Data types

==========

1. **Primitive Data types**
    a. primitive data type have fix memory size

        E.x byte, short, int, long ,float, double, boolean and char

2. **Non Primitive Data types**
    a. non primitive data type have variable memory size

E.x String and Array

—----------

String

==========

1. String is a non-primitive data type whose memory size is not fixed.
2. String is used to store a collection of characters.
3. String is an inbuilt class present inside the "java.lang" package.
4. String class is the final class that can't be inherited from other classes.
5. Object creation of String can be done in two ways

    a. Without new keyword

        String s1 = "Amit";   // String literal

    - When we create a string object without a new keyword then the string gets stored in a **string constant pool area** and called as string literal.
    - String constant pool area is an area in **heap memory** where java stores literal values.

    b. With new keyword

        String s2 = new String("xyz");   // String Object

    - When we create a string object with a new keyword then the string gets stored in a **non constant pool area**.

—----------

What is String Pool Area

==========

1. String objects are going to get stored inside the **String pool area** which is present inside the **heap area**.
2. String pool area: It is used to store String objects.
3. It is classified into 2 areas:
    a. constant pool area
    b. non-constant pool area.

a. **Constant pool area:**

    i. During object creation time if you don't make use of a new keyword then object creation takes place inside the constant pool area.
    ii. **Duplicate objects are not allowed inside a constant pool area.**
    iii. If we are trying to save the same string then both strings point out the same object.

```
// constant pool area

String s1="abc";                    // create an object  “abc” < s1

String s2="abc";                    //s2 > “abc”

String s3="abc1”;
```

b. **Non-constant pool area:**

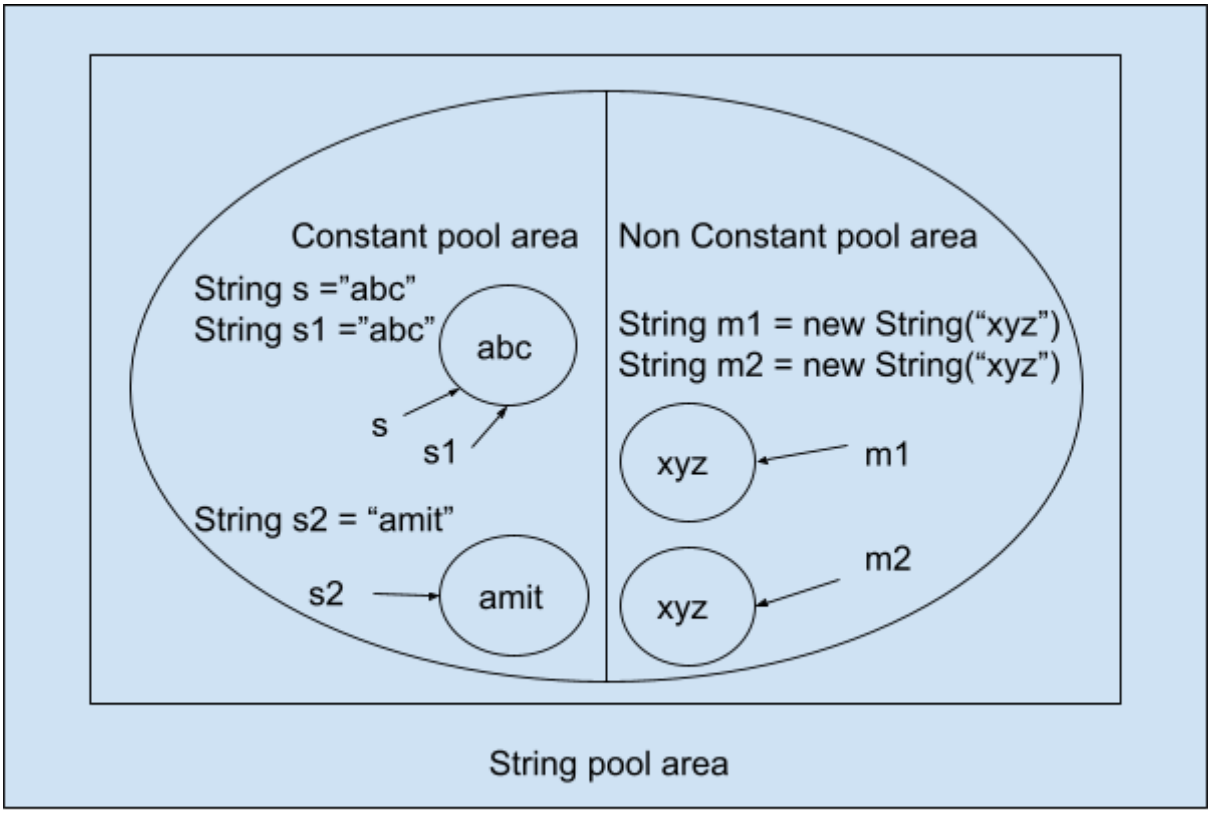
    i. During object creation time if you make use of a new keyword then object creation takes place inside a non-constant pool area.
    ii. Duplicate objects are allowed inside non-constant pool areas which represent separate objects.

```
// non-constant pool area

String s4=new String("abc");

String s5=new String("abc");
```

—----------

Representation of Heap Area

==========



Heap area