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Java Programming  
Assignment - 3

Q.

Ans. `import java.util;`

```
class InvalidMarksException {  
    public InvalidMarksException (String msg) {  
        Super (msg);  
    }  
}
```

```
class Student {  
    private int roll;  
    private String name;  
    private int [] marks = new int [3];
```

```
public Student (int roll, String name, int [] marks) throws InvalidMarksException {  
    this.roll = roll;  
    this.name = name;  
    this.marks = marks;  
    ValidMarks();  
}  
} Public void validate Marks () throws Invalid Marks Exception {
```

```
for (int i=0; i < marks.length; i++) {  
    if (marks[i] < 0 || marks[i] > 100) {
```

```
        throw new Invalid Marks Exception ("Invalid  
        marks for Subject " + (i+1) + " " + marks [i]);  
    }
```

y

y

y

Public double calculate Average () {

int sum = 0;

for (int m : marks)

sum + = m;

} return sum / 3.0;

3) Public void display Result () {

System.out.println ("Roll Number: " + Roll Number)

System.out.println ("student Name: " + studentName)

System.out.print ("marks: " ) ;

for (int m : marks) { }

System.out.println ( ) ;

double avg = calculate Average ();

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

if (avg > = 40) { }

System.out.println ("Result: Pass ");

} else { }

System.out.println ("Result: Fail ");

3

4

5

## Public class Result Manager {

Student [ ] Students = new Student [100];

int count = 0;

Scanner sc = new Scanner (System.in);

public void add student (, throws Invalid  
Marks Except )

try {

System.out.print ("enter Roll number: ");

int roll = sc.nextInt (),

int [ ] Marks = new Int [3]

for (int i = ; i < 3, i++) {

System.out.print i " enter Marks for  
Subject " + i + " : " ;

Marks [i] = sc.nextInt ();

y

Student S = new Student (roll no, marks)

S.validate Marks ();

Student [ count ++ ] = S;

System.out.print ("student added successfully ")<sup>14</sup>

y Catch (InputMismatchException) {  
System.out.println ("Error: invalid input  
type.!!."),  
sc.nextInt(),

y  
y

public void showStudentDetails() {  
try {

System.out.println ("Enter Roll No to search.");  
int roll = sc.nextInt();

boolean found = false;

for (int i = 0; i < count; i++) {

if (student[i] == null || student[i].roll  
Number != roll) {

found = true;

break;

y

y if (!found) {

System.out.println ("Student not found");

y

3 System.out.printer ("Student not found"),  
}

• Catch (InputMismatchException e) {

System.out.print ("Error: Input mismatch")  
Scanner nextLine();

}

3

Public void main() {

try {

while (true) {

System.out.printer ("Student Result").

System.out.printer ("1 Add Student").

System.out.printer ("2 Show Student Details").

System.out.printer ("3 Exit").

System.out.printer ("Enter your choice").

System.out.printer ("").

int choice);

Class 1

try {

add student();

Catch (InvalidMarksException e) {

System.out.printer ("Error: " + e.getMessage());

```
    }  
    branch;  
    Case 2;  
    Show student details();  
    break;  
Case 3;  
System.out.println("Enter program. Then you  
return,  
default;  
System.out.print("invalid choice");
```

```
}  
}  
finally {  
sc.close();  
System.out.println("Scanner closed program  
ended");  
}
```

```
}  
Public static void main (String [ ] args)
```

```
Result Manager manager = new Result  
manager();
```

```
Manager.main (menu());
```