

CS 1050

Pre-lab3

Directions:

Complete the following pre-lab assignment before coming to next week's lab. It will help you in completing the lab assignment. If you have any questions or have problem in completing the pre-lab ask TAs for help during TA hours or schedule an appointment.

Purpose:

- ⌚ Use scanf and printf functions to gather information from user and display results.
- Use conditional statements and loops.
- Use switch statement.

Description

For the prelab assignment write a program that calculates the area of square, rectangle and circle. To begin display the menu to user (as shown in the sample output) and ask user to give an option if the option is not between 0-3 display an error message and ask for a new option. Once the user has given the option use a switch statement to switch to that particular case and read the inputs for sides or radius. Perform the error check for inputs as done in the lab 2. Show the results as shown in the sample output below.

Sample Output

Characters in bold are input from the user

```
[sm3z5@tc-login Lab3]$ ./a.out
```

```
Area Calculation
```

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

```
Please enter your choices:-1
```

```
Invalid choice
```

```
Area Calculation
```

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

```
Please enter your choices:4
```

Invalid choice
Area Calculation

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

Please enter your choices:**11**

Invalid choice
Area Caculation

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

Please enter your choices:**1**

Enter the side of a square:**0**

Invalid choice
Enter the side again:**0**

Invalid choice
Enter the side again:**0**

Invalid choice
Enter the side again:**-1**

Invalid choice
Enter the side again:**5**

Area of square with side 5 is 25.00

Area Calculation

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

Please enter your choices:**2**

Enter the first side of a rectangle:**8**

Enter the second side of a rectangle:**3**

Area of the rectangle with sides 8 and 3 is 24.00

Area Calculation

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

Please enter your choices:**3**

Enter the radius of a square:**0**

Invalid choice

Enter the side again:**0**

Invalid choice

Enter the side again:**-1**

Invalid choice

Enter the side again:**4**

Area of circle with radius 4 is 50.24

Area Calculation

1. Square

2. Rectangle

3. Circle

0. Exit

Please enter your choices:**0**

Exiting the Program

[sm3z5@tc-login Lab3]\$./a.out

Area Calculation

1. Square

2. Rectangle

3. Circle

0. Exit

Please enter your choices:**-9**

Invalid choice

Area Calculation

1. Square

2. Rectangle

3. Circle

0. Exit

Please enter your choices:**4**

Invalid choice

Area Calculation

1. Square

2. Rectangle

3. Circle

0. Exit

Please enter your choices:**0**

Exiting the Program

[sm3z5@tc-login Lab3]\$./a.out

Area Calculation

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

Please enter your choices:**2**

Enter the first side of a rectangle:**0**

Invalid choice

Enter the side again:**0**

Invalid choice

Enter the side again:**2**

Enter the second side of a rectangle:**-1**

Invalid choice

Enter the side again:**-1**

Invalid choice

Enter the side again:**5**

Area of the rectangle with sides 2 and 5 is 10.00

Area Calculation

- 1. Square
- 2. Rectangle
- 3. Circle
- 0. Exit

Please enter your choices:**0**

Exiting the Program