Lab-5

Objective:

To make you familiar with the *switch* statement, while loop, and for loop.

Assignment:

In your program, you should make use of *switch* statement, *while loop*, *do-while* loop and *for* loop to get an output like the one shown in the next section. Also, 0<min-range< max-range<1001. Don't forget to validate your inputs.

Sample Output:

```
Please enter the min range: -2
Enter the max range: 111
The input is invalid. Please enter the min_range and max_range
Please enter the min range: 4
Enter the max range: 2
The input is invalid. Please enter the min_range and max_range
Please enter the min range: 1
Enter the max range: 100
hello!
choose one of the following option (1->4)
1. To print the sum of odd numbers in the range 1 to 100
2. To print the sum of numbers, with 2 as least significant digit, in the range 1 to 100
3. To print the sum of numbers, with 6 as least significant digit, in the range 1 to 100
4. To Quit
What is your choice: 1
The sum of odd numbers in the range 1 to 100 is 2500
choose one of the following option (1->4)
1. To print the sum of odd numbers in the range 1 to 100
2. To print the sum of numbers, with 2 as least significant digit, in the range 1 to 100
3. To print the sum of numbers, with 6 as least significant digit, in the range 1 to 100
4. To Quit
What is your choice: 2
The sum of numbers ending in 2 in the range 1 to 100 is 470
choose one of the following option (1->4)
1. To print the sum of odd numbers in the range 1 to 100
2. To print the sum of numbers, with 2 as least significant digit, in the range 1 to 100
3. To print the sum of numbers, with 6 as least significant digit, in the range 1 to 100
4. To Quit
What is your choice: 3
The sum of numbers ending in 6 in the range 1 to 100 is 510
choose one of the following option (1->4)
1. To print the sum of odd numbers in the range 1 to 100
2. To print the sum of numbers, with 2 as least significant digit, in the range 1 to 100
3. To print the sum of numbers, with 6 as least significant digit, in the range 1 to 100
4. To Quit
What is your choice: 4
Thank you! Have a nice day.
```

Logical outline of the program:

```
#include<iostream>

using namespace std;


int main()

{

    //Declare the constants

    //Declare and initialize the variables

    //Validate and take inputs

    do

    {

        //Print the menu to the console and ask the user to choose from
        the menu.

        switch(choice)

        {

            case 1:

                //loop to print the sum of odd numbers in the range

                break;

            case 2:

                //loop to print the sum of numbers with 2, in the
                range

                break;

            case 3:

                // loop to print the sum of numbers ending in 6 in
                the range

                break;

            case 4:

                //quit condition
```

```
                break;

            default:

                    //Input invalid
        }

    } while(//quit condition);
}
```

Grading Rubric:

- Properly formatted code header with Name, User name, Section, Instructor, Date, Assignment number and purpose (15 points)
- Proper declaration of variables and constants with descriptive names (20 points)
- Proper use of loops and switch statement (30 points)
    - In your program, I should see at least one while loop, one for loop and one do while loop.
- Comments, indentation and spaces between each line of code (15 points)
- Meaningful inputs and properly formatted output (10 point)