Project On

University_Relational_Database

(In SQL using JAVA)

- A project report by **Fariha Nusrat**

The document is to describe the **project** done for university's academic course purpose. The project is built using JAVA connecting database. For storing all the data in databse we followed **CRUD** method of database.

Here, Netbeans were used as the platform for **JAVA** and **SQL** for recording database and buliding ER diagram. From the next page, the highlights of the whole project are demonstrated.

First, here is given my new schema tables in **sqldeveloper window** and in **sql*plus command prompt window** as well.

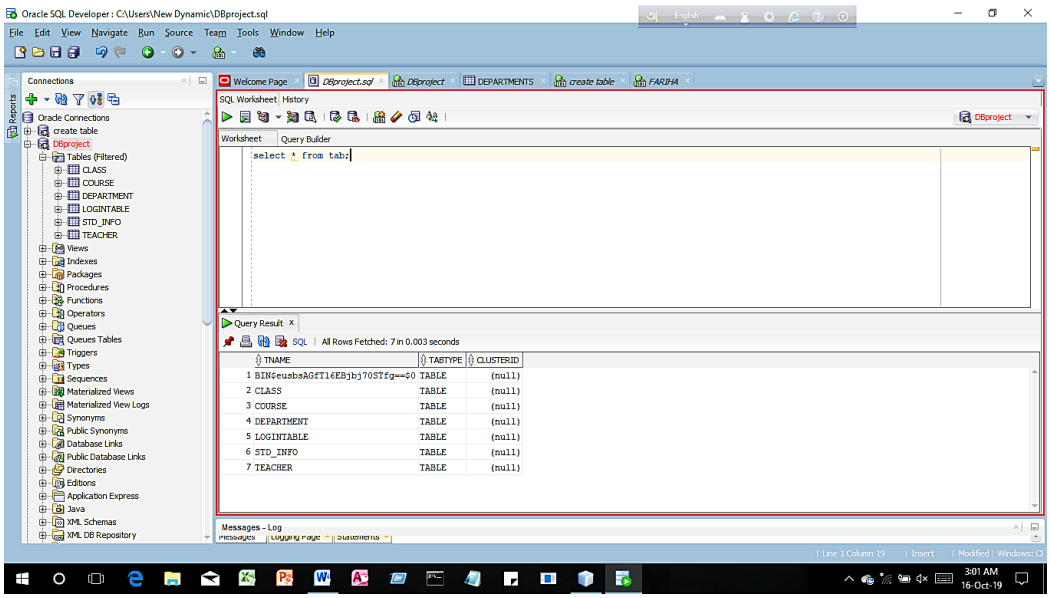

fig: sqldeveloper window

Here, the existed tables are shown in sqldeveloper window.

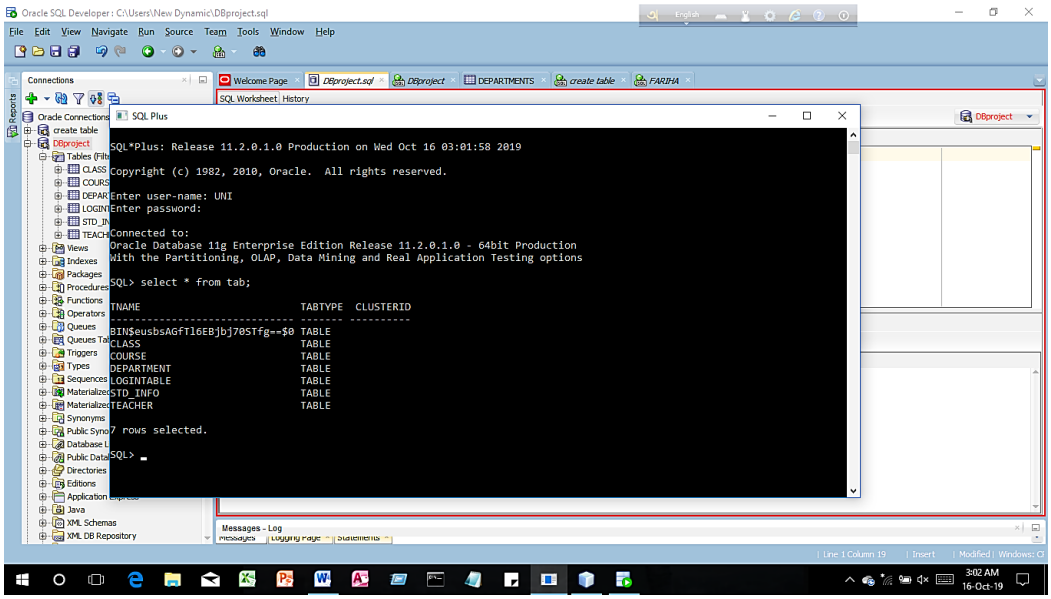

fig: sql*plus command prompt wind.

Here,at first I have created a new schema called **UNI** and then created some tables and inserted the values in the tables.

Now, let me show the tables in java by using jframe ,jtextfield etc

Login Window :

Here is the first window using **jframe** which is to login to the tables by providing the username and password.

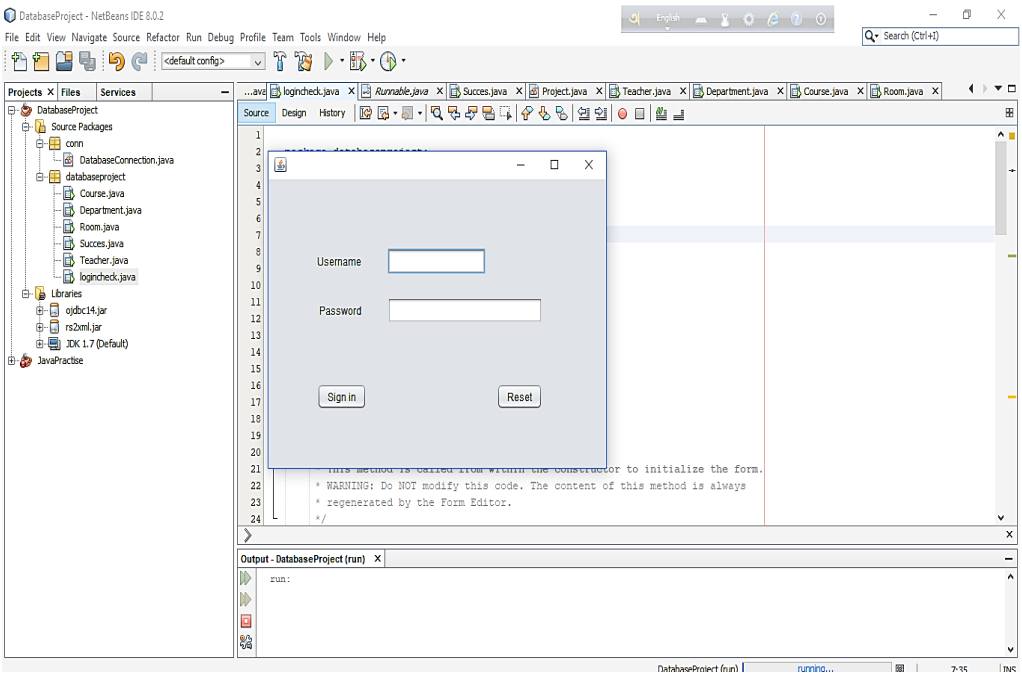

fig: LOGIN window

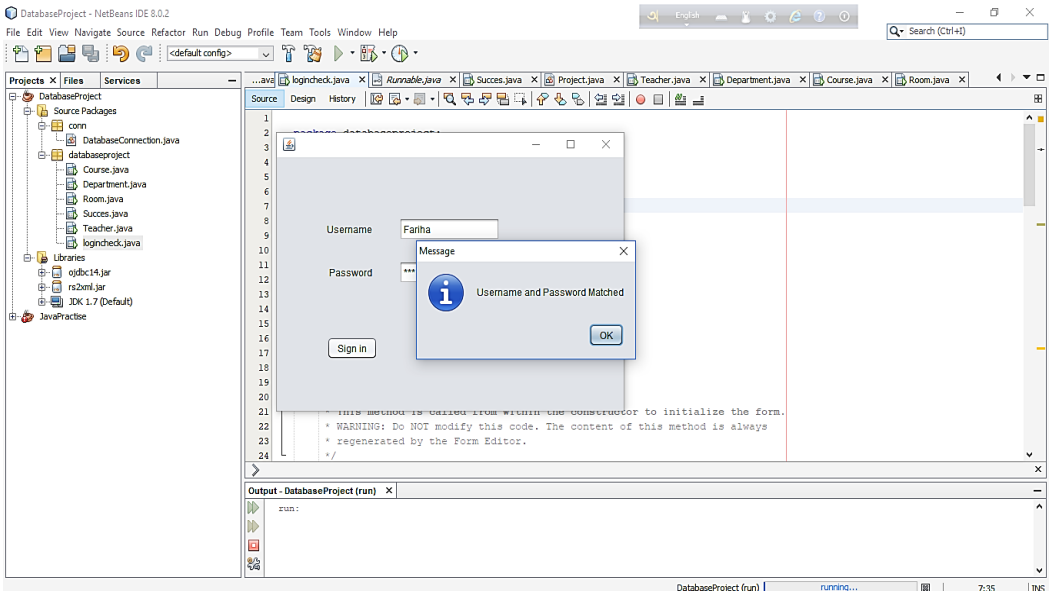

fig: LOGIN window

Here, **Username** and **Password** has been provided , that is matched. We can also reset the username and password if needed.

Table 1: For Students information

Table Name: STD_INFO.

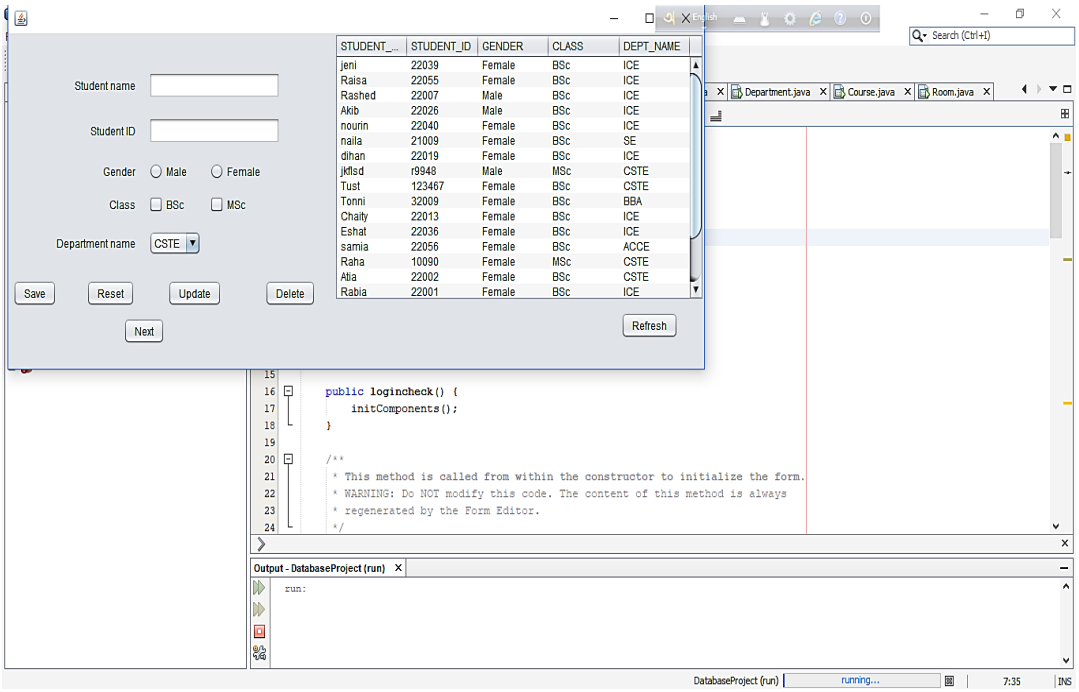

fig: STD_INFO table

Here ,shows a table with students information and also shows the options for performing the operations for INSERTing , UPDATing , DELETing etc.

Here, **READ** operation has been showed.

Now, the **INSERTING** operation is shown below:

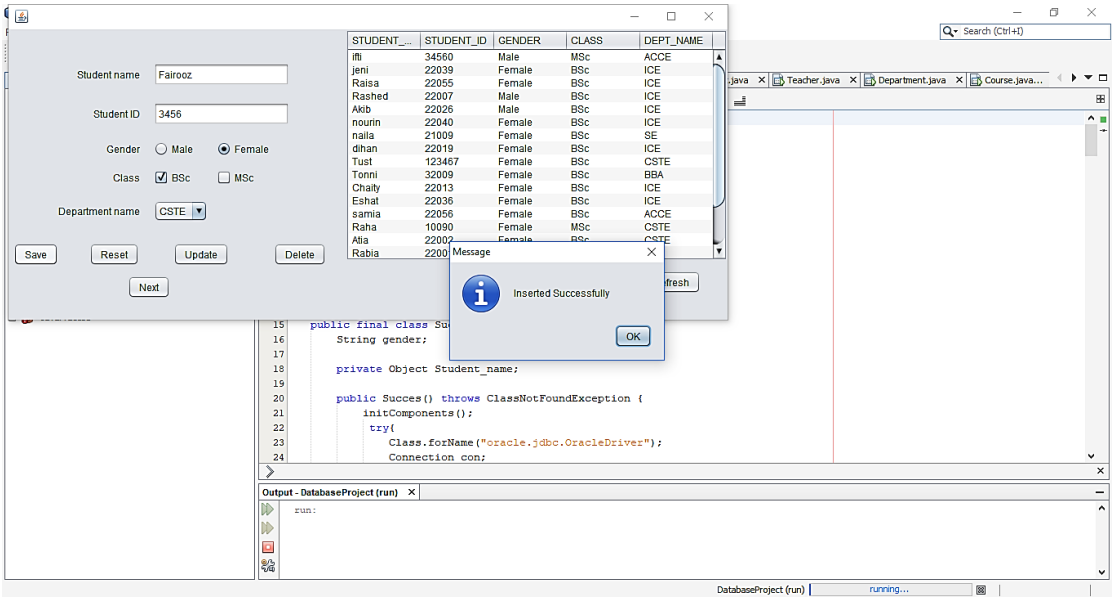

fig: Insertion Operation demonstration

Now, the **UPDATE** operation is shown below:

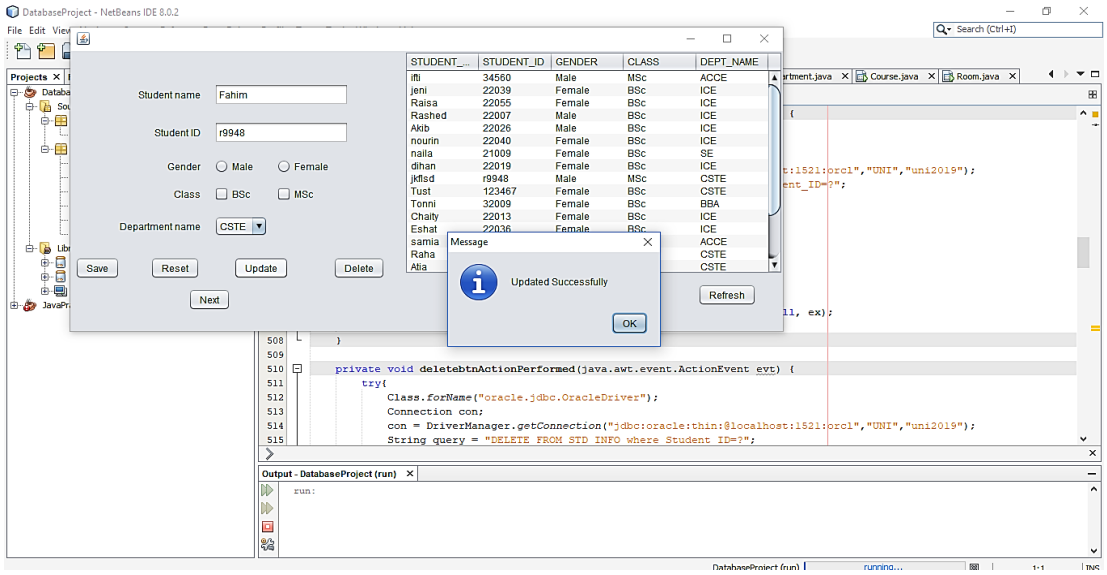

fig: Update Operation demonstration

Again, the **DELETE** operation is given below:

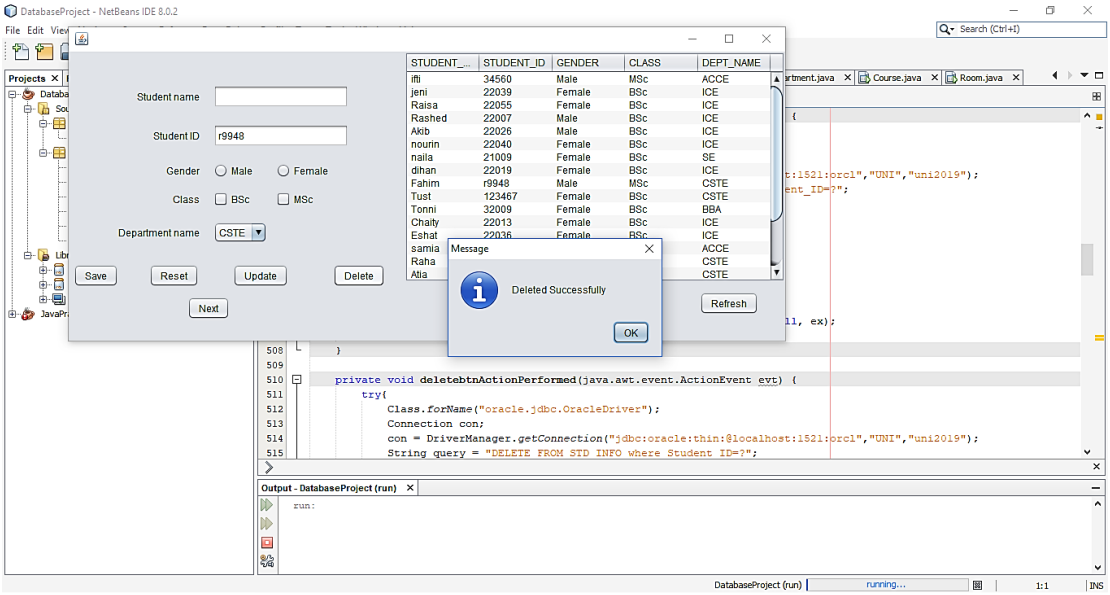

fig: Delete Operation demonstration

Table_2 : For Teachers information

Table Name: TEACHER.

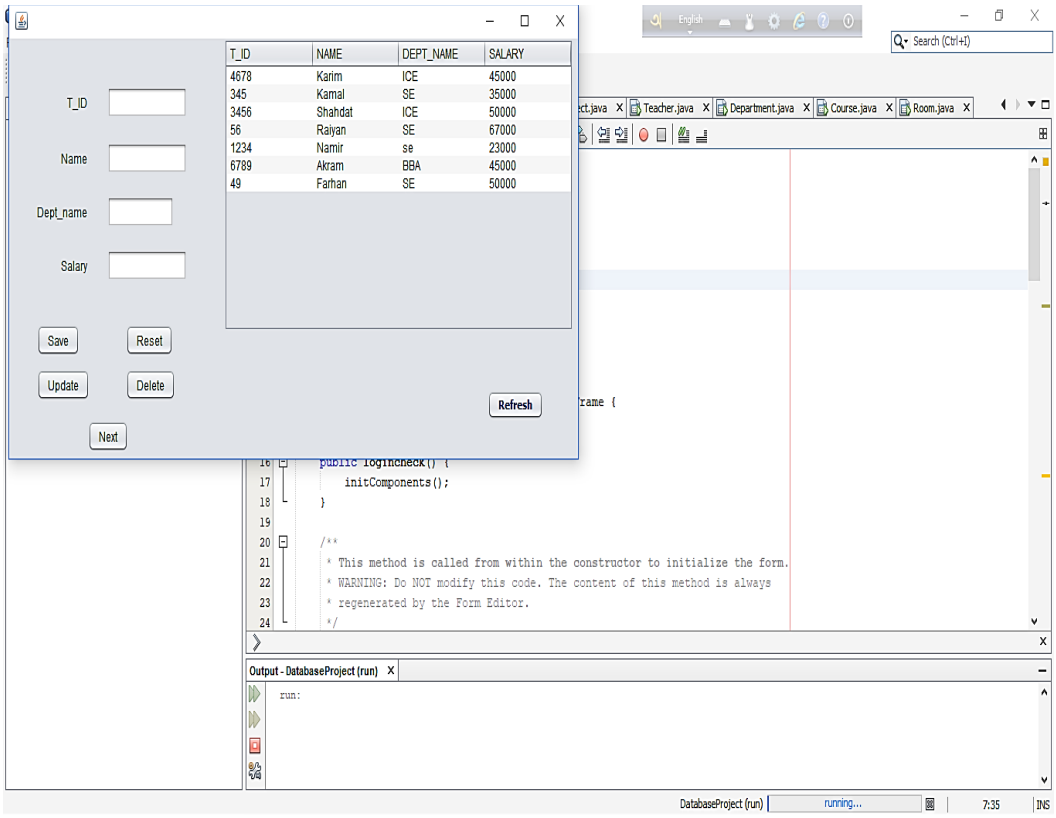

fig: TEACHER table

Table_3 : For recording the information about the Departments.

Table Name: DEPARTMENT.

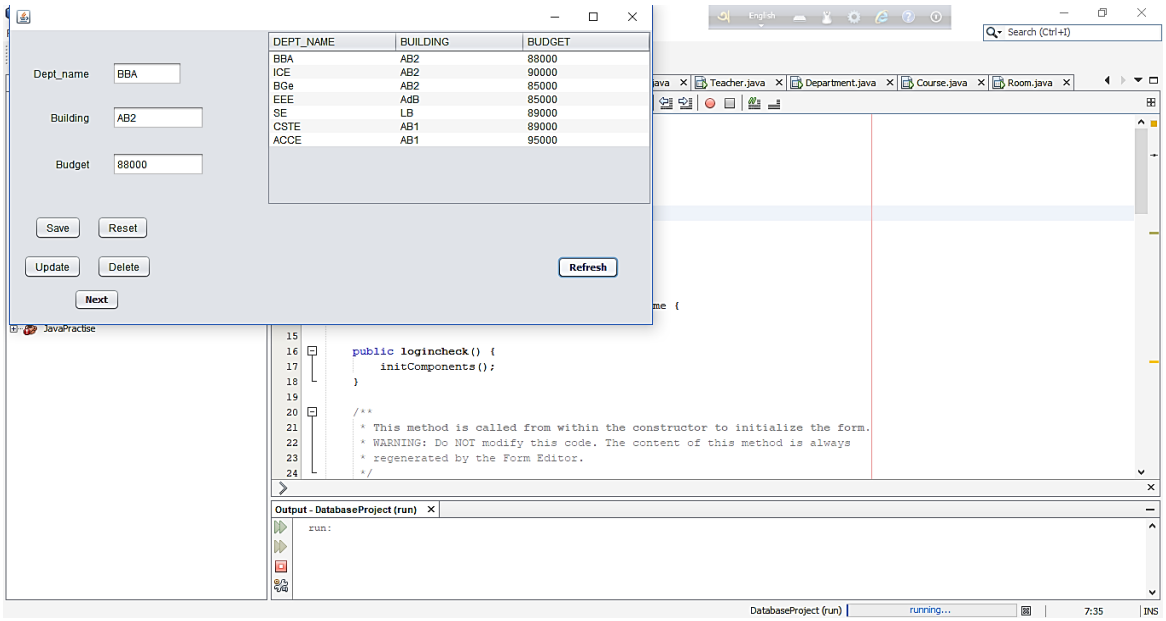

fig: DEPARTMENT table

Here, the table DEPARTMENT contains three columns, by which we can get the department name ,where it is located , the budget approved for the development of that department.

Table 4 : For collecting the information about the COURSE that is being studied in any particular department .

Table Name: COURSE.

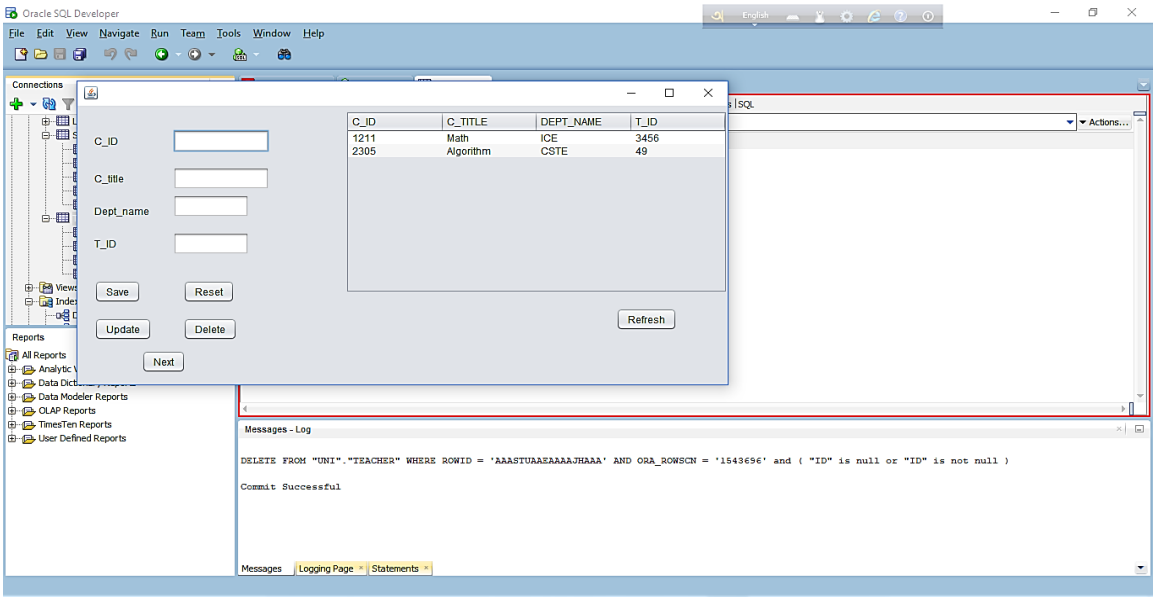

fig: COURSE table

By this table we can get to know which course is taught, its name by the C_TITLE column, department name and the teacher who is currently teaching this course.

Table_5: To know further about the course.

Table Name: CLASS.

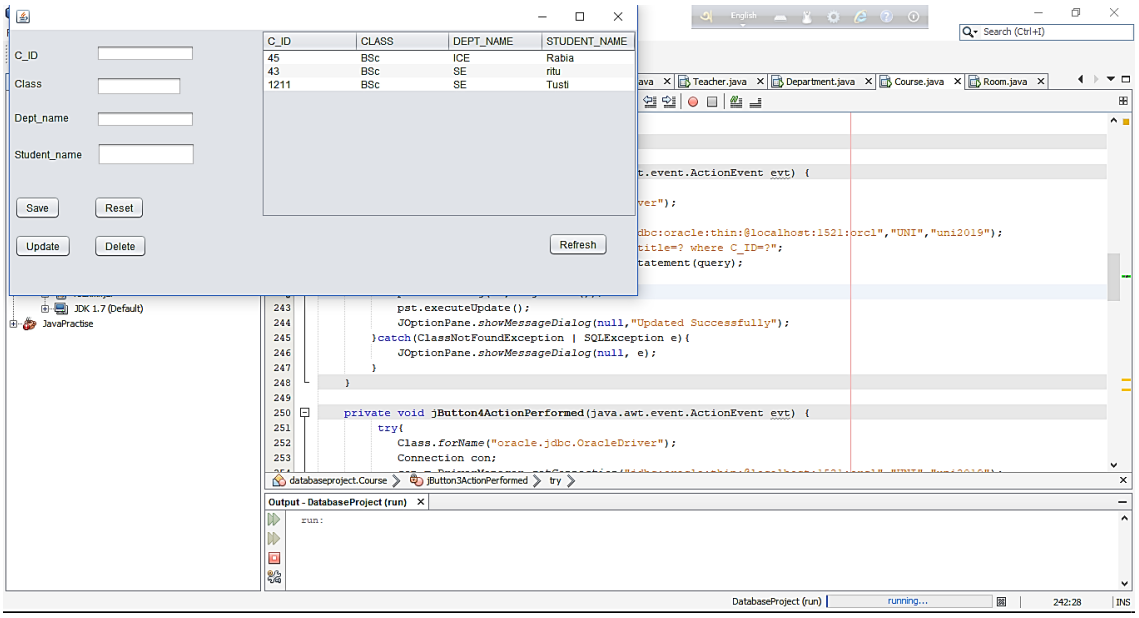

fig: CLASS table

By this table we can instantly could know which student of which class is currently taking the course. We can also can know his department .Which would help a teacher or instructor to monitor a particular student. Besides, it will help a student to improve his academic and social life as well, as a teacher personally could be in touch with that student.

E-R Model

E-R Model of these tables are given below:

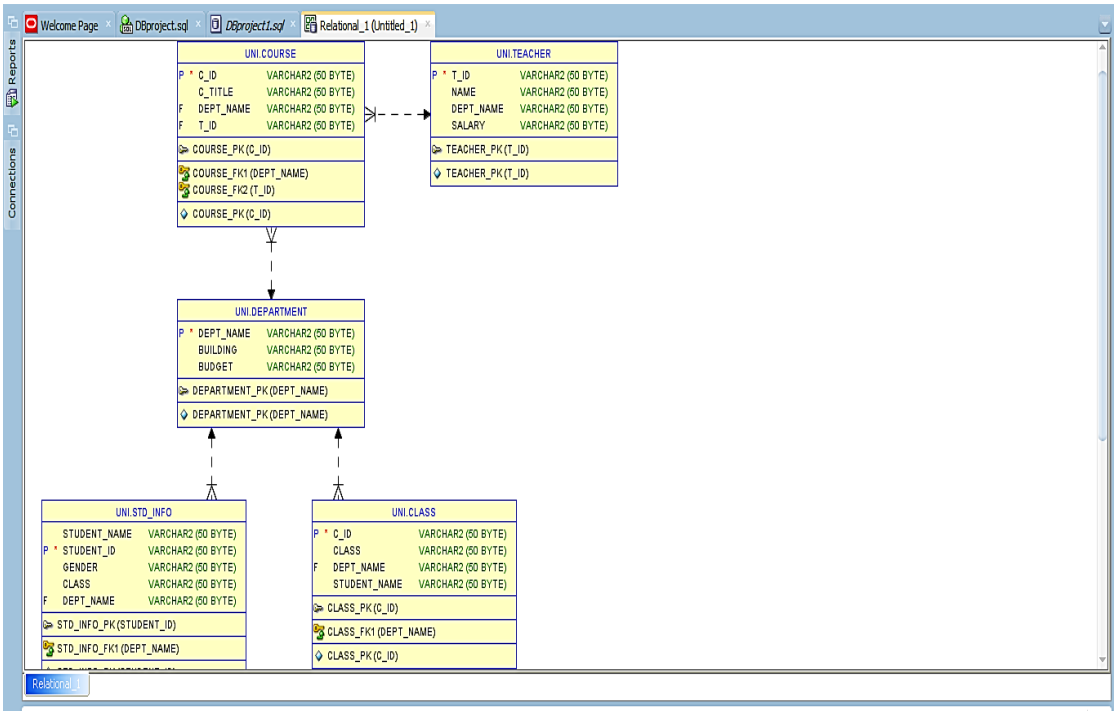

fig: (a)

here, fig:(a) shows the entity relationship**(E-R**) model between the STD_INFO table and the DEPARTMENT table.

Here, in these E-R model there is a one to many relation between COURSE table and TEACHER table, then one to many relation between COURSE and DEPARTMENT, and also there is a one to many relation exists between DEPARTMENT with the STD_INFO and CLASS.

The One to Many relation between COURSE and TEACHER table describes that a teacher can teach many course but a course can be taught only one teacher.

The One to Many relation between COURSE and DEPARTMENT table describes that a course can only be included in one department but on the other a department can have many course for its student.

The One to Many relation between Department with STD_INFO and CLASS table describes that a student can only be a part of only one particular department, where there are many students in a department. Again, the Primary key in CLASS table is Course id (C_ID) and the

foreign key is the DEPT_NAME from the DEPARTMENT table. So, One to Many relation between these two tables shows that a department can have many course but a course can only be included only in one department.