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| **Day9 Assignment**  **By**  **Jonnagiri siva naga prasanna** |

1.c# program to print

a)factorial of number

b)factors of a number

c)check if it is prime or not

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| Program: |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day9Project1  {  class Operations  {  private int input;  public void ReadInput()  {  Console.WriteLine("Enter number: ");  input = Convert.ToInt32(Console.ReadLine());  }  public int Factorial()  {  int fact = 1;  for (int i = 1; i <= input; i++)  {  fact = fact \* i;  }  return fact;  }  public void Factors()  {  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 % 1 == 0)  count++;  }  if (count == 2)  return true;  else  return false;  }  }  internal class Program  {  static void Main(string[] args)  {  Operations ob = new Operations();  ob.ReadInput();  Console.WriteLine(ob.Factorial());  ob.Factors();  if (ob.IsPrime())  Console.WriteLine("Input is PRIME Number");  else  Console.WriteLine("Not a Prime Number");  Console.ReadLine();  }  }  } |
| Output: |
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2.c# program to read two numbers from user and print

a)sum of two numbers

b)difference of two numbers

c)product of two numbers

d)division of two numbers

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| Program: |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : jonnagiri siva naga prasanna  // Purpose : Arithmetic Operations  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Day9Project2  {  class ArithmeticOperations  {  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 Difference()  {  return a - b;  }  public int Product()  {  return a \* b;  }  public int Division()  {  return a % b;  }  }  internal class Program  {  static void Main(string[] args)  {  ArithmeticOperations ar = new ArithmeticOperations();  ar.ReadInput();  Console.WriteLine(ar.AddNumbers());  Console.WriteLine(ar.Difference());  Console.WriteLine(ar.Product());  Console.WriteLine(ar.Division());  Console.ReadLine();  }  }  } |
| Output: |
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3.creat an employee class with variables of id,name,salary,company

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| Program: employee class with 4 variables |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : jonnagiri siva naga prasanna  // Purpose: Display Employee Details  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Day9Project3  {  class Employee  {  public int id;  public string name;  public int salary;  public string company;  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());  company = "NationsBenifts";  }  public void PrintData()  {  Console.WriteLine($"Id:{id}, Name:{name}, Salary:{salary}, Company={company}");  }  }  internal class Program  {  static void Main(string[] args)  {  Employee emp1 = new Employee();  emp1.ReadData();  emp1.PrintData();  Employee emp2 = new Employee();  emp2.ReadData();  emp2.PrintData();  Console.ReadLine();  }  }  } |
| Output: |
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4.difference between normal variable and statinc variable.

Static Variables:

1.A static variable is associated with the class has only one copy per class but not for each object. An instance of a class does not have static variables.

2. Static variables can be accessed by static or instance methods

3. Memory is allocated when the class is loaded in context area at run time.

Non-Static Variables:

1..Non-static variables will have one copy each per object. Each instance of a class will have one copy of non-static variables.

2.Instance variables can be accessed only by the instance methods.

3. Instance variables are allocated at compile time.

**5.write 5 points about constructor**

**1. A constructors is used to initialize class variables.**

**2. By default, C# has one constructor i.e., Default constructor to initialize class variables.**

**3. If user create user-defined constructor the default constructor will disappear.**

**4. Constructor name should be same as class name. If we use same variables as class variable use this. Keyword to differentiate class variable.**

**5. For a constructor, there should not be any return type not even void.**

**Eg : Public Employee(int id, string name)**

**6.creat employee class with 2 constructors**

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| **Program:**employee class with 2 constructor |
| **Code:** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : jonnagiri siva naga Prasanna  // Purpose : Employee Class Constructor  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Day9Project4  {  class Employee  {  public int id;  public string name;  public int salary;  public static string company = "NationsBenefits";  public Employee()  {  this.id = 0;  this.name = null;  }  public Employee(int eid, string ename, int esalary)  {  id = eid;  name = ename;  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());  company = "NationsBenifts";  }  public void PrintData()  {  Console.WriteLine($"Id:{id}, Name:{name}, Salary:{salary}, Company={company}");  }  }  internal class Program  {  static void Main(string[] args)  {  Employee emp = new Employee(1, "siva", 40000);  emp.PrintData();  Console.ReadLine();  }  }  } |
| **Output:** |
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