**Student Record System**

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**Modules used in project :-**

|  |  |  |
| --- | --- | --- |
| Sr. No | Module | Description |
| 1 | java.sql | Provides the API for accessing and processing data stored in a data source (usually a relational database) using the Java programming language.  This API includes a framework whereby different drivers can be installed dynamically to access different data sources.  Although the JDBC API is mainly geared to passing SQL statements to a database, it provides for reading and writing data from any data source with a tabular format. |
| 2 | java.util.Scanner | A simple text scanner which can parse primitive types and strings using regular expressions. |

**Code :-**

import java.sql.\*;

import java.util.Scanner;

public class StudentRecordSystem

{

public static void main(String[] args)

{

System.out.println(

"Project Title: Student Record System\n"+

"Name : Ajay Lingayat\n"

);

Index();

}

static int roll\_nam;

static String name;

static int std;

static String address;

static final String jdbc\_class = "org.apache.derby.jdbc.ClientDriver";

static final String driver = "jdbc:derby://localhost:1527/students";

static Connection conn = null;

public static void Index()

{

System.out.println(

"Welcome To Student Record System!\n"+

"~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~"

);

System.out.println(

"Choose ur action:\n"+

"1 : View Students\n"+

"2 : Add a Student Record\n"+

"3 : Update Student Record\n"+

"4 : Delete Student Record\n"+

"0 : Exit\n"

);

Scanner sc = new Scanner(System.in);

System.out.println("Enter a choice:\n");

int task\_id = sc.nextInt();

switch(num)

{

case 4:

delete\_student();

case 3:

update\_student();

case 2:

add\_student();

case 1:

view\_students();

case 0:

System.out.println(

"Thnx for using Student Record System"

);

break;

}

}

public static void view\_students()

{

try{

Class.forName("org.apache.derby.jdbc.ClientDriver");

conn = DriverManager.getConnection("jdbc:derby://localhost:1527/students");

System.out.println(

"Following are the student details:"

);

statement st = conn.createStatement();

String raw\_query = "SELECT \* FROM StudentInfo";

ResultSet result = st.executeQuery(raw\_query);

ResultSetMetaDate result\_md = result.getMetaData();

System.out.println(

result\_md.getColumnName(1)+

"\t\t"+

result\_md.getColumnName(2)+

"\t\t\t"+

result\_md.getColumnName(3)+

"\t\t"+

result\_md.getColumnName(4)+

"\n\n"

);

while(result.next())

{

System.out.println(

result.getString("ROLL\_NO")+

"\t\t"+

result.getString("NAME")+

"\t\t"+

result.getString("STANDARD")+

"\t\t"+

result.getString("ADDRESS")

);

}

System.out.println("\n");

conn.close();

Index();

}

catch(Exception e)

{

System.out.println(

"Error:"+e.getMessage()+

"Invalid input, please try again!"

);

Index();

}

}

public static void add\_student()

{

try

{

int roll\_no;

String name = null;

int std;

String address = null;

Scanner sc1 = new Scanner(System.in);

Class.forName("org.apache.derby.jdbc.ClientDriver");

conn = DriverManager.getConnection("jdbc:derby://localhost:1527/students");

statement st = conn.createStatement();

System.out.println(

"TO ADD STUDENT RECORD:\n"+

"~~~~~~~~~~~~~~~~~~~~~\n"+

"\nEnter Roll No.:"

);

roll\_no = sc1.nextInt();

System.out.println(

"Enter Name:"

);

name = sc1.next();

System.out.println(

"Enter Standard:"

);

std = sc1.nextInt();

System.out.println(

"Enter Address:"

);

address = sc1.next();

String raw\_query = "INSERT INTO StudentInfo values("+roll\_no+",'"+name+"',"+std+",'"+address+"')";

st.executeUpdate(raw\_query);

System.out.println(

"Record saved successfully1"

);

conn.close();

Index();

}

catch(ClassNotFoundException | SQLException e)

{

System.out.println(

"Error:"+e.getMessage()+

"Invalid input, please try again!"

);

Index();

}

}

public static void update\_student()

{

try

{

int roll\_no;

String name = null;

int std;

String address = null;

int num;

Class.forName("org.apache.derby.jdbc.ClientDriver");

conn = DriverManager.getConnection("jdbc:derby://localhost:1527/students");

statement st = conn.createStatement();

System.out.println(

"TO UPDATE STUDENT RECORD:\n"+

"~~~~~~~~~~~~~~~~~~~~~~~~~\n"+

);

Scanner sc1 = new Scanner(System.in);

try

{

System.out.println(

"Enter roll no to view student record which u want to update"

);

num = sc1.nextInt();

String raw\_query = "SELECT \* FROM StudentInfo WWHERE ROLL\_NO = "+num;

st.execute(raw\_query);

ResultSet result = st.executeQuery(raw\_query);

ResultSetMetaData result\_md = result.getMetaData();

System.out.println(

"\nShowing the student record;\n"+

result\_md.getColumnName(1)+

"\t\t"+

result\_md.getColumnName(2)+

"\t\t"+

result\_md.getColumnName(3)+

"\t\t"+

result\_md.getColumnName(4)+

"\n\n"

);

while(result.next())

{

System.out.println(

result.getString("ROLL\_NO")+

"\t\t"+

result.getString("NAME")+

"\t\t"+

result.getString("STANDARD")+

"\t\t"+

result.getString("ADDRESS")

);

}

System.out.println('\n');

}

catch(Exception e)

{

System.out.println(

"Error:"+e.getMessage()+

"Invalid input, please try again!"

);

Index();

}

System.out.println(

"Enter new details:\n\n"+

"Enter Roll No.:"

);

roll\_no = sc1.nextInt();

System.out.println(

"Enter Name:"

);

name = sc1.next();

System.out.println(

"Enter Standard:"

);

std = sc1.nextInt();

System.out.println(

"Enter Address:"

);

address = sc1.next();

String raw\_query = "UPDATE StudentInfo SET NAME='"+name+"', STANDARD="+std+", ADDRESS='"+address+"' WHERE ROLL\_NO="+roll\_no;

st.executeUpdate(raw\_query);

System.out.println(

"Student Record Updated Successfully!"

);

conn.close();

Index();

}

catch(ClassNotFoundException | SQLException e)

{

System.out.println(

"Error:"+e.getMessage()+

"Invalid input, please try again!"

);

Index();

}

}

public static void delete\_student()

{

try

{

int roll\_no;

Scanner sc1 = new Scanner(System.in);

Class.forName("org.apache.derby.jdbc.ClientDriver");

conn = DriverManager.getConnection("jdbc:derby://localhost:1527/students");

statement st = conn.createStatement();

System.out.println(

"TO DELETE STUDENT RECORD\n"+

"~~~~~~~~~~~~~~~~~~~~~~~~\n"+

"\nEnter Roll No.:"

);

roll\_no = sc1.nextInt();

String raw\_query = "DELETE FROM StudentInfo WHERE ROLL\_NO="+roll\_no;

st.executeUpdate(raw\_query);

System.out.println(

"Student Record Deleted Successfully!"

);

conn.commit();

conn.close();

Index();

}

catch(ClassNotFoundException | SQLException e)

{

System.out.println(

"Error:"+e.getMessage()+

"Invalid input, please try again!"

);

Index();

}

}

}