String, String Buffer and String Builder

Rawlabs Academy

What is String?

- String is **non-primitive** data type and it is also class which is under `java.lang` package.
- String is collection of characters
- Immutable
- Can create object without new keyword

Why String is Immutable?

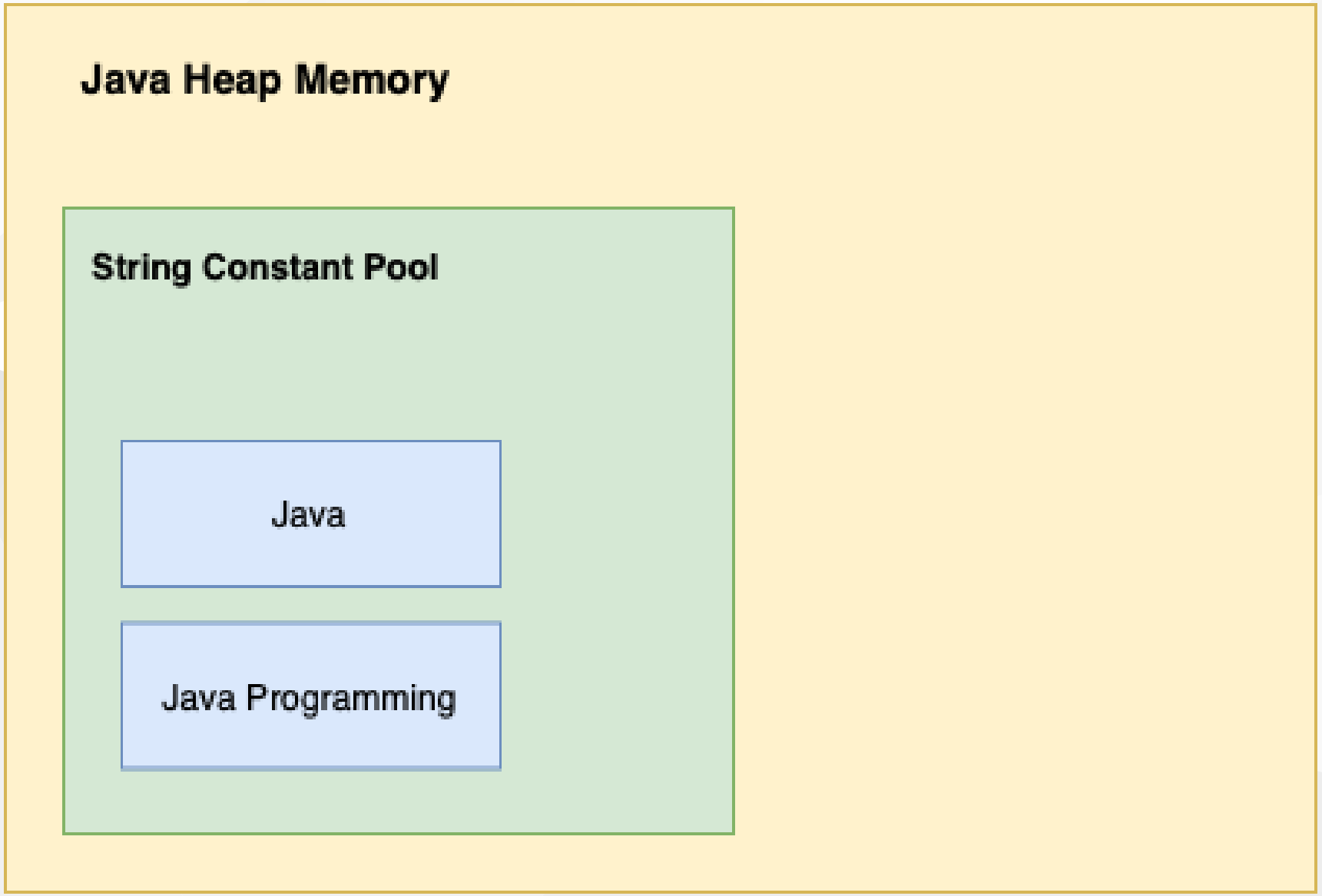
- String are **constants**, values can't be changed after they are created
- Because java uses the concept of **string literal**
- Suppose, fi one reference variable changes the value of the object, it will be affected to al the reference variables. That is why string objects are immutable in java.

Example 1

```
public class Main {
    public static void main(String[] args) {
        String s = "Java";
        s.concat(" Programming");
        System.out.println(s);
    }
}
```

Output : `Java`

The `concat()` method is append the string at the end. So, `String` are immutable objects.


Java Heap Memory
String Constant Pool
Java
Java Programming

Example 2

```
public class Main {
    public static void main(String[] args) {
        String s = "Java";
        s = s.concat(" Programming");
        System.out.println(s);
    }
}
```

Output : `Java Programming`

So, it assign it into the **reference variable**.

Methods

- `charAt()`, `contains()`

Example 3 - subString()

- `substring(int index)` the parameter is start / begin index
- `subString(int start, int end)`

```
public class Main {
    public static void main(String[] args) {
        String s = new String();
        s = "Java Programming";
        System.out.println(s.subString(5));
        System.out.println(s.subString(0, 5));
    }
}
```