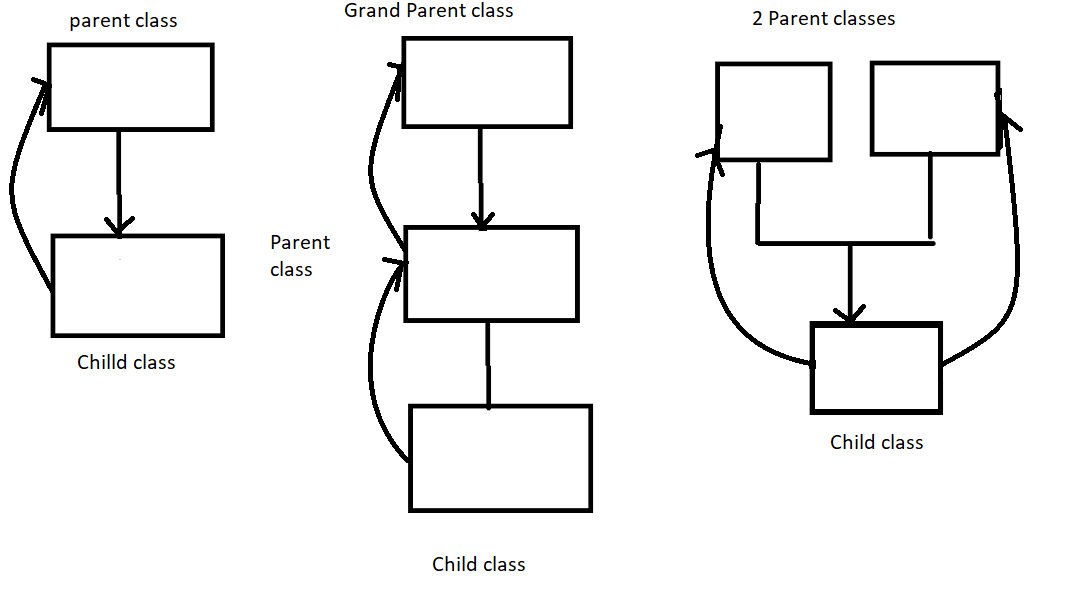
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| Day-10 Morning Assignment  By  U.Joshna  [04-02-2022] |

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| 1.Write the two points discussed about inheritance in the Class?  .Inheritance is the process of re-using base class methods in the  Derived Class  .Inheritance main Goal is : Re-usability  .And to remove Duplicate Code |

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| 2.Write example code for:  a.Single inheritance  b.Multi level inheritance |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Single\_inheritance  {  class Algebra  {  public int Add(int a,int b)  {  return a + b;  }  public int Sub(int a,int b)  {  return a - b;  }  }  class TotalMaths : Algebra  {  public int mul(int a,int b)  {  return a \* b;  }  }  internal class Program  {  static void Main(string[] args)  {  TotalMaths tm = new TotalMaths();  Console.WriteLine(tm.Add(7, 9));  Console.ReadLine();  }  }  } |
| Output: |
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| b.Multiple inheritance |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Multi\_level\_inheritance  {  class Algebra  {  public int Add(int a, int b)  {  return a + b;  }  public int Sub(int a, int b)  {  return a - b;  }  }  class TotalMaths : Algebra  {  public int mul(int a, int b)  { return a \* b; }  }  class AllSubjects : TotalMaths  {  public string Water()  {  return "H20";  }  }  internal class Program  {  static void Main(string[] args)  {  AllSubjects obj = new AllSubjects();  obj.Water();  Console.WriteLine(obj.Water());  Console.ReadLine();  }  }  } |
| Output: |
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| 3.Pictorially represent 3 types of inheritance discussed in the class? |



Single Inheritance Multi Level Multiple Inheritance

Inheritance

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| 4.Why multiple inheritance is not supported for classes in C#  .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# |

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| 5.What is Polymorphism?  .Polymorphism is the ability of an object to take on many forms  .it has two types Method Overloading and Method Overriding  Method Overloading:  .same method with different Parameters & irrespective of return type is called method overloading  Method Overriding:  .in overriding derived class comes to the picture |

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| 6.Write sample code for method overloading? |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Over\_loading  {  class Algebra  {  public int Add(int a, int b)  {  return a + b;  }  public float Add(float a, float b)  {  return a + b;  }  }  internal class Program  {  static void Main(string[] args)  {  Algebra obj = new Algebra();  Console.WriteLine(obj.Add(6.5f, 10.5f));  Console.ReadLine();  }  }  } |
| Output: |
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| 7.Write a sample code for method overriding  [Using new keyword]? |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Method\_Overriding  {  class EnglishMessage  {  public void PrintHi()  {  Console.WriteLine("Hi");  }  public void PrintHello()  {  Console.WriteLine("Hello");  }  public void PrintGE()  {  Console.WriteLine("Good Evening");  }  }  class TeluguMessage : EnglishMessage  {  public new void PrintGE()  {  Console.WriteLine("Subhasayanthram");  }  internal class Program  {  static void Main(string[] args)  {  TeluguMessage message = new TeluguMessage();  message.PrintHi();  message.PrintHello();  message.PrintGE();  Console.ReadLine();  }  }  }  } |
| Output: |
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| 8.Research and Write sample code for method overriding  Using virtual ,override key word? |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_10\_virtual\_keyword  {  class English  {  public void PrintHi()  {  Console.WriteLine("Hi");  }  public void PrintHello()  {  Console.WriteLine("Hello");  }  public virtual void PrintGM()  {  Console.WriteLine("Good Morning");  }  }  class Telugu : English  {  public override void PrintGM()  {  Console.WriteLine("Subhodhayam");  }  }  internal class program  {  static void Main(string[] args)  {  Telugu obj = new Telugu();  obj.PrintHi();  obj.PrintHello();  obj.PrintGM();  Console.ReadLine();  }  }  } |
| Output: |
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