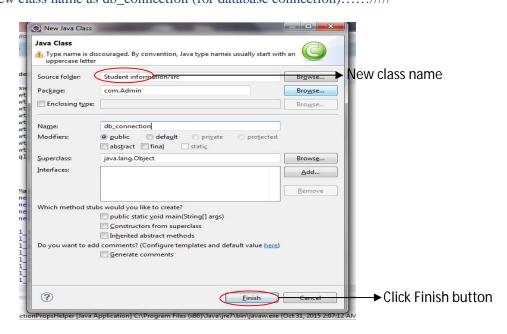
```
////......Declaration JPanel, JButton, JLabel and JTextField....////
                                                                         Object (user define panel)
         panel_main
JPanel
                       =new JPanel();
JPanel
         panel_center
                      =new JPanel();
                                           -JPanel
JPanel
                      =new JPanel();
         panel_north
JPanel
                      =new JPanel();
         panel_south
                                                                           Object (user define label)
JLabel
        lbl_student_id
                          =new JLabel("Student ID");
JLabel
        lbl student name = new JLabel("Name");
JLabel
        lbl mobile
                          =new JLabel("Mobile");
                         =new JLabel("1st_Semester GPA");
JLabel
        lbl 1st semester
        lbl_2nd_semester = new_ILabel("2nd Semester GPA");
JLabel
JLabel
        lbl_3rd_semester = new JLabel("3rd Semester GPA");
JLabel
        lbl 4th semester
                         =new JLabel("4th Semester GPA");
JLabel
        lbl 5th semester
                         =new JLabel("5th Semester GPA");
JLabel
        lbl_6th_semester
                         =new JLabel("6th Semester GPA");
                          =new JLabel("7th Semester GPA");
                                                                           JLabel
JLabel
        lbl_7th_semester
JLabel
        lbl_8th_semester
                         =new JLabel("8th Semester GPA");
JLabel
        lbl_1st_credit
                          =new JLabel("Credit");
JLabel
        lbl 2nd credit
                          =new JLabel("Credit");
JLabel
        lbl 3rd credit
                         =new JLabel("Credit");
JLabel
                          =new JLabel("Credit");
        lbl_4th_credit
JLabel
                          =new JLabel("Credit");
        lbl 5th credit
JLabel
                          =new JLabel("Credit");
        lbl 6th credit
JLabel
        lbl_7th_credit
                          =new JLabel("Credit");
JLabel
        lbl 8th credit
                          =new JLabel("Credit");
                                                                               Object (userdefine)
JTextField txt_student_id
                                  =new JTextField(15);
JTextField txt student name
                                  =new JTextField(15);
                                  =new JTextField(15);
JTextField txt_mobile
JTextField txt_1st_semester
                                  =new JTextField(15);
JTextField txt 2nd semester
                                  =new JTextField(15):
JTextField txt 3rd semester
                                  =new JTextField(15);
JTextField txt_4th_semester
                                  =new JTextField(15);
JTextField txt_5th_semester
                                  =new JTextField(15);
JTextField txt_6th_semester
                                  =new JTextField(15);
JTextField txt_7th_semester
                                  =new JTextField(15);
                                                                           JTextField
JTextField txt_8th_semester
                                  =new JTextField(15);
JTextField txt_1st_credit
                                  =new JTextField(15);
JTextField txt_2nd_credit
                                  =new JTextField(15);
JTextField txt_3rd_credit
                                  =new JTextField(15);
JTextField txt 4th credit
                                  =new JTextField(15);
JTextField txt 5th credit
                                  =new JTextField(15);
                                                                          Object(userdefine)
JTextField txt 6th credit
                                  =new JTextField(15):
JTextField txt 7th credit
                                  =new JTextField(15);
JTextField
           txt_8th_credit
                                  =new JTextField(15);
JTextField txt_search
                                  =new ITextField(30);
JButton
         btn_add
                         =new JButton("Add");
JButton
                         =new JButton("Edit");
         btn_edit
                         =new JButton("Delete");
JButton
         btn_delete
                                                                   JButton
JButton
                         =new JButton("View CGPA");
         btn_view_cgpa
JButton
         btn search
                         =new JButton("Search");
GridBagConstraints c=new GridBagConstraints();
                                                            ▶ GridBagConstraint Building Class
```

```
////// JPanel Addition and Layout set. .....////
public void cmp()
                                          ► Add main panel
        add (panel main);
                                                                        → Set BorderLayout
        panel main.setLayout(newBorderLayout());
        panel_main.add(panel_center,BorderLayout.CENTER);
        panel_main.add(panel_north,BorderLayout.NORTH);
        panel_main.add(panel_south,BorderLayout.SOUTH);
        panel_center_work();
        panel_north_work();
                                                                   ► Method declaration
        panel_south_work();
}
               ////......Add all component in panel_center_work.....///
private void panel_center_work()
        panel_center.setLayout(new GridBagLayout());
        c.gridx=0,
                                                     Value of X and Y coordinate
        c.gridy=0;
        c.fill=GridBagConstraints.BOTH;
        c.insets=new Insets(5,5,5,5);
        panel center.add(lbl student id,c);
        c.gridx=1;
        c.gridy=0;
        panel_center.add(txt_student_id,c);
        c.gridx=2;
        c.gridy=0;
        panel_center.add(lbl_student_name,c);
        c.gridx=3;
        c.gridy=0;
        panel_center.add(txt_student_name,c);
        c.gridx=0;
        c.gridy=1;
        panel_center.add(lbl_1st_semester,c);
        c.gridx=1;
        c.gridy=1;
        panel_center.add(txt_1st_semester,c);
        c.gridx=2;
        c.gridy=1;
        panel_center.add(lbl_1st_credit,c);
        c.gridx=3;
        c.gridy=1;
        panel_center.add(txt_1st_credit,c);
        c.gridx=0;
        c.gridy=2;
        panel_center.add(lbl_2nd_semester,c);
        c.gridx=1;
        c.gridy=2;
        panel_center.add(txt_2nd_semester,c);
        c.gridx=2;
        c.gridy=2;
        panel_center.add(lbl_2nd_credit,c);
```

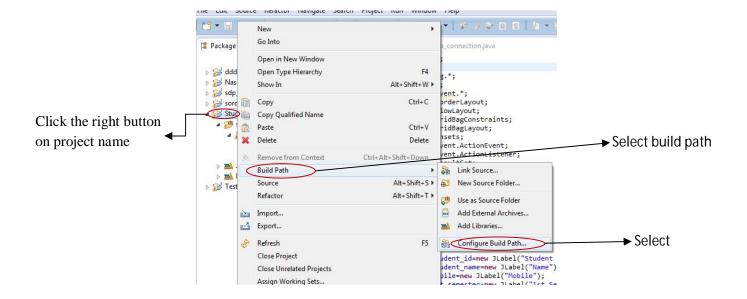
```
c.gridx=3;
c.gridy=2;
panel_center.add(txt_2nd_credit,c);
c.gridx=0;
c.gridy=3;
panel_center.add(lbl_3rd_semester,c);
c.gridx=1;
c.gridy=3;
panel_center.add(txt_3rd_semester,c);
c.gridx=2;
c.gridy=3;
panel_center.add(lbl_3rd_credit,c);
c.gridx=3;
c.gridy=3;
panel_center.add(txt_3rd_credit,c);
c.gridx=0;
c.gridy=4;
panel_center.add(lbl_4th_semester,c);
c.gridx=1;
c.gridy=4;
panel_center.add(txt_4th_semester,c);
c.gridx=2;
c.gridy=4;
panel_center.add(lbl_4th_credit,c);
c.gridx=3;
c.gridy=4;
panel_center.add(txt_4th_credit,c);
c.gridx=0;
c.gridy=5;
panel_center.add(lbl_5th_semester,c);
c.gridx=1;
c.gridy=5;
panel_center.add(txt_5th_semester,c);
c.gridx=2;
c.gridy=5;
panel_center.add(lbl_5th_credit,c);
c.gridx=3;
c.gridy=5;
panel_center.add(txt_5th_credit,c);
c.gridx=0;
c.gridy=6;
panel_center.add(lbl_6th_semester,c);
c.gridx=1;
c.gridy=6;
panel_center.add(txt_6th_semester,c);
c.gridx=2;
c.gridy=6;
panel_center.add(lbl_6th_credit,c);
c.gridx=3;
c.gridy=6;
panel_center.add(txt_6th_credit,c);
c.gridx=0;
c.gridy=7;
panel_center.add(lbl_7th_semester,c);
c.gridx=1;
c.gridy=7;
```

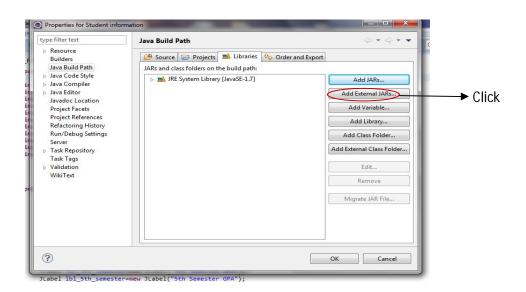
```
panel_center.add(txt_7th_semester,c);
        c.gridx=2;
        c.gridy=7;
        panel_center.add(lbl_7th_credit,c);
        c.gridx=3;
        c.gridy=7;
        panel_center.add(txt_7th_credit,c);
        c.gridx=0;
        c.gridy=8;
        panel_center.add(lbl_8th_semester,c);
        c.gridx=1;
        c.gridy=8;
        panel_center.add(txt_8th_semester,c);
        c.gridx=2;
        c.gridy=8;
        panel_center.add(lbl_8th_credit,c);
        c.gridx=3;
        c.gridy=8;
        panel_center.add(txt_8th_credit,c);
}
               ////..... Add all component in panel_north_work......////
        private void panel_north_work()
{
        panel_north.setLayout(new FlowLayout());
        panel_north.add(txt_search);
        panel_north.add(btn_search);
}
              /////.........Add all component in panel_south_work......///
private void panel_south_work()
        panel_south.setLayout(new FlowLayout());
        panel_south.add(btn_add);
        panel south.add(btn edit);
                                                      → Add JButton
        panel_south.add(btn_delete);
        panel_south.add(btn_view_cgpa);
}
              ////......btnAction method declaration and definition .....////
public Main_frame(){
        init();
        cmp();
        btnAction();
}
                 /////...... Add Action Listener for every button....////
public void btnAction() {
              btn add.addActionListener(new ActionListener() {
                                                                           Constructor for add button
                         public void actionPerformed(ActionEvent arg0) {
```

```
}
               });
               btn_edit.addActionListener(new ActionListener() {
                       public void actionPerformed(ActionEvent arg0) {
               });
              btn delete.addActionListener(new ActionListener() {
                       public void actionPerformed(ActionEvent arg0) {
               });
                                                                               Action listener
                                                                            method for every JButton
               btn_view_cgpa.addActionListener(new ActionListener() {
                       public void actionPerformed(ActionEvent arg0) {
               });
               btn_search.addActionListener(new ActionListener() {
                       public void actionPerformed(ActionEvent arg0) {
               });
//////..... Create new class name as db_connection (for database connection)...../////
```

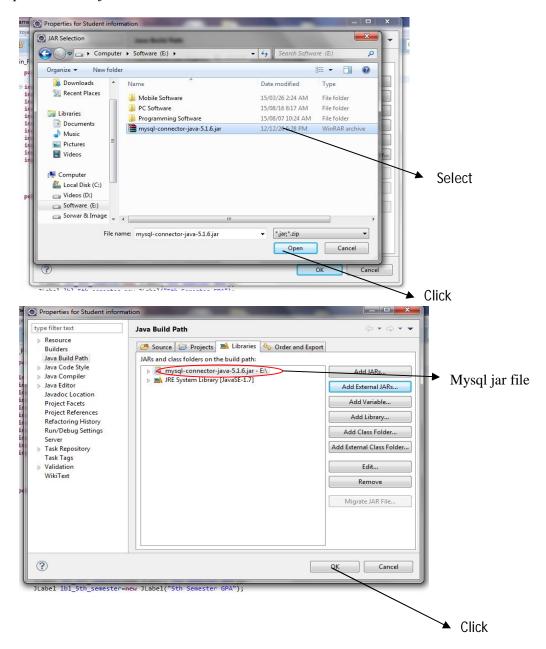


Download (mysql-connector-java-5.1.6.jar) file from internet then follow the steps.





Select the path of mysql downloaded jar file



Go to cmd.exe then write Mysql-uroot –p12345

Create database and table like as following figure.

```
0 0 0
C:\Windows\system32\cmd.exe - mysql -uroot -p12345
Microsoft Windows [Version/6.1.7600]
Copyright (c) 2009 Microsoft Corporation.
                                                       All rights reserved.
C:\Users\Emdidar×mysql -uroot -p12345
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 60
Server version: 6.0.9-alpha-community MySQL Community Server (GPL)
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.
mysql> create database student_result;
Query OK, 1 row affected (0.00 sec)
                                                Create a database named student result
mysql> use student_result;
Database changed
mysql×create table result(
     -> student_name varchar(111),
-> gpa_1st double,
-> gpa_2nd double,
                                                  Create a table named result
     -> gpa_3rd double,

-> gpa_4th double,

-> gpa_5th double,

-> gpa_6th double,
     -> gpa_7th double,
-> gpa_8th double,
                                       Attributes of the table
      -> credit1 int,
      -> credit2 int,
      > credit3 int,
      > credit4 int.
      > credit5 int.
      > credit6 int.
      > credit7 int.
                                         Primary Key
     -> credit8 int,
     -> cgpa double,
     -> primary key(student_id));
```

.....

////.....Write those code on db connection class.....///

```
package com.Admin;
import java.sql.DriverManager; import class
import java.util.*;
import java.io.*;
import java.sql.*;
public class db_connection {
```