String in Java:

String refers to a collection of characters enclosed within double quotes(“ ”).

String refers to an Object in java present in a package called java.lang.String.

```
eg:: String s= "sachin";
    System.out.println(s);//sachin

    String s =new String("sachin");
    System.out.println(s);//sachin
```

Two types of String:
1- Immutable String (String class)
2- Mutable String (StringBuilder, StringBuffer)

- In java String object is by default immutable (String class if you store), meaning once the object is created we cannot change the value of the object, if we try to change then those changes will be reflected on the new object not on the existing object.

Ways to compare String ;

equals(): Compare the content of String Object
== : Compare references of String Objects.
equalsIgnoreCase(): Compares values of String ignoring case sensitivity.
compareTo(); compare value of string lexicographically

- Memory in case of String will be allocated in Heap and within heap there is String Constant pool. If we are creating a String object without a new keyword things get resolved during compile time and Memory created in the String Constant pool.
- Meaning : Direct literals are always placed in SCP,Because of runtime operation if object is required to create compulsorily that object should be placed on the Heap(Using new keyword or using any method like concate()) ,but not on SCP.

(Watch the class recording for understanding of same)

Note::

- Before allocating memory in String Constant Pool(SCP) 1st jvm will check is any object is already created with required content or not.
- If it is already available then it will reuse the existing object instead of creating the new Object.
- If it is not available only then a new object will be created, so we say in SCP there is no chance of existing 2 objects with the same content.
- In SCP duplicates are not permitted.

- Garbage Collector cannot access SCP Area, Even though Object does not have any reference still object is not eligible for GC.
- All SCP objects will be destroyed only at the time of JVM ShutDown.

Note :

- In our program if any String object is required to be used repeatedly then it is not recommended to create multiple objects with the same content it reduces performance of the system and affects memory utilisation.
- We can create only one copy and we can reuse the same object for every requirement. This approach improves performance and memory utilisation we can achieve this by using "scp". (Adv of SCP)