

# Exam Prep: Classes

## String Builder

Write a **class** that holds, validates and manipulates **characters** (strings with length 1) in an array. An **instance** of the class should support the following operations:

- Can be **instantiated** with a passed in **string** argument or **without** anything
- **append(string)** - **converts** the passed in **string** argument to an **array** and adds it to the **end** of the storage
- **prepend(string)** - **converts** the passed in **string** argument to an **array** and adds it to the **beginning** of the storage
- **insertAt(string, index)** - **converts** the passed in **string** argument to an **array** and adds it at the **given** index (there is **no** need to check if the index is in range)
- **remove(startIndex, length)** - **removes** elements from the storage, starting at the given index (**inclusive**), **length** number of characters (there is **no** need to check if the index is in range)
- **allToUpper()** - **changes** all characters in the class instance to upper case
- **allToLower()** - **changes** all characters in the class instance to lower case
- **toUpper(index)** - **Changes** a character at a specific index to upper case
- **toLowerCase(index)** - **Changes** a character at a specific index to lower case
- **toString()** - **returns** a string with **all** elements joined by an **empty** string
- All passed in **arguments** should be **strings**. If any of them are **not**, **throws** a type **error** with the following message: "**Argument must be a string**"

## Constraints

- The constructor of your class has **valid and invalid parameters**.
- Submit the class definition as is, **without** wrapping it in any function.

## Examples

Input	Output
<pre>let str = new StringBuilder('hello'); str.append(', there'); str.prepend('User, '); str.insertAt('woop',5 ); console.log(str.toString()); str.remove(6, 3); str.allToUpper() console.log(str.toString());</pre>	User,woop hello, there USER,W HELLO, THERE
Input	Output
<pre>let str = new StringBuilder('hello'); str.append(5);</pre>	TypeError:'Argument must be string'

## What to submit?

Class Signature: `class StringBuilder`