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1. You need to create a table named employees in the database to store employee information. Write a Java program using JDBC to create the employees table with the following columns:

id of type INT, which is the primary key and auto-incremented.

first_name of type VARCHAR(50) to store the employee's first name.

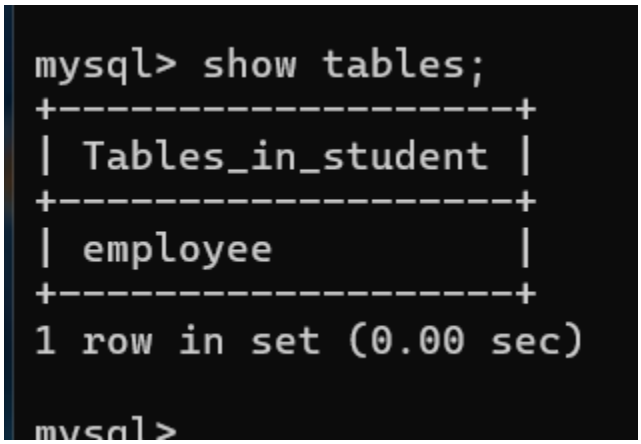
last_name of type VARCHAR(50) to store the employee's last name.

age of type INT to store the employee's age.

```
package com.Sudha.jdbc;
import java.sql.*;
public class Employee {
public static void main(String[] args) throws Exception {

Class.forName("com.mysql.cj.jdbc.Driver");
//create a new table under the student database

String sql_query = "CREATE TABLE Employee ("
        + "id INT NOT NULL AUTO_INCREMENT Primary Key, "
        + "first_name VARCHAR(50) NOT NULL, "
        + "last_name VARCHAR(50) NOT NULL, "
        + "age INT NOT NULL);";

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student","root","root");

            Statement st = con.createStatement();
            // to create a table with columns
            st.executeUpdate(sql_query);
            // to my referance
            System.out.println("Table created successfully");
            con.close();
    }
    }
```

Output :

Table created successfully



2. **The employees table in the database has the following columns: id, first_name, last_name, and age. Write a Java program using JDBC to insert a new employee record into the table. The employee's first name is "John," last name is "Doe," and age is 30.**

```
package com.Sudha.jdbc;
import java.sql.*;
public class Employee {
	public static void main(String[] args) throws Exception {
		Class.forName("com.mysql.cj.jdbc.Driver");
		//insert values into employee table

		String Insert = "INSERT INTO employee (first_name, last_name, age)
VALUES ('John', 'Deo', 35)";
		Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student","root","root");
		Statement st = con.createStatement();
		// to create a table with columns
		st.executeUpdate(Insert);
		// to my referance
		System.out.println("Inserted Successfully");
		con.close();
	}
	}
```

OUTPUT :

Inserted Successfully

```
mysql> select * from employee;
+----+------------+-----------+-----+
| id | first_name | last_name | age |
+----+------------+-----------+-----+
|  1 | John       | Deo       |  35 |
+----+------------+-----------+-----+
1 row in set (0.00 sec)
```

3. Write a Java program that updates the age and designation of an employee with the given name. Assume that the connection to the database is established using the provided url, username, and password. The program should update the age and designation columns for the employee specified by their name.

```
package com.Sudha.jdbc;
import java.sql.*;
public class Update {
	public static void main(String[] args)throws Exception {
		Class.forName("com.mysql.cj.jdbc.Driver");
		// Update the  values of age and designation

		String Update = "UPDATE employee SET age = 36 WHERE first_name =
'John' AND last_name = 'Deo'";
		String Alter = "ALTER TABLE employee ADD COLUMN designation
VARCHAR(50); ";
		Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student","root","root");
		Statement st = con.createStatement();
		// to create a table with columns
		st.executeUpdate(Update);
		st.executeUpdate(Alter);
		// to my referance
		System.out.println(" Successfully Completed");
		con.close();
	}
}
```

OUTPUT : Successfully Completed

```
mysql> select * from employee;
+----+------------+-----------+-----+-------------+
| id | first_name | last_name | age | designation |
+----+------------+-----------+-----+-------------+
|  1 | John       | Deo       |  36 | NULL        |
+----+------------+-----------+-----+-------------+
1 row in set (0.00 sec)
```

4. Write Java program fetching data from emp table query using jdbc with mysql.

```
package com.Sudha.jdbc;
import java.sql.*;
public class FetchingData {
	public static void main(String[] args) throws Exception {
		// TODO Auto-generated method stub
		Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student","root","root");
    // Creating a statement object
    Statement statement = con.createStatement();
    // SQL query to fetch all employee records
    String selectSQL = "SELECT id, first_name, last_name, age, designation FROM employee";
    // Executing the query
    ResultSet resultSet = statement.executeQuery(selectSQL);
    // Processing the result set
    while (resultSet.next()) {
      int id = resultSet.getInt("id");
      String firstName = resultSet.getString("first_name");
      String lastName = resultSet.getString("last_name");
      int age = resultSet.getInt("age");
      String designation = resultSet.getString("designation");
      // Displaying the fetched data
      System.out.println("ID: " + id);
      System.out.println("First Name: " + firstName);
      System.out.println("Last Name: " + lastName);
      System.out.println("Age: " + age);
      System.out.println("Designation: " + designation);
      System.out.println();
    }
}}
```

OUTPUT :

ID: 1
First Name: John
Last Name: Deo
Age: 36
Designation: null

5. Write Java program for deleting data from emp table using jdbc with mysql.

```
package com.Sudha.jdbc;
import java.sql.*;
public class DeletingRecord {
     public static void main(String args[]) throws Exception{
     Class.forName("com.mysql.cj.jdbc.Driver");

       Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/stu
dent","root","root");

          Statement st = con.createStatement();

          //deleting the records

          String delete_record = "delete from employee where
id=1";

          System.out.println("Deleteing the record done
successfully");
          int delete_record_row =
st.executeUpdate(delete_record);
          System.out.println("the number rows deleted
:"+delete_record_row);

          con.close();
     }
}
```

OUTPUT :

```
Deleteing the record done successfully
```

```
the number rows deleted :1
```