

Programming Fundamentals (CS-1002) BCS-1N

Assignment # 3, Fall 2021

Submission Deadline: Thursday November 04, 2021 (11:00 pm)

Total Marks: 100

Use nested loops to achieve the tasks.

Write a **menu-driven C++ program** that prints different solid and hollow shapes after getting inputs.

Enter your option for the shape type (1 to 6):

1. Right Triangle
2. Isosceles Triangle
3. Diamond
4. Square
5. Rectangle (rows fixed at 6)
6. Parallelogram (rows fixed at 6)

If the user enters any other key, the program should continue asking for the valid input.

Next the program should show the following menu:

- Enter s for solid
- h for hollow
- b for both solid and hollow shapes

Program should continue asking for the valid input if input is other than 1, 2 or 3.

Next the program should prompt the user for the dimension.

Enter the dimension (between 2 and 20):

Program should check that the user enters an integer number between 1 and 20.

Finally the program should ask about the character to be used to draw shapes.

Enter the character type (only *, %, \$ and & are allowed):

Program should continue asking for the valid input if the user enters any other character.

EXAMPLES:

If the user enters the options 1 s 5 *, the following shape will be drawn:

```
*
**
***
****
*****
```

If the user enters the options 2 h 3 &, the following shape will be drawn:

```
&
&  &
& & & & &
```