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**Batch: M5 32162**

**Problem Statement: Develop a database application that uses any JDBC Driver.**

**Code:**

package sql\_1;

import java.util.Scanner;

import java.sql.\*;

public class Exp\_4

{

Connection con;//7th Task

Derived data; //15th Task

Exp\_4() //2nd task

{

data=new Derived(); //15th Task

}

public static void main(String[] args)

{

Exp\_4 obj=new Exp\_4();//1st task

obj.getconnection();//3rd task

Scanner in=new Scanner(System.in);//10th Task

int ch;

try

{

do

{

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

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");

int choice =in.nextInt();

switch(choice)

{

case 1:obj.createtable();

break;

case 2:obj.insert();

break;

case 3:obj.fetchdata();

break;

case 4:obj.delete();

break;

case 5:obj.update();

break;

case 6:obj.search();

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=in.nextInt();

}while(ch!=0);

}

catch(Exception E)

{

System.out.println(E);

}

}

void getconnection()//4th Task

{

String driver="com.mysql.cj.jdbc.Driver";//6th task

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

String username="root"; //Enter your account username

String password="Root@1234"; //Enter your account password

try //9th task

{

Class.forName(driver);//5th Task

con=DriverManager.getConnection(url,username,password); //8th task

System.out.println("Connection established successfully");

}

catch(Exception E)

{

System.out.println(E);

}

}

void createtable() //11th Task

{

try

{

String query="create table student2(rollno int,name varchar(10),sub varchar(10),marks

int, primary key(rollno))";

PreparedStatement st=con.prepareStatement(query);

int i=st.executeUpdate();

System.out.println("Table Created successfully"+i);

}

catch(Exception E)

{

System.out.println(E);

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

}

}

void insert()throws SQLException //12th task

{

data.get\_data();

String query="insert into student2 values(?,?,?,?)";

PreparedStatement st=con.prepareStatement(query);

st.setInt(1, data.retrollno());

st.setString(2, data.retname());

st.setString(3, data.retsub());

st.setInt(4, data.retmarks());

int i=st.executeUpdate();

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

}

void fetchdata()throws SQLException //16th Task

{

String query="select \* from student2";

PreparedStatement st= con.prepareStatement(query);

ResultSet rs=st.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 update()throws SQLException //17th Task

{

int rollno,marks;

Scanner in=new Scanner(System.in);

System.out.println("Enter the rollno to updated");

rollno=in.nextInt();

PreparedStatement st=con.prepareStatement("update student2 set marks=? where rollno=?");

System.out.println("Enter the marks to updated");

marks=in.nextInt();

st.setInt(1, marks);

st.setInt(2, rollno);

st.executeUpdate();

}

void search()throws SQLException//18th Task

{

int rollno;

Scanner in=new Scanner(System.in);

System.out.println("Enter the rollno to be search");

rollno=in.nextInt();

PreparedStatement st=con.prepareStatement("select \*from student2 where rollno=?");

st.setInt(1, rollno);

ResultSet rs=st.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 delete()throws SQLException//19th Task

{

int rollno;

Scanner in=new Scanner(System.in);

System.out.println("Enter the rollno to be search");

rollno=in.nextInt();

PreparedStatement st=con.prepareStatement("delete from student2 where rollno=?");

st.setInt(1, rollno);

st.executeUpdate();

}

void closeconnection()throws SQLException //20th Task

{

con.close();

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

}

}

class Base //13th Task

{

int rollno;

String name;

public void get\_data()

{

Scanner input=new Scanner(System.in);

System.out.println("Enter the rollno and name of the student");

rollno=input.nextInt();

name=input.next();

}

public int retrollno()

{

return rollno;

}

public String retname()

{

return name;

}

}

class Derived extends Base //14th Task

{

int marks;

String sub;

public void get\_data()

{

Scanner in=new Scanner(System.in);

super.get\_data();

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

sub=in.next();

marks=in.nextInt();

}

public String retsub()

{

return sub;

}

public int retmarks()

{

return marks;

}

}