

Toggle the character (03rd June)

Problem

Submissions

Leaderboard

Discussions

Take in a character as an input from the user a. If the entered character is a small-case character, then convert it into the corresponding uppercase character and print it. b. If the entered character is an upper-case character, ~~then~~ convert it into the corresponding lowercase character and print it.

Input Format

For each test case, you will get an alphabet as a character input.

Constraints

The alphabet that is taken as input is only small-case or capital-case.

Output Format

You have to print the output as a character data-type.

Scanner scnr = new s

char ch = scnr.nextLine().charAt(0);

$$\rightarrow \text{ch} \rightarrow a - z \rightarrow A - Z$$

$$\text{ch} = 'a' \rightarrow 'A'$$

$$\rightarrow \text{ch} \rightarrow A - Z \rightarrow a - z$$

$$\text{ch} = 'D' \rightarrow 'd'$$

Sample Input 0

a

Sample Output 0

A

① Identify the given character is a smaller case or capital case.

if ($ch >= 'a'$ & $ch <= 'z'$)

$a-z | A-Z)$

{
smaller case;
}
else {

}
capital case
3

* Note:- When we are performing arithmetic operation on character, at that time, character convert itself into its equivalent ASCII value.

② Convert the character from

lower case - upper case and vice-versa.

smaller case

(a) $ch = 'd'$

$ch = ch - 'a'$

$= 100 - 97$

$= 3$

(b) $ch = \frac{ch - 'a' + 'A'}{3 + 65}$

$= 3 + 65$

$= 68$

$ch = (\text{char})(68)$

4 D

capital case

(a) $ch = 'D'$

$ch = ch - 'A' \rightarrow 65$

↓

$68 - 65 = 3$

(b) $ch = \frac{ch - 'A' + 'a'}{3 + 97}$

$ch = 3 + 97$

$= 100 \rightarrow \text{type cast.}$

$ch = (\text{char})(100) \Rightarrow D$

Formula -

(1)

smaller to capital

$$ch = (\text{char}) (ch - 'a' + 'A')$$

(2)

capital to smaller -

$$ch = (\text{char}) (ch - 'A' + 'a')$$

A	→	'65'
B	→	'66'
C	→	'67'
D	→	'68'

'a'	→	97
'b'	→	98
'c'	→	99
'd'	→	100

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

public class Solution {

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print ou
        Scanner scn = new Scanner(System.in);
        char ch = scn.nextLine().charAt(0);

        if(ch >= 'a' && ch <='z'){
            ch = (char)(ch -'a' + 'A');
        }else{
            ch = (char)(ch-'A'+'a');
        }

        System.out.println(ch);
    }
}
```

Loops: → is a feature which facilitates the execution of a set of instructions / functions repeatedly while some condition evaluates to true .

↳ (a) for loop.

^h(3) while loop.

↳ (c) do-while loop.

"(d) for-each loop.

四

Q → Point 1000 steps

→ repetitive task

for loop

syntax:-

for (initialization part; testing condition; increment/decrement) {

_____ logic

3

+1, -1

inc/dec :-

$i = 1$ | post inc
 $i++$ | pre inc
 $i = 1$ | post dec
 $i--$ | pre dec

testing cond "

$i < 200$

\Rightarrow If, we are not writing "stoping cond", then its runs for infinite no. of times

$i = 201$

$201 < 2 \text{ (S)}$

$i = 4 \Rightarrow i = i + y$

$i = 4 \Rightarrow i = i - y$

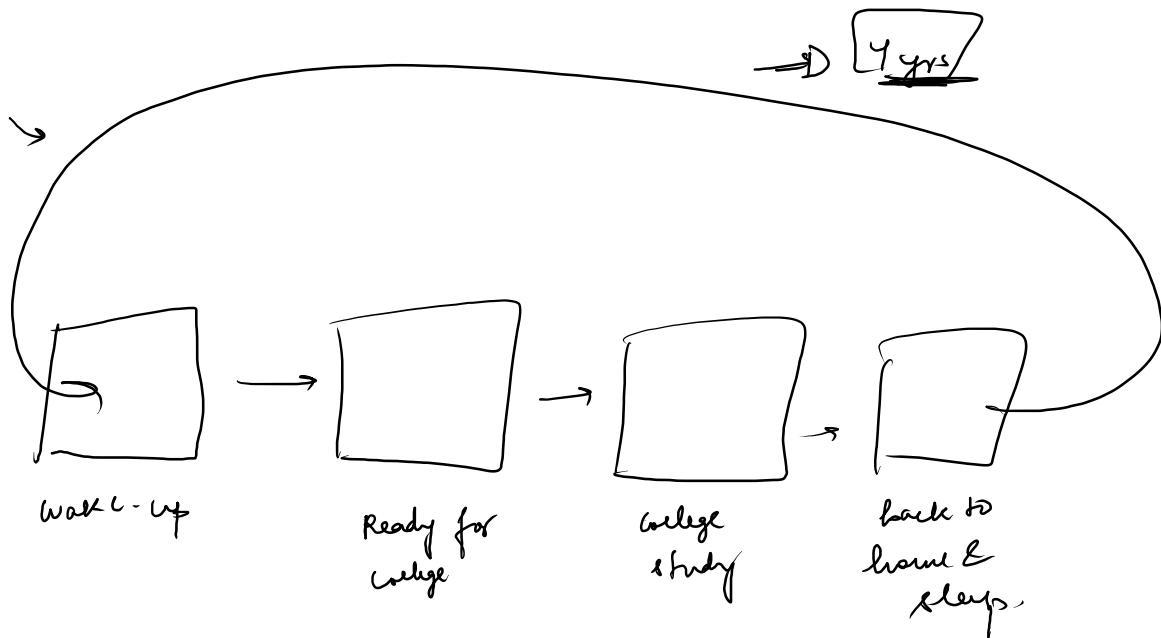
initialization part:-

$i = 0 / i = 5 ; i = 100$

Q →

Print 1000 stars.

```
for ( int i=1; i <= 1000; i++ ) {  
    System.out.println("*");  
}
```



```
for(int i=1;i<=10;i++){  
    System.out.println("*");  
}
```

$i = 1 \leq 10$ (T)

$i = 2 \leq 10$ (T)

$i = 3 \leq 10$ (T)

$i = 4 \leq 10$ (T)

$i = 5 \leq 10$ (T)

$i = 6 \leq 10$ (T)

$i = 7 \leq 10$ (T)

$i = 8 \leq 10$ (T)

$i = 9 \leq 10$ (T)

$i = 10 \leq 10$ (T)

$i = 11 \leq 10$ (F)

*
*
*
*
*
*
*
*
*
*

→ Do dry run
→ Coding } → 10 min

Print * using loops (04th June)

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

public class Solution {

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();

        for(int i=1;i<=n;i++){
            System.out.println("*");
        }
    }
}
```

Count Digits (04th June)

Problem

Submissions

Leaderboard

Discussions

1. You've to count the number of digits in a number.

2. Take as input "n", the number for which the digits has to be counted.

3. Print the digits in that number.

num = scnr.nextInt();

438
↓
→ count = 1

438
↓
→ count = 2

48
↓
→ count = 3

4
↓
→ count = 4

num = 438
= 4 digits

= 4

num = 5355456
= 7

Sample Input 0

4383

Sample Output 0

4

repeat

for loop

5355456
↓ → 1
535545
↓ → 2
53554
↓ → 3
5354
↓ → 4
534
↓ → 5
53
↓ → 6
5
↓ → 7
1 → 7
0

answer
stopping condition when num becomes zero

μεμ =

535547

num =

53 554

2 4 6
5355

men =

$$\text{num} = 3 \quad 535$$

9 ↙ ↓

num 53

A hand-drawn diagram illustrating a magnetic dipole moment vector. A vertical rectangle labeled '6' contains a horizontal arrow pointing downwards, representing a magnetic dipole moment vector. This vector originates from a circular loop with a central hole, which has a small circle labeled '0' inside it. The label 'mum' is written twice on the left side of the rectangle.

$$5 \ 3 \ 5 \overline{5} \quad \begin{array}{l} 4 \\ \hline 7 \end{array} \rightarrow | \ 10$$

53584

$$535 \overline{)542} \begin{matrix} 1 \\ 1 \end{matrix}$$

$$\begin{array}{r} \overline{5} \ 3 \overline{5} \ 5 \ 4 \\ \underline{-} \ 5 \ 3 \overline{5} \ 5 \ 4 \\ \hline 50 \end{array}$$

35
30

$$\begin{array}{r} 54 \\ \times 50 \\ \hline 2700 \end{array}$$

0 / 10

355470)
4
7

```

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

public class Solution {

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN
        Scanner scn = new Scanner(System.in);
        int num = scn.nextInt();
        int count = 0;

        for(int i=num ; i>0 ; i/=10){
            count +=1;
        }
        System.out.println(count);
    }
}

```

10) $\frac{0}{4}$

$\downarrow \downarrow \downarrow$
 $\rightarrow \text{num} = 4358$
 $\rightarrow \text{count} = 012\cancel{3}4$

~~000~~ $\rightarrow 4$

$i = 4358 > 0 \quad (T)$
 $i = 435 > 0 \quad (T)$
 $i = 43 > 0 \quad (T)$
 $i = 4 > 0 \quad (T)$
 $i = 0 > 0 \quad (F)$

