# What is the difference between StringBuilder and StringBuffer and String ?

**Both StringBuilder and StringBuffer** are mutable. That means you can change the content of them, with in the same location.

Simply use StringBuilder unless you really are trying to share a buffer between threads. StringBuilder is

the unsynchronized (less overhead = more efficient) younger brother of the original synchronized StringBuffer class.

StringBuffer came first. Sun was concerned with correctness under all conditions, so they made it synchronized to make it thread-safe just in case.

StringBuilder came later. Most of the uses of StringBuffer were single-thread and unnecessarily paying the cost of the synchronization.

Since StringBuilder is a drop-in replacement for StringBuffer without the synchronization, there would not be differences between any examples.

If you are trying to share between threads, you can use StringBuffer, but consider whether higher-level synchronization is necessary, e.g. perhaps instead of using StringBuffer, should you synchronize the methods that use the StringBuilder.

**String**:

String is immutable, if you try to alter their values, another object gets created,

whereas StringBuffer and StringBuilder are mutable so they can change their values.

The String class represents character strings. All string literals in Java program, such as "abc" are implemented as instances of this class.

String objects are immutable once they are created we can't change. (Strings are constants).

If a String is created using constructor or method then those strings will be stored in Heap Memory as well as SringConstantPool. But before saving in pool it invokes intern() method to check object availability with same content in pool using equals method. If String-copy is available in the Pool then returns the reference.

Otherwise, String object is added to the pool and returns the reference.

Which one to use when?

StringBuilder : When you need a string, which can be modifiable, and only one thread is accessing

and modifying it.

StringBuffer : When you need a string, which can be modifiable, and multiple threads are accessing and modifying it.