

## Longest Non-Repeating Substring

**Background:** The challenge is to write a function that find and return the longest portion of a string that has no repeating characters.

**Challenge:** [LeetCode - 3. Longest Substring Without Repeating Characters](#)

**Resources:** [MDN Web Docs](#) and [w3Schools](#)

**Notes:** The code below is intended to be informational and is not meant to be the only way to write a function that determines the longest non-repeating substring. In addition to the function below, I employed other functions and methods to set conditions, extract data and facilitate user interaction.

```
function lengthOfLongestSubstring(str) {  
  // create a set to store the longest substring  
  //Why? JS set cannot contain duplicate elements  
  let longestStrLength = 0;  
  let newArray = [];  
  
  // check if the str is blank, challenge condition  
  if (str !== ""){  
    // if not blank, loop through the provided string  
    for (let i = 0; i < str.length; i++){  
      // Use a set to store the string created from the current point  
      let stringSet = new Set();  
  
      // Use an internal loop to evaluate the letters starting at the current  
      //point  
      if (stringSet.has(str[i])) {  
        // If it does, stop because it already exists in the set  
        break;  
      } else {  
        // the letter is added to the set because it's not found  
        stringSet = stringSet.add(str[i]);  
      };  
    }  
    // assign longestStrLength to the greater numerical value(longestStrLength  
    // or stringSet)  
    longestStrLength = Math.max(  
      longestStrLength,  
      stringSet.size  
    );  
    // use the spread operator to copy/convert the set to the new array
```

```

        newArray = [...stringSet]
        return longestStrLength + " and " + newArray.join("");
    }
    }else {
        // the string is blank
        return 0;
    }
};

// TESTING THE FUNCTION
console.log(lengthOfLongestSubstring("abcabcbb")); // 3 and abc
console.log(lengthOfLongestSubstring("bbbbbb")); // 1 and b
console.log(lengthOfLongestSubstring("pwwkew")); // 2 and pw
console.log(lengthOfLongestSubstring("lokmmmmhy")); // 4 and lokm
console.log(lengthOfLongestSubstring("fudrrweqtn")); // 4 and fudr
console.log(lengthOfLongestSubstring("")); // 0

```