

LECTURE 10A

Overloading

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Constructor overloading

- **Example:** Write a java program for the following:
- Class circle with three variables to hold fractional values for: x,y coordinates of the center and radius r.
- The user may or may not give the values for these.
- If only radius is specified, take origin as the center.
- If nothing is specified, make it a unit circle centered at the origin.
- Further, the class should be capable of computing and returning the values of the circumference and the area

Java Copy

- In Java, there is no operator to create a copy of an object.
- Assignment operator will create a copy of reference variable and not of an object

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Methods of Copying in Java

- By using constructor
- By assigning the values of one object to another
- By clone() method of Object class

Copying values by using constructor

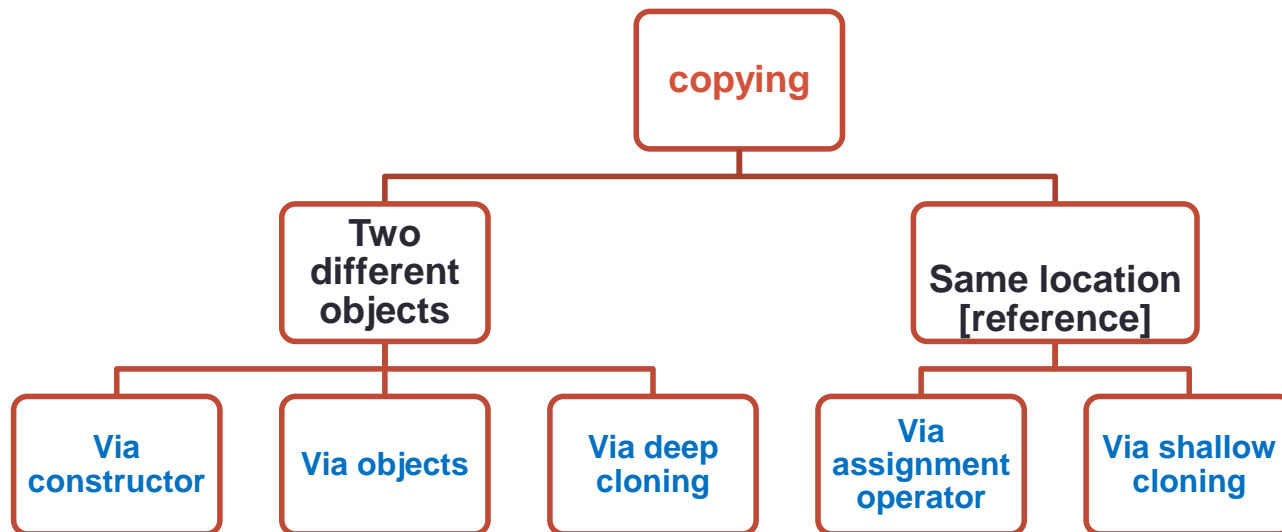
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Copying by assigning values of one object to another

- The values of one object can be copied into another object by assigning the object's values to another object.

Copying by clone method of object class

Summary of copying methods in Java



Difference between constructor and method in Java

Constructor	Method
Used to initialise the state of an object	Used to expose behavior of an object
Must not have a return type	Must have return type
Is invoked implicitly	Is invoked explicitly
The Java compiler provides a default constructor if you do not have any constructor	Method is not provided by compiler in any case
Name must be same as class name	Name may or may not be same as class name