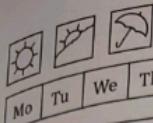


Gaurav Rana - 2401120009



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ASSIGNMENT-3

import java.util.*;

```
class InvalidMarksException extends Exception {  
    public InvalidMarksException(String msg) { super(msg); }  
}
```

class student {

int roll;

String name;

int []marks = new int [3];

student (int roll, String name, int []marks) throws
InvalidMarksException {

this.roll = roll;

this.name = name;

this.marks = marks;

validateMarks();

}

void validateMarks () throws InvalidMarksException {

for (int i = 0; i < marks.length; i++) {

if (marks[i] < 0 || marks[i] > 100)

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throw new InvalidMarksException("Invalid marks for
subject " + (i+1));
}

}

double avg () {

return (marks[0] + marks[1] + marks[2]) / 3.0;

}

void display () {

System.out.println ("Roll:" + roll + "\nName :" + name);
System.out.println ("marks :" + marks[0] + " " + marks[1]
+ " " + marks[2]);

System.out.println ("Average :" + avg());

System.out.println ("Result :" + (avg() >= 40 ?
"Pass" : "Fail"));

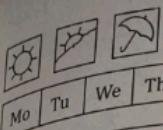
}

}

Public class ResultManager {

Student [] students = new Student [100];
int count = 0;

Scanner sc = new Scanner (System.in);



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```
void addStudent () {  
    try {  
        System.out.print("Roll: ");  
        int roll = sc.nextInt();  
        sc.nextLine();  
    }
```

```
System.out.print("Name: ");  
String name = sc.nextLine();
```

```
int [] m = new int [3];  
for (int i=0; i < 3; i++) {  
    System.out.print("marks" + (i+1) + ": ");  
    m[i] = sc.nextInt();  
}
```

```
students[count++] = new student(roll, name, m);  
System.out.println("Added Successfully.");  
} catch (InvalidMarksException | InputMismatchException e) {  
    System.out.println("Error: " + e.getMessage());  
    sc.nextLine();  
} finally {
```



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```
System.out.println("Returning to Menu...");  
}  
}
```

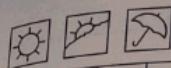
```
void showStudent()  
try {  
    System.out.print("Enter Roll: ");  
    int r = sc.nextInt();
```

```
for (int i=0; i < count; i++) {  
    if (students[i].roll == r) {  
        students[i].display();  
        return;  
    }  
}
```

```
System.out.println("Student Not found.");
```

```
} finally {
```

```
    System.out.println("Search completed.");  
}
```



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```
void menu () {  
    while (true) {  
        System.out.println ("\\n1. Add Student\\n2. Show  
        Student\\n3. Exit");  
        System.out.print ("(choice : ");
```

```
int ch = sc.nextInt ();  
switch (ch) {  
    case 1: addStudent (); break;  
    case 2: showStudent (); break;  
    case 3: System.out.println ("Exiting..."); return;  
    default: System.out.println ("Invalid choice");  
}
```

```
public static void main (String [] args) {  
    new ResultManager ().menu ();  
}
```