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DAY10 MORNING ASSIGNMENT
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4TH FEB 2022

Q1.Write the two points discussed about inheritance in the class.

1. Inheritance is the process of Re-Using base class methods in the derived class.
2.Inheritance main goal is Re-usability and remove the duplicate code.

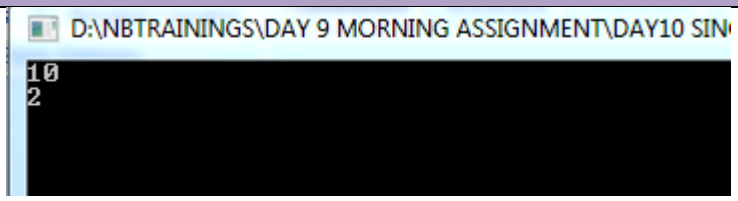
Q.2Write the example code for
a. single inheritance
b. Multi inheritance

Code: Single inheritance

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

namespace DAY10_SINGLE_INHARITANCE
{
    class Algebra
    {
        /// <summary>
        /// This method is used for Addition
        /// </summary>
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <returns></returns>
        public int Add(int a, int b)
        {
            return a + b;
        }

    }
    class substract :Algebra
    {
        /// <summary>
        /// This is used for subtraction
        /// </summary>
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <returns></returns>
        public int Sub(int a , int b)
        {
```

```
            return a - b;
        }

    }
    internal class Program
    {
        static void Main(string[] args)
        {
            substract obj = new substract();
            Console.WriteLine(obj.Add(5, 5));
            Console.WriteLine(obj.Sub(4, 2));
            Console.ReadLine();



        }
    }
}
```

OUTPUT:



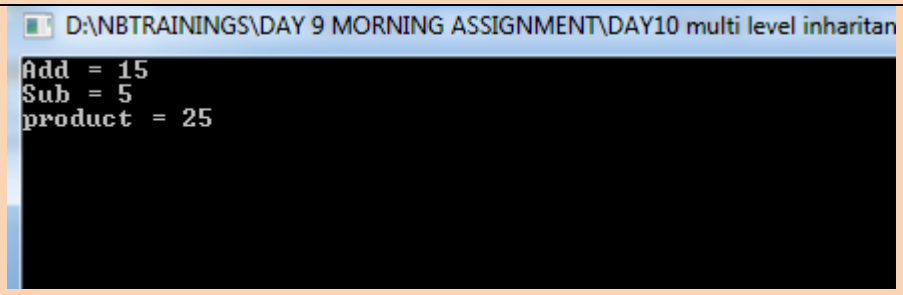
Multi level inheritance:

Code:

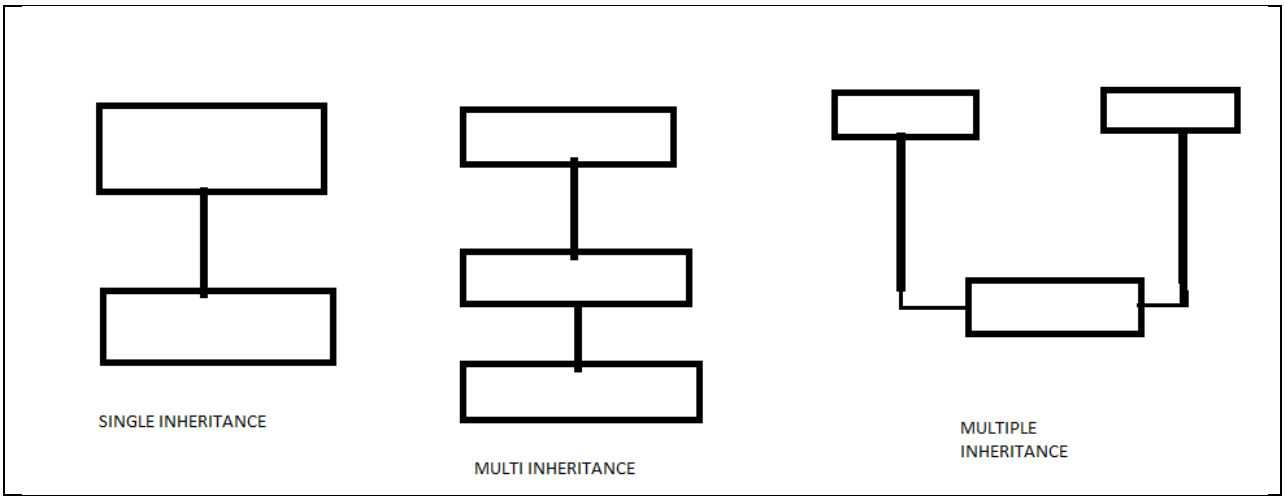
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace DAY10_multi_level_inharitance
{
    class Algebra
    {
        /// <summary>
        /// This method is used to find addition
        /// </summary>
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <returns></returns>
        public int Add(int a, int b )
        {
            return a + b;
        }
    }
    class Substract :Algebra
    {
        /// <summary>
        /// This is used to find substraction
        /// </summary>
```

```
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <returns></returns>
        public int Sub(int a, int b)
        {
            return a - b;
        }
    }
    class product : Substract
    {
        /// <summary>
        /// his method is used for product
        /// </summary>
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <returns></returns>
        public int Multi(int a, int b)
        {
            return a * b;
        }
    }

    internal class Program
    {
        static void Main(string[] args)
        {
            product obj = new product();
            Console.WriteLine($"Add = {obj.Add(10, 5)}");
            Console.WriteLine($"Sub = {obj.Sub(10, 5)}");
            Console.WriteLine($"product = {obj.Multi(5, 5)}");

            Console.ReadLine();



        }
    }
}
```

Output:



Q3. Pictorial representation of 3 types of inheritances



Q4.Write why multiple inheritance is not supported in c#
In C# compiler is designed not to support multiple inheritance because it causes ambiguity of methods from different base class. This is cause by diamond shape problems of two classes if two classes B and C inherit from A, and class D inherits from both B and C so, multiple inheritance is not possible in c#

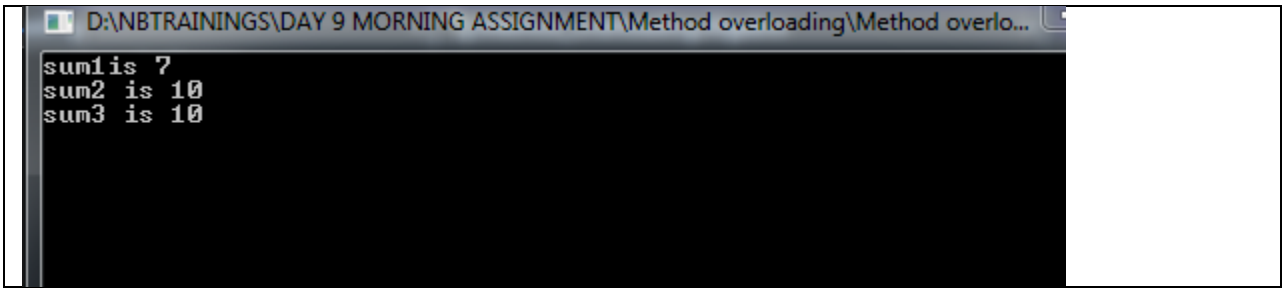
Q5.What is polymorphism?
Polymorphism is the ability of an object which acts as like many forms. Two types of polymorphism a. Method overloading b. Method overriding

Q6.Write simple code for method overloading
Coad:

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

namespace Method_overloading
{
   class Algebra
   {
      /// <summary>
      /// This is for addition
      /// </summary>
      /// <param name="a"></param>
      /// <param name="b"></param>
      /// <returns></returns>
      public int Add(int a, int b)
```

```
        {
            return a + b;
        }
        /// <summary>
        /// This is used for addition
        /// </summary>
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <param name="c"></param>
        /// <returns></returns>
        public int Add(int a, int b, int c)
        {
            return a + b + c;
        }
        /// <summary>
        /// This is used for addition
        /// </summary
        /// <param name="a"></param>
        /// <param name="b"></param>
        /// <param name="c"></param>
        /// <param name="d"></param>
        /// <returns></returns>
        public int Add(int a, int b, int c, int d)
        {
            return a + b + c + d;
        }

    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Algebra m = new Algebra();
            Console.WriteLine("sum1is {0}", m.Add(5, 2));
            Console.WriteLine("sum2 is {0}", m.Add(3,5,2));
            Console.WriteLine("sum3 is {0}", m.Add(2,5,1,2));

            Console.ReadLine();
        }
    }
}
```

Output:



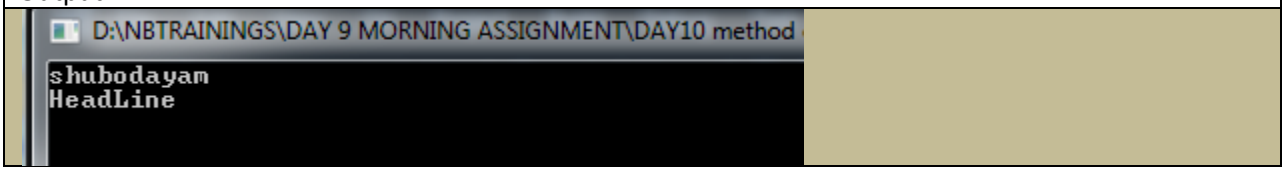
Q7.Write sample code for method overriding

Code:

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

namespace DAY10_method_overriding
{
   class English
   {
      /// <summary>
      /// This Metthod is to print
      /// </summary>
      public void Print()
      {
         Console.WriteLine("good morning");
      }

      public void PrintHeadLine()
      {
         Console.WriteLine("HeadLine");

      }

   }
      class Telugu : English
      {
         public new void Print()
         {
            Console.WriteLine("shubodayam");

         }

      }
      internal class Program
      {
```

```
        static void Main(string[] args)
        {
            Telugu obj = new Telugu();
        obj.Print();
        obj.PrintHeadLine();
        Console.ReadLine();
        }
    }
}
```

Output:



Q8.Research and write sample code for method overriding using virtual , override keywords

Code:

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

namespace DAY10_PROJECT4
{
    class Indianexpress
    {
        public virtual void Print()
        {
            Console.WriteLine("Good morning");
        }
        public void Printdata()
        {
            Console.WriteLine("HeadLines");
        }
        public  void Printmain()
        {
            Console.WriteLine("Descripion");
        }
    }
    class Enaadu : Indianexpress
    {
       public override void Print()
        {
            Console.WriteLine("shubodayam");
        }
    }

    internal class Program
```

```
    {
        static void Main(string[] args)
        {
            Enaadu obj = new Enaadu();
            obj.Print();
            Console.ReadLine();
        }
    }
}
```

Ouput: