**JDBC**

package jdbc;

import java.sql.\*;

import java.util.\*;

public class Database {

Connection con;

Derived Data;

Database(){

Data=new Derived();

}

public static void main(String args[]) throws Exception {

Database obj=new Database();

obj.getConnect();

Scanner sc=new Scanner(System.in);

int ch;

try {

do {

System.out.println("\\n1.Create the table \\n2.Insert the data \\n3.Fetch Data \\n4.Delete Record \\n5.Update Record \\n6.Search Record \\n7.Close Connection");

System.out.println("Select the operation=");

int choice=sc.nextInt();

switch (choice) {

case 1:obj.createtable();

break;

case 2:obj.insertdata();

break;

case 3:obj.fetchdata();

break;

case 4:obj.deletedata();

obj.fetchdata();

break;

case 5: obj.updatedata();

obj.fetchdata();

break;

case 6:obj.searchdata();

break;

case 7:obj.closeconnection();

break;

default:System.out.println("Enter the correct option");

break;

}

System.out.println("Do you want to continue then press 1 otherwise 0");

ch=sc.nextInt();

}while(ch!=0);

}catch(Exception e) {

System.out.println(e);

}

}

void getConnect() {

String driver="com.mysql.cj.jdbc.Driver";

String url="jdbc:mysql://localhost:3306/data";

String name="root";

String password="pranav1910";

try {

Class.forName(driver);

con=DriverManager.getConnection(url,name,password);

System.out.println("Database connected");

}

catch(Exception e) {

System.out.println(e);

}

}

void createtable() {

try {

String query="create table Student(rollno int primary key ,name varchar(10),sub varchar(30),mark int)";

PreparedStatement ps=con.prepareStatement(query);

int i=ps.executeUpdate();

System.out.println("table created sucessfully"+i);

}

catch(Exception e) {

System.out.println(e);

System.out.println("select next operation");

}

}

void insertdata()throws Exception {

Data.get\_data();

String query="insert into Student values(?,?,?,?)";

PreparedStatement ps=con.prepareStatement(query);

ps.setInt(1, Data.getrollno());

ps.setString(2, Data.getname());

ps.setString(3, Data.getsub());

ps.setInt(4, Data.getmarks());

int i=ps.executeUpdate();

System.out.println("no.of rows affected"+i);

}

void fetchdata()throws Exception {

String query="select \* from Student";

PreparedStatement ps=con.prepareStatement(query);

ResultSet rs=ps.executeQuery();

System.out.println("Rollno" +"\t"+"Std\_name"+"\t"+"Sub\_name"+"\t"+"Marks");

while(rs.next()) {

System.out.println(rs.getInt(1)+"\t"+rs.getString(2)+"\t"+rs.getString(3)+"\t"+rs.getInt(4));

}

}

void updatedata()throws Exception {

int rollno,marks;

Scanner sc=new Scanner(System.in);

System.out.println("Entre roll updated roll no");

rollno=sc.nextInt();

System.out.println("Entre the updated mark");

marks=sc.nextInt();

String query="update Student set mark=? where rollno=?";

PreparedStatement ps=con.prepareStatement(query);

ps.setInt(1,marks);

ps.setInt(2, rollno);

int i=ps.executeUpdate();

System.out.println("no of rows update="+i);

}

void searchdata()throws Exception{

int rollno;

Scanner sc=new Scanner(System.in);

System.out.println("Entre the roll no for search=");

rollno=sc.nextInt();

String query="select \* from Student where rollno=?";

PreparedStatement ps=con.prepareStatement(query);

ps.setInt(1, rollno);

ResultSet rs=ps.executeQuery();

System.out.println("Rollno" +"\t"+ "Student\_name"+"\t"+"Subject\_name"+"\t"+"Marks");

while(rs.next()) {

System.out.println(rs.getInt(1)+"\t"+rs.getString(2)+"\t "+rs.getString(3)+"\t "+rs.getInt(4));

}

}

void deletedata()throws Exception{

int rollno;

System.out.println("Entre the roll no for delete=");

Scanner sc=new Scanner(System.in);

rollno=sc.nextInt();

String query="delete from Student where rollno=?";

PreparedStatement ps=con.prepareStatement(query);

ps.setInt(1, rollno);

int i=ps.executeUpdate();

System.out.println("no of rows delete "+i);

}

void closeconnection()throws SQLException

{

con.close();

System.out.println("Closed database connection");

}

}

class Base{

int rollno;

String name;

public void get\_data() {

Scanner sc=new Scanner(System.in);

System.out.println("Entre the roll no");

rollno=sc.nextInt();

sc.nextLine();

System.out.println("Entre the name");

name=sc.nextLine();

}

public int getrollno()

{

return rollno;

}

public String getname()

{

return name;

}

}

class Derived extends Base

{

int marks;

String sub;

public void get\_data()

{

Scanner in=new Scanner(System.in);

super.get\_data();

System.out.println("Enter the sub name");

sub=in.next();

System.out.println("Entre mark");

marks=in.nextInt();

}

public String getsub()

{

return sub;

}

public int getmarks()

{

return marks;

}

}