

String and StringBuilder

- * String is the collection of characters.

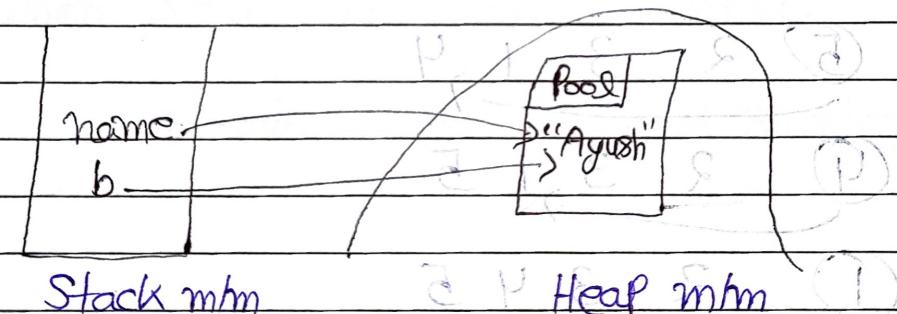
Ex- String name = "Ayush Agarwal";

- It is a non-primitive datatype

* String Pool - It is a separate memory structure inside the heap area.

UseCase- All the similar values of strings don't allocate in string pool.

Ex- String name = "Ayush"
String b = "Ayush"



Note- If you will change the value of let say of b named reference variable it will not change the value of b.

- Strings are immutable in Java because without immutability feature string pool can't work.

Ex- String name = "Ayush";

= name.concat("Agarwal") // it will not add Agarwal to name bcz of immutability.

* How do we check that one reference var is pointing to same obj or not

Comparison of strings - ex: String a = "Kunal"; String b = "Kunal";

$\text{a} == \text{b}$ method

Comparison



$a \rightarrow \text{"Kunal}$
 $b \rightarrow \text{"Kunal"}$

in this case

$a == b$ will

checks if ref give False.

var one pointing to

Same object.

$a \rightarrow \text{"Kunal}$
 $b \rightarrow \text{"Kunal"}$

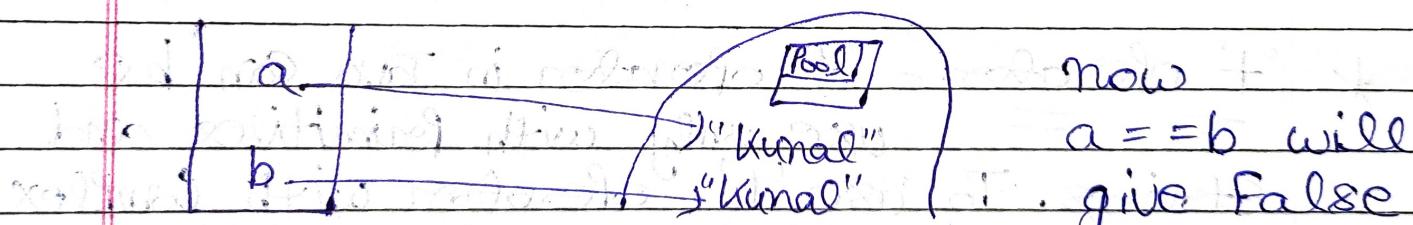
$a == b$ will

give True.

* How to create diff objects of same value
By using 'new' keyword.

Ex-1 String a = new String ("Kunal");
String b = new String ("Kunal");

// Creating these values outside
the pool but in heap.



* When you only needs to check value

Use .equals method.
By Ex-2

Ex- a.equals(b) // true

Note - Everything in Java ~~is~~ Points using
 = .toString() method implicitly but for arrays, obj etc this .toString() method is different that's why we have to tell Java manually that don't use simple .toString() method ~~is~~ use Arrays.toString() method.

* Pretty Printing ~~using~~ Placeholders to format String.

Ex- `float a = 453.1234F;`
 = `System.out.printf("Formatted no.%8%.2F", a);`

O/p - 453.13 - // rounded two point

We have to use printf here

The printf method in Java can be used to output a formatted string to the console using various format specifiers.

* '+' operator - '+' operator in Java can be used only with primitives and strings. To use '+' operator with complex datatype like Array We should have at least one string ex- " " in the expression.

Note - There are many methods of printing

* StringBuilder Class - It is used to create mutable (modifiable) String. It has many methods.

Ex- `StringBuilder builder = new StringBuilder();`

- UseCase - It can be used to reduce memory usage. Because in String when we make some changes in obj it always make new obj bcz of immutability but in StringBuilder it makes changes to the original obj no new obj is created.