JAVA LAB FAT

CSE1007

REGNO: 20BCE2893

# FAT LAB-BATCH1

**Instructions to Students**

Ø After completing your program, create a PDF file for both the programs and rename with your register number (E.g.: 18BCE0001.pdf) and then upload into vtop on or before 11:30 Am

...

Hi, ANISH SHRESTHA. When you submit this form, the owner will see your name and email address.

* Required

1. **Question 1**

(a) Write a Java program to sort a string array in an ascending order.

Input the string : welcome to VIT Vellore

Expected Output :ceeeeilllmooorttvvw

(b) Create a table called student which contains regno, name and marks of three subjects. Write a java code to fetch those details and calculate the total and average and store it in the database. Finally display who is the topper in the class and how many students got fail mark in any one of the subjects. (Non-anonymous question ⓘ) *

(50 Points)

QUESTION NO 1:

CODE:

(Code on visual studio code
#not a screenshot can be copied)

```java
import java.util.*;

class Arrange {

    public static void main(String[] args) {

        String Takestr;
        String Lowerstr;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the string");
        Takestr = sc.nextLine();
        Lowerstr = Takestr.toLowerCase();
        // Converting string into an array for computation
        char sorted[] = Lowerstr.toCharArray();

        char temp;
        //SORTING THE STRING IN ACCENDING ORDER
        int i = 0;
        while (i <= sorted.length) {
            int j = i + 1;
            while (j <= sorted.length - 1) {
                if (sorted[j] < sorted[i]) {
                    temp = sorted[i];
                    sorted[i] = sorted[j];
                    sorted[j] = temp;
                }
                j += 1;
            }
            i += 1;
        }
        sc.close();
        System.out.println("The sorted string in ascending order is:");
        System.out.println(sorted);
    }
}
```

OUTPUTS:

```
PS D:\VIT\class room\3rd Sem\JAVA\lab\5th day problems\based on strings> cd "d:\VIT\cl
ge.java } ; if ($?) { java Arrange }
Enter the string
Welcome to VIT vellore
   ceeeeilllmooorttvvw
PS D:\VIT\class room\3rd Sem\JAVA\lab\5th day problems\based on strings>
```

```
ge.java } ; if ($?) { java Arrange }
Enter the string
Hello It is Java lab FAT 20BCE2893
The sorted string in ascending order is:
      022389aaaabbceefhiijlllosttv
PS D:\VIT\class room\3rd Sem\JAVA\lab\5th day problem
```

Question no2 :

Code:

```
import java.sql.*;
class Labfat1{
   public static void main(String[] args) {
      Connection con;
      PreparedStatement ps;

      //java connection
      try{
         Class.forName("com.mysql.cj.jdbc.Driver");
         con=DriverManager.getConnection("jdbc:mysql://localhost:3306/labfat","root","");

         //table creation
         PreparedStatement pst0=con.prepareStatement("CREATE TABLE Student1 (regno int, Name
varchar(225), M1 int, M2 int, M3 int );");
         pst0.execute();
         System.out.println("TABLE CREATED");
```

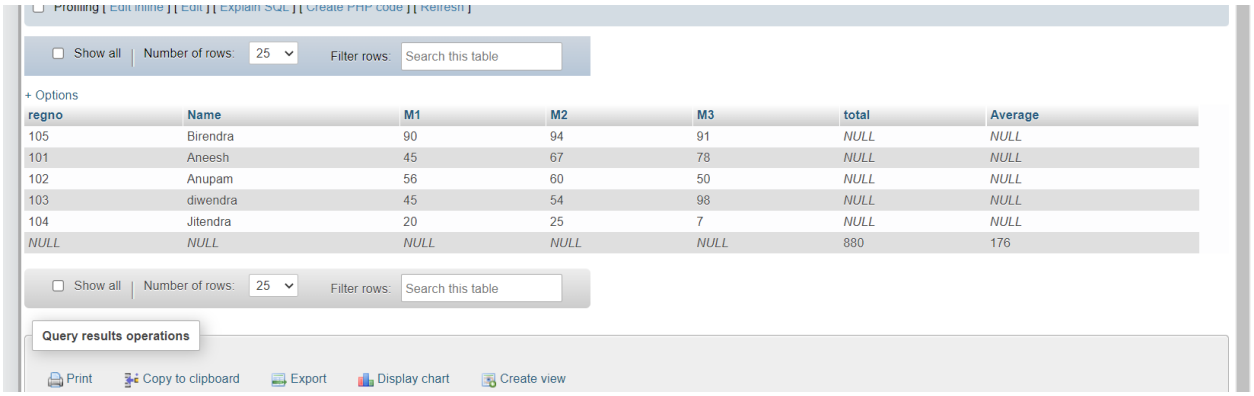
```
        //insert values
        PreparedStatement pst1=con.prepareStatement("INSERT INTO Student1 VALUES
(105,'Birendra',90,94,91);");
        pst1.execute();

PreparedStatement pst2=con.prepareStatement("INSERT INTO Student1 VALUES
(101,'Aneesh',45,67,78);");
        pst2.execute();
PreparedStatement pst3=con.prepareStatement("INSERT INTO Student1 VALUES
(102,'Anupam',56,60,50);");
        pst3.execute();
PreparedStatement pst4=con.prepareStatement("INSERT INTO Student1 VALUES
(103,'diwendra',45,54,98);");
        pst4.execute();
PreparedStatement pst5=con.prepareStatement("INSERT INTO Student1 VALUES
(104,'Jitendra',20,25,7);");
        pst5.execute();
        System.out.println("VALUES INSERTED INTO TABLE");

        // Altered table
        PreparedStatement pst6=con.prepareStatement("Alter Table Student1 Add total int;");// Altered
the table to add Total and average.
        pst6.execute();
        PreparedStatement pst7=con.prepareStatement("Alter Table Student1 Add Average int;");//
Altered the table to add Total and average.
        pst7.execute();
        System.out.println("Table Altered with marks ");



        PreparedStatement pst=con.prepareStatement("select * from student1");
        ResultSet rs=pst.executeQuery();

        while(rs.next()){
           System.out.println("Regno: "+rs.getString("regno")+" Name: "+rs.getString("Name")+" M1
"+rs.getString("M1")+"M2 "+rs.getString("M2")+" M3 "+rs.getString("M3")+" Total
"+rs.getString("Total")+"Average"+rs.getString("Average"));
        }
       PreparedStatement pst8=con.prepareStatement("INSERT INTO STUDENT1 (TOTAL,AVERAGE )
SELECT SUM(M1+M2+M3),AVG(M1+M2+M3) FROM STUDENT1;");// Altered the table to add Total and
average.
        pst8.execute();
        System.out.println("Total and average Value Inserted  ");
```

```
        System.out.println("Finding Topper In the class");
        PreparedStatement pst9=con.prepareStatement("select regno,name where total=max(total); ");
        ResultSet rs1=pst.executeQuery();


        if(rs1.next()){
           System.out.println("ID: "+rs1.getString("regno")+" Name: "+rs1.getString("name"));
        }

      }catch(Exception e){
        System.out.println(e);
      }
   }
}
```

Output:

```
import java.sql.*;
class Labfat1{
    public static void main(String[] args) {
        Connection con;
        PreparedStatement ps;

        //java connection
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/labfat","root","");

            //table creation
            PreparedStatement pst0=con.prepareStatement("CREATE TABLE Student1 (regno int, Name varchar(225), M1 int, M2 int, M3 int );");
            pst0.execute();
            System.out.println("TABLE CREATED");

            //insert values
            PreparedStatement pst1=con.prepareStatement("INSERT INTO Student1 VALUES (105,'Birendra',90,94,91);");
            pst1.execute();

PreparedStatement pst2=con.prepareStatement("INSERT INTO Student1 VALUES (101,'Aneesh',45,67,78);");
            pst2.execute();
PreparedStatement pst3=con.prepareStatement("INSERT INTO Student1 VALUES (102,'Anupam',56,60,50);");
            pst3.execute();
PreparedStatement pst4=con.prepareStatement("INSERT INTO Student1 VALUES (103,'diwendra',45,54,98);");
            pst4.execute();
PreparedStatement pst5=con.prepareStatement("INSERT INTO Student1 VALUES (104,'Jitendra',20,25,7);");
            pst5.execute();
            System.out.println("VALUES INSERTED INTO TABLE");

            // Altered table
            PreparedStatement pst6=con.prepareStatement("Alter Table Student1 Add total int;");// Altered the table to add Total and average.
            pst6.execute();
            PreparedStatement pst7=con.prepareStatement("Alter Table Student1 Add Average int;");// Altered the table to add Total and average.
```

```
Regno: 105 Name: Birendra M1 90M2 94 M3 91 Total nullAveragenull
Regno: 101 Name: Aneesh M1 45M2 67 M3 78 Total nullAveragenull
Regno: 102 Name: Anupam M1 56M2 60 M3 50 Total nullAveragenull
Regno: 103 Name: diwendra M1 45M2 54 M3 98 Total nullAveragenull
Regno: 104 Name: Jitendra M1 20M2 25 M3 7 Total nullAveragenull
Total and average Value Inserted
Finding Topper In the class
ID: 105 Name: Birendra
BUILD SUCCESSFUL (total time: 0 seconds)
```


Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]
Show all | Number of rows: 25 Filter rows: Search this table
+ Options
regno Name M1 M2 M3 total Average
105 Birendra 90 94 91 NULL NULL
101 Aneesh 45 67 78 NULL NULL
102 Anupam 56 60 50 NULL NULL
103 diwendra 45 54 98 NULL NULL
104 Jitendra 20 25 7 NULL NULL
NULL NULL NULL NULL NULL 880 176
Show all | Number of rows: 25 Filter rows: Search this table
Query results operations
Print
Copy to clipboard
Export
Display chart
Create view