



VIT[®]

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

B. Tech. Semester 2020-2021

**SCHOOL OF COMPUTER SCIENCE ENGINEERING
(SCOPE)**

Java Programming

LAB FAT

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First

Code

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package FAT;

/**
 *
 * @author hp
 */
import java.util.ArrayList;
import java.util.Scanner;
import java.util.*;
class EmployeeDetails implements Comparable<EmployeeDetails>{

    int emp_id, salary;
    String name, doj;

    public int getEmp_id() {
        return emp_id;
    }
    public void setEmp_id(int emp_id) {
        this.emp_id = emp_id;
    }
    public int getSalary() {
        return salary;
    }
}
```

```

public void setSalary(int salary) {
    this.salary = salary;
}
public String getName() {
    return name;
}
public void setName(String name) {
    this.name = name;
}
public String getDOJ() {
    return doj;
}
public void setDOJ(String doj) {
    this.doj = doj;
}

@Override
public int compareTo(EmployeeDetails e) {
    if (getSalary() == 0 ) {
        return 0;
    }
    return Integer.compare(getSalary(), e.getSalary());
}

}

public class Employee{
    public static void main(String args[]) {

        EmployeeDetails emp = new EmployeeDetails();
    }
}

```

```
Scanner s = new Scanner(System.in);

System.out.println("Total employees:");

int n = Integer.parseInt(s.nextLine());


List<EmployeeDetails> arr = new ArrayList<EmployeeDetails>();

for(int i=0;i<n;i++)
{
    System.out.println("Employee ID:");
    int emp_id = Integer.parseInt(s.nextLine());
    emp.setEmp_id(emp_id);
    System.out.println("Employee Name:");
    String emp_name = s.nextLine();
    emp.setName(emp_name);
    System.out.println("Employee Salary:");
    int emp_sal = Integer.parseInt(s.nextLine());
    emp.setSalary(emp_sal);
    System.out.println("Employee DOJ:");
    String emp_doj = s.nextLine();
    emp.setDOJ(emp_doj);

    arr.add(emp);
}


boolean a = true;
boolean b = false;


while(a){
    System.out.println("Enter employee id");
    int id_1 = Integer.parseInt(s.nextLine());

    for(EmployeeDetails i: arr){
```

```
        if(i.getEmp_id() == id_1){  
            System.out.println("Found");  
            b=true;  
        }  
    }  
    if(b == false){  
        System.out.println("Not Found");  
    }  
  
    System.out.println("Search More ? enter y or n");  
    String abc = s.nextLine();  
  
    if(abc.equals("n")){  
        a=false;  
    }  
}  
  
Collections.sort(arr);  
  
for(EmployeeDetails Empl: arr){  
    System.out.println(Empl.getEmp_id());  
    System.out.println(Empl.getSalary());  
    System.out.println(Empl.getName());  
    System.out.println(Empl.getDOJ());  
    System.out.println();  
}  
Collections.reverse(arr);
```

```
for(EmployeeDetails Empl: arr ){  
    System.out.println(Empl.getEmp_id());  
    System.out.println(Empl.getSalary());  
    System.out.println(Empl.getName());  
    System.out.println(Empl.getDOJ());  
    System.out.println();  
}  
//Showing Employee details  
  
//Getting salary using getter  
int sal = emp.getSalary();  
}  
}
```

Result

```
run:
Total employees:
3
Employee ID:
1
Employee Name:
A
Employee Salary:
20000
Employee DOJ:
3455
Employee ID:
2
Employee Name:
r
Employee Salary:
15000
Employee DOJ:
424
Employee ID:
3
Employee Name:
Ay
Employee Salary:
10000
Employee DOJ:
123132
Enter employee id
3
Found
Found
Found
Search More ? enter y or n
n
3
10000
Ay
123132

3
10000
Ay
123132

3
10000
Ay
123132

3
10000
Ay
123132

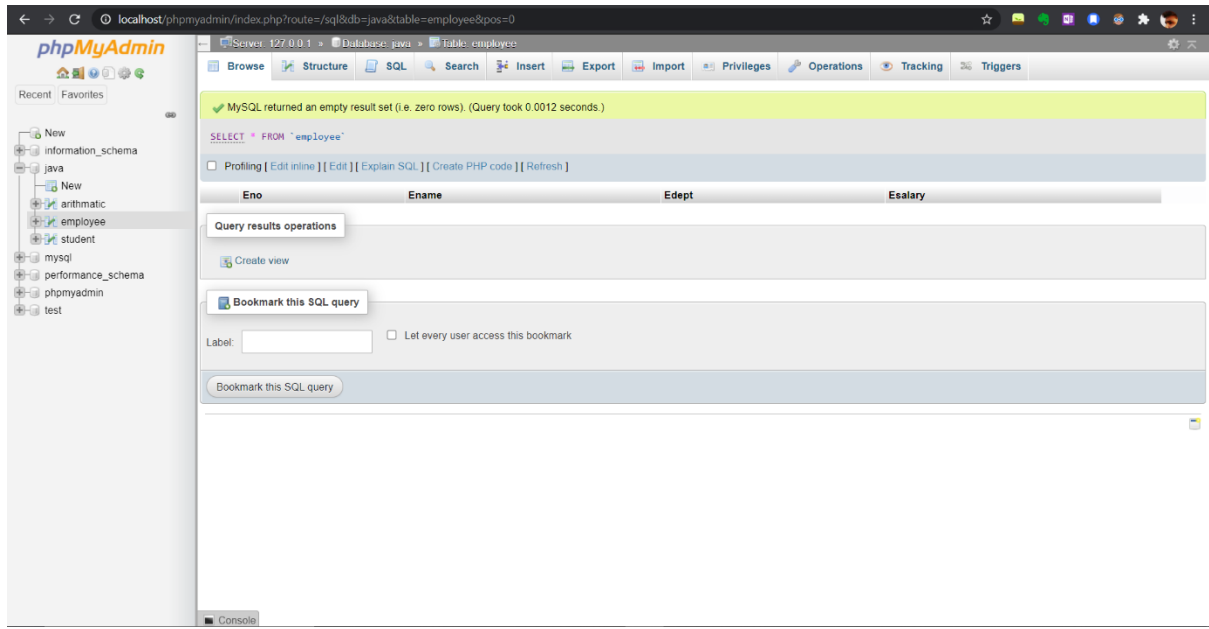
3
10000
Ay
123132

3
10000
Ay
123132

BUILD SUCCESSFUL (total time: 39 seconds)
||
```

Second

Table and Database



Insert

Code


```

package FAT;

/**
 *
 * @author hp
 */

import java.sql.*;

public class insert {

void ShowData(Statement stmt) throws SQLException {

    System.out.println("");

    ResultSet rs = stmt.executeQuery("select * from student");

    ResultSetMetaData rsmd = rs.getMetaData();

    String col_1 = rsmd.getColumnName(1);
    String col_2 = rsmd.getColumnName(2);
    String col_3 = rsmd.getColumnName(3);
    String col_4 = rsmd.getColumnName(4);
    String col_5 = rsmd.getColumnName(5);
    String col_6 = rsmd.getColumnName(6);

    System.out.println(col_1 + "\t\t " + col_2 + "\t\t" + col_3 + "\t " + col_4 + "\t " + col_5 +
        "\t\t" + col_6);

    System.out.println("_____
    _____");

    System.out.println("-----");

    while (rs.next())

        System.out.println(rs.getString(1) + "\t\t " + rs.getString(2) + "\t " + rs.getString(3) + "\t "
            + rs.getString(4) + "\t " + rs.getString(5) + "\t " + rs.getString(6));
    }

public static void main(String args[]) {

    try {

```

```
insert obj = new insert();

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

// here java is database name, root is username

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

Statement stmt = con.createStatement();

stmt.executeUpdate(
"INSERT INTO employee VALUES ('1','Amit','finance','10000');");

stmt.executeUpdate(
"INSERT INTO employee VALUES ('2','Ayush','tech','20000');");

stmt.executeUpdate(
"INSERT INTO employee VALUES ('3','Rishabh','sales','30000');");

stmt.executeUpdate(
"INSERT INTO employee VALUES ('4','Amrit','marketing','40000');");


obj.ShowData(stmt);
}

catch (Exception e) {

System.out.println(e);

}

}

}
```

Result

+ Options			
Eno	Ename	Edept	Esalary
1	Amit	finance	10000
2	Ayush	tech	20000
3	Rishabh	sales	30000
4	Amrit	marketing	40000

Get

Code

```
package FAT;
```

```

/**
 *
 * @author hp
 */
import java.sql.*;

public class get {

    static final String DB_URL = "jdbc:mysql://localhost/java";

    static final String USER = "root";

    static final String PASS = "";

    void ShowData(Statement stmt) throws SQLException {

        System.out.println("");

        ResultSet rs = stmt.executeQuery("select * from employee");

        ResultSetMetaData rsmd = rs.getMetaData();

        String col_1 = rsmd.getColumnName(1);

        String col_2 = rsmd.getColumnName(2);

        String col_3 = rsmd.getColumnName(3);

        String col_4 = rsmd.getColumnName(4);

        System.out.println(col_1 + "\t " + col_2 + "\t" + col_3 + "\t " + col_4);

        System.out.println("_____");

        System.out.println("-----");

    };

    while (rs.next())

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

            "\t " + rs.getString(4));

    }

    public static void main(String args[]) {

        try {

            get obj = new get();

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

```

```

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

        // here java is database name, root is username

        Statement stmt = con.createStatement();

        obj.ShowData(stmt);

        con.close();

    } catch (Exception e) {

        System.out.println(e);

    }

}
}

```

Result

Eno	Ename	Edept	Esalary
1	Amit	finance	10000
2	Ayush	tech	20000
3	Rishabh	sales	30000
4	Amrit	marketing	40000

BUILD SUCCESSFUL (total time: 2 seconds)

Search

Code

```

package FAT;

/**
 *
 * @author hp
 */
import java.sql.*;
import java.util.*;

public class search {

    static final String DB_URL = "jdbc:mysql://localhost/java";

    static final String USER = "root";

    static final String PASS = "";

    void ShowData(Statement stmt, String matchPattern) throws SQLException {

        System.out.println("");

        ResultSet rs = stmt.executeQuery("select * from employee where Ename REGEXP
'^"+matchPattern+"");

        ResultSetMetaData rsmd = rs.getMetaData();

        String col_1 = rsmd.getColumnName(1);

        String col_2 = rsmd.getColumnName(2);

        String col_3 = rsmd.getColumnName(3);

        String col_4 = rsmd.getColumnName(4);

        System.out.println(col_1 + "\t " + col_2 + "\t " + col_3 + "\t " + col_4);

        System.out.println("_____");

        System.out.println("-----");

        while (rs.next())

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

        }

    public static void main(String args[]) {

```

```

System.out.println("Enter the name to be searched");

    try {

        search obj = new search();

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

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

        // here java is database name, root is username

        Statement stmt = con.createStatement();

        Scanner sc = new Scanner(System.in);

        String str = sc.nextLine();

        obj.ShowData(stmt, str);

        con.close();

    } catch (Exception e) {

        System.out.println(e);

    }

}

```

Result

Test Case 1

```

run:
Enter the name to be searched
Amit

Eno      Ename  Edept   Esalary
-----
1        Amit   finance  10000
BUILD SUCCESSFUL (total time: 18 seconds)
||

```

Test Case 2

```
run:
Enter the name to be searched
Rishabh

Eno      Ename Edept      Esalary
-----
3        Rishabh      sales      30000
BUILD SUCCESSFUL (total time: 6 seconds)
||
```

Test Case 3 (IMP)

```
run:
Enter the name to be searched
Am

Eno      Ename Edept      Esalary
-----
1        Amit      finance      10000
4        Amrit      marketing    40000
BUILD SUCCESSFUL (total time: 5 seconds)
||
```

Test Case 4(IMP)

```
run:
Enter the name to be searched
askdj

Eno      Ename Edept      Esalary
-----
BUILD SUCCESSFUL (total time: 5 seconds)
||
```

Test Case 5(IMP)

```
run:
Enter the name to be searched
A

Eno      Ename Edept      Esalary
-----
1        Amit      finance      10000
2        Ayush      tech         20000
4        Amrit      marketing    40000
BUILD SUCCESSFUL (total time: 5 seconds)
||
```

