

What is Constructor:

A constructor is a special method in object-oriented programming that is used to initialize objects when they are created. In most programming languages, the constructor method has the same name as the class and is automatically called when an instance of the class is created.

Constructor overloading is a feature of object-oriented programming languages that allows multiple constructors to be defined within a class, each with a different parameter list. When an object is created, the appropriate constructor is called based on the arguments passed to it.

Constructor overloading can be used to create objects with different initial states, or to provide multiple ways of initializing an object. For example, a class representing a date might have constructors that take a year, month, and day, or a constructor that takes a string in a specific format representing the date.

Constructors can also have access modifiers such as public, private, or protected, which control the visibility of the constructor and who can create instances of the class.

In this example, the Adder class has a constructor that takes two parameters: a int representing the first input, and an int representing second. The constructor initializes the input1 and input2 data members of the Adder object.

Now, let's talk about constructor overloading. Constructor overloading is the ability to define multiple constructors for a class, each with a different parameter list. When an object is created, the appropriate constructor is called based on the arguments passed to it.

Here's an example of constructor and constructor overloading in Java:

```
import util.Adder;

public class AdderTest {
    public static void main(String[] args) {
        //new operator in java creates an object from class
        Adder adderObj = new Adder(10);

        Adder adderObj2 = new Adder(40, 50);
        //String str1 = adderObj.takeFirstInputFromUser();

        //String str2 = adderObj.takeSecondInputFromUser();
        adderObj.sumAndPrintResult();
        adderObj2.sumAndPrintResult();

        //below is the private method and cant be
        //accessed from object
        //adderObj.performSum();
    }
}
```

```
    }  
}  
import util.Adder;  
  
public class AdderTest {  
    public static void main(String[] args) {  
        //new operator in java creates an object from class  
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        //String str1 = adderObj.takeFirstInputFromUser();  
  
        //String str2 = adderObj.takeSecondInputFromUser();  
        adderObj.sumAndPrintResult();  
        adderObj2.sumAndPrintResult();  
  
        //below is the private method and cant be  
        //accessed from object  
        //adderObj.performSum();  
    }  
}
```

Assignment question:

Create class Person with name and age

Create two constructor, one which will accept only name and other which will accept name and age

Create method in person which will print summary of the person

*Imp, while printing summary, make sure if age is 0 then don't print the age, print only name

if both age and name is present then print both