# Lab Program 7

For this and all future labs, I strongly encourage you to begin your programs with a comment header similar to the following:

```
/*

Programmer: First & Last Name

Class: CSCE 1030  Lab

Date: Today's Date

Assignment: Lab 7

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*/
```

You are welcome to include more information if you like.

This week's assignment we will start working with loop control structures, but specifically the **while and do-while statement**. Please follow the detailed explanation and name your file accordingly:  **LastnameProg6A.c** and **LastnameProg6B.c**.  **\*\*\*\*\*** Use a do-while loop for one program and a while loop for another.

**Program A should:**

1.  Utilize a symbolic constant as an upper bound with value of 1000.

2.  Prompt the user with for a positive integer to be the lower bound value.

3.  Determine if user provided value is greater than /equal to zero, and ensure the user provide value is less than the upper bound value.

4.  Print the values that have 5 as a prime factor between the upper and lower value.

Example:

```
Upper bound is set to 1000.  Please enter a positive lower bound value:

1001

I am sorry, that is an invalid lower bound value.
```

**OR**

```
Upper bound is set to 1000.  Please enter a positive lower bound value:

-1

I am sorry, that is an invalid lower bound value.
```

**OR**

```
Upper bound is set to 1000.  Please enter a positive lower bound value:

980

Values that are:

985

990

995

1000
```

**Program B should:**

1. Prompt the user for a positive integer value.

2. Determine if the user provided value is greater than/ equal to 0.

3. Calculate the factorial value of the value provided by the user. (Factorial $4! = 4*3*2*1$)

4. Print that calculated value to the screen.

Example:

```
Please enter a positive integer value:

-3

I am sorry that is an invalid value.
```

**OR**

```
Please enter a positive integer value:

8

Factorial result: 40,320
```