Lab 02

Loops

1- Write a program that takes a string and reverses it

```csharp
class Program
{
    static void Main(string[] args)
    {
        Console.WriteLine("Enter a string");
        string word = Console.ReadLine();


        Console.WriteLine("Reversed string is: ");
        int lastIndex = word.Length - 1;
        for (int i=lastIndex; i>=0; i--)
        {
            Console.Write(word[i]);
        }
        Console.WriteLine();
    }
}
```

2- Write a program that prints all numbers from 1 to n that are neither divisible by 3 nor 7 simultaneously

```
class Program
{
    static void Main(string[] args)
    {
        Console.WriteLine("Enter number N:");
        int n = int.Parse(Console.ReadLine());
        for (int i = 1; i <= n; i++)
        {
            if ((i % 7 != 0) && (i % 3 != 0))
            {
                Console.Write(" " + i);
            }
        }
    }
}
```

3- Write a program that checks if a number is prime or not

```
class Program
{
    static void Main(string[] args)
    {
        Console.Write("Enter a positive number: ");
        int num = int.Parse(Console.ReadLine());
        int divider = 2;
        int maxDivider = (int)Math.Sqrt(num);
        bool prime = true;
        while (prime && (divider <= maxDivider))
        {
            if (num % divider == 0)
            {
                prime = false;
            }
            divider++;
        }
        Console.WriteLine("Prime? " + prime);
    }
}
```

4- A program that that calculates $\frac{N!}{K!}$ for given N and K (1<K<N)

```csharp
class Program
{
    static void Main(string[] args)
    {
        int fact = 1;
        Console.WriteLine("Enter N");
        int n = int.Parse(Console.ReadLine());
        Console.WriteLine("Enter K");
        int k = int.Parse(Console.ReadLine());
        if (k < n && k > 1)
        {
            for (int i =n; i>k; i--)
            {
                fact *= i;
            }
            Console.WriteLine("The result is {0}", fact);
        }else{
            Console.WriteLine("Please note that 1<K<N");
        }
    }
}
```

Assignment:

Write a program to any hexadecimal number to its decimal equivalent

Assignment solutions to be uploaded to your github account, then you should send the repo's link to: **khaled.3ttia@gmail.com**