**ASSINGMENT 3 :**

**WHAT IS METHOD OVERLOADING?**

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| Method Overloading is a feature that allows a class to have two or more methods having same name, if their argument lists are different.  Argument lists could differ in – 1. Number of parameters. 2. Data type of parameters. 3. Sequence of Data type of parameters |

**Program:**

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| class MethodOverloading  {  public void disp(char s)  {  System.out.println(""+s);  }  public void disp(char s, int n)  {  System.out.println(s + " "+n);  }  }  public class Sample  {  public static void main(String args[])  {  MethodOverloading obj = new MethodOverloading();  obj.disp('S');  obj.disp('S',50);  }  } |

**Output:**

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| run:  S  S 50 |

**What is Constructor overloading?**

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| Like methods, constructor can also be overloaded. We will see constructor overloading with the help of an example using this() and parameterized constructor. Before we got through the source code and examples lets discuss why we need to overload a constructor:  Constructor overloading is way of having more than one constructor which does different-2 tasks. For e.g. Vector class has 4 types of constructors. If you do not want to specify the initial capacity and capacity increment then you can simply use default constructor o vector  like this  Vector v = new Vector();  however if you need to specify the capacity and increment then you call the parameterized constructor with two int args like this:  Vector v= new Vector(10, 5); |

***Program :***

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| class Rectangle  {  int l,b;  Rectangle(int x,int y)  {  l=x;  b=y;  }  Rectangle(int x)  {    }  int Area()  {  return(l\*b);  }  }  public class RectangleArea  {  public static void main(String args[])  {  Rectangle a1=new Rectangle(10,20);  int area=a1.Area();  System.out.println("Area= "+area);  }  } |

**Output:**

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| Area= 200 |

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| **Method Overloading** | **Constructor Overloading** |
| 1) A method is said to be overloaded  method if and only if method name  is same but its signature is different.  2) In method overloading method name  may be different than class name.  3) There is return type.  4) In it memory is allocate at compile  time. | 1)A constructor is said to be overloaded if and  only if constructor name is same but its signatures is different.  2) In constructor overloading consructor name  3) should be same as class name.  4) There is not return type.  5)In it memory is allocate at run time |