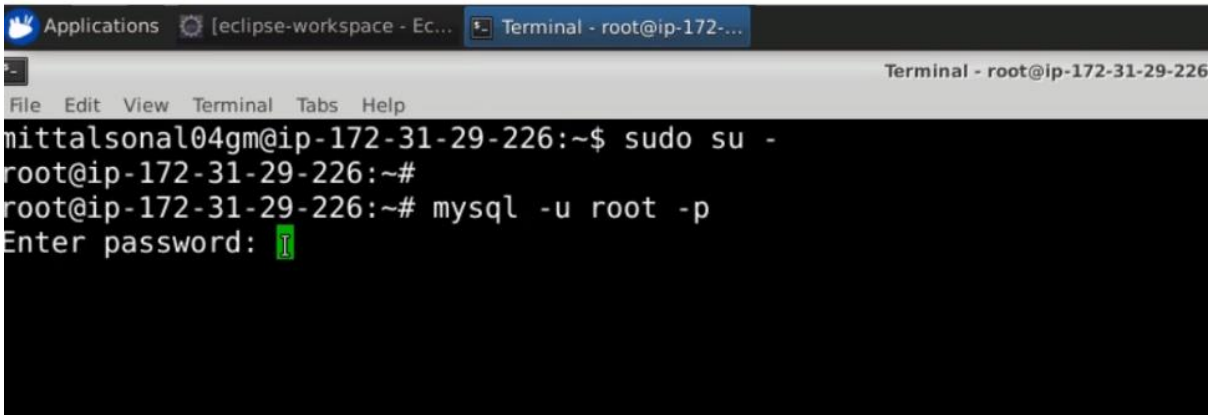
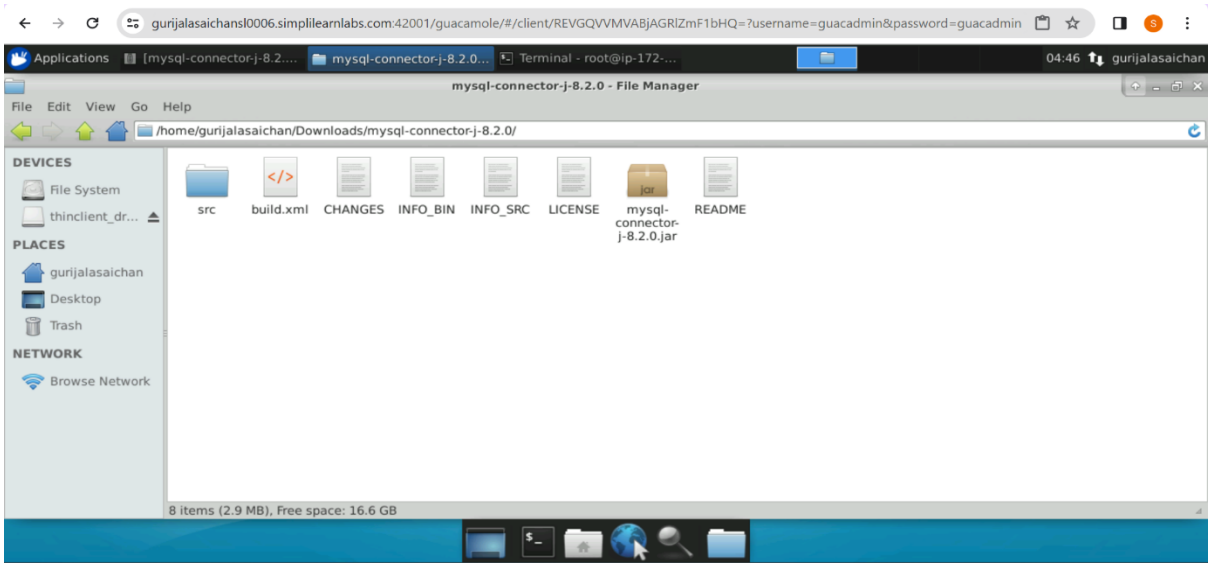
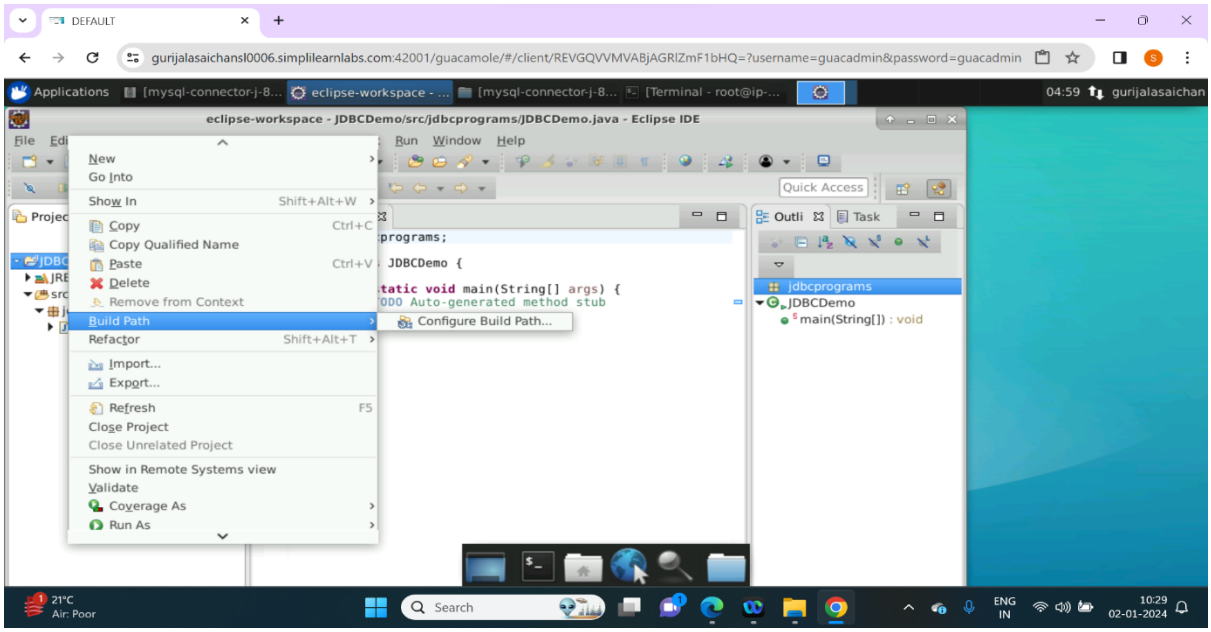
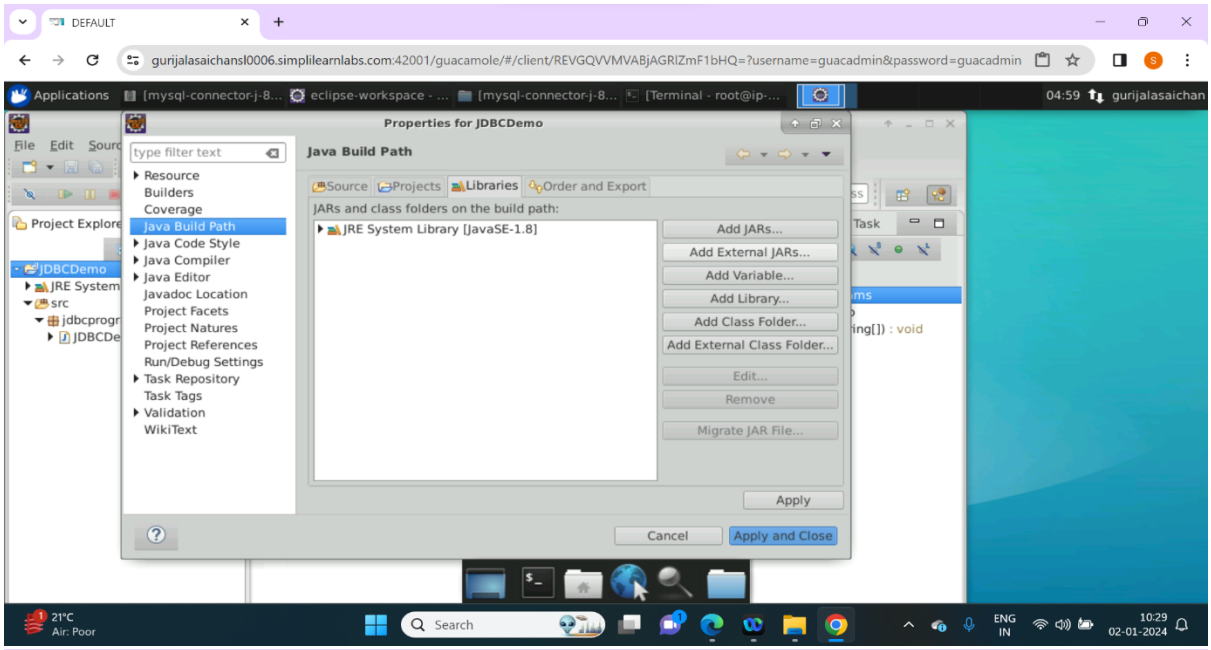
JDBC ASSISTED PRACTICE PROJECTS:

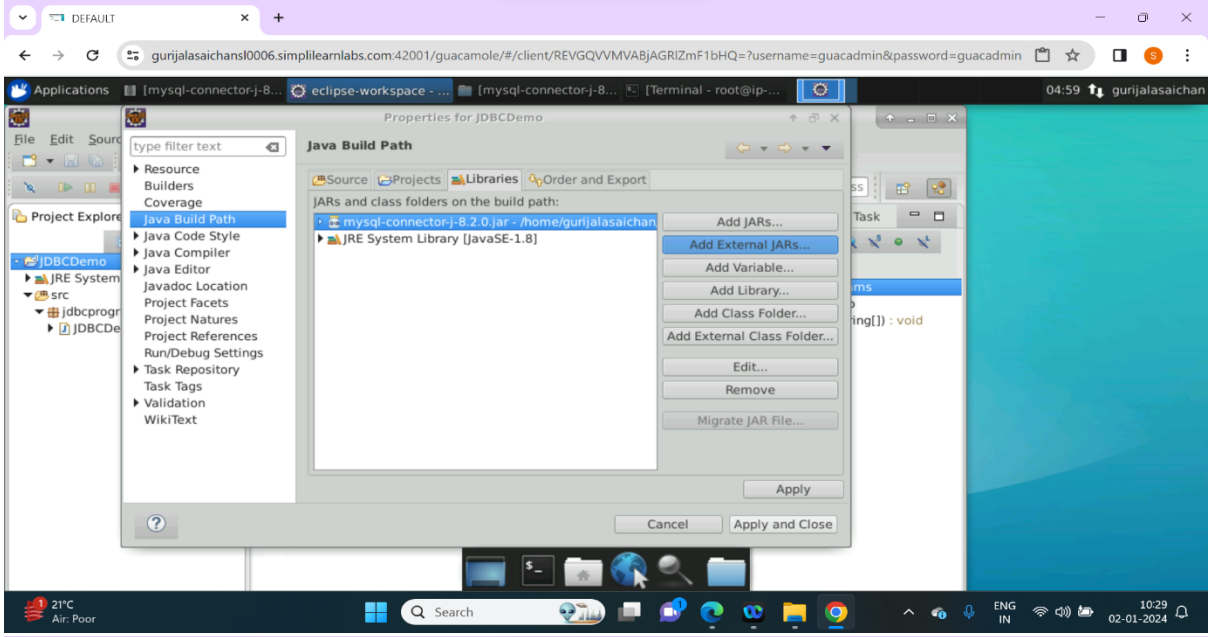
1. Set up a JDBC Environment

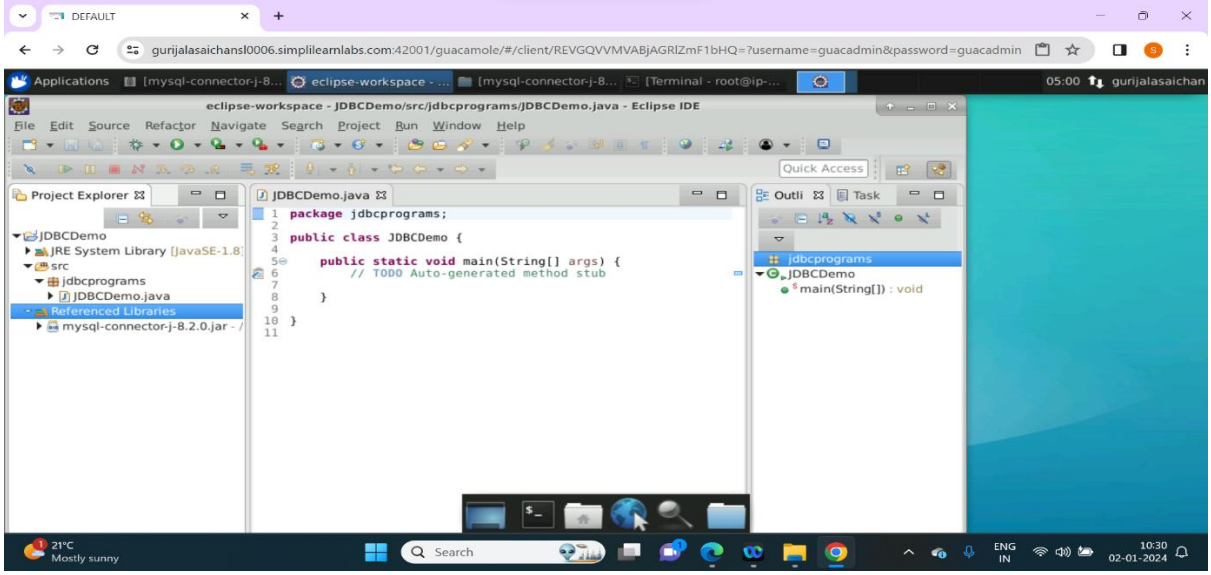




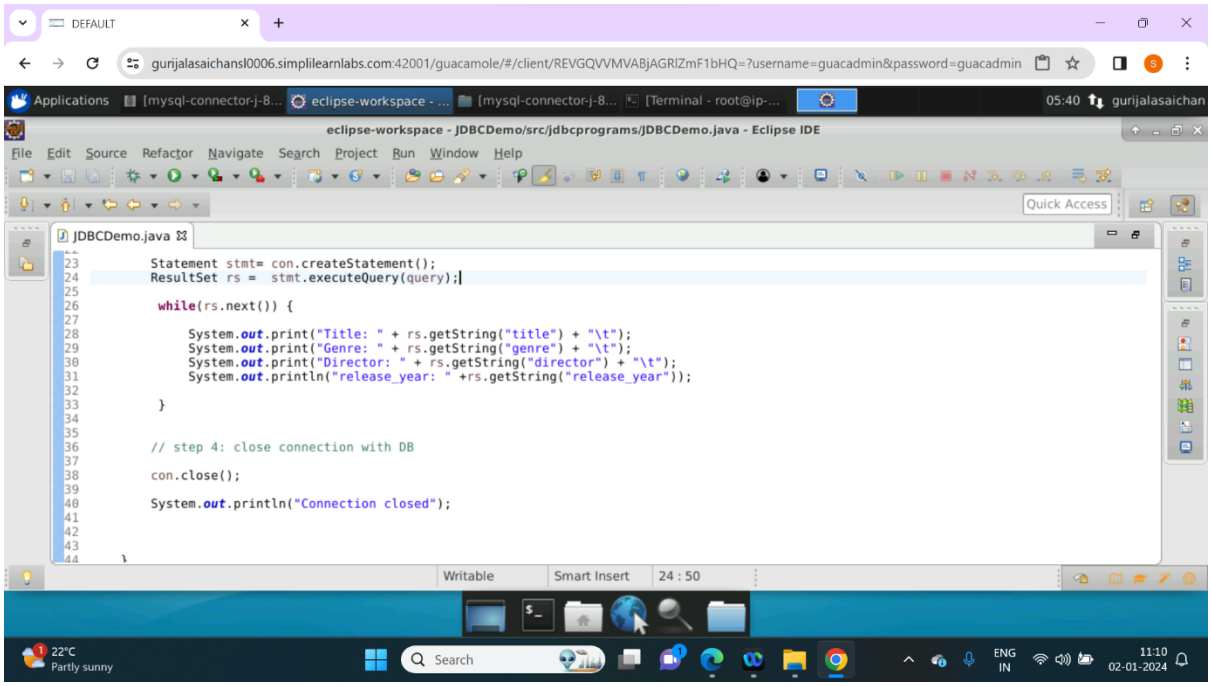


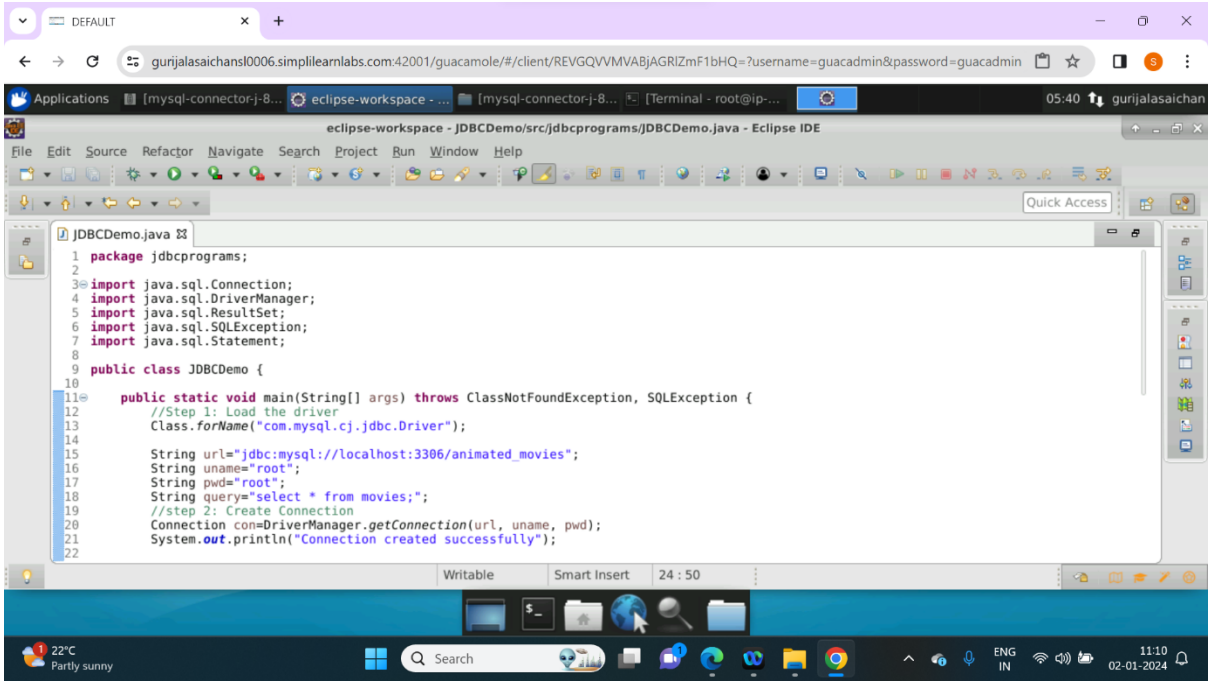

DEFAULT
gurijalasaichansl0006.simplilearnlabs.com:42001/guacamole/#/client/REVGQVVMVABjAGRlZmF1bHQ=?username=guacadmin&password=guacadmin
Applications
[mysql-connector-j-8...
eclipse-workspace - ...
[Terminal - root@ip-...
04:59
gurijalasaichan
Properties for JDBCDemo
type filter text
Resource
Builders
Coverage
Java Build Path
Java Code Style
Java Compiler
Java Editor
Javadoc Location
Project Facets
Project Natures
Project References
Run/Debug Settings
Task Repository
Task Tags
Validation
WikiText
Java Build Path
Source
Projects
Libraries
Order and Export
JARs and class folders on the build path:
JRE System Library [JavaSE-1.8]
Add JARs...
Add External JARs...
Add Variable...
Add Library...
Add Class Folder...
Add External Class Folder...
Edit...
Remove
Migrate JAR File...
Apply
Cancel
Apply and Close
21°C
Air: Poor
Search
ENG
IN
10:29
02-01-2024

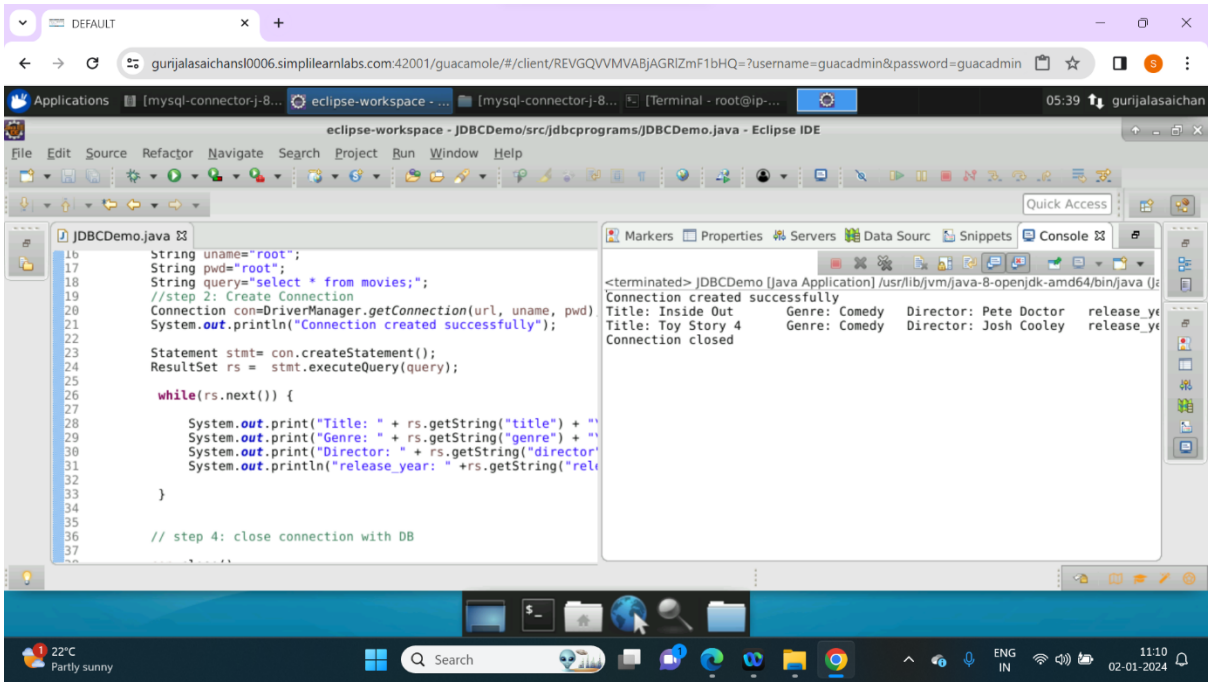

DEFAULT
gurijalasaichansl0006.simplilearnlabs.com:42001/guacamole/#/client/REVGQVVMVABjAGRlZmF1bHQ=?username=guacadmin&password=guacadmin
Applications
[mysql-connector-j-8...
eclipse-workspace - ...
[Terminal - root@ip-...
04:59
gurijalasaichan
Properties for JDBCDemo
type filter text
Resource
Builders
Coverage
Java Build Path
Java Code Style
Java Compiler
Java Editor
Javadoc Location
Project Facets
Project Natures
Project References
Run/Debug Settings
Task Repository
Task Tags
Validation
WikiText
Java Build Path
Source
Projects
Libraries
Order and Export
JARs and class folders on the build path:
mysql-connector-j-8.2.0.jar - /home/gurijalasaichan
JRE System Library [JavaSE-1.8]
Add JARs...
Add External JARs...
Add Variable...
Add Library...
Add Class Folder...
Add External Class Folder...
Edit...
Remove
Migrate JAR File...
Apply
Cancel
Apply and Close
21°C
Air: Poor
Search
ENG
IN
10:29
02-01-2024


DEFAULT
gurijalasaichansl0006.simplilearnlabs.com:42001/guacamole/#/client/REVGQVVMVABjAGRlZmF1bHQ=?username=guacadmin&password=guacadmin
Applications
[mysql-connector-j-8...
eclipse-workspace - ...
[Terminal - root@ip-...
05:00
gurijalasaichan
eclipse-workspace - JDBCDemo/src/jdbcprograms/JDBCDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Project Explorer
JDBCDemo
JRE System Library [JavaSE-1.8]
src
jdbcprograms
JDBCDemo.java
Referenced Libraries
mysql-connector-j-8.2.0.jar - /
JDBCDemo.java
1 package jdbcprograms;
2
3 public class JDBCDemo {
4
5 public static void main(String[] args) {
6 // TODO Auto-generated method stub
7
8 }
9
10 }
11
Outli
Task
jdbcprograms
JDBCDemo
main(String[]) : void
21°C
Mostly sunny
Search
ENG
IN
10:30
02-01-2024

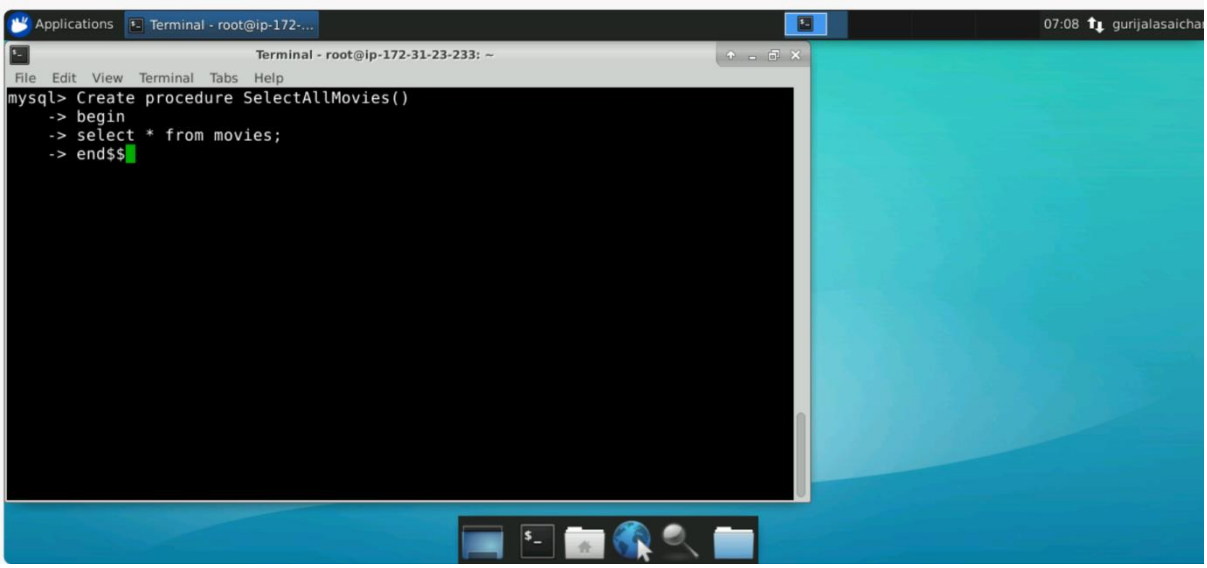
2. Demonstrate Connection, Statement, and ResultSet in JDBC.

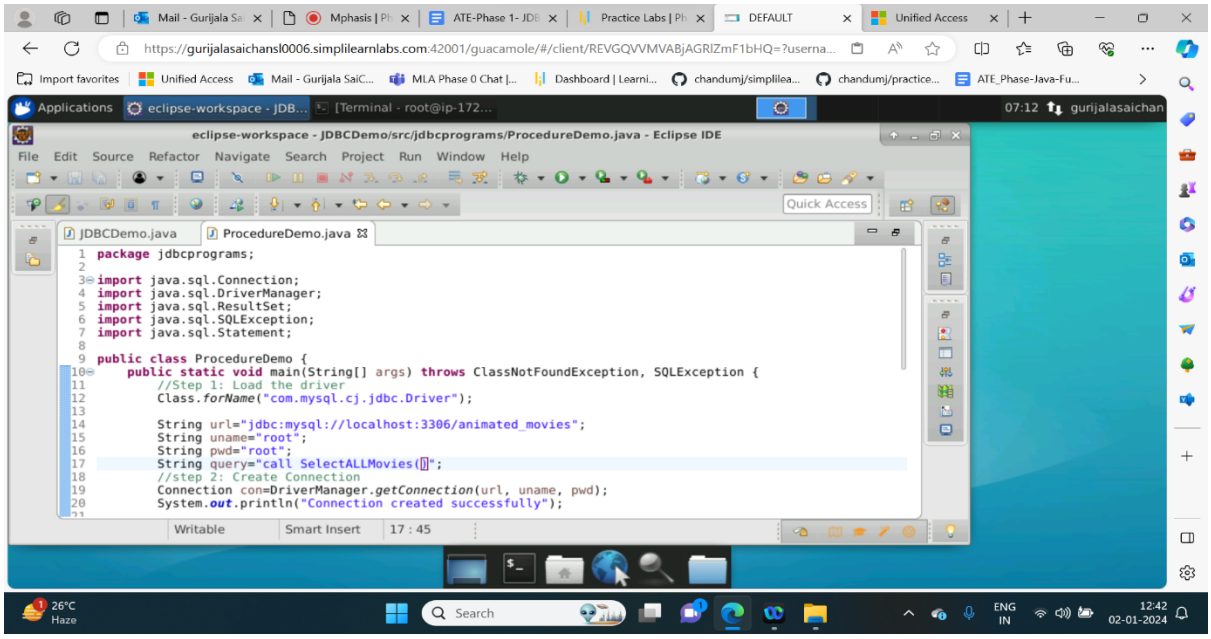


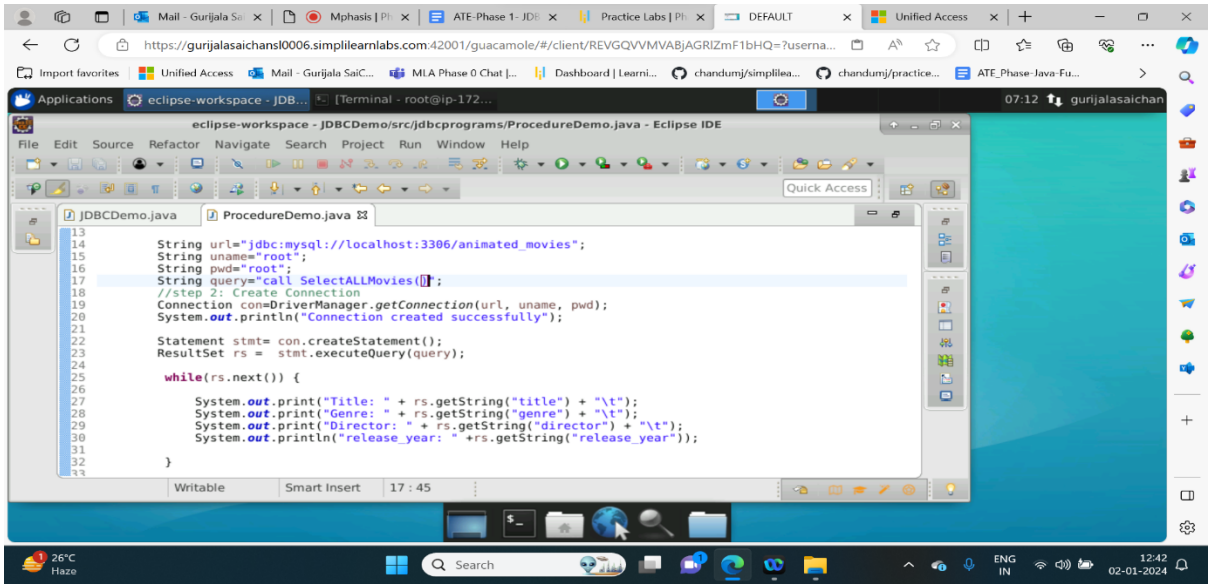


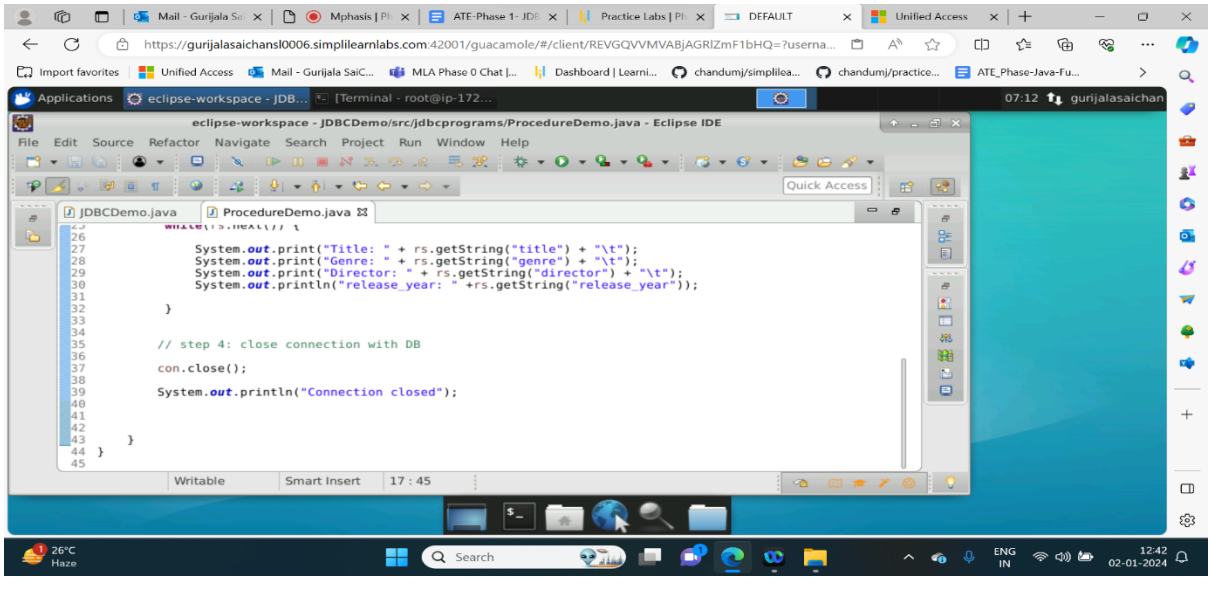


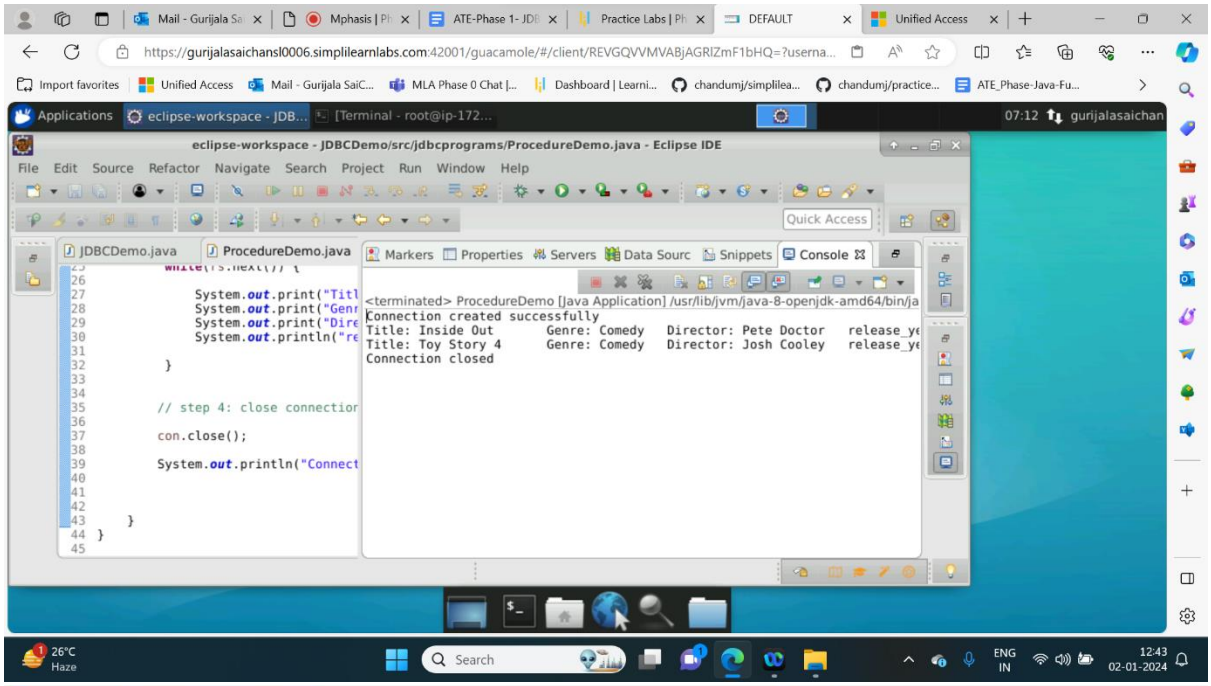
3. Demonstrate stored procedures and exception handling in JDBC.

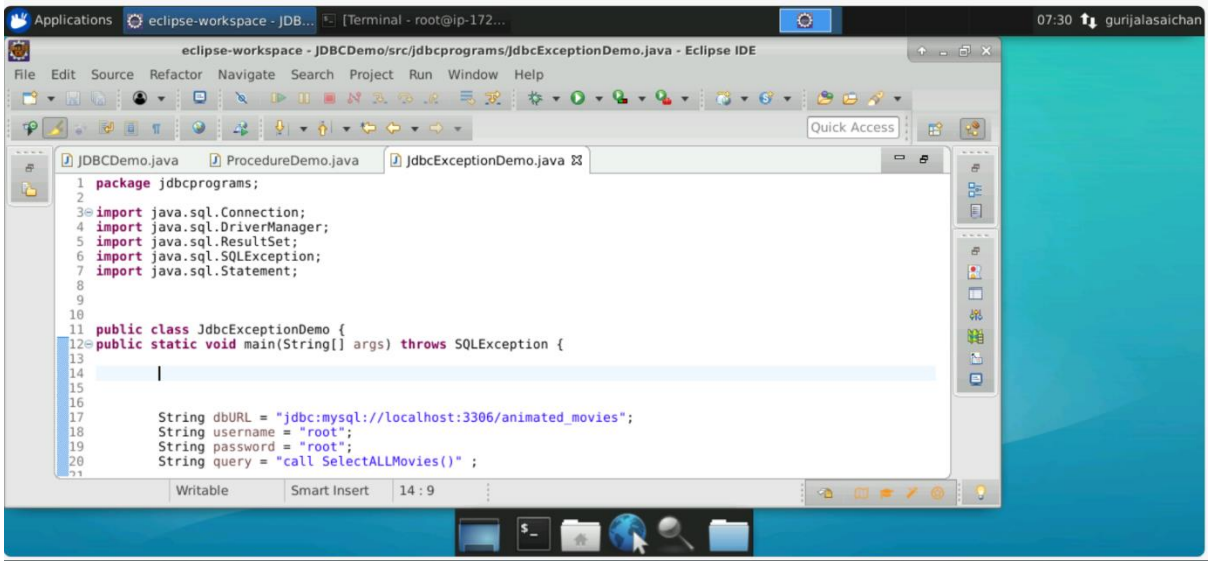


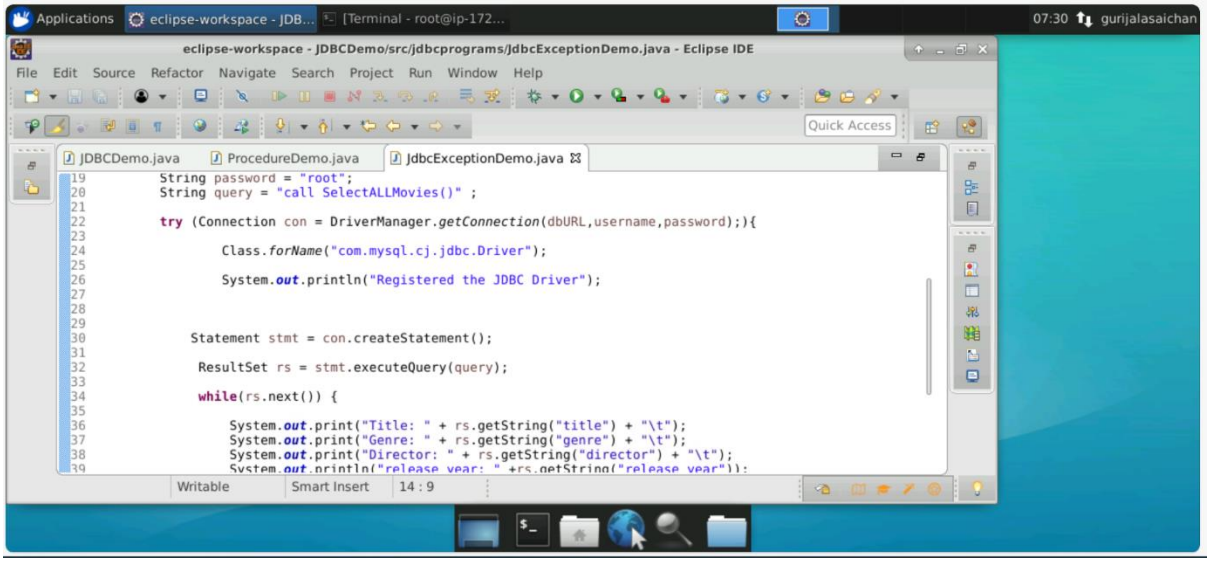

eclipse-workspace - JDBCDemo/src/jdbcprograms/ProcedureDemo.java - Eclipse IDE
JDBCDemo.java
ProcedureDemo.java
package jdbcprograms;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
public class ProcedureDemo {
public static void main(String[] args) throws ClassNotFoundException, SQLException {
//Step 1: Load the driver
Class.forName("com.mysql.cj.jdbc.Driver");
String url="jdbc:mysql://localhost:3306/animated_movies";
String uname="root";
String pwd="root";
String query="call SelectALLMovies()";
//step 2: Create Connection
Connection con=DriverManager.getConnection(url, uname, pwd);
System.out.println("Connection created successfully");
Writable
Smart Insert
17 : 45

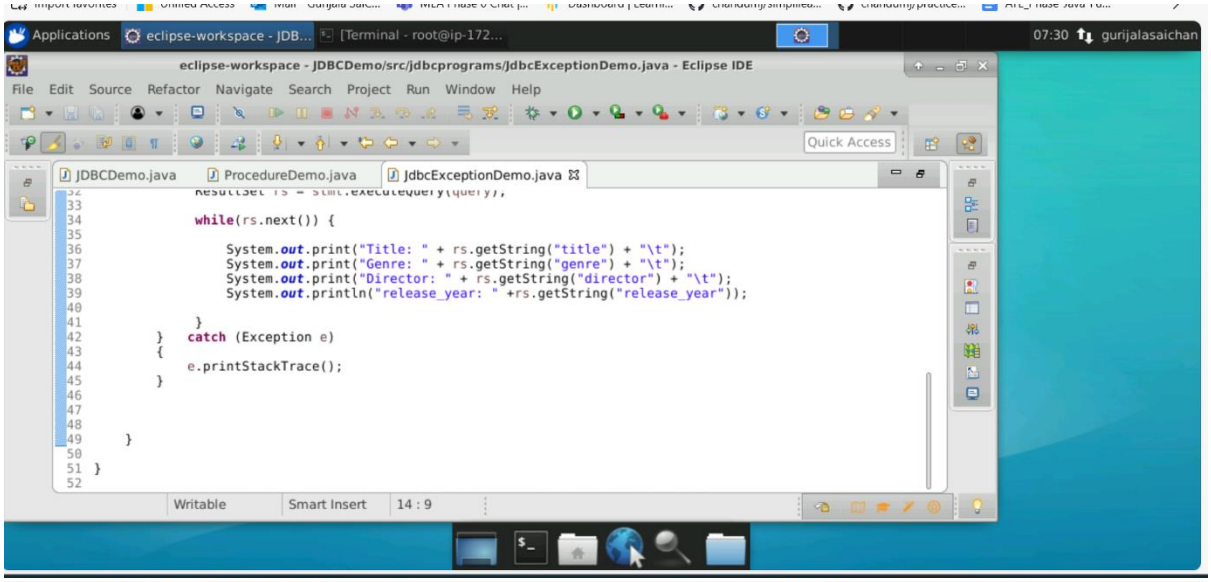

eclipse-workspace - JDBCDemo/src/jdbcprograms/ProcedureDemo.java - Eclipse IDE
JDBCDemo.java
ProcedureDemo.java
String url="jdbc:mysql://localhost:3306/animated_movies";
String uname="root";
String pwd="root";
String query="call SelectALLMovies()";
//step 2: Create Connection
Connection con=DriverManager.getConnection(url, uname, pwd);
System.out.println("Connection created successfully");
Statement stmt= con.createStatement();
ResultSet rs = stmt.executeQuery(query);
while(rs.next()) {
System.out.print("Title: " + rs.getString("title") + "\t");
System.out.print("Genre: " + rs.getString("genre") + "\t");
System.out.print("Director: " + rs.getString("director") + "\t");
System.out.println("release_year: " +rs.getString("release_year"));
}
Writable
Smart Insert
17 : 45

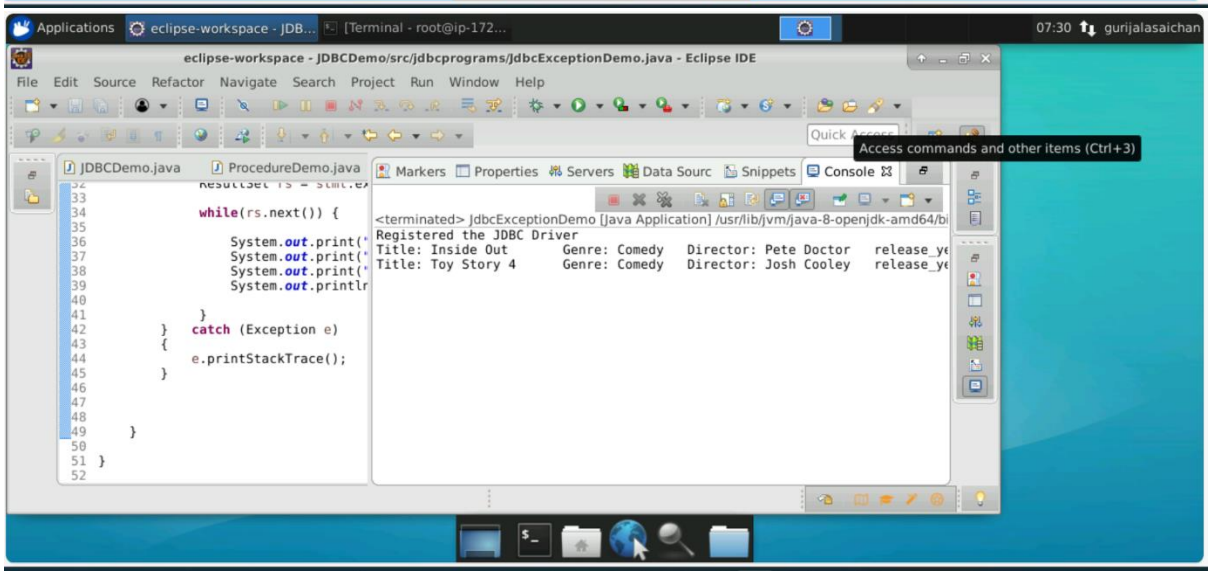

eclipse-workspace - JDBCDemo/src/jdbcprograms/ProcedureDemo.java - Eclipse IDE
JDBCDemo.java
ProcedureDemo.java
System.out.print("Title: " + rs.getString("title") + "\t");
System.out.print("Genre: " + rs.getString("genre") + "\t");
System.out.print("Director: " + rs.getString("director") + "\t");
System.out.println("release_year: " +rs.getString("release_year"));
}
// step 4: close connection with DB
con.close();
System.out.println("Connection closed");
}
}
Writable
Smart Insert
17 : 45

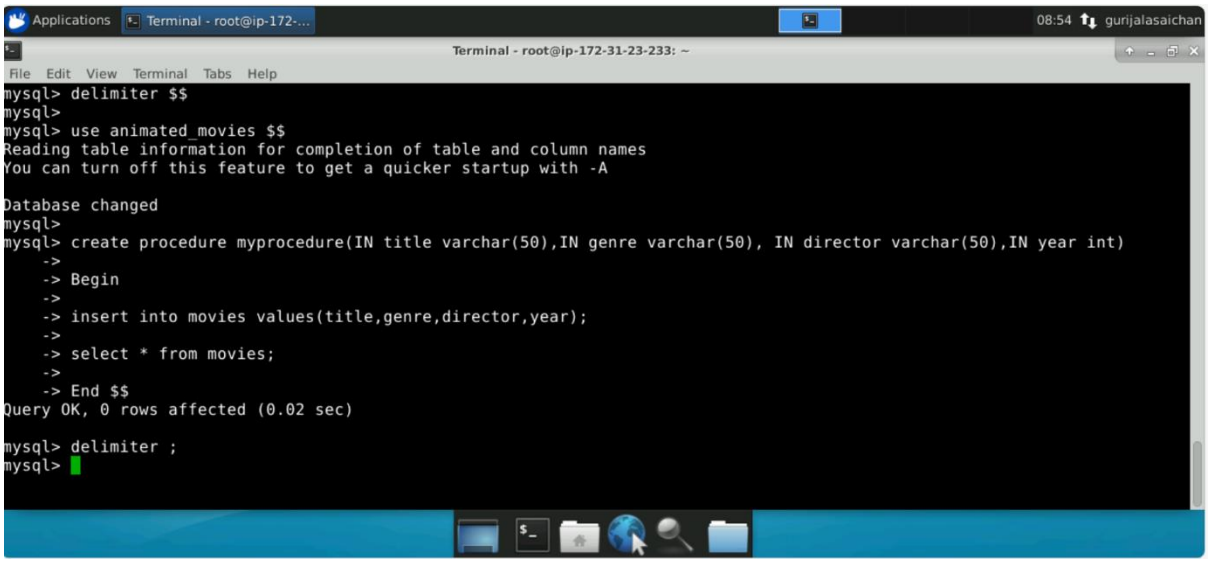

eclipse-workspace - JDBCDemo/src/jdbcprograms/ProcedureDemo.java - Eclipse IDE
JDBCDemo.java
ProcedureDemo.java
Console
<terminated> ProcedureDemo [Java Application] /usr/lib/jvm/java-8-openjdk-amd64/bin/ja
Connection created successfully
Title: Inside Out Genre: Comedy Director: Pete Doctor release_ye
Title: Toy Story 4 Genre: Comedy Director: Josh Cooley release_ye
Connection closed


eclipse-workspace - JDBCDemo/src/jdbcprograms/JdbcExceptionDemo.java - Eclipse IDE
JDBCDemo.java
ProcedureDemo.java
JdbcExceptionDemo.java
Writable
Smart Insert
14 : 9

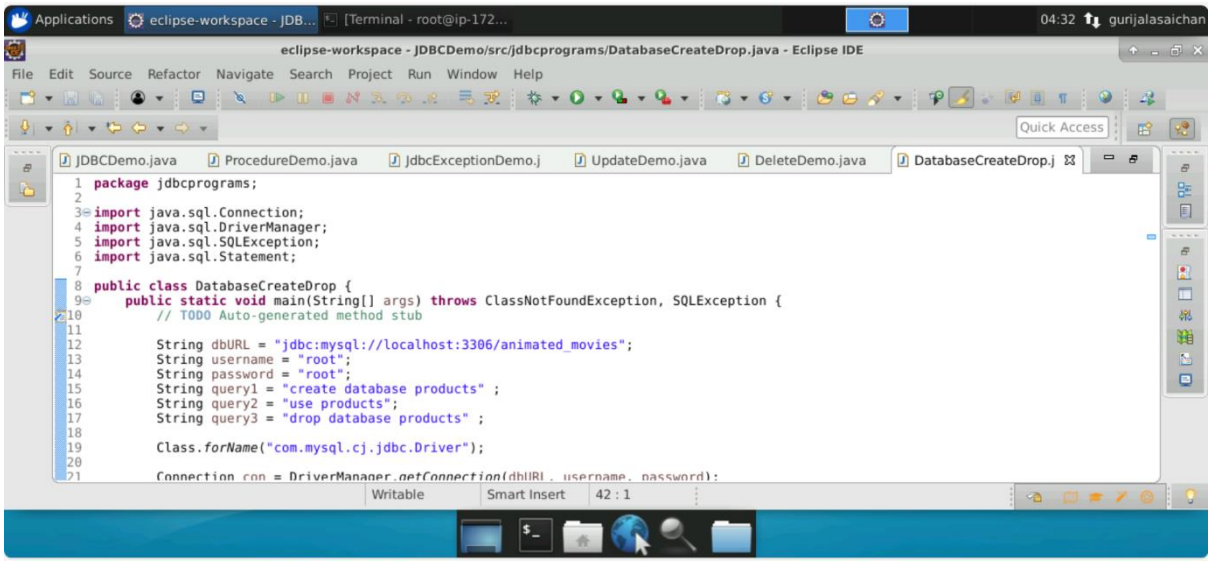

eclipse-workspace - JDBCDemo/src/jdbcprograms/JdbcExceptionDemo.java - Eclipse IDE
JDBCDemo.java
ProcedureDemo.java
JdbcExceptionDemo.java
Writable
Smart Insert
14 : 9

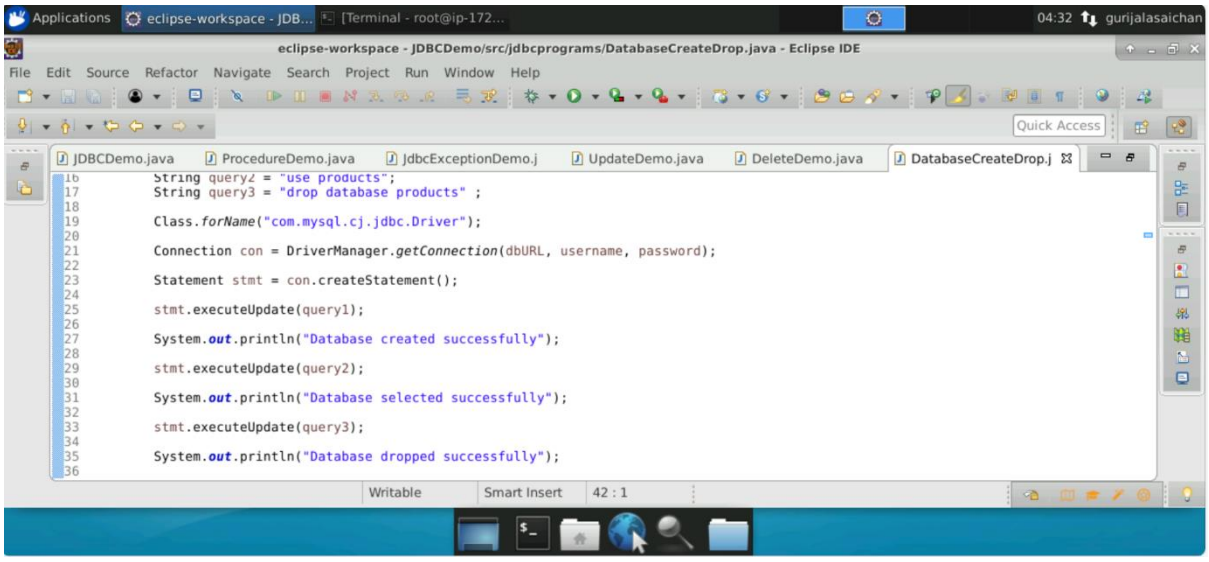

Applications
eclipse-workspace - JDB...
[Terminal - root@ip-172...
07:30
gurijalasaichan
eclipse-workspace - JDBCDemo/src/jdbcprograms/JdbcExceptionDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
JDBCDemo.java
ProcedureDemo.java
JdbcExceptionDemo.java
while(rs.next()) {
System.out.print("Title: " + rs.getString("title") + "\t");
System.out.print("Genre: " + rs.getString("genre") + "\t");
System.out.print("Director: " + rs.getString("director") + "\t");
System.out.println("release_year: " +rs.getString("release_year"));
} catch (Exception e)
{
e.printStackTrace();
}
}
}
Writable
Smart Insert
14 : 9

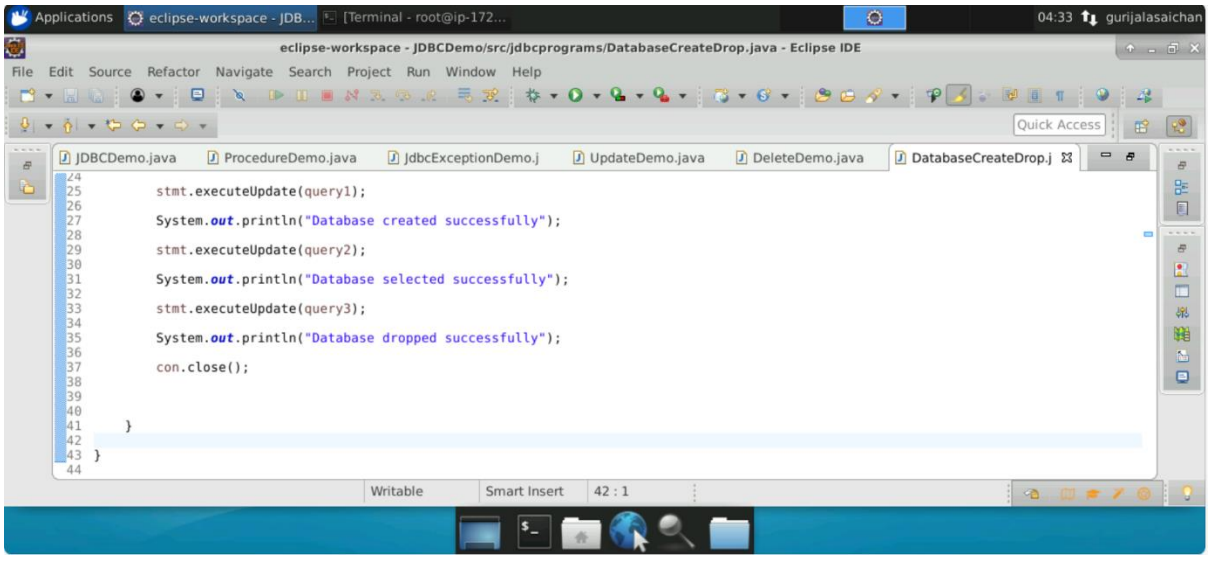

Applications
eclipse-workspace - JDB...
[Terminal - root@ip-172...
07:30
gurijalasaichan
eclipse-workspace - JDBCDemo/src/jdbcprograms/JdbcExceptionDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Access commands and other items (Ctrl+3)
JDBCDemo.java
ProcedureDemo.java
Markers
Properties
Servers
Data Sourc
Snippets
Console
<terminated> JdbcExceptionDemo [Java Application] /usr/lib/jvm/java-8-openjdk-amd64/bi
Registered the JDBC Driver
Title: Inside Out Genre: Comedy Director: Pete Doctor release_ye
Title: Toy Story 4 Genre: Comedy Director: Josh Cooley release_ye

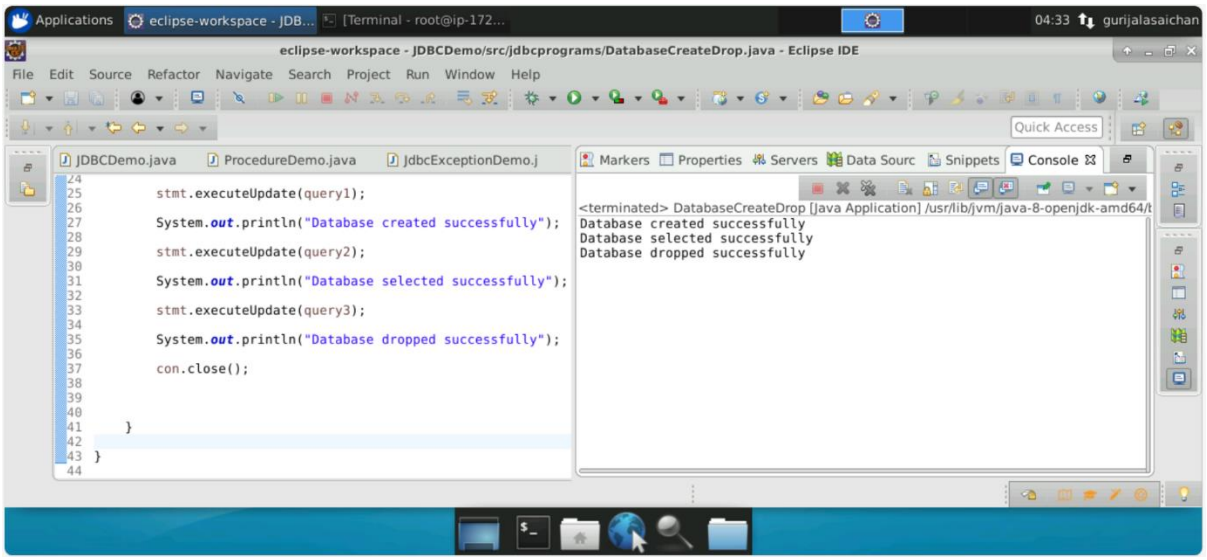

Applications
Terminal - root@ip-172-...
08:54
gurijalasaichan
Terminal - root@ip-172-31-23-233: ~
File Edit View Terminal Tabs Help
mysql> delimiter $$
mysql>
mysql> use animated_movies $$
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Database changed
mysql>
mysql> create procedure myprocedure(IN title varchar(50),IN genre varchar(50), IN director varchar(50),IN year int)
-> Begin
-> insert into movies values(title,genre,director,year);
-> select * from movies;
-> End $$
Query OK, 0 rows affected (0.02 sec)
mysql> delimiter ;
mysql>

4. Demonstrate how to create, select, and drop a database in JDBC

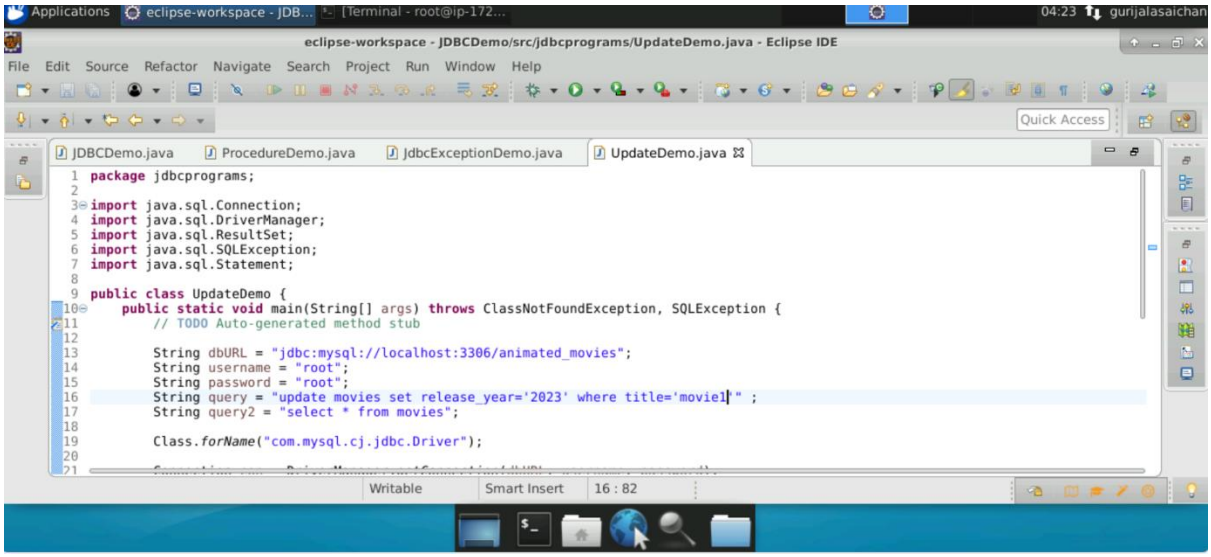


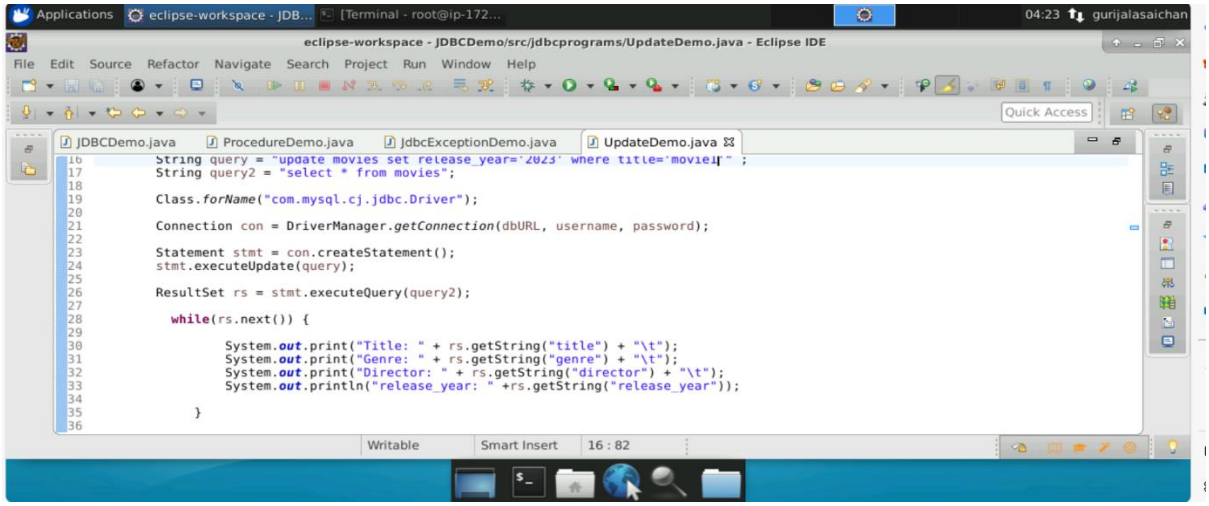


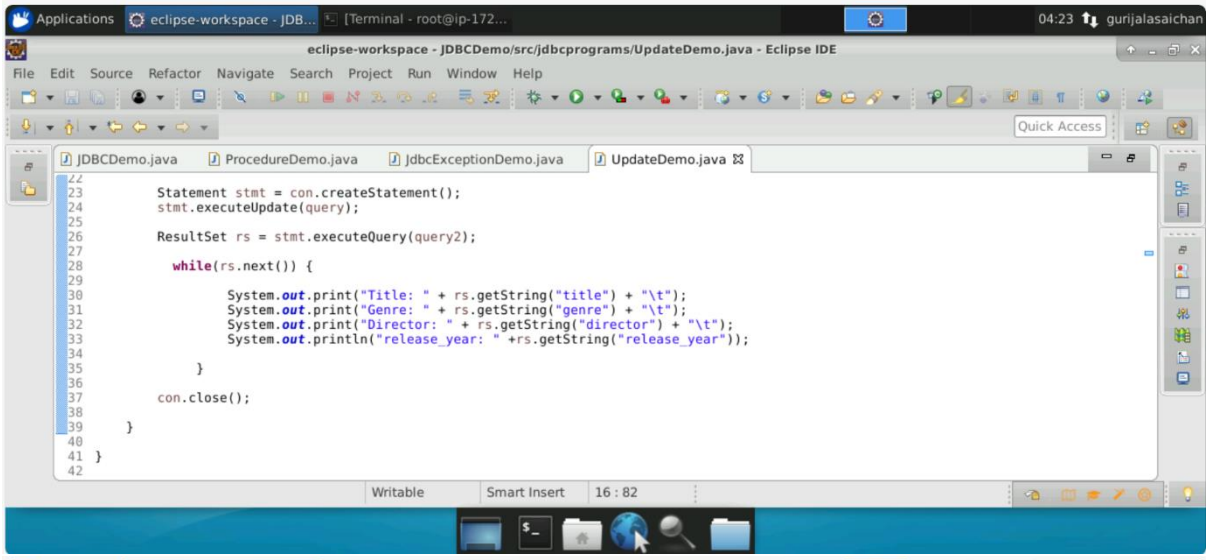


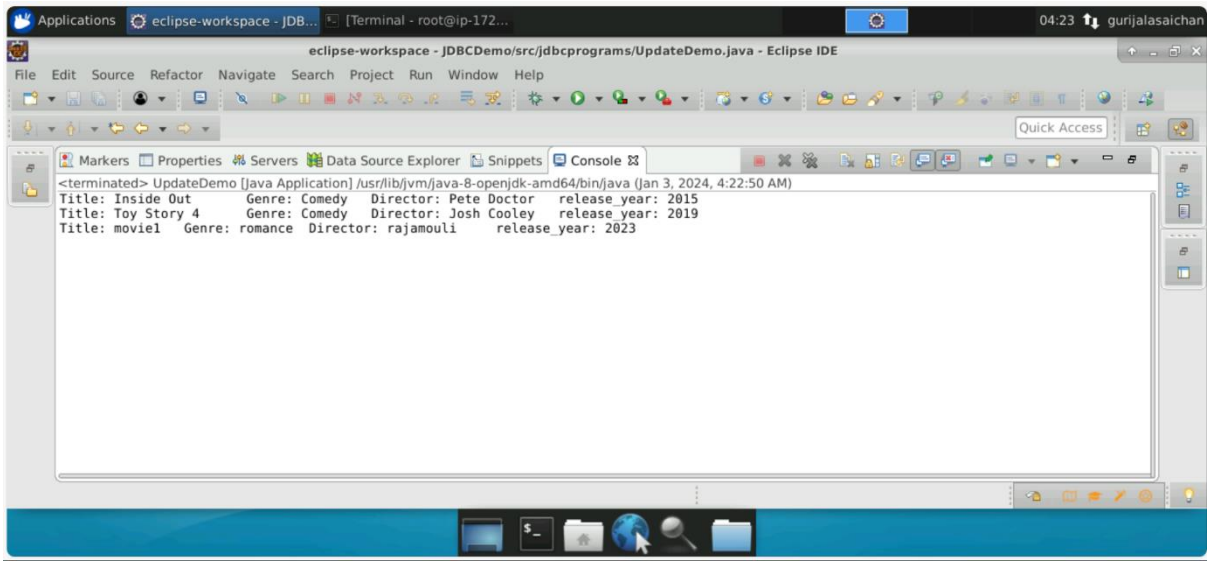


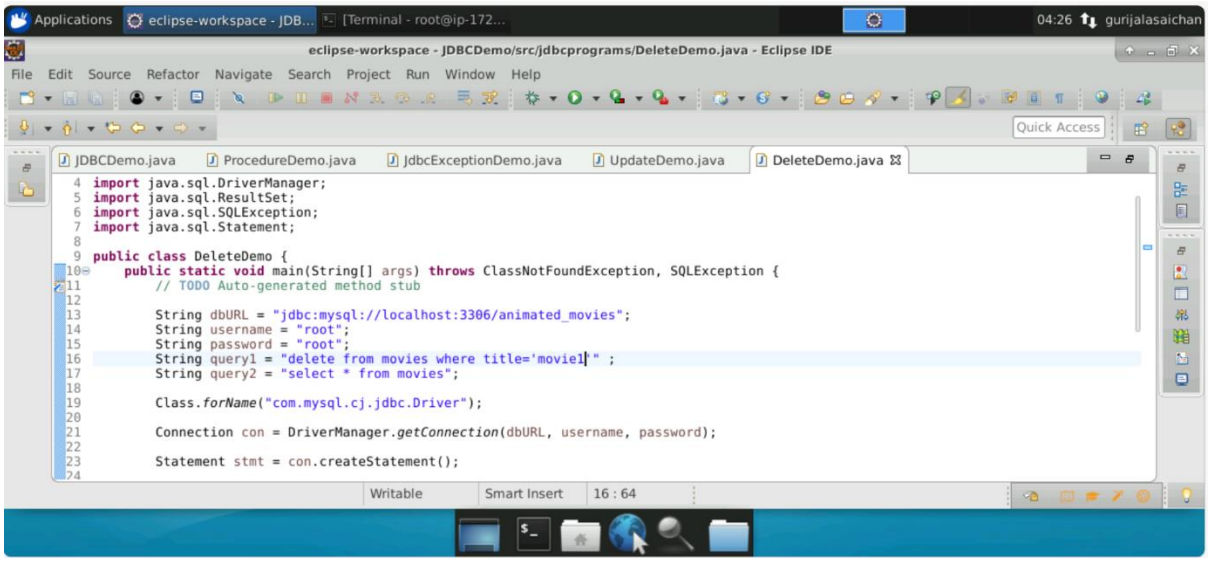
5. Demonstrate database record handling using JDBC

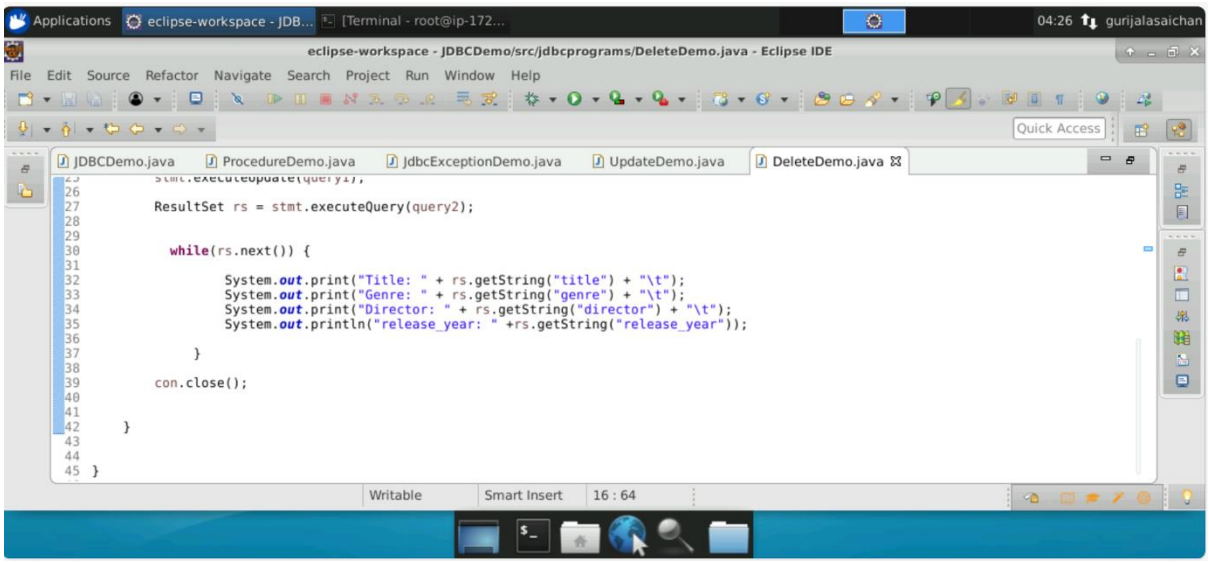


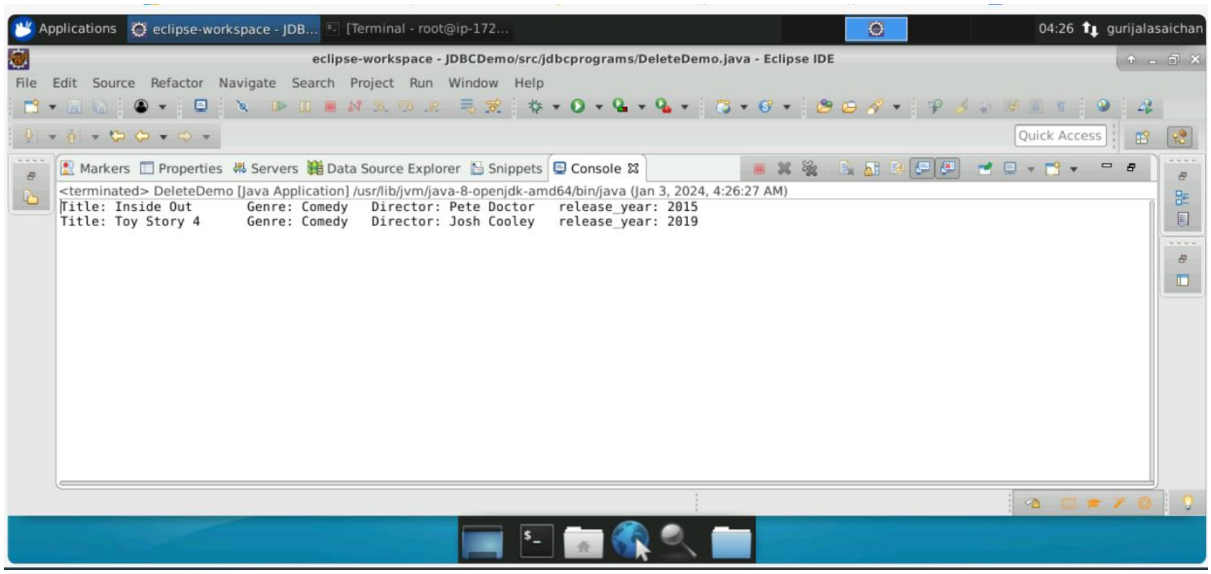



Applications
eclipse-workspace - JDB...
[Terminal - root@ip-172...
04:23
gurijalasaichan
eclipse-workspace - JDBCDemo/src/jdbcprograms/UpdateDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
JDBCDemo.java
ProcedureDemo.java
JdbcExceptionDemo.java
UpdateDemo.java
Statement stmt = con.createStatement();
stmt.executeUpdate(query);
ResultSet rs = stmt.executeQuery(query2);
while(rs.next()) {
System.out.print("Title: " + rs.getString("title") + "\t");
System.out.print("Genre: " + rs.getString("genre") + "\t");
System.out.print("Director: " + rs.getString("director") + "\t");
System.out.println("release_year: " +rs.getString("release_year"));
}
con.close();
}
}
Writable
Smart Insert
16 : 82

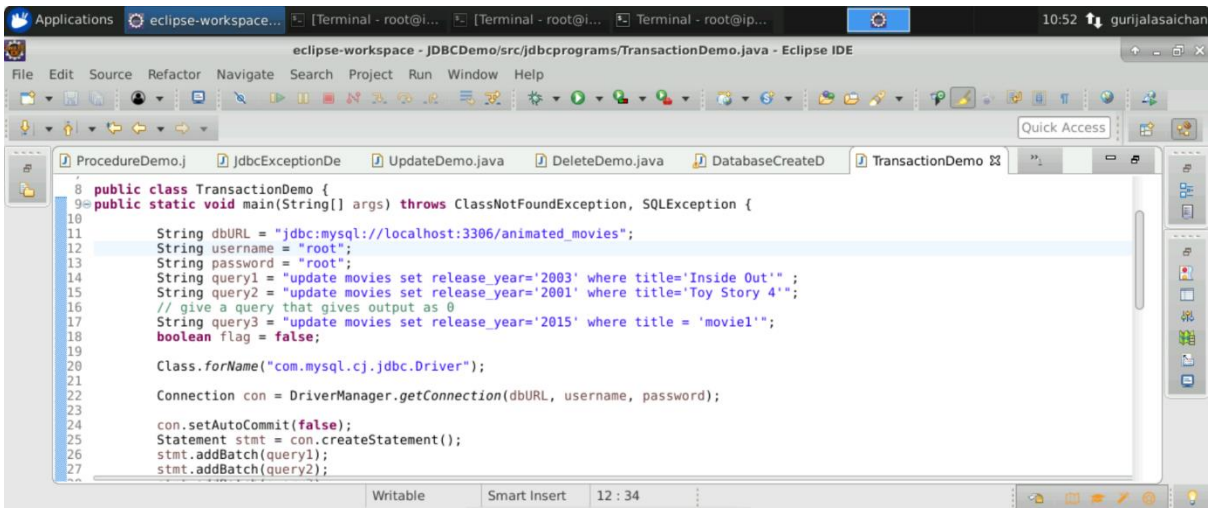

Applications
eclipse-workspace - JDB...
[Terminal - root@ip-172...
04:23
gurijalasaichan
eclipse-workspace - JDBCDemo/src/jdbcprograms/UpdateDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Markers
Properties
Servers
Data Source Explorer
Snippets
Console
<terminated> UpdateDemo [Java Application] /usr/lib/jvm/java-8-openjdk-amd64/bin/java (Jan 3, 2024, 4:22:50 AM)
Title: Inside Out Genre: Comedy Director: Pete Doctor release_year: 2015
Title: Toy Story 4 Genre: Comedy Director: Josh Cooley release_year: 2019
Title: movie1 Genre: romance Director: rajamouli release_year: 2023

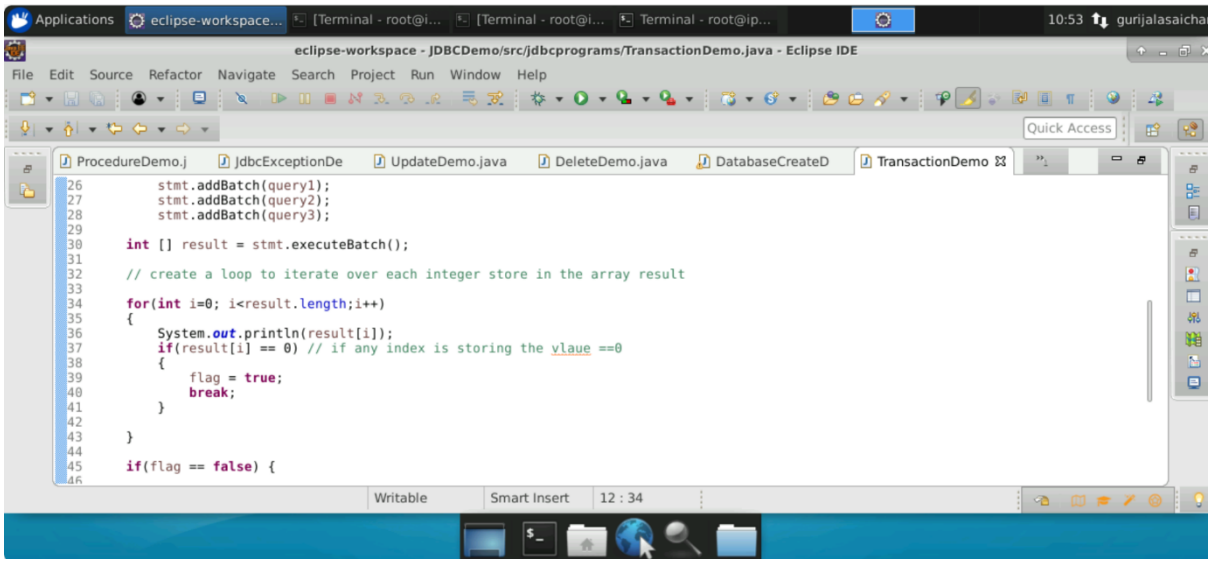

Applications
eclipse-workspace - JDB...
[Terminal - root@ip-172...
04:26
gurijalasaichan
eclipse-workspace - JDBCDemo/src/jdbcprograms/DeleteDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
JDBCDemo.java
ProcedureDemo.java
JdbcExceptionDemo.java
UpdateDemo.java
DeleteDemo.java
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
public class DeleteDemo {
public static void main(String[] args) throws ClassNotFoundException, SQLException {
// TODO Auto-generated method stub
String dbURL = "jdbc:mysql://localhost:3306/animated_movies";
String username = "root";
String password = "root";
String query1 = "delete from movies where title='movie1' " ;
String query2 = "select * from movies";
Class.forName("com.mysql.cj.jdbc.Driver");
Connection con = DriverManager.getConnection(dbURL, username, password);
Statement stmt = con.createStatement();
Writable
Smart Insert
16 : 64

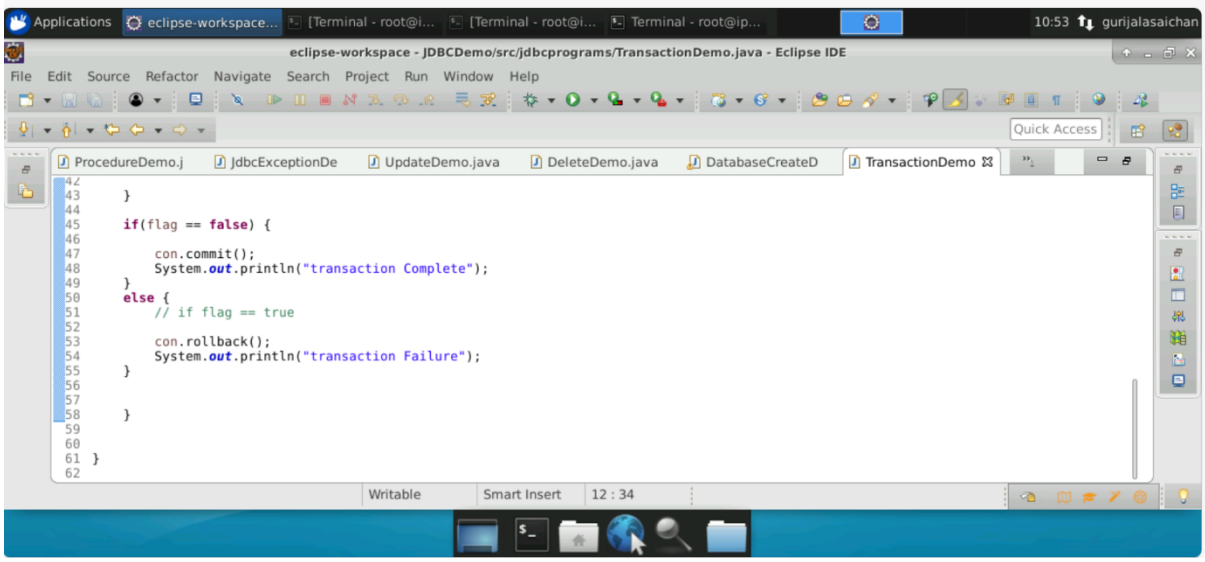


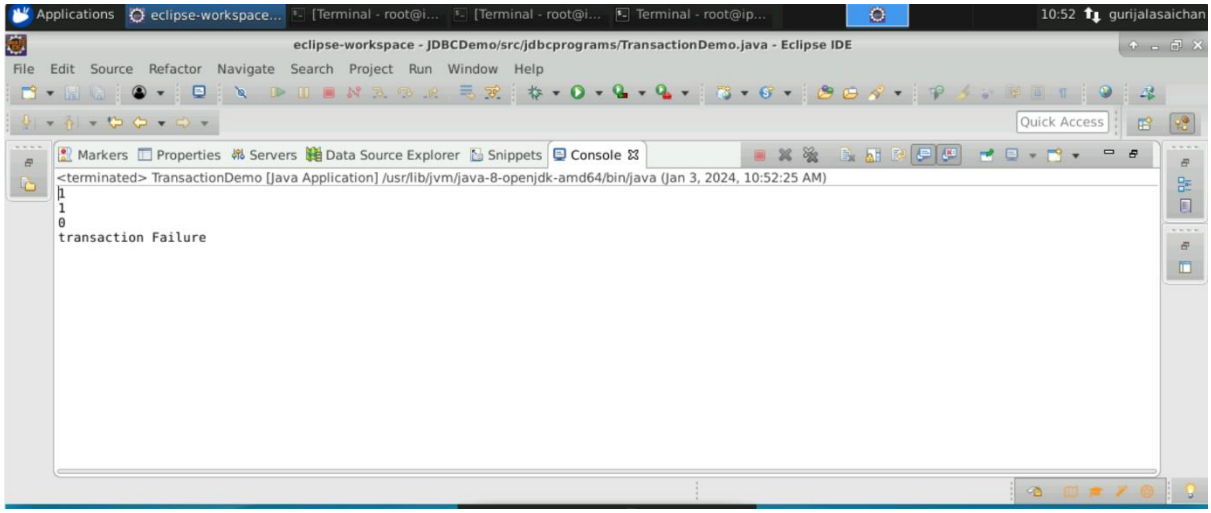


6. Demonstrate Transaction Management in JDBC




eclipse-workspace - JDBCDemo/src/jdbcprograms/TransactionDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
ProcedureDemo.j JdbcExceptionDe UpdateDemo.java DeleteDemo.java DatabaseCreateD TransactionDemo
stmt.addBatch(query1);
stmt.addBatch(query2);
stmt.addBatch(query3);
int [] result = stmt.executeBatch();
// create a loop to iterate over each integer store in the array result
for(int i=0; i<result.length;i++)
{
System.out.println(result[i]);
if(result[i] == 0) // if any index is storing the vlaue ==0
{
flag = true;
break;
}
}
if(flag == false) {
Writable Smart Insert 12 : 34


eclipse-workspace - JDBCDemo/src/jdbcprograms/TransactionDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
ProcedureDemo.j JdbcExceptionDe UpdateDemo.java DeleteDemo.java DatabaseCreateD TransactionDemo
}
if(flag == false) {
con.commit();
System.out.println("transaction Complete");
}
else {
// if flag == true
con.rollback();
System.out.println("transaction Failure");
}
}
}
Writable Smart Insert 12 : 34


eclipse-workspace - JDBCDemo/src/jdbcprograms/TransactionDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Markers Properties Servers Data Source Explorer Snippets Console
<terminated> TransactionDemo [Java Application] /usr/lib/jvm/java-8-openjdk-amd64/bin/java (Jan 3, 2024, 10:52:25 AM)
1
1
0
transaction Failure