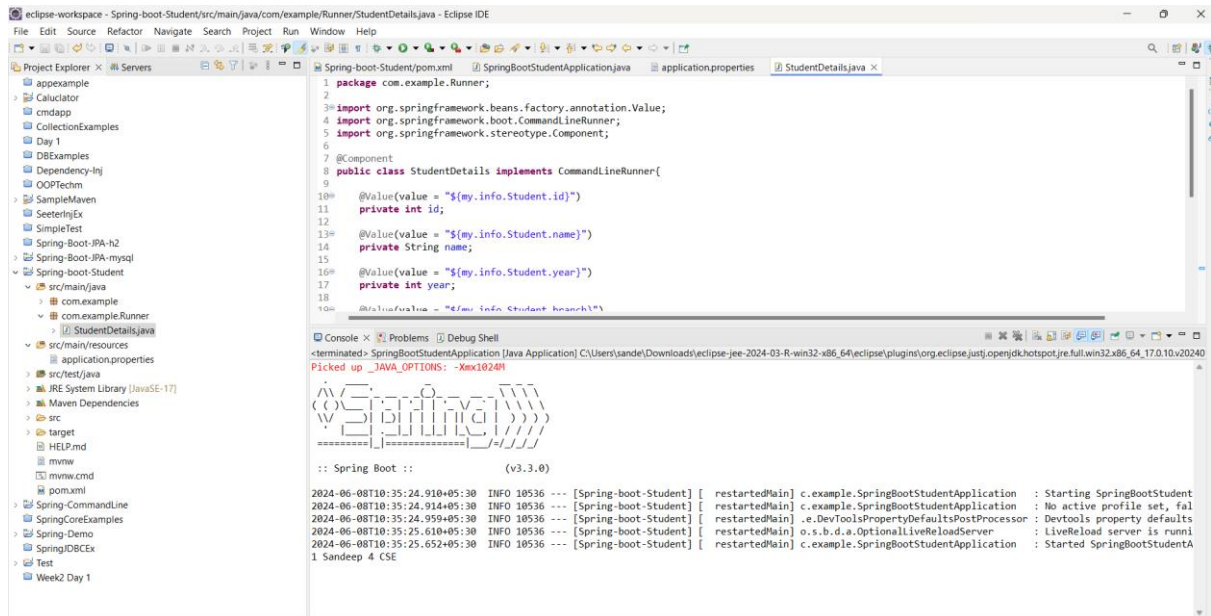
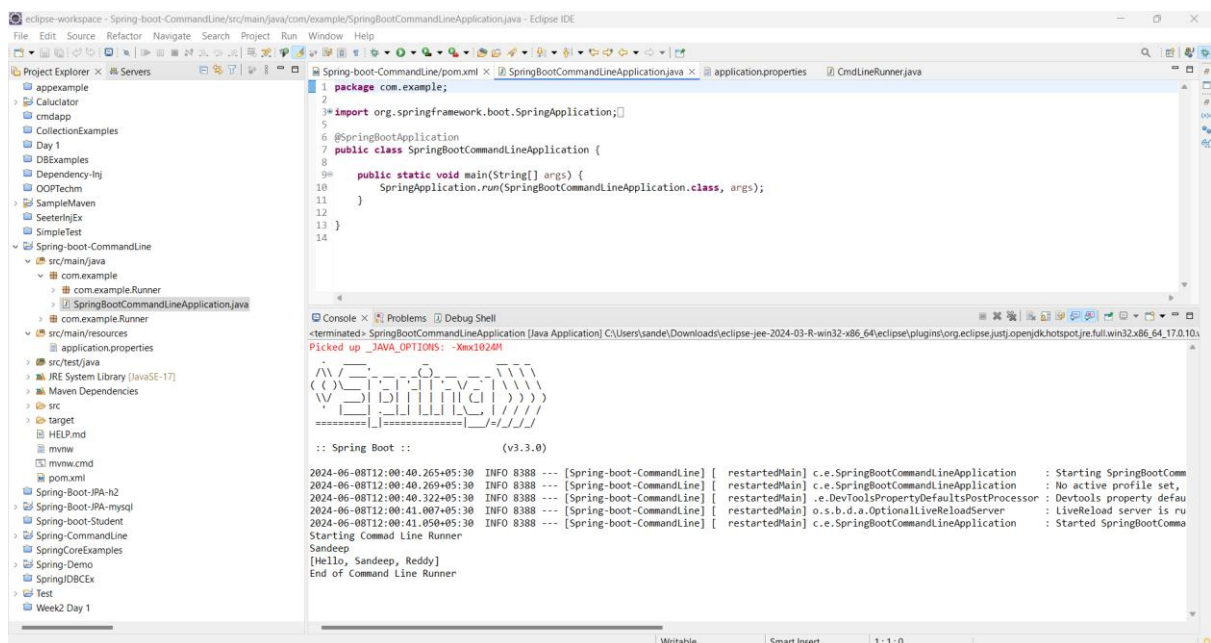


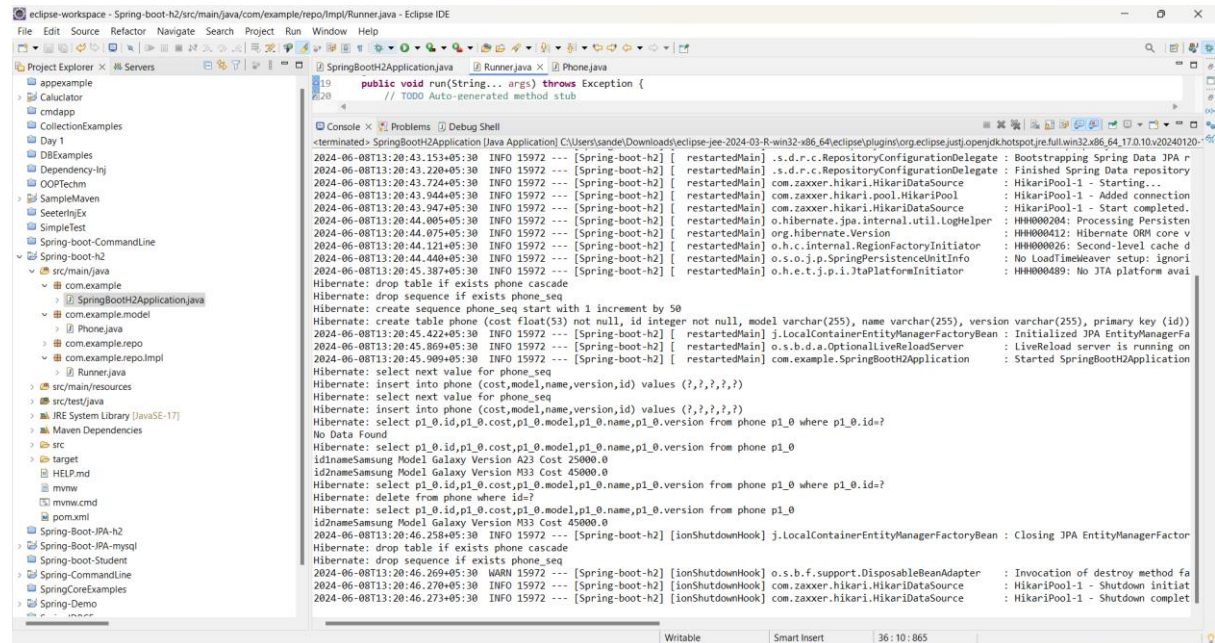
# Task 1



# Task 2



## Task 3

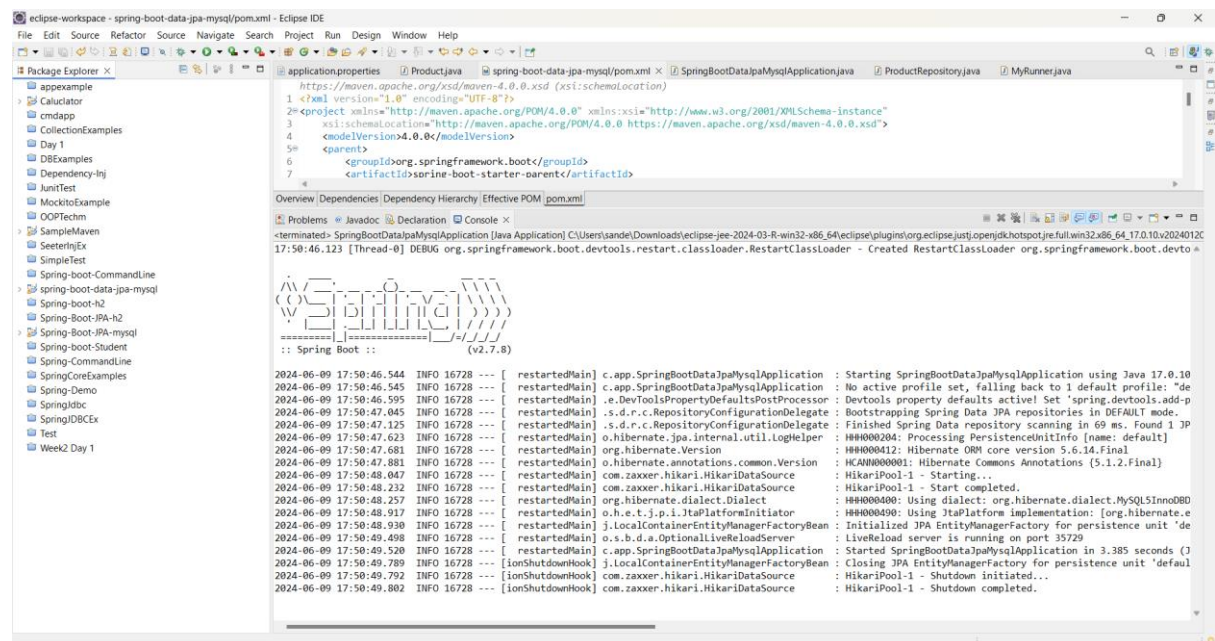


The screenshot shows the Eclipse IDE with a Spring Boot application. The main code file is `SpringBootH2Application.java`, which contains a `run` method. The console output shows the application starting and initializing the H2 database. The output includes messages from the `SpringData` repository, `HikariPool-1`, `org.hibernate.jpa.internal.util.LogHelper`, `org.hibernate.Version`, `org.hibernate.internal.RegionFactoryInitiator`, `org.springframework.orm.jpa.persistenceunit.NoLoadTimeInitializer`, and `org.springframework.orm.jpa.persistenceunit.NoLoadTimeInitializer`.

```
public void run(String... args) throws Exception {  
    // TODO Auto-generated method stub  
}
```

```
<terminated> SpringBootH2Application [Java Application] C:\Users\sande\Downloads\ eclipse-jee-2024-03-R-win32-x86_64\ eclipse\ plugins\ org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.10.v20240120-  
2024-06-08T13:20:43.153+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA r  
2024-06-08T13:20:43.220+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository  
2024-06-08T13:20:43.724+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...  
2024-06-08T13:20:43.944+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] com.zaxxer.hikari.pool.HikariPool : HikariPool-1 - Added connection  
2024-06-08T13:20:43.947+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.  
2024-06-08T13:20:44.005+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] o.hibernate.jpa.internal.util.LogHelper : HH0000204: Processing Persisten  
2024-06-08T13:20:44.075+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] org.hibernate.Version : HH0000412: Hibernate ORM core v  
2024-06-08T13:20:44.121+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] o.h.c.internal.RegionFactoryInitiator : HH0000026: Second-level cache d  
2024-06-08T13:20:44.440+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] o.s.o.j.p.SpringPersistenceUnitInfo : No LoadTimeInitializer setup; ignori  
2024-06-08T13:20:45.387+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator : HH0000489: No JTA platform avai  
Hibernate: drop sequence if exists phone_seq  
Hibernate: create sequence phone_seq start with 1 increment by 50  
Hibernate: create table phone (cost float(53) not null, id integer not null, model varchar(255), name varchar(255), version varchar(255), primary key (id))  
2024-06-08T13:20:45.422+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFacto  
2024-06-08T13:20:45.860+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on  
2024-06-08T13:20:45.909+05:30 INFO 15972 --- [Spring-boot-h2] [ restartedMain] com.example.SpringBootH2Application : Started SpringBootH2Application  
Hibernate: select next value for phone_seq  
Hibernate: insert into phone (cost,model,name,version,id) values (?,?,?,?,?)  
Hibernate: select next value for phone_seq  
Hibernate: insert into phone (cost,model,name,version,id) values (?,?,?,?,?)  
Hibernate: select pl_0.id,pl_0.cost,pl_0.model,pl_0.name,pl_0.version from phone pl_0 where pl_0.id=?  
No Data Found  
Hibernate: select pl_0.id,pl_0.cost,pl_0.model,pl_0.name,pl_0.version from phone pl_0  
idNameSamsung Model Galaxy Version A23 Cost 25000.0  
idNameSamsung Model Galaxy Version H33 Cost 45000.0  
Hibernate: select pl_0.id,pl_0.cost,pl_0.model,pl_0.name,pl_0.version from phone pl_0 where pl_0.id=?  
Hibernate: delete from phone where id=?  
Hibernate: select pl_0.id,pl_0.cost,pl_0.model,pl_0.name,pl_0.version from phone pl_0  
idNameSamsung Model Galaxy Version H33 Cost 45000.0  
2024-06-08T13:20:46.258+05:30 INFO 15972 --- [Spring-boot-h2] [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFacto  
Hibernate: drop table if exists phone cascade  
Hibernate: drop sequence if exists phone_seq  
2024-06-08T13:20:46.269+05:30 WARN 15972 --- [Spring-boot-h2] [ionShutdownHook] o.s.b.f.support.DisposableBeanAdapter : Invocation of destroy method fa  
2024-06-08T13:20:46.270+05:30 INFO 15972 --- [Spring-boot-h2] [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown initiat  
2024-06-08T13:20:46.273+05:30 INFO 15972 --- [Spring-boot-h2] [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown complet
```

## Task 4



The screenshot shows the Eclipse IDE with a Spring Boot application. The main code file is `SpringBootDataJpaMysqlApplication.java`, which contains a `run` method. The console output shows the application starting and initializing the H2 database. The output includes messages from the `SpringData` repository, `HikariPool-1`, `org.hibernate.jpa.internal.util.LogHelper`, `org.hibernate.Version`, `org.hibernate.internal.RegionFactoryInitiator`, `org.springframework.orm.jpa.persistenceunit.NoLoadTimeInitializer`, and `org.springframework.orm.jpa.persistenceunit.NoLoadTimeInitializer`.

```
https://maven.apache.org/xsd/maven-4.0.0.xsd (xsi:schemaLocation)  
1 <?xml version="1.0" encoding="UTF-8"?>  
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
3 xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">  
4 <modelVersion>4.0.0</modelVersion>  
5 <parent>  
6 <groupId>org.springframework.boot</groupId>  
7 <artifactId>spring-boot-starter-parent</artifactId>  
8 </parent>  
9 <groupId>com.example</groupId>  
10 <artifactId>spring-boot-data-jpa-mysql</artifactId>  
11 <version>1.0.0</version>  
12 <packaging>jar</packaging>  
13 <name>Spring Boot</name>  
14 <description>Spring Boot</description>  
15 <url>https://spring.io</url>  
16 <organization>  
17 <name>Spring</name>  
18 </organization>  
19 <licenses>  
20 <license>  
21 <name>Spring</name>  
22 <url>https://spring.io</url>  
23 </license>  
24 </licenses>  
25 <developers>  
26 <developer>  
27 <name>Spring</name>  
28 </developer>  
29 </developers>  
30 <dependencies>  
31 <dependency>  
32 <groupId>org.springframework.boot</groupId>  
33 <artifactId>spring-boot-starter</artifactId>  
34 </dependency>  
35 <dependency>  
36 <groupId>org.springframework.boot</groupId>  
37 <artifactId>spring-boot-starter-data-jpa</artifactId>  
38 </dependency>  
39 <dependency>  
40 <groupId>org.springframework.boot</groupId>  
41 <artifactId>spring-boot-starter-web</artifactId>  
42 </dependency>  
43 </dependencies>  
44 <build>  
45 <plugins>  
46 <plugin>  
47 <groupId>org.springframework.boot</groupId>  
48 <artifactId>spring-boot-maven-plugin</artifactId>  
49 </plugin>  
50 </plugins>  
51 </build>  
52 </project>
```

```
<terminated> SpringBootDataJpaMysqlApplication [Java Application] C:\Users\sande\Downloads\ eclipse-jee-2024-03-R-win32-x86_64\ eclipse\ plugins\ org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.17.0.10.v20240120-  
17:50:46.123 [Thread-0] DEBUG org.springframework.boot.devtools.restart.classloader.RestartClassLoader - Created RestartClassLoader org.springframework.boot.devto  
2024-06-09 17:50:46.544 INFO 16728 --- [ restartedMain] c.app.SpringBootDataJpaMysqlApplication : Starting SpringBootDataJpaMysqlApplication using Java 17.0.10  
2024-06-09 17:50:46.545 INFO 16728 --- [ restartedMain] c.app.SpringBootDataJpaMysqlApplication : No active profile set, falling back to 1 default profile: "de  
2024-06-09 17:50:46.595 INFO 16728 --- [ restartedMain] e.DevToolsPropertyDefaultsPostProcessor : DevTools property defaults active! Set 'spring.devtools.add-p  
2024-06-09 17:50:47.045 INFO 16728 --- [ restartedMain] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.  
2024-06-09 17:50:47.125 INFO 16728 --- [ restartedMain] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 69 ms. Found 1 JP  
2024-06-09 17:50:47.623 INFO 16728 --- [ restartedMain] o.hibernate.jpa.internal.util.LogHelper : HH0000204: Processing PersistenceUnitInfo [name: default]  
2024-06-09 17:50:47.681 INFO 16728 --- [ restartedMain] org.hibernate.Version : HH0000412: Hibernate ORM core version 5.6.14.Final  
2024-06-09 17:50:47.881 INFO 16728 --- [ restartedMain] o.hibernate.annotations.common.Version : HCANN000001: Hibernate Commons Annotations (5.1.2.Final)  
2024-06-09 17:50:48.047 INFO 16728 --- [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...  
2024-06-09 17:50:48.232 INFO 16728 --- [ restartedMain] com.zaxxer.hikari.pool.HikariPool : HikariPool-1 - Start completed.  
2024-06-09 17:50:48.257 INFO 16728 --- [ restartedMain] org.hibernate.dialect.Dialect : HH0000000: Using dialect: org.hibernate.dialect.MySQL5InnoDB  
2024-06-09 17:50:48.917 INFO 16728 --- [ restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator : HH0000490: Using JtaPlatform implementation: [org.hibernate.e  
2024-06-09 17:50:49.498 INFO 16728 --- [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'de  
2024-06-09 17:50:49.520 INFO 16728 --- [ restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729  
2024-06-09 17:50:49.520 INFO 16728 --- [ restartedMain] c.app.SpringBootDataJpaMysqlApplication : Started SpringBootDataJpaMysqlApplication in 3.385 seconds (?)  
2024-06-09 17:50:49.789 INFO 16728 --- [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactory for persistence unit 'default'  
2024-06-09 17:50:49.792 INFO 16728 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown initiated...  
2024-06-09 17:50:49.802 INFO 16728 --- [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown completed.
```

```
mysql> select * from product;
```

prod_id	prod_cost	prod_name	vendor_code
73	100.5	Paslma	Samsung
83	85000	TV	OnePlus
93	25000	Nord	Vivo

```
3 rows in set (0.00 sec)
```

## Task 5

```

@Override
public void run(String... args) throws Exception {

}

:: Spring Boot :: (v3.3.0)

2024-06-10T17:00:15.212+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] c.example.SpringBootEmpMysqlApplication : Starting SpringBootEmpMysqlAppl
2024-06-10T17:00:15.215+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] c.example.SpringBootEmpMysqlApplication : No active profile set, falling
2024-06-10T17:00:15.268+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : DevTools property defaults acti
2024-06-10T17:00:15.825+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA r
2024-06-10T17:00:15.892+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository
2024-06-10T17:00:16.418+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] o.hibernate.jpa.internal.util.LogHelper : HH0000204: Processing Persisten
2024-06-10T17:00:16.486+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] org.hibernate.Version : HH0000412: Hibernate ORM core v
2024-06-10T17:00:16.533+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] o.h.c.internal.RegionFactoryInitiator : HH0000026: Second-level cache d
2024-06-10T17:00:16.951+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] o.s.o.j.p.SpringPersistenceUnitInfo : No LoadTimeWeaver setup: ignori
2024-06-10T17:00:16.993+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Starting...
2024-06-10T17:00:17.286+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Added connection
2024-06-10T17:00:17.296+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Start completed.
2024-06-10T17:00:17.273+05:30 WARN 11596 --- [Spring-boot-emp-mysql] [restartedMain] org.hibernate.orm.deprecation : HH00000025: MySQLDialect does
2024-06-10T17:00:18.214+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator : HH0000489: No JTA platform avai
2024-06-10T17:00:18.262+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFa
2024-06-10T17:00:18.751+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on
2024-06-10T17:00:18.792+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [restartedMain] c.example.SpringBootEmpMysqlApplication : Started SpringBootEmpMysqlAppli

Insert Starting
Insert Successfully
Sandeep,Software,100000.0
Sandeep,Software,100000.0
Sandeep,Software,100000.0
Deleted Successfully
2024-06-10T17:00:19.107+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [ionShutdownHook] j.LocalContainerEntityManagerFactoryBean : Closing JPA EntityManagerFactor
2024-06-10T17:00:19.112+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown initiat
2024-06-10T17:00:19.121+05:30 INFO 11596 --- [Spring-boot-emp-mysql] [ionShutdownHook] com.zaxxer.hikari.HikariDataSource : HikariPool-1 - Shutdown complet

```

Database changed

mysql> show tables;

```
+-----+
| Tables_in_abc |
+-----+
| product       |
+-----+
```

1 row in set (0.00 sec)

mysql> show tables;

```
+-----+
| Tables_in_abc |
+-----+
| employee      |
| product       |
+-----+
```

2 rows in set (0.00 sec)

mysql> select \* from employee;

```
+-----+-----+-----+-----+
| emp_id | emp_dept | emp_name | salary |
+-----+-----+-----+-----+
|      1 | Software | Sandeep  | 100000 |
|      2 | NGO      | Obama    | 90000  |
|      3 | Politics | Putin    | 80000  |
+-----+-----+-----+-----+
```

3 rows in set (0.00 sec)

mysql> select \* from employee;

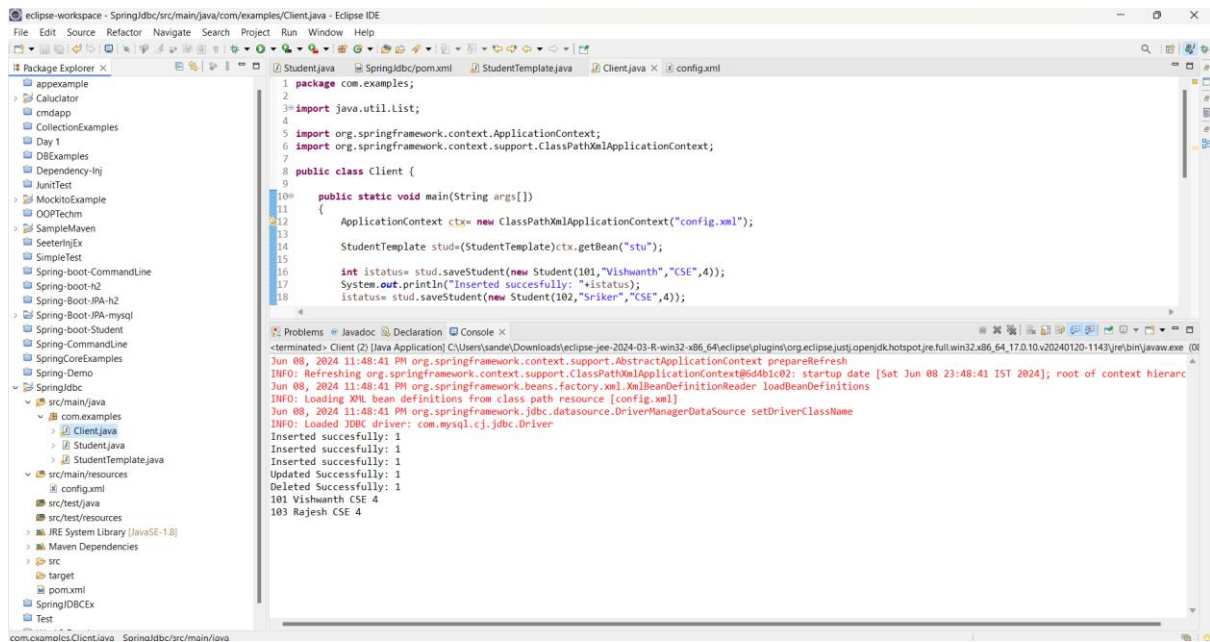
```
+-----+-----+-----+-----+
| emp_id | emp_dept | emp_name | salary |
+-----+-----+-----+-----+
|      1 | Software | Sandeep  | 100000 |
|      2 | NGO      | Obama    | 90000  |
|      3 | Politics | Putin    | 80000  |
|      4 | Software | Sandeep  | 100000 |
|      5 | NGO      | Obama    | 90000  |
+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

mysql>

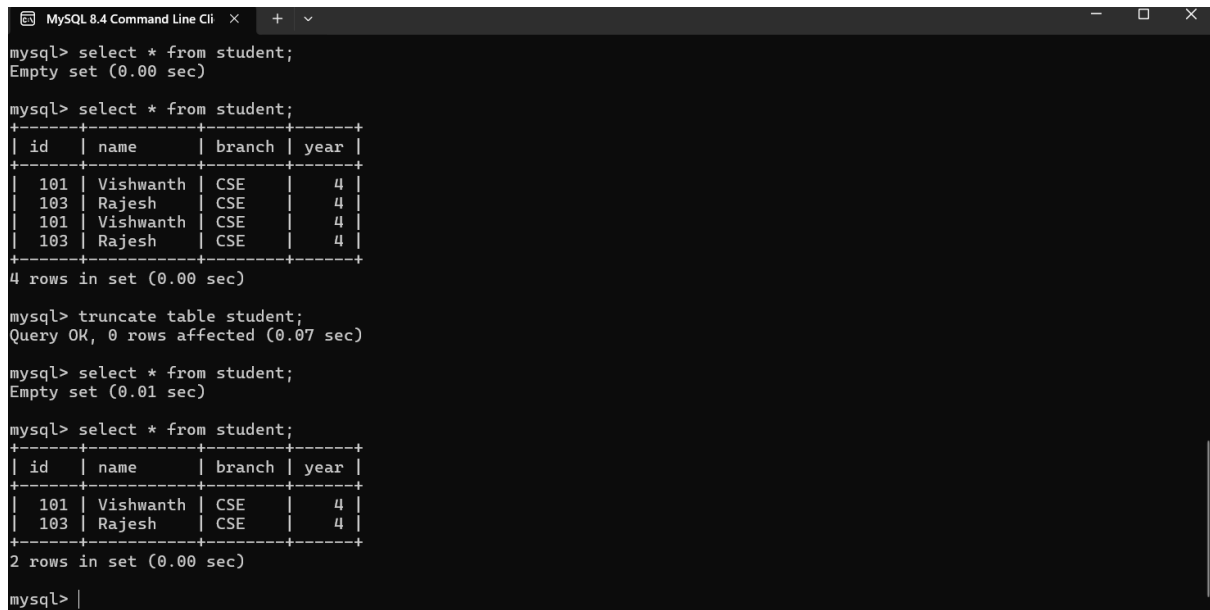


## Task 6



```
1 package com.examples;
2
3 import java.util.List;
4 import org.springframework.context.ApplicationContext;
5 import org.springframework.context.support.ClassPathXmlApplicationContext;
6
7 public class Client {
8
9
10     public static void main(String args[])
11     {
12         ApplicationContext ctx= new ClassPathXmlApplicationContext("config.xml");
13         StudentTemplate stud=(StudentTemplate)ctx.getBean("stu");
14
15         int istatus= stud.saveStudent(new Student(101,"Vishwanth","CSE",4));
16         System.out.println("Inserted successfully: "+istatus);
17         istatus= stud.saveStudent(new Student(102,"Sriker","CSE",4));
18     }
19 }
```

Jun 08, 2024 11:48:41 PM org.springframework.context.support.AbstractApplicationContext prepareRefresh  
INFO: Refreshing org.springframework.context.support.ClassPathXmlApplicationContext@4d4b1c02: startup date [Sat Jun 08 23:48:41 IST 2024]; root of context hierarchy  
Jun 08, 2024 11:48:41 PM org.springframework.beans.factory.xml.XmlBeanDefinitionReader loadBeanDefinitions  
INFO: Loading XML bean definitions from class path resource [config.xml]  
Jun 08, 2024 11:48:41 PM org.springframework.jdbc.datasource.DriverManagerDataSource setDriverClassName  
INFO: Loaded JDBC driver: com.mysql.cj.jdbc.Driver  
Inserted successfully: 1  
Inserted successfully: 1  
Updated Successfully: 1  
Deleted Successfully: 1  
101 Vishwanth CSE 4  
103 Rajesh CSE 4



```
mysql> select * from student;
Empty set (0.00 sec)

mysql> select * from student;
+----+-----+-----+-----+
| id | name   | branch | year |
+----+-----+-----+-----+
| 101 | Vishwanth | CSE    | 4    |
| 103 | Rajesh   | CSE    | 4    |
| 101 | Vishwanth | CSE    | 4    |
| 103 | Rajesh   | CSE    | 4    |
+----+-----+-----+-----+
4 rows in set (0.00 sec)

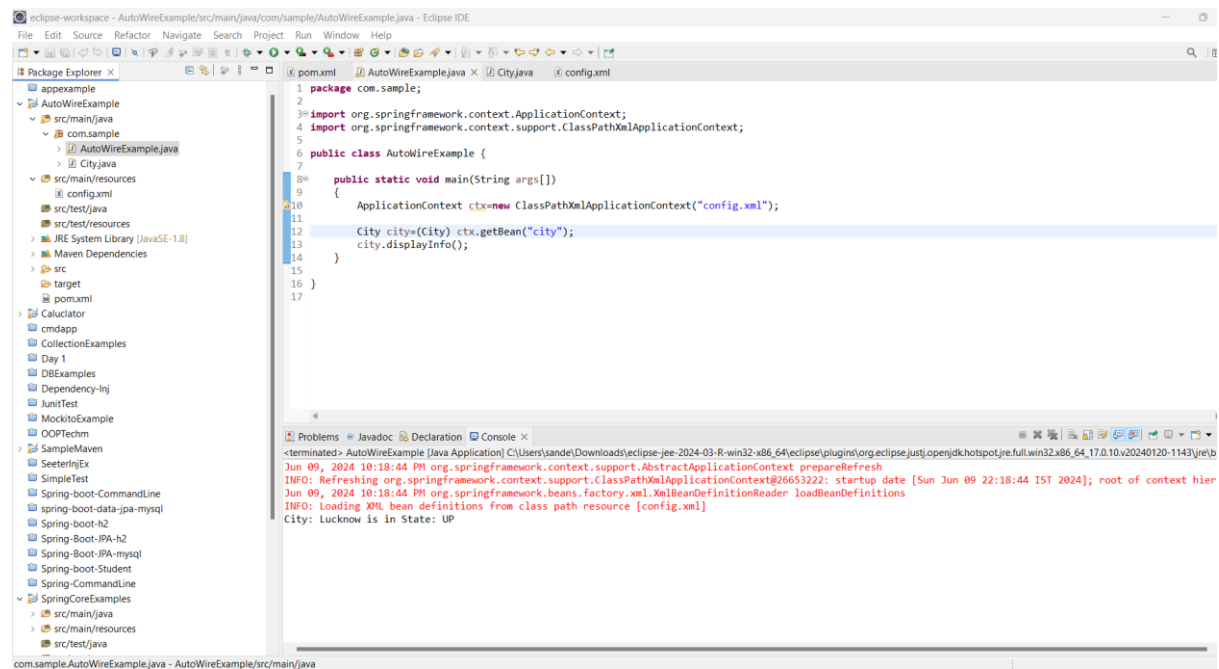
mysql> truncate table student;
Query OK, 0 rows affected (0.07 sec)

mysql> select * from student;
Empty set (0.01 sec)

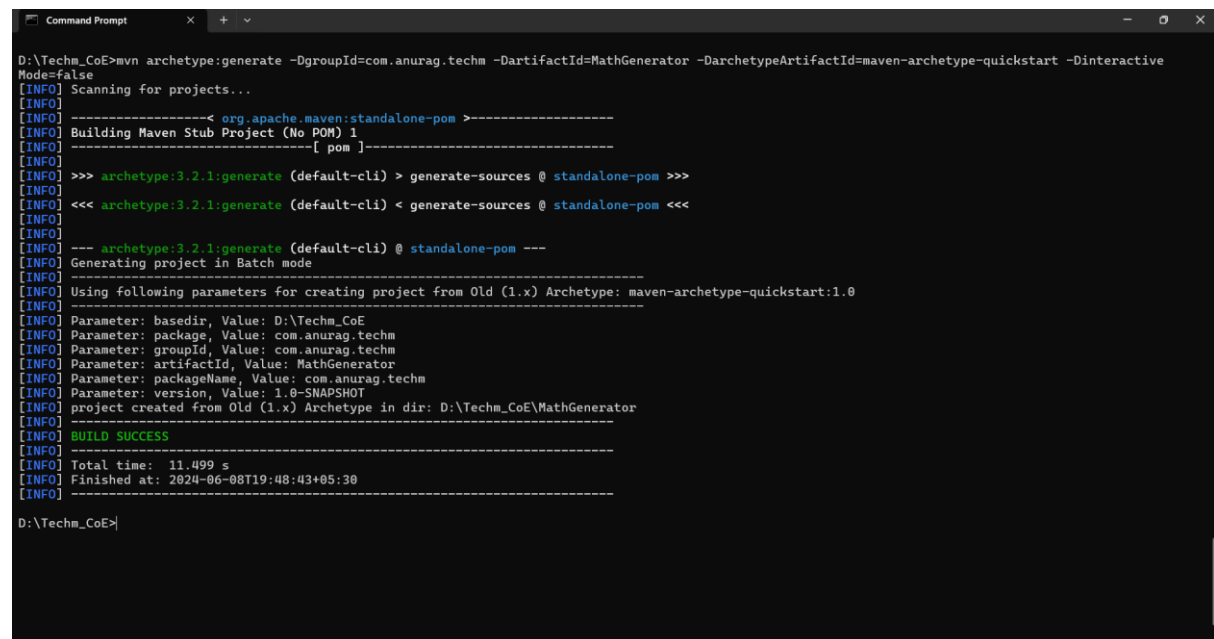
mysql> select * from student;
+----+-----+-----+-----+
| id | name   | branch | year |
+----+-----+-----+-----+
| 101 | Vishwanth | CSE    | 4    |
| 103 | Rajesh   | CSE    | 4    |
+----+-----+-----+-----+
2 rows in set (0.00 sec)

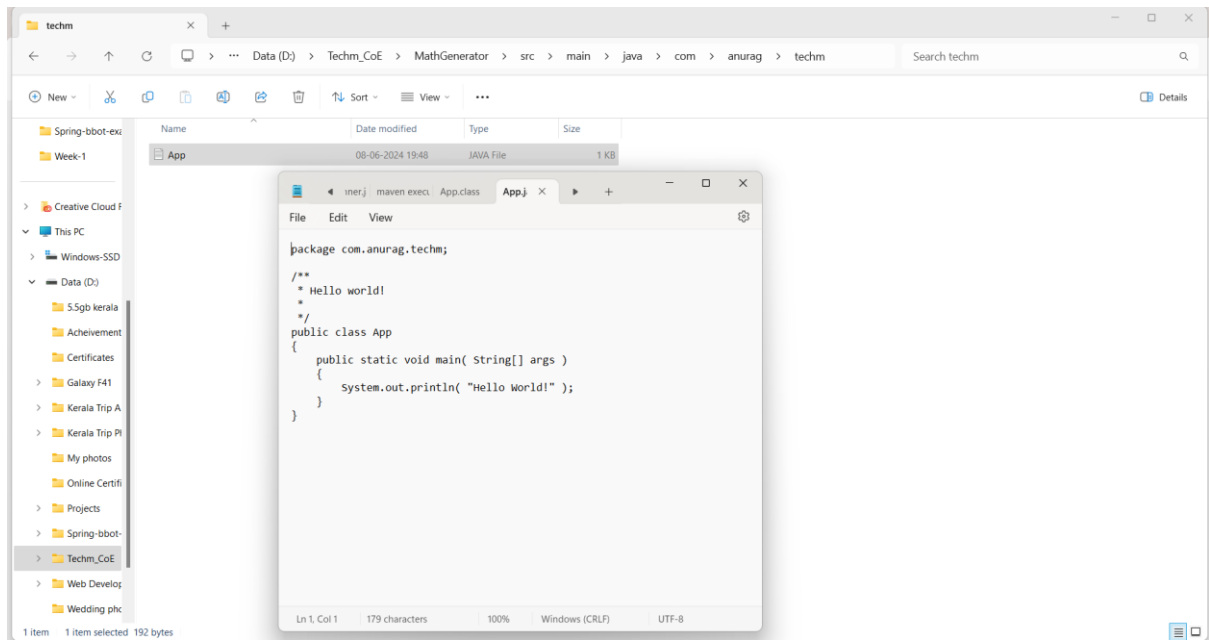
mysql>
```

## Task 7

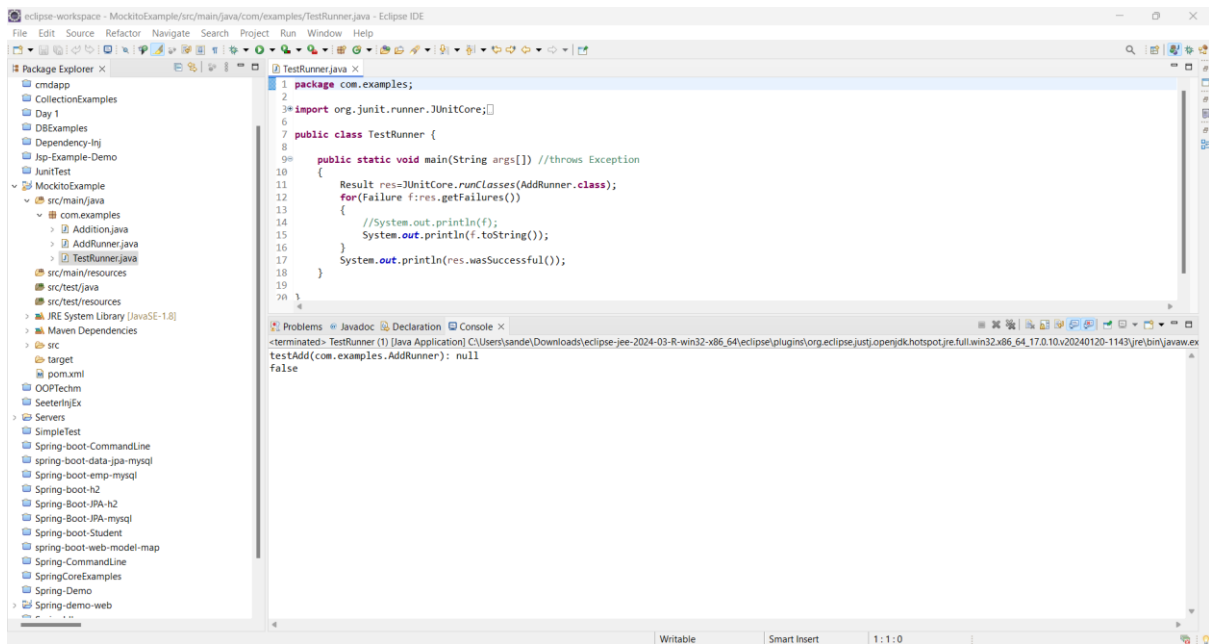


## Task 8





## Task 9



# Task 10

