Topic ⇒ User Defined Methods

(Instance Variable & Constructors)

Lecture #10

H/W 8

Design a class Library as follows:

Instance Variable / Data members:
int acc_num--> To store accession number of the book
String title --> To store name of the author

Member methods :
void input () : To input and store the accession no., title and author name.
void Compute () : To accept no. of days let, calculate and display the fine charged @ Rs. 2/day
void display () : To display details in the following format.

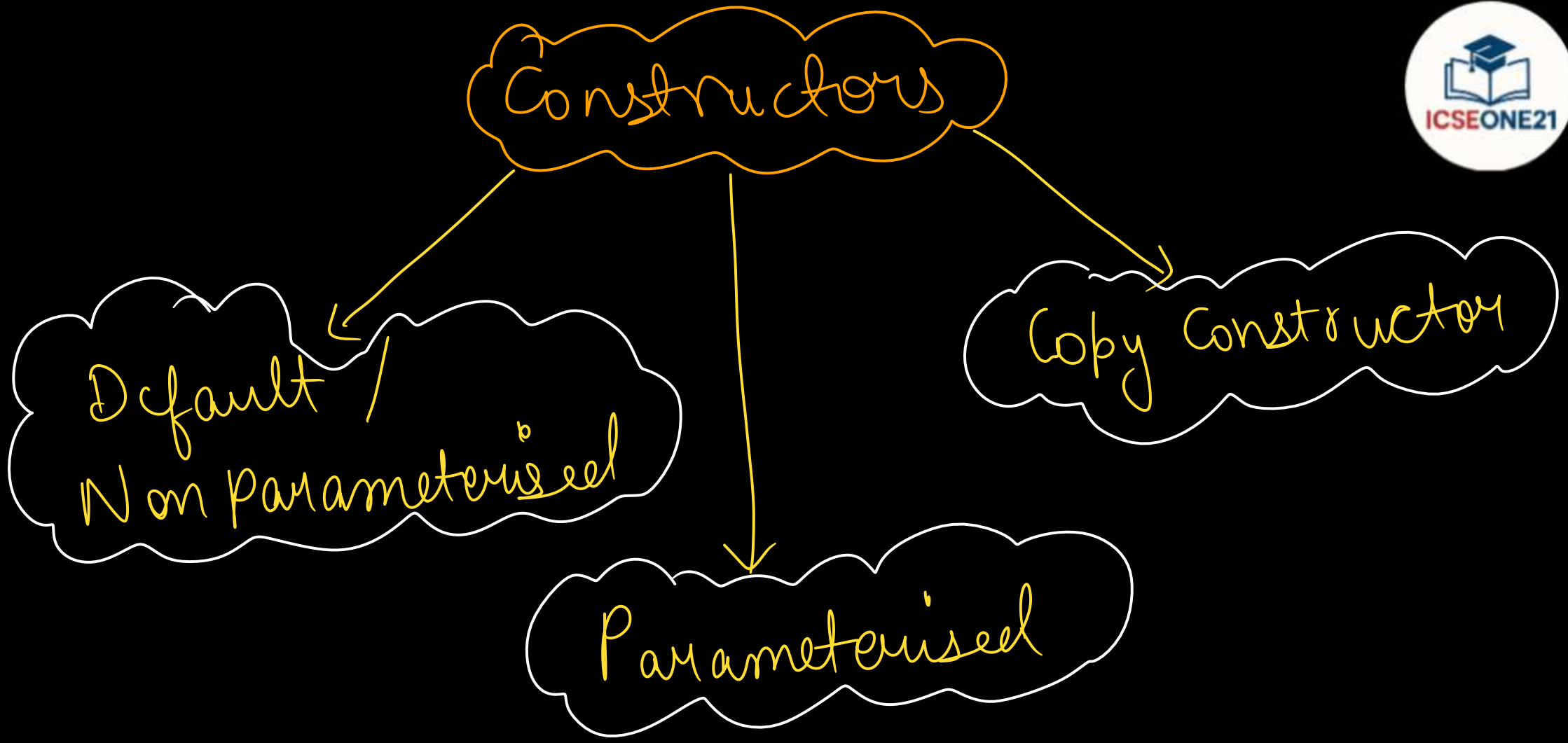
Accession no. Title Author

```
import java.util.Scanner;
class Library
{
int acc_num;
String title;
String author;
void input ()
{
Scanner ob = new Scanner(System.in);
System.out.println("Enter accession no. , title and author name");
acc_num = ob.nextInt();
title = ob.nextLine();
author = ob.nextLine();
}

void compute ()
{
Scanner ob = new Scanner (System.in);
int nd = ob.nextInt();
System.out.println("Total fine charged = "+ (nd*2));
}
```

```
void display ()
{
System.out.println("Accession no. \t Title \t Author ");
System.out.println(acc_num + "\t"+title +"\t"+ author);
}

public static void main (String args[])
{
Library obj = new Library();
obj.input();
obj.compute();
obj.display();
}
}
```

* Constructors *

* It is a special member function of the class having same name as of class.
* It is used to initialise the data members of the class.
* It is neither return type nor void.
* A constructor can't be called. It is automatically called and executed when an object is created by it.


Constructors
Default / Non Parameterised
Parameterised
Copy Constructor

```
Class ABCD
{
    public static void main (String args[])
    {
        ABCD ob = new ABCD ();
    }
}
```

objeet name

ABCD → Classnam

new → Keyword

ABCD () → default constructor

```
class Sample
{
  int a,b;
  //Non parameterised
  public Sample()
  {
    a=10;
    b=20;
  }
  //Parameterised Constructor
  public Sample(int x, int y)
  {
    a=x;
    b=y;
  }
  public void display()
  {
    System.out.println("The no is" + a + " " +b);
  }
```

```
  //Default Constructor
  public Sample()
  {
    a=0;
    b=0;
  }
```

```
  public static void main(String args[])
  {
    Sample ob1 = new Sample();
    Sample ob2 = new Sample(100,200);
    ob1.display(); → 10,20
    ob2.display(); → 100,200
  }
}
```

No Homework

Thank You