Day 9 Assignment

By
Triveni Anumolu

03-02-2022

1. Write a C# program to read input from user and print
 a. factorial of a number
 b. factors of a number
c. check if it prime or not

Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day9Project1
{
        /*************************************************************
         Author: Triveni Anumolu
        Purpose: Printing factorial, factors of a number and checking prime or not
        *************************************************************/
      class Mathsoperations
      {
         private int input;

         public void Readinput()
         {
            Console.WriteLine("Enter the number");
            input = Convert.ToInt32(Console.ReadLine());
         }

         public void Factorial()
         {
            int fact = 1;
            for (int i = 1; i <= input; i++)
            {
               fact = fact * i;
            }
            Console.WriteLine("Factorial of {0} is {1}",input,fact);
         }
```

```
        public void Printfactors()
        {
            for (int i = 1; i <= input; i++)
            {
                if (input % i == 0)
                    Console.WriteLine(i);
            }
        }

        public bool Isprime()
        {
            int count = 0;
            for (int i = 1; i <= input; i++)
            {
                if (input % i == 0)
                    count++;

            }
            if (count == 2)
                return true;
            else
                return false;
        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            Mathsoperations obj = new Mathsoperations();
            obj.Readinput();
            obj.Factorial();
            obj.Printfactors();
            if (obj.Isprime())
                Console.WriteLine("Input is prime");
            else
                Console.WriteLine("Input is not prime");

            Console.ReadLine();

        }
    }

}
```

Result:

```
Enter the number
10
Factorial of 10 is 3628800
1
2
5
10
Input is not prime
```

2. Write C# program to read two numbers from use and print
a. sum of two numbers
b. difference of two numbers
c. product of two numbers
d. division of two numbers.

Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day9Project2
{
   class MathTask
   {
      private int a;
      private int b;

      public void Readinput()
      {
         Console.WriteLine("Enter first number");
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter second number");
         b = Convert.ToInt32(Console.ReadLine());

      }
      public int Addnumbers()
```

```
        {
            return a + b;
        }
        public int Subtractnumbers()
        {
            return a - b;
        }
        public int Multiplynumbers()
        {
            return a * b;
        }
        public int Dividenumbers()
        {
            return a / b;
        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            MathTask mt = new MathTask();
            mt.Readinput();
            Console.WriteLine(mt.Addnumbers());
            Console.WriteLine(mt.Subtractnumbers());
            Console.WriteLine(mt.Multiplynumbers());
            Console.WriteLine(mt.Dividenumbers());
            Console.ReadLine();
        }
    }
}
```

Result:

```
Enter first number
4
Enter second number
8
12
-4
32
0
```

3. Create an employee class with below variables id, name, salary, company . write methods to read data and print data.

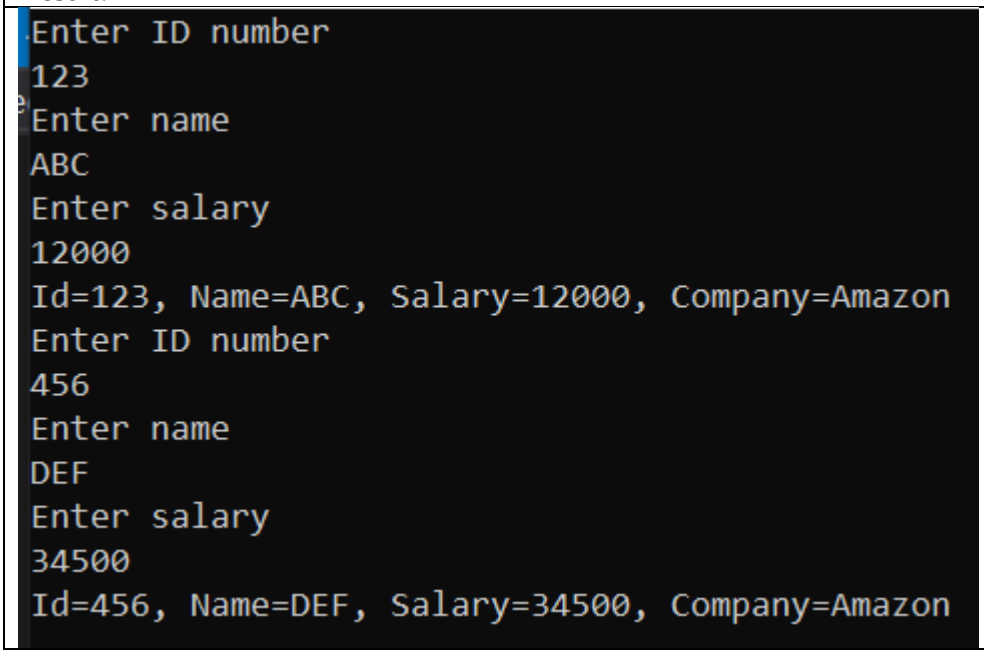
Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day9Project3
{
   class Employee
   {
      /*************************************************************************
      Author: Triveni Anumolu
      Program: Creating employee class and printing variables
      *************************************************************************/
      private int id;
      private string name;
      private int salary;
      public static string company;
      public void Readdata()
      {
         Console.WriteLine("Enter ID number");
         id = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter name ");
         name = Console.ReadLine();
         Console.WriteLine("Enter salary");
         salary = Convert.ToInt32(Console.ReadLine());
         company = "Amazon";
      }
      public void Printdata()
      {
         Console.WriteLine($"Id={id},
Name={name},Salary={salary},Company={company}");
      }
   }
   class Program
   {
      static void Main(string[] args)
      {
         Employee e1 = new Employee();
         e1.Readdata();
         e1.Printdata();
         Employee e2 = new Employee();
```

```
        e2.Readdata();
        e2.Printdata();
        Console.ReadLine();
    }
}
```

Result:



4. Research and find the difference between normal variable and static variable.	
Static Variable	Normal variable
1.A static variable acts as a global variable and is shared among all the objects of the class.	1. Normal variables are specific to instance object in which they are created.
2.If any changes are made in static variables , the changes will effect the whole class.	2.If any changes are made in normal variables, it will just effect the current object.

5.Write 5 points about constructor discussed in the class.
1.A constructor is used to initialize class variables. 2.By default C# has one constructor that is “default constructor” which initialize values. 3.Constructor name should be same as class name. 4.To use same variables as that of class variables, use “this” keyword to differentiate class variables. 5.Constructor doesn’t have return class.

6. Create Employee class with two constructors as discussed in the class

Program:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day9Project6
{
    /*****************************************************************
      Author: Triveni Anumolu
      Purpose: Creating employee class with two constructors as discussed in the class
    *****************************************************************/
   class Employee
   {
      public int id;
      public string name;
      public int salary;
      public static string company = "NBH Technologies";
      public Employee()
      {
         id = 0;
         name = "null";
         salary = 0;
      }
      public Employee(int eid, string ename, int esalary)
      {
         this.id = eid;
         this.name = ename;
         this.salary = esalary;
      }
      public void ReadData()
      {
         Console.WriteLine("Enter Employee Id:");
         id = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter Employee Name:");
         name = Console.ReadLine();
         Console.WriteLine("Enter Employee Salary:");
         salary = Convert.ToInt32(Console.ReadLine());
```

```
        }
        public void PrintData()
        {
            Console.WriteLine($"id={id},Name={name},salary={salary},company={company}");
        }
    }

    class Program
    {
        static void Main(string[] args)
        {
            Employee emp = new Employee();
            emp.PrintData();
            Console.ReadLine();
        }
    }
}
```

Result:

```
id=0,Name=null,salary=0,company=NBH Technologies
```