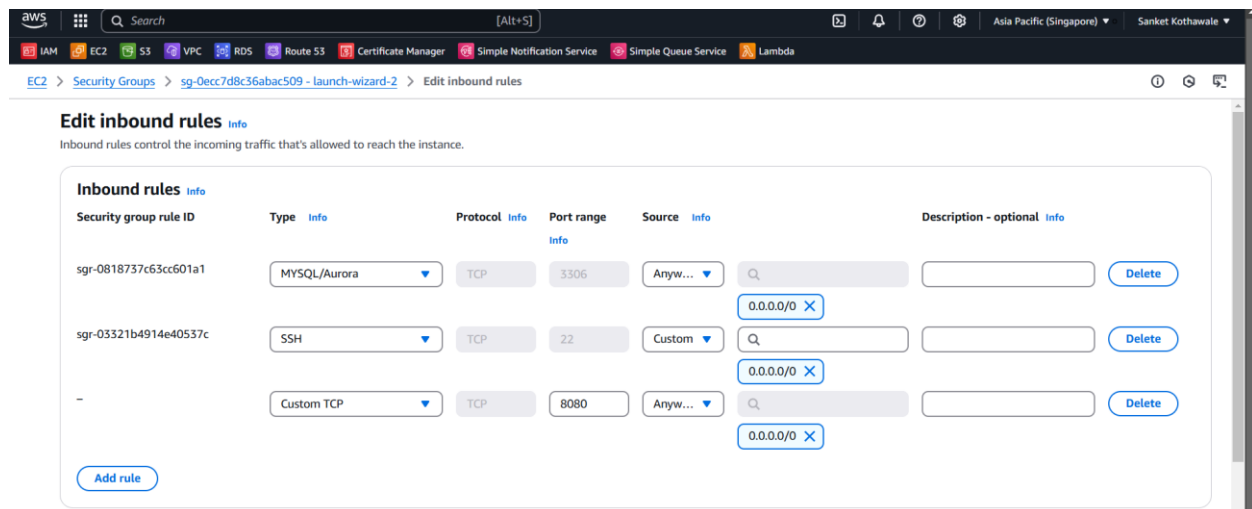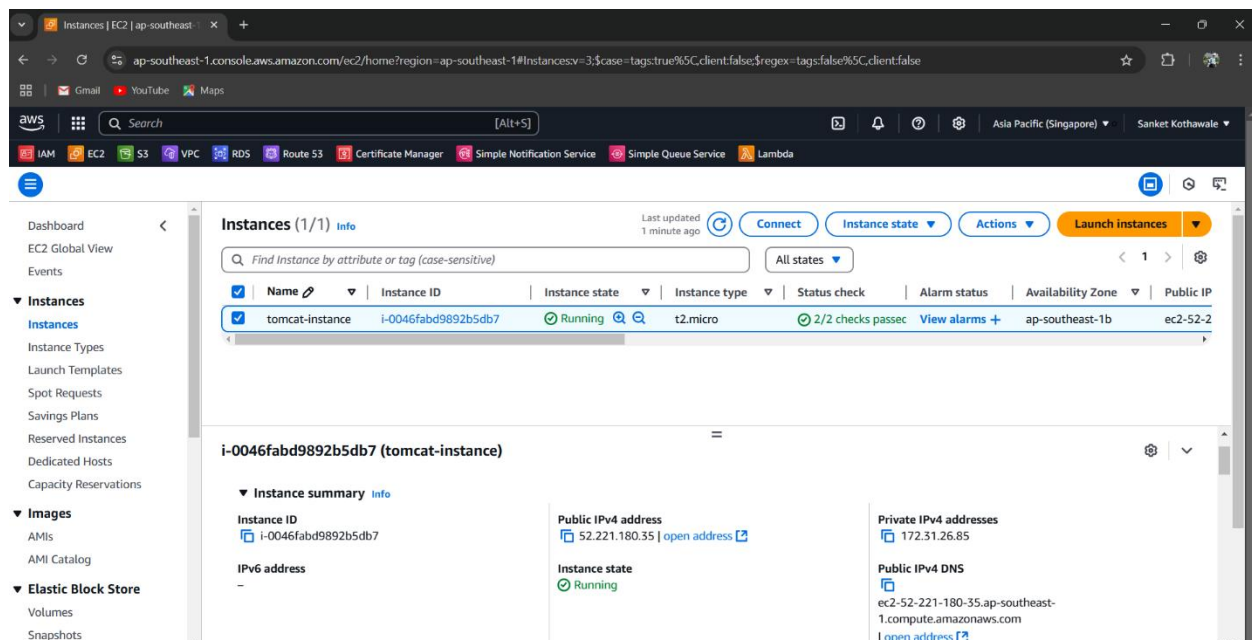
_____

Create RDS

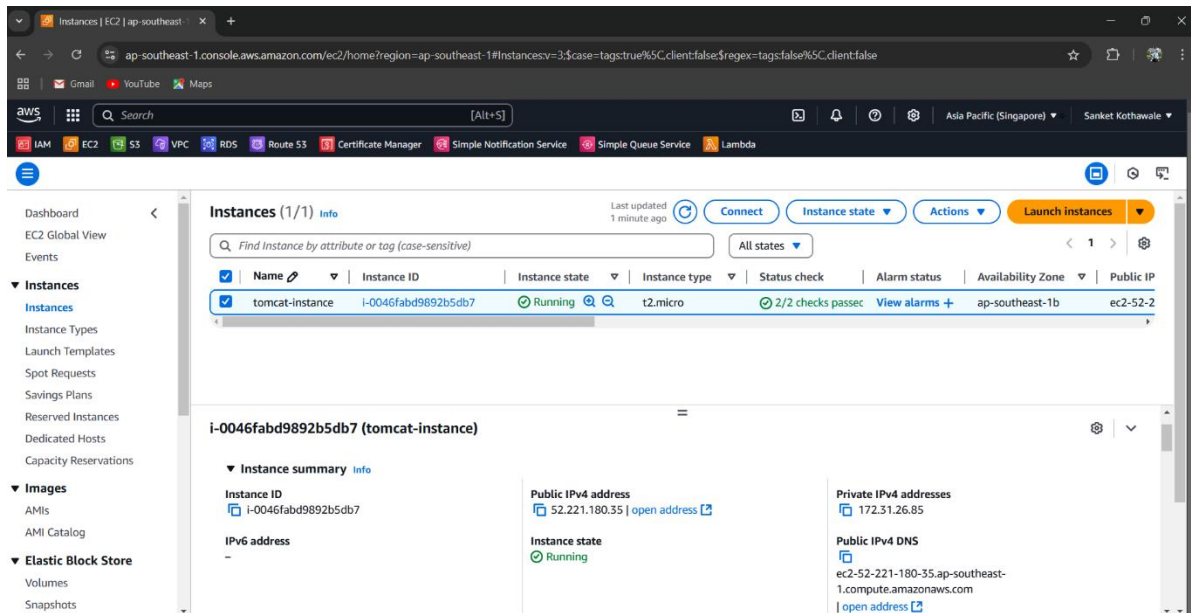## Create security group
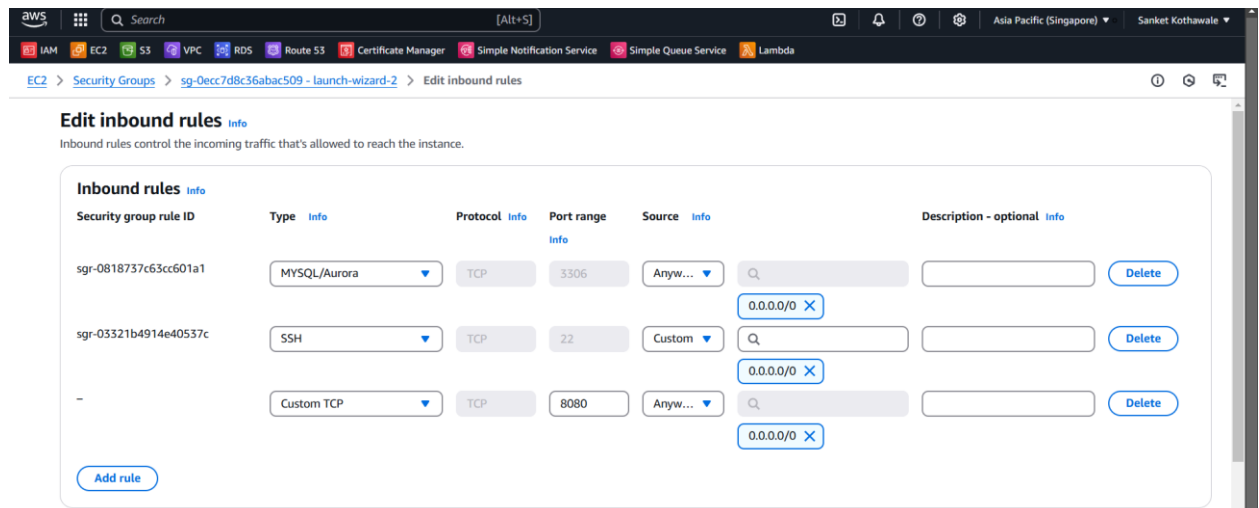
Edit inbound rule

Create instance

Instance connect to amazon linux

sudo -i yum install java -y download tomcat 9 curl -O paste link address

tar – xzvf   apache tomcat file name -C /opt

cd /opt/apache-tomcat-9.0.98 ls

cd /opt/apache-tomcat-9.0.98/webapps

curl -O https://s3-us-west-2.amazonaws.com/studentapi-cit/student.war

ls   ❼ show file student.war rds and tomcat connection cd /opt/apache-tomcat-9.0.98/lib

curl -O https://s3-us-west-2.amazonaws.com/studentapi-cit/mysql-connector.jar ls

❼ show file in lib mysql-connector.jar

Terminal   Sessions   View   X server   Tools   Games   Settings   Macros   Help

Session   Servers   Tools   Games   Sessions   View   Split   MultiExec   Tunneling   Packages   Settings   Help   X server   Exit

Quick connect...

User sessions
  13.235.49.110 (ec2-user)
  13.235.49.110 (ec2-user) (1)
  3.83.207.150 (ec2-user)
  3.92.52.128 (ec2-user)
  3.92.52.128 (ec2-user) (1)
  3.92.52.128 (ec2-user) (2)
  34.238.115.35 (ec2-user)
  52.221.180.35 (ec2-user)
  54.87.140.159 (ec2-user)

4. 52.221.180.35 (ec2-user)

```
► SSH session to ec2-user@52.221.180.35
  • Direct SSH           : ✔
  • SSH compression       : ✔
  • SSH-browser           : ✔
  • X11-forwarding        : ✘  (disabled or not supported by server)

► For more info, ctrl+click on help or visit our website.


  ~\_      #_
  ~\_  ####_          Amazon Linux 2023
  ~\_  \#####\
  ~~     \###|
  ~~      \#/___         https://aws.amazon.com/linux/amazon-linux-2023
  ~~      V~' '->
   ~~~         /
     ~~._.   _/
        _/ _/
      _/m/'

Last login: Tue Jan 28 06:22:40 2025 from 152.58.16.129
[ec2-user@ip-172-31-26-85 ~]$ sudo -i
[root@ip-172-31-26-85 ~]# yum install java -y
Last metadata expiration check: 1:13:26 ago on Tue Jan 28 05:20:16 2025.
Package java-23-amazon-corretto-1:23.0.1+8-1.amzn2023.1.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-26-85 ~]# curl -O https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.98/src/apache-tomcat-9.0.98-src.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 6924k  100 6924k    0     0  9121k      0 --:--:-- --:--:-- --:--:-- 9111k
[root@ip-172-31-26-85 ~]# ls
apache-tomcat-9.0.98-src.tar.gz   apache-tomcat-9.0.98.tar.gz
[root@ip-172-31-26-85 ~]# tar -xvf  apache-tomcat-9.0.98.tar.gz -C /opt
apache-tomcat-9.0.98/conf/
apache-tomcat-9.0.98/conf/catalina.policy
apache-tomcat-9.0.98/conf/catalina.properties
apache-tomcat-9.0.98/conf/context.xml
apache-tomcat-9.0.98/conf/jaspic-providers.xml
apache-tomcat-9.0.98/conf/jaspic-providers.xsd
apache-tomcat-9.0.98/conf/logging.properties
apache-tomcat-9.0.98/conf/server.xml
```

```
    libXtst-1.2.5-1.amzn2023.0.1.x86_64                    libbrotli-1.0.9-4.amzn2023.0.2.x86_64
    libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64              libpng-2:1.6.37-10.amzn2023.0.6.x86_64
    libxcb-1.17.0-1.amzn2023.0.1.x86_64                    pixman-0.43.4-1.amzn2023.0.4.x86_64
    xml-common-0.6.3-56.amzn2023.0.2.noarch

Complete!
[root@ip-172-31-32-240 ~]# curl -O https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.98/bin/apache-tomcat-9.0.98.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 12.1M  100 12.1M    0     0  88.2M      0 --:--:-- --:--:-- --:--:-- 88.1M
[root@ip-172-31-32-240 ~]# ls
apache-tomcat-9.0.98.tar.gz
[root@ip-172-31-32-240 ~]# tar -xvf apache-tomcat-9.0.98.tar.gz -C /opt
apache-tomcat-9.0.98/conf/
apache-tomcat-9.0.98/conf/catalina.policy
apache-tomcat-9.0.98/conf/catalina.properties
apache-tomcat-9.0.98/conf/context.xml
apache-tomcat-9.0.98/conf/jaspic-providers.xml
apache-tomcat-9.0.98/conf/jaspic-providers.xsd
apache-tomcat-9.0.98/conf/logging.properties
apache-tomcat-9.0.98/conf/server.xml
apache-tomcat-9.0.98/conf/tomcat-users.xml
apache-tomcat-9.0.98/conf/tomcat-users.xsd
apache-tomcat-9.0.98/conf/web.xml
apache-tomcat-9.0.98/bin/
apache-tomcat-9.0.98/lib/
apache-tomcat-9.0.98/logs/
apache-tomcat-9.0.98/temp/
apache-tomcat-9.0.98/webapps/
apache-tomcat-9.0.98/webapps/ROOT/
apache-tomcat-9.0.98/webapps/ROOT/WEB-INF/
apache-tomcat-9.0.98/webapps/docs/
apache-tomcat-9.0.98/webapps/docs/META-INF/
```

cd /opt/apache-tomcat-8.5.88/conf vim context.xml

add the following content in this file

<Resource name="jdbc/TestDB" auth="Container" type="javax.sql.DataSource"

maxTotal="500" maxIdle="30" maxWaitMillis="1000"

username="mydblogin" password="mydbpassword"

driverClassName="com.mysql.jdbc.Driver"

　　　url="jdbc:mysql://RDS database endpoint:3306/mysql database
name?useUnicode=yes&characterEncoding=utf8"/>

Rds database ❼ Copy endpoint

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| innodb             |
| mysql              |
| performance_schema |
| studentapp         |
| sys                |
+--------------------+
6 rows in set (0.001 sec)

MariaDB [(none)]> use studentapp;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [studentapp]> CREATE TABLE if not exists students(student_id INT NOT NULL AUTO_INCREMENT,
    -> student_name VARCHAR(100) NOT NULL,
    ->      student_addr VARCHAR(100) NOT NULL,
    -> student_age VARCHAR(3) NOT NULL,
    -> student_qual VARCHAR(20) NOT NULL,
    -> student_percent VARCHAR(10) NOT NULL,
    -> student_year_passed VARCHAR(10) NOT NULL,
    -> PRIMARY KEY (student_id)
    -> );
Query OK, 0 rows affected, 1 warning (0.000 sec)

MariaDB [studentapp]>
MariaDB [studentapp]> show tables;
+---------------------+
| Tables_in_studentapp |
+---------------------+
| students            |
+---------------------+
1 row in set (0.001 sec)

MariaDB [studentapp]> select * from students;
Empty set (0.001 sec)
```



```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
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| students            |
+---------------------+
1 row in set (0.001 sec)

MariaDB [studentapp]> select * from students;
Empty set (0.001 sec)
```
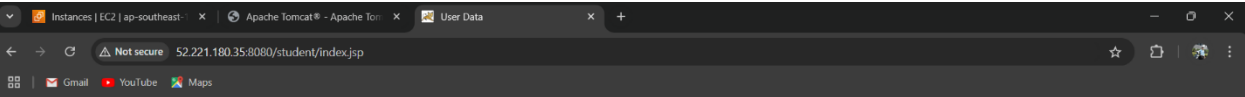
Student Registration Form

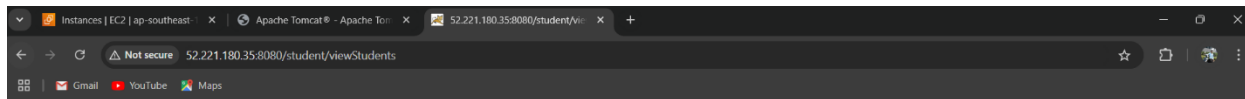|	
Student Name	
Student Address	
Student Age	
Student Qualification	
Student Percentage	
Year Passed	
register	

Register Student

Students List

Student ID	StudentName	Student Addrs	Student Age	Student Qualification	Student Percentage	Student Year Passed	Edit	Delete
1	sanket	pune	24	msc	80	2024	edit	delete
2	anil	dattawadi	25	btech	85	2024	edit	delete
3	shubham	pirangut	27	pharmacy	80	2021	edit	delete