Loops

1. Write a program to find the factorial value of any number entered through the keyboard.

2. Two numbers are entered through the keyboard. Write a program to find the value of one number raised to the power of another.

3. Write a program to print out all Armstrong numbers between1 and 500. If sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number. For example, 153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3)

4. Write a program to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.

5. Write a program to print all prime numbers from 1 to 300. (Hint: Use nested loops, break and continue)

6. Write a program to add first seven terms of the following series using a for loop:

$$\frac{1}{1!} + \frac{2}{2!} + \frac{3}{3!} + \ldots\ldots$$

7. Write a program to produce the following output:

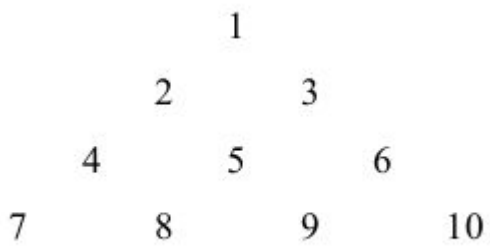
```
A B C D E F G F E D C B A
A B C D E F   F E D C B A
A B C D E       E D C B A
A B C D           D C B A
A B C               C B A
A B                   B A
A                       A
```

8. Write a program to print the multiplication table of the number entered by the user. The table should get displayed in the following form.

```
29 * 1 = 29
29 * 2 = 58
...
```

Loops

9. Write a program to produce the following output:



10. Write a program to generate all combinations of 1, 2 and 3 using for loop.