Lab Test 3

Q1) For mobile top up and other mobile operations the users need to enter codes and send. Sometimes users receive errors because of incorrect syntax that they have entered.

Assume that the user **must** enter the code between two stars. Nested codes are also allowed. If one star is missing, then user will receive error to re-enter syntax in a recursion method.

Please write a statement using recursive method that:
If customer does not enter the correct syntax, then return "Please put the digits between two stars".

Example output:

…… ——> correct
…..*….* — —> correct
…..*..——> Please put the digits between two stars
*……——> Please put the digits between two stars

Q2) There are n switches in the campus. You are required to create a mesh topology for the switches. Write a recursive method to returns the total number of connections required for n switches in the campus.

```
Mesh Topology
There are 4 switches in the campus.
The total number of connections required is 6
There are 7 switches in the campus.
The total number of connections required is 21
```

Q3) Write a program that creates an integer array with 5 elements. The program accepts user input for the elements of the array. Use exception handling to detect improper inputs. The user needs to enter the correct input to continue. The program will stop if ArrayIndexOutOfBoundsException is encountered. The program will display all integers entered by the user.

Example output:

```
Enter an Integer: 12
Enter an Integer: hello
Invalid input type
Enter an Integer: 23
Enter an Integer: 86.7
Invalid input type
Enter an Integer: 32
Enter an Integer: 10
Enter an Integer: 92
Enter an Integer: 2
The array of integers is:
12 23 32 10 92
```