Experiment Title: Constructors

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Subject Name: Java Programming Lab   Subject Code: 20CSP-219

Aim/Overview of the practical: To study different types of constructors in java.

- Write a Program to understand the concept of Default Constructor.
- Write a Program to understand the concept of Parameterized Constructor

PROGRAM CODE :

```java
package com.uni;

class Default {
    int a;
    String name;
    Default() {
        System.out.println("====== Default Constructor Called ======");

    }
}

class Para {
    int a;
    String name;
    Para(int b, String n) {
        a = b;
        name = n;
        System.out.println("====== Parameterized Constructor Called ======");
    }
}

public class constructor {
    public static void main(String[] args) {
        Default obj1 = new Default();
        System.out.println("Id: " + obj1.a);
        System.out.println("Name: " + obj1.name);
        Para obj2 = new Para(5, "Someone");
        System.out.println("Id: " + obj2.a);
        System.out.println("Name: " + obj2.name);
    }
}
```

- Write a Program to understand the concept for Constructor Chaining.

Program Code :

```java
class Constructor{
    int value1;
    int value2;
    Constructor(){
        value1 = 1;
        value2 = 2;
        System.out.println("Inside 1st Parent Constructor");
    }
    Constructor(int a){
        value1 = a;
        System.out.println("Inside 2nd Parent Constructor");
    }
    public void display(){
        System.out.println("Value1 === "+value1);
        System.out.println("Value2 === "+value2);
    }

    public static void main(String args[]){
        ConstructorChild d1 = new ConstructorChild();
        d1.display();
    }
}

class ConstructorChild extends Constructor{
    int value3;
    int value4;
    ConstructorChild(){
        //super(5);
        value3 = 3;
        value4 = 4;
        System.out.println("Inside the Constructor of Child");
    }
    public void display(){
        System.out.println("Value1 === "+value1);
        System.out.println("Value2 === "+value2);
        System.out.println("Value1 === "+value3);
        System.out.println("Value2 === "+value4);

    }
}
```

OUTPUT:

Learning outcomes (What I have learnt) :

- If a class doesn't have a constructor, the Java compiler automatically creates a **default constructor** during run-time. The default constructor initializes instance variables with default values. For example, the int variable will be initialized to 0.
- Constructor types: **No-Arg Constructor** - a constructor that does not accept any arguments **Parameterized constructor** - a constructor that accepts arguments **Default Constructor** - a constructor that is automatically created by the Java compiler if it is not explicitly defined.
- Constructors are invoked implicitly when you instantiate objects.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			
4.			

THANK YOU!