

Logics in string-based problems

- 1.) `Character.toLowerCase()`-To change the character from uppercase to lowercase
- 2.) `Character.toUpperCase()`-To change the character from lowercase to uppercase
- 3.) `str.length()`-To get the length of the string
- 4.) `str.equals(str1)`-To check whether the two strings are equal or not
- 5.) `str.charAt(i)`-To get a character from a string i.e, “i” represents the index value

Example:

```
String input1="MADam";
String str="";
String str1="";
for(int i=0;i<input1.length();i++){
    str=str+(Character.toLowerCase(input1.charAt(i)));
}
for(int i=str.length()-1;i>=0;i--){
    str1=str1+(str.charAt(i));
}
if(str.equals(str1)){
    System.out.println(2);
}
else{
    System.out.println(1);
}
```

- 6.) `input1.split(" ")`-To split the words from a sentence,by using some delimiters like space,-,etc.,

Example:

```
String input1="Wipro tech";
String arr[]=input1.split(" ");
```

- 7.) `Character.isLowerCase()`-To check whether the given character is in lowercase
- 8.) `Character.isUpperCase()`-To check whether the given character is in uppercase

Example:

```
Char ch='a';

if(Character.isUpperCase(ch){

    value2+=Character.toLowerCase(ch);
}
else{

    value2+=Character.toUpperCase(ch);
}
```

- 9.) `Character.getNumericValue()`-To get the digit character as an integer from the string, instead of getting as a character

Example:

```
String input1="123456732128989";
int a=Character.getNumericValue(input1.charAt(i));
```

- 10.)Ascii value for a-z: 97-122

11.)Ascii value for A-Z: 65-90

12.)Ascii value for 0-9: 48-57

Logics in number-based problems

- 1.) `input1%10`-To get a unit digit of a number
- 2.) `(input1%100)/10`-To get a tenth digit of a number
- 3.) `(input1%1000)/100`-To get a hundredth digit of a number
- 4.) `(input1/1000)`-To get a thousandth digit of a number
- 5.) `Math.abs()`-To get an absolute value while performing difference

Example:

```
int d1=-12;  
System.out.println(Math.abs(d1));
```

Output:

12

Converting integer to string and vice-versa:

Int to string:

`Integer.toString(val)` or `String.valueOf(val)`

String to int:

`Integer.parseInt(str)` or `Integer.valueOf(str)`

Converting integer to character and vice-versa:

Int to character:

`int a=65;`

`char ch=(char)a;`

Character to int:

`Char ch='a'`

`int val=ch; //it holds a ascii value of 'a'`