

Assignment NO- 1

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Roll NO - TECOD453 (D3)

Aim: Write a JAVA / C++ / Python program that contains a string (char pointer) with a value 'Hello world'. The program should contain AND, OR, XOR each character in this string with 127 and display result.

Theory -

a) String - The string is one-dimensional array of characters terminated by a null. Each & every character in the array consumes one byte of memory, and last character is always null which is always used to identify how string ends. String declaration is always done by -

1. By string literal
2. By char array

Operations:

a) AND operation - The binary and AND will produce a 1 O/P only when both inputs are 1. Else it produces an 0 O/P

A	B	$A \cap B$
0	0	0
0	1	0
1	0	0
1	1	1

by XOR operation - The binary XOR operation will always produce a 1 O/P will inputs are different and 0 when both are same

Input		Output
X	Y	
0	0	0
1	0	1
0	1	1
1	1	0

Conclusion - we performed AND, OR, XOR operations on string = "Hello world"

Main.java



Run

Output

```
2 // Use this editor to write, compile and run your Java code online
3
4 class HelloWorld {
5     public static void main(String args[])
6     {
7         String input="Hello World";
8
9         System.out.print("Hello World characters' AND operation with 127 "
10             );
11         for(int i=0;i<input.length();i++)
12         {
13             int res=(input.charAt(i))&127;
14             System.out.print(Character.toString(res)) ;
15         }
16
17         System.out.println();
18
19         System.out.print("Hello World characters' XOR operation with 127 "
20             );
21         for(int i=0;i<input.length();i++)
22         {
23             int res=(input.charAt(i))^127;
24             System.out.print(Character.toString(res)) ;
25         }
26     }
27 }
```

```
java -cp /tmp/EwXVHUWdJ1 HelloWorld
Hello World characters' AND operation with 127 Hello World
Hello World characters' XOR operation with 127 7....._(.
..|
```