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

Create database and table like as following figure.

Create a database named student_ result

Create a table named result

Attributes of the table

Primary Key

Create user table for login

Insert user & password in user table

//////…..Write those code on db_connection class…..////

```java
package com.Admin;

import java.sql.DriverManager;          ──────▶ import class

import java.util.*;

import java.io.*;

import java.sql.*;

public class db_connection {

    public Connection con=null;

    public Statement sta=null;

    public void Connection() {

    try{                     User name    password    port    server    Database file

String  username="root",password="12345",port="3306",server="localhost",db_file="student_result";

    String url="jdbc:mysql://"+server+":"+port+"/"+db_file;     ──────▶ create jdbc connection

    Class.forName("com.mysql.jdbc.Driver").newInstance();

    con=DriverManager.getConnection(url,username,password);     ──────▶ create database
                                                                        connection

    sta=con.createStatement();

    System.out.println ("Database connection established");

        }

        catch(Exception exp){

                System.out.println(exp);

        }

    }
```

}

```java
btn_add.addActionListener(new ActionListener()
{
        public void actionPerformed(ActionEvent arg0)
        {
        int credit_1st=Integer.parseInt(txt_1st_credit.getText());
        int credit_2nd=Integer.parseInt(txt_2nd_credit.getText());
        int credit_3rd=Integer.parseInt(txt_3rd_credit.getText());          Convert text value into interger
        int credit_4th=Integer.parseInt(txt_4th_credit.getText());
        int credit_5th=Integer.parseInt(txt_5th_credit.getText());
        int credit_6th=Integer.parseInt(txt_6th_credit.getText());
        int credit_7th=Integer.parseInt(txt_7th_credit.getText());
        int credit_8ht=Integer.parseInt(txt_8th_credit.getText());
        double gpa_1st=Double.valueOf(txt_1st_semester.getText())*credit_1st;
        double gpa_2nd=Double.valueOf(txt_2nd_semester.getText())*credit_2nd;
        double gpa_3rd=Double.valueOf(txt_3rd_semester.getText())*credit_3rd;
        double gpa_4th=Double.valueOf(txt_4th_semester.getText())*credit_4th;   convert double
        double gpa_5th=Double.valueOf(txt_5th_semester.getText())*credit_5th;
        double gpa_6th=Double.valueOf(txt_6th_semester.getText())*credit_5th;
        double gpa_7th=Double.valueOf(txt_7th_semester.getText())*credit_7th;
        double gpa_8ht=Double.valueOf(txt_8th_semester.getText())*credit_8ht;
        double gpa=gpa_1st+gpa_2nd+gpa_3rd+gpa_4th+gpa_5th+gpa_6th+gpa_7th+gpa_8ht;
        int credit=credit_1st+credit_2nd+credit_3rd+credit_4th+credit_5th+
          credit_6th+credit_7th+credit_8ht;
                                                                     calculate GPA
```

```java
        double cgpa=gpa/credit;


    try {
                                                    Insert text value into result table
        String sql="insert into result
        values('"+txt_student_id.getText().trim()+"','"+txt_student_name.getText().trim()+"','"+txt_1st_se
        mester.getText().trim()+"','"+txt_2nd_semester.getText().trim()+"','"+txt_3rd_semester.getText().
        trim()+"','"+txt_4th_semester.getText().trim()+"','"+txt_5th_semester.getText().trim()+"','"+txt_6t
        h_semester.getText().trim()+"','"+txt_7th_semester.getText().trim()+"','"+txt_8th_semester.getTe
        xt().trim()+"','"+txt_1st_credit.getText().trim()+"','"+txt_2nd_credit.getText().trim()+"','"+txt_3rd
        _credit.getText().trim()+"','"+txt_4th_credit.getText().trim()+"','"+txt_5th_credit.getText().trim()
        +"','"+txt_6th_credit.getText().trim()+"','"+txt_7th_credit.getText().trim()+"','"+txt_8th_credit.get
        Text().trim()+"','"+cgpa+"')";

        db.sta.executeUpdate(sql);              Execute insert query

        JOptionPane.showMessageDialog(null, "New Record Insert Successfull.....");

    }
    catch (Exception e) {               Catch error occurred in try block

        JOptionPane.showMessageDialog(null, e);

        }
    }});
```

//////////…….Action Listener for edit Button…..//////

```java
btn_edit.addActionListener(new ActionListener() {

            public void actionPerformed(ActionEvent arg0) {

                    try {

                                int credit_1st=Integer.parseInt(txt_1st_credit.getText());

                                int credit_2nd=Integer.parseInt(txt_2nd_credit.getText());

                                int credit_3rd=Integer.parseInt(txt_3rd_credit.getText());

                                int credit_4th=Integer.parseInt(txt_4th_credit.getText());

                                int credit_5th=Integer.parseInt(txt_5th_credit.getText());

                                int credit_6th=Integer.parseInt(txt_6th_credit.getText());

                                int credit_7th=Integer.parseInt(txt_7th_credit.getText());

                                int credit_8ht=Integer.parseInt(txt_8th_credit.getText());
```

```java
        double gpa_1st=Double.valueOf(txt_1st_semester.getText())*credit_1st;

        double gpa_2nd=Double.valueOf(txt_2nd_semester.getText())*credit_2nd;

        double gpa_3rd=Double.valueOf(txt_3rd_semester.getText())*credit_3rd;

        double gpa_4th=Double.valueOf(txt_4th_semester.getText())*credit_4th;

        double gpa_5th=Double.valueOf(txt_5th_semester.getText())*credit_5th;

        double gpa_6th=Double.valueOf(txt_6th_semester.getText())*credit_5th;

        double gpa_7th=Double.valueOf(txt_7th_semester.getText())*credit_7th;

        double gpa_8ht=Double.valueOf(txt_8th_semester.getText())*credit_8ht;

        double gpa=gpa_1st+gpa_2nd+gpa_3rd+gpa_4th+gpa_5th+gpa_6th+gpa_7th+gpa_8ht;

int credit=credit_1st+credit_2nd+credit_3rd+credit_4th+credit_5th+credit_6th+credit_7th+credit_8ht;

        double cgpa=gpa/credit;

        String cgpa1=Double.toString(cgpa);          ➛Update query

        String sql="update result set
student_id='"+txt_student_id.getText().trim()+"',student_name='"+txt_student_name.getText().trim()+"',g
pa_1st='"+txt_1st_semester.getText().trim()+"',gpa_2nd='"+txt_2nd_semester.getText().trim()+"',gpa_3rd
='"+txt_3rd_semester.getText().trim()+"',gpa_4th='"+txt_4th_semester.getText().trim()+"',gpa_5th='"+txt
_5th_semester.getText().trim()+"',gpa_6th='"+txt_6th_semester.getText().trim()+"',gpa_7th='"+txt_7th_s
emester.getText().trim()+"',gpa_8th='"+txt_8th_semester.getText().trim()+"',
credit1='"+txt_1st_credit.getText().trim()+"',credit2='"+txt_2nd_credit.getText().trim()+"',credit3='"+txt_
3rd_credit.getText().trim()+"',credit4='"+txt_4th_credit.getText().trim()+"',credit5='"+txt_5th_credit.getT
ext().trim()+"',credit6='"+txt_6th_credit.getText().trim()+"',credit7='"+txt_7th_credit.getText().trim()+"',c
redit8='"+txt_8th_credit.getText().trim()+"',cgpa='"+cgpa1+"' where
student_id='"+txt_search.getText().trim()+"'";

                        db.sta.executeUpdate(sql);          ➛ execute update query

                JOptionPane.showMessageDialog(null, "Update Data Success....");

                }

                catch (Exception e) {

                        JOptionPane.showMessageDialog(null, e);

                }

            }

        });
```

```java
btn_delete.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent arg0) {
                    try {
                            String sql="delete from result where
student_id='"+txt_student_id.getText().toString()+"'";
                            db.sta.executeUpdate(sql);
                            JOptionPane.showMessageDialog(null, "Delete Data
Success....");
                    }
                    catch (Exception e) {
                            JOptionPane.showMessageDialog(null, e);
                    }
            }
    });
```

```java
btn_search.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent arg0) {
                    try {
                            String sql="select * from result where
student_id='"+txt_search.getText().trim()+"'";
                            ResultSet rs=db.sta.executeQuery(sql);
                            while(rs.next())
                            {
                                    txt_student_id.setText(rs.getString("student_id"));

        txt_student_name.setText(rs.getString("student_name"));
                                    txt_1st_semester.setText(rs.getString("gpa_1st"));
```

```java
                                txt_2nd_semester.setText(rs.getString("gpa_2nd"));

                                txt_3rd_semester.setText(rs.getString("gpa_3rd"));

                                txt_4th_semester.setText(rs.getString("gpa_4th"));

                                txt_5th_semester.setText(rs.getString("gpa_5th"));

                                txt_6th_semester.setText(rs.getString("gpa_6th"));

                                txt_7th_semester.setText(rs.getString("gpa_7th"));

                                txt_8th_semester.setText(rs.getString("gpa_8th"));

                                txt_1st_credit.setText(rs.getString("credit1"));

                                txt_2nd_credit.setText(rs.getString("credit2"));

                                txt_3rd_credit.setText(rs.getString("credit3"));

                                txt_4th_credit.setText(rs.getString("credit4"));

                                txt_5th_credit.setText(rs.getString("credit5"));

                                txt_6th_credit.setText(rs.getString("credit6"));

                                txt_7th_credit.setText(rs.getString("credit7"));

                                txt_8th_credit.setText(rs.getString("credit8"));

                        }

                }

                catch (Exception e) {

                        JOptionPane.showMessageDialog(null, e);

                }

        }

        });

    }

                //////////…….Action Listener for cgpa_add Button…..//////

btn_view_cgpa.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent arg0) {

                        JFrame fr=new JFrame();                    Create new JFrame  by using
                                                                   new keyword
                        fr.setVisible(true);
```

Object of JFrame

```java
fr.setSize(444,444);

fr.setLocationRelativeTo(null);

final JTextField txt=new JTextField(11);

JButton b=new JButton("CGPA");

fr.setLayout(new FlowLayout());

fr.add(txt);

fr.add(b);

b.addActionListener(new ActionListener() {

        public void actionPerformed(ActionEvent arg0) {

                try {

                        String s="select cgpa from result where

                           student_id='"+txt.getText().trim()+"'";

                        ResultSet rs=db.sta.executeQuery(s);

                        while(rs.next())

                        {

                                String bbb=rs.getString("cgpa");

                        JOptionPane.showMessageDialog(null, bbb);

                        }

                }

                catch (Exception e) {

                        JOptionPane.showMessageDialog(null, e);

                }

        }

});

    }

});
```