Method Overloading

Java™

What is Method Overloading?

- It is when you have two or more methods in the same class with the same name but with different parameters.
- Return type of the methods may or may not be different
- We can overload static and instance methods as well as constructors.

Rules

- The following rules must be fulfilled for the methods to be overloaded.
  - Methods must have the same method name.
  - Methods must have different parameters.

- If the rules gets followed then the methods may or may not
  - Have different return types.
  - Have different access modifiers.
  - Throw different checked or unchecked exceptions.

Overloading example for methods

```
public static void main(String[]args) {

    System.out.println(add(2.3, 23.1));
    System.out.println(add(2, 4));
    System.out.println(add(3, 4, 5, 6, 7, 8));

}

    public static double add(double decimal, double decimal2) {
        return decimal + decimal2;
    }

    public static int add(int integer, int integer2) {
        return integer + integer2;
    }

    public static String add(int...ints) {
        int result = 0;
        String resultAsString = "";
        for(int i=0; i<ints.length; i++) {
            result += ints[i];
            resultAsString += i!=ints.length-1 ? ints[i] + " + " : ints[i];
        }
        return resultAsString += " = " + result;
    }
```

Here we make use of varargs. You can pass any number of variables of defined type. You use it as an array in the method