

Java Program to find longest substring without repeating characters in a string.

```
packagefriday;
importjava.util.LinkedHashMap;
publicclassMainClass
{
    staticvoidlongestSubstring(String inputString)
    {
        //Convert inputString to charArray
        char[] charArray = inputString.toCharArray();
        //Initialization
        String longestSubstring = null;

        intlongestSubStringLength = 0;

        //Creating LinkedHashMap with characters as keys and their position as values.

        LinkedHashMap<Character, Integer>charPosMap = newLinkedHashMap<Character,
        Integer>();

        //Iterating through charArray

        for (inti = 0; i<charArray.length; i++)
        {
            charch = charArray[i];

            //If ch is not present in charPosMap, adding ch into charPosMap along with its
            position

            if(!charPosMap.containsKey(ch))
            {
                charPosMap.put(ch, i);
            }

            //If ch is already present in charPosMap, repositioning the cursor i to the position
            of ch and clearing the charPosMap

            else
            {
                i = charPosMap.get(ch);
                charPosMap.clear();
            }

            //Updating longestSubstring and longestSubStringLength

            if(charPosMap.size() >longestSubStringLength)
            {
                longestSubStringLength = charPosMap.size();

                longestSubstring = charPosMap.keySet().toString();
            }
        }

        System.out.println("Input String : "+inputString);

        System.out.println("The longest substring : "+longestSubstring);

        System.out.println("The longest Substring Length : "+longestSubStringLength);
    }

    publicstaticvoid main(String[] args)
    {
        LongestSubstring("javaconceptoftheday");
    }
}
```

```
System.out.println("=====");  
  
LongestSubstring("thelongestsubstring");  
    }  
}
```

OUTPUT:

```
Console 11  
-terminated- MainClass [Java Application] C:\Program Files\Java\jre1.8.0_221\bin\javaw.exe (29-May-2020, 4:14:36 PM)  
Input String : javaconceptsoftheday  
The longest substring : {o, p, t, h, e, d, a, y}  
The longest Substring Length : 8  
=====  
Input String : thelongestsubstring  
The longest substring : {u, b, s, t, r, i, n, g}  
The longest Substring Length : 8
```