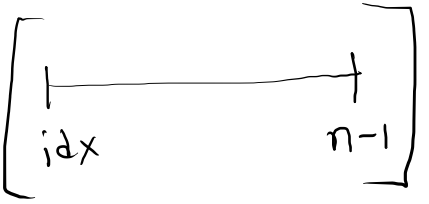
sub-string.

s → a b c d

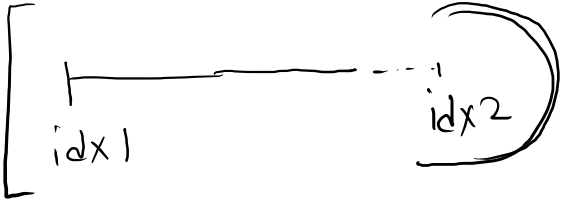
abc ✓

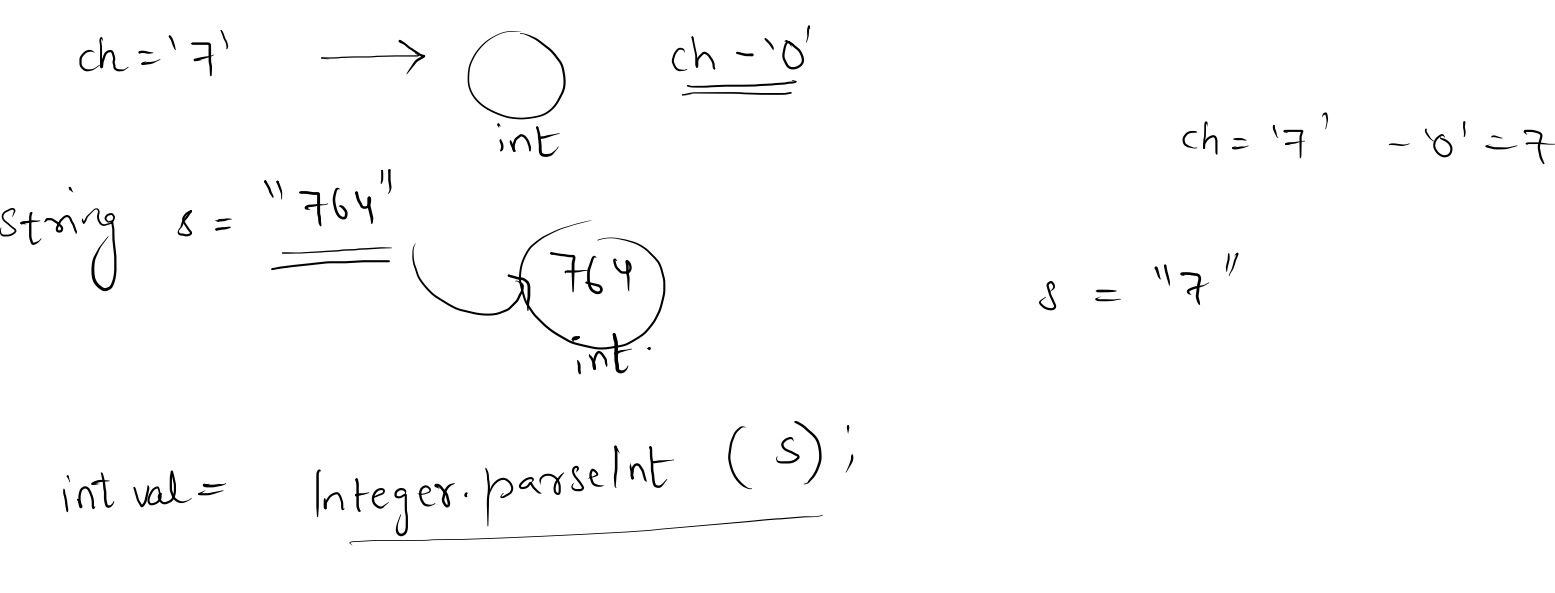
acd X

substring (idx)



substring (idx1, idx2)





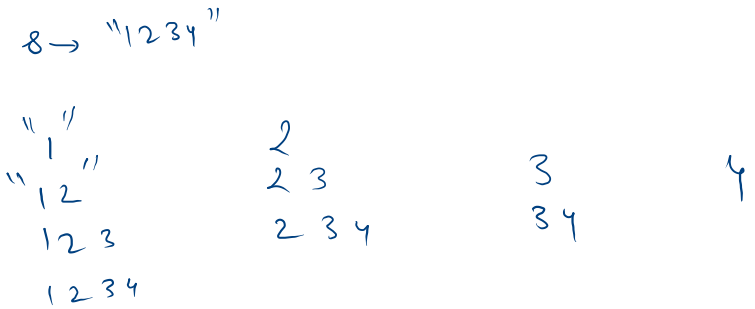

```java
public class Main
{
    public static void main(String[] args) {
        String s = "764";
        int val = Integer.parseInt(s);  //764

        //774

        System.out.println(val + 10);
    }
}
```

Sum of All Substrings

Take a **String str** as input and print the **sum** of all **substrings** of a string representing a **number**.

Eg: str="**1234**"

Sum = 1 + 2 + 3 + 4 + 12 + 23 + 34 + 123 + 234 + 1234 = **1670**




```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String s = scn.next();
        int ans = 0;
        for(int i = 0; i < s.length(); i++){
            for(int j = i; j < s.length(); j++){
                ans += Integer.parseInt(s.substring(i, j+1));
            }
        }
        System.out.println(ans);
    }
}
```

Desired String

Take a **string** as input. Print the **count** of all the **substrings** that start with **'A'** and end with **'A'**. Also print the **length** of the **longest** such substring in the **second line**. In the **third line**, print that **longest substring**.

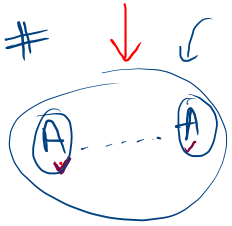
If no such substring exists, print **-1**.

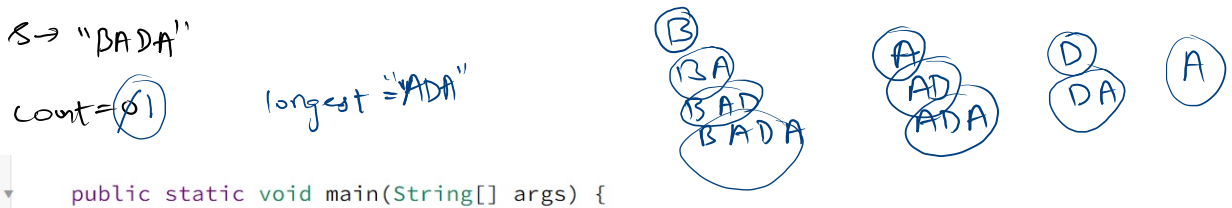
Sample Input 0

```
ABADA
```

Sample Output 0

```
3
5
ABADA
```






```java

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String s = scn.next();
        int count = 0;  //A.....A
        String longest = "";
        for(int i = 0; i < s.length(); i++){
            for(int j = i; j < s.length(); j++){
                String ss = s.substring(i, j+1);
                if(ss.length() > 1 && ss.charAt(0) == 'A' && ss.charAt(ss.length()-1) == 'A'){
                    count++;

                    if(ss.length() > longest.length()){
                        longest = ss;
                    }
                }
            }
        }
        if(count == 0){
            System.out.println(-1);
        }else{
            System.out.println(count);
            System.out.println(longest.length());
            System.out.println(longest);
        }

```

Power of a String

Take a **String str** as input and calculate the **Power** of the string.

Power of a string is defined as the **maximum length** of **substring** that contains only one **unique** character.

A **substring** is a continuous sequence of characters within a string.

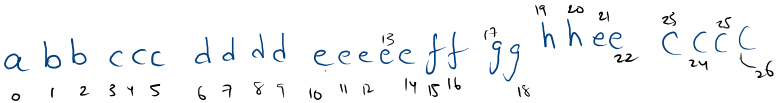
Note: All characters in the string are in **lowercase**.

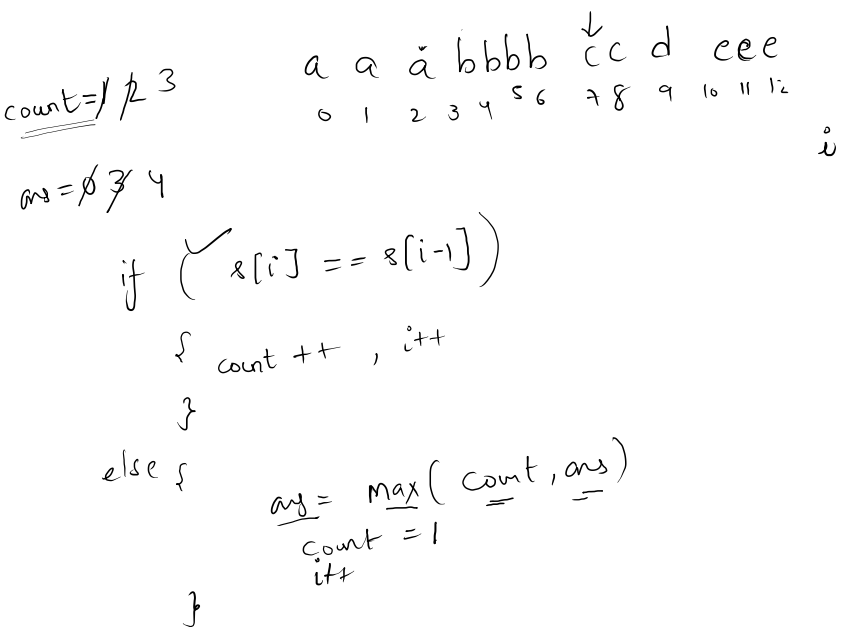
Sample Input 0

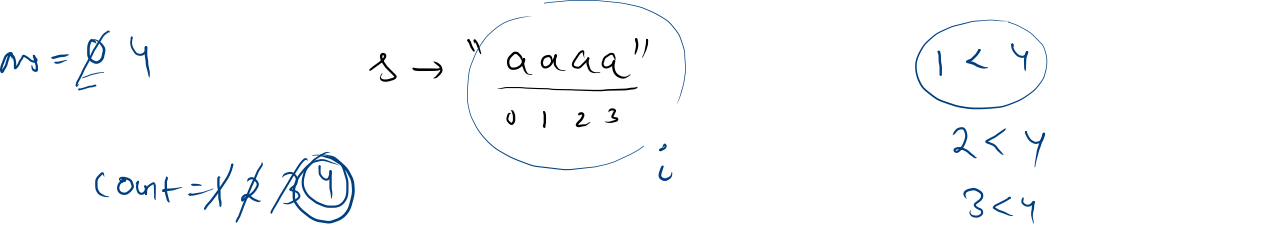
```
abbcccddddeeeeeffgghheecccc
```

Sample Output 0

```
5
```





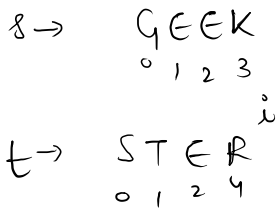



```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String s = scn.next();
        int count = 1;
        int ans = 0;
        int idx = 1;
        while(idx < s.length()){
            if(s.charAt(idx) == s.charAt(idx-1)){
                count++;
            }else{
                ans = Math.max(count, ans);
                count = 1;
            }
            idx++;
        }
        System.out.println(ans);
    }
}
```

Language: Java 8

```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String s = scn.next();
        int count = 1;
        int ans = 0;
        int idx = 1;
        while(idx < s.length()){
            if(s.charAt(idx) == s.charAt(idx-1)){
                count++;
            }else{
                ans = Math.max(count, ans);
                count = 1;
            }
            idx++;
        }
      # ans = Math.max(count, ans);
        System.out.println(ans);
    }
}
```

Merge String Alternatively



Sample Input 0

```
GEEK
STER
```

Sample Output 0

```
GSETEEKR
```

u → "GSETEEKR"

s → "GAME"
0 1 2 3
t → "PLAN"

```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String s = scn.next();
        String t = scn.next();

        String ans = "";
        for(int i = 0; i < s.length(); i++){
            ans += s.charAt(i);
            ans += t.charAt(i);
        }
        System.out.println(ans);
    }
}
```

ans = GPALMAEN

i = 0 → 0 < 4
1 → 1 < 4
2 → 2 < 4
3 → 3 < 4
4 → 4 < 4 ✗