

# Male or Female

+ 5% > above  
to sit into MCQ

class work

• next().charAt(0)

Problem

Submissions

Leaderboard

Discussions

ch - input

Take in a character as a character input from the user and print "You are a male" if 'M' or 'm' is taken as input. And print "You are a female" if 'F' or 'f' is taken as input. And if some other character is taken as an input, then print "Type again".

if (ch == 'M' || ch == 'm') print

else if (ch == 'F' || ch == 'f') print

else

```
Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(ch == 'M' || ch == 'm'){
    System.out.println("You are a male");
} else if(ch == 'F' || ch == 'f'){
    System.out.println("You are a female");
} else{
    System.out.println("Type again");
}
```

else

# Jump three character to right.

Problem

Submissions

Leaderboard

Discussions

Sample Input 0

a → input

Sample Output 0

d

Sample Input 1

x

Sample Output 1

Can't jump

Take in a character as an input and manipulate it as given under

(char) (char+3)

↑ typescasting  $97 + 3 = 100$

if ( $ch \geq 'a'$  ||  $ch \leq 'w'$ )

ch = ch + 3

(char) →

i. Condition 1: If the entered character is a small-case character, then

A. If the character is from character 'a' and till the character 'w', both 'a' and 'w' included, then jump three times and print the resulting character as explained in the example below, For eg. If 'a' is given then print 'd', If 'b' is given then print the character 'e', If 'c' is given then print the character 'f', If 'w' is given then print the character 'z'

B. Else print the string "Can't jump"

ii. Condition 2: If the entered character is not a small case character, then print the string "Not a small case"

# ASCII Table

Code Char	Code Char	Code Char	Code Char
0 NUL (null)	32 SPACE	64 @	96 `
1 SOH (start of heading)	33 !	65 A	97 a
2 STX (start of text)	34 "	66 B	98 b
3 ETX (end of text)	35 #	67 C	99 c
4 EOT (end of transmission)	36 \$	68 D	100 d
5 ENQ (enquiry)	37 %	69 E	101 e
6 ACK (acknowledge)	38 &	70 F	102 f
7 BEL (bell)	39 '	71 G	103 g
8 BS (backspace)	40 (	72 H	104 h
9 TAB (horizontal tab)	41 )	73 I	105 i
10 LF (NL line feed, new line)	42 *	74 J	106 j
11 VT (vertical tab)	43 +	75 K	107 k
12 FF (NP form feed, new page)	44 ,	76 L	108 l
13 CR (carriage return)	45 -	77 M	109 m
14 SO (shift out)	46 .	78 N	110 n
15 SI (shift in)	47 /	79 O	111 o
16 DLE (data link escape)	48 0	80 P	112 p
17 DC1 (device control 1)	49 1	81 Q	113 q
18 DC2 (device control 2)	50 2	82 R	114 r
19 DC3 (device control 3)	51 3	83 S	115 s
20 DC4 (device control 4)	52 4	84 T	116 t
21 NAK (negative acknowledge)	53 5	85 U	117 u
22 SYN (synchronous idle)	54 6	86 V	118 v
23 ETB (end of trans. block)	55 7	87 W	119 w
24 CAN (cancel)	56 8	88 X	120 x
25 EM (end of medium)	57 9	89 Y	121 y
26 SUB (substitute)	58 :	90 Z	122 z
27 ESC (escape)	59 ;	91 [	123 {
28 FS (file separator)	60 <	92 \	124
29 GS (group separator)	61 =	93 ]	125 }
30 RS (record separator)	62 >	94 ^	126 ~
31 US (unit separator)	63 ?	95 _	127 DEL

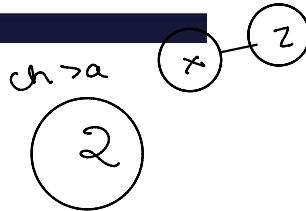
'a'  
 char ch ← input  
 if (ch > 'a' && ch ≤ 'z')  
 {  
 if (ch ≥ 'a' && ch ≤ 'w')  
 {  
 char ans = (char) (ch + 3)  
 print (ans)  
 } else → can't jump  
 = 100  
 } else →  
 print → Not a small case

$$a \rightarrow d \\ b \rightarrow e \\ c \rightarrow f \\ w \rightarrow z \\ x \rightarrow$$

$$\frac{a}{a} + 3 = 97 + 3 \\ = 100$$

(char)

$$d \downarrow \\ \underline{\text{ans} = ch + 3}$$

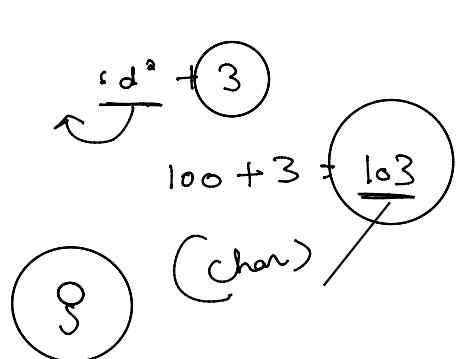


char

$$\frac{d}{d} + 3$$

$$100 + 3 = \underline{103}$$

9  
 (char)



```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0); → 'A'
if(ch>='a' && ch<='z'){
    if(ch>='a' && ch<='w'){
        char ans = (char)(ch+3);
        System.out.println(ans);
    }else{
        System.out.println("Can't jump");
    }
}else{
    System.out.println("Not a small case");
}

```

*Annotations:*

- Yellow oval around `scn.next()` with arrow pointing to `'A'`.
- Blue ovals around `ch >= 'a'`, `ch <= 'z'`, and `ch >= 'a'`, `ch <= 'w'`.
- Blue oval around `ans = (char)(ch+3)` with arrow pointing to `'a' + 3`. A note "typecasting" is written near this.
- Red oval around `System.out.println("Not a small case")`.

Sample Input 0	Sample Input 1
a	x
Sample Output 0	Sample Output 1
d	Can't jump ✓
Sample Input 2	Sample Output 2
A	✓ Not a small case

```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(Character.isLowerCase(ch)){
    if(ch>='a' && ch<='w'){
        char ans = (char)(ch+3);
        System.out.println(ans);
    }else{
        System.out.println("Can't jump");
    }
}else{
    System.out.println("Not a small case");
}

```

## Small Capital or Digit

Problem      Submissions      Leaderboard

Take in a character as an input and then

- Print "Small case" if it is a small case character.
- Print "Capital case" if it is a capital case character.
- Print "Digit" if it is a digit.
- Print "None" if none of the above conditions follow.

$ch \leftarrow \text{input}$

if *inbuilt Method* `Character.isLowerCase(ch);` logical  
*UpperCase*       $ch > 'A' \& ch \leq 'Z'$   
 $ch > 'a' \& ch \leq 'z'$   
 $ch \geq '1' \& ch \leq '9'$

```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(Character.isLowerCase(ch)){
    System.out.println("Small case");
}else if(Character.isUpperCase(ch)){
    System.out.println("Capital case");
}else if(Character.isDigit(ch)){
    System.out.println("Digit");
}else{
    System.out.println("None");
}

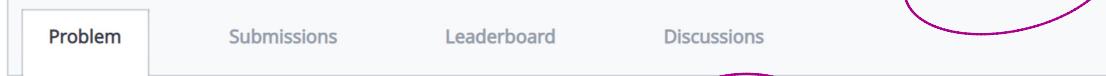
```

```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(ch>='a' && ch<='z'){
    System.out.println("Small case");
}else if(ch>='A' && ch<='Z'){
    System.out.println("Capital case");
}else if(ch>='0' && ch<='9'){
    System.out.println("Digit");
}else{
    System.out.println("None");
}

```

## Add if a digit



Take in a character as an input from the user

a. If the entered character is a digit, then add 100 to the value of the digit entered and print the final answer.

Convert the digit which is added as a character data-type into the integer data-type using two ways,

First: By using [Use the in-built function Character.getNumericValue]

Second using: By manipulating the digit character data-type into the integer data-type.  $ch - '0'$

b. Else print "This is not a digit"



char → int + 100

ch → input  
if (Character.isDigit(ch))  
{     int ans = Character.getNumericValue(ch);  
       print(ans + 100);  
    }  
    else → cc

ch > '0' & ch ≤ '9'

```

    print (ans+100) >
else → ''
    >>

```

```

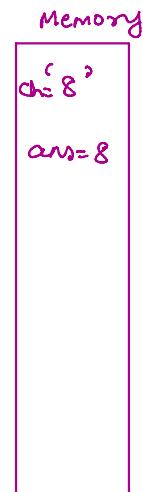
int ans = ch - '0';
print (ans+100)
'0' → '9'

```

```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0); →
if(Character.isDigit(ch)){ ✓ yes
    int ans = Character.getNumericValue(ch);
    System.out.println(ans + 100);
} else{
    System.out.println("This is not a digit");
}

```



```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(ch>='0' && ch<='9'){
    int ans = Character.getNumericValue(ch);
    System.out.println(ans + 100);
} else{
    System.out.println("This is not a digit");
}

```

```

Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0); → '7'
if(ch>='0' && ch<='9'){
    int ans = ch - '0'; → 55 - 48 = 7
    System.out.println(ans + 100);
} else{
    System.out.println("This is not a digit");
}

```

$$ans = 7$$

# Toggle the character

is Lower Case → to Lower Case  
is Uppercase → toUpperCase

Problem

Submissions

Leaderboard

Discussions

Take in a character as an input from the user



a. If the entered character is a small-case character, convert it into the corresponding uppercase character and print it.

b. If the entered character is an upper-case character, convert it into the corresponding lowercase character and print it.

'a' → 'A'  
'B' → 'b'

10:30

ch → input  
if (lowercase)  
    print (uppercase)  
else

    print (toLowercase())

```
Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(Character.isLowerCase(ch)){
    System.out.println(Character.toUpperCase(ch));
} else{
    System.out.println(Character.toLowerCase(ch));
}
```

String length

8

> 4

9 10 3  
Geekster

8 = k

# Print character at 3rd index

Problem

Submissions

Leaderboard

Discussions

You will be given a string as an input, and

String = str = scn.nextLine();

a. If the length of the string is greater than or equal to 4, then print the character at 3rd index.

You will be given a string as an input, and

a. If the length of the string is greater than or equal to 4, then print the character at 3rd index.

b. Otherwise, print "Small string"

Eg. If the input string is "abcdef", then print d.

0 1 2 3 4 5  
a b c d e f  
  |  
  d

String = str = scn.nextLine();

if (str.length >= 4)  
Print  
char at str.charAt(3);

next() → "Geekster is awesome"  
nextLine() → ↑

```
Scanner scn = new Scanner(System.in);
String str = scn.nextLine();
if(str.length() >= 4){
    System.out.println(str.charAt(3));
} else{
    System.out.println("Small string");
}
```

## GKSTR02 Concatenate\_Two\_Strings

Problem

Submissions

Leaderboard

Discussions

Hello + Friends = HelloFriends

Take two strings as input by creating a Scanner object. Print the final string as output after concatenation.

str1 →  
str2 →  
System (str1 + str2);

next()  
nextLine()  
"Karthik Reddy"

```
Scanner scn = new Scanner(System.in);
String str1 = scn.nextLine();
String str2 = scn.nextLine();

System.out.println(str1 + str2);
```

string concatenate 2

str1 + str2 + str1  
length > Greater

## string concatenate 2

str1 + str2 + str1  
length > greater

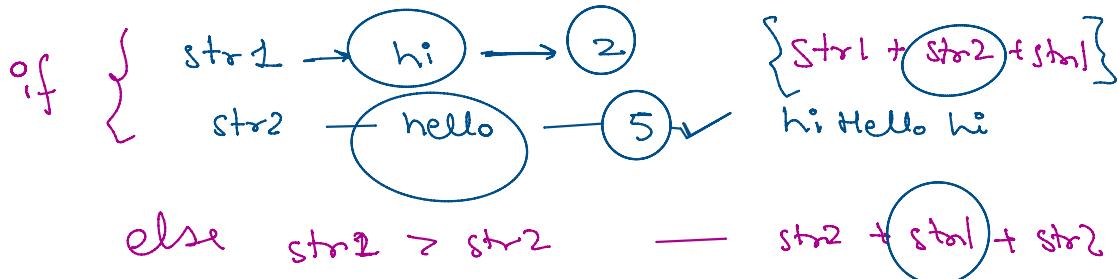
Problem

Submissions

Leaderboard

Discussions

Given 2 strings, a and b, return a string of the form short+long+short, with the shorter string on the outside and the longer string on the inside. The strings will not be the same length, but they may be empty (length 0).  
comboString("Hello", "hi") → "hiHellohi" comboString("hi", "Hello") → "hiHellohi" comboString("aaa", "b") → "baaab"



str1 → hi 2  
str2 → hello 5 — middle

↳ hi hello hi

str1 → hello 5  
str2 → bye

bye hello bye

```
Scanner scn = new Scanner(System.in);  
String a = scn.nextLine(); → hello  
String b = scn.nextLine(); → hi  
if(a.length() > b.length())  
    System.out.println(b+a+b);  
}else{  
    System.out.println(a+b+a);  
}
```

Sample Input 1

```
hello  
hi
```

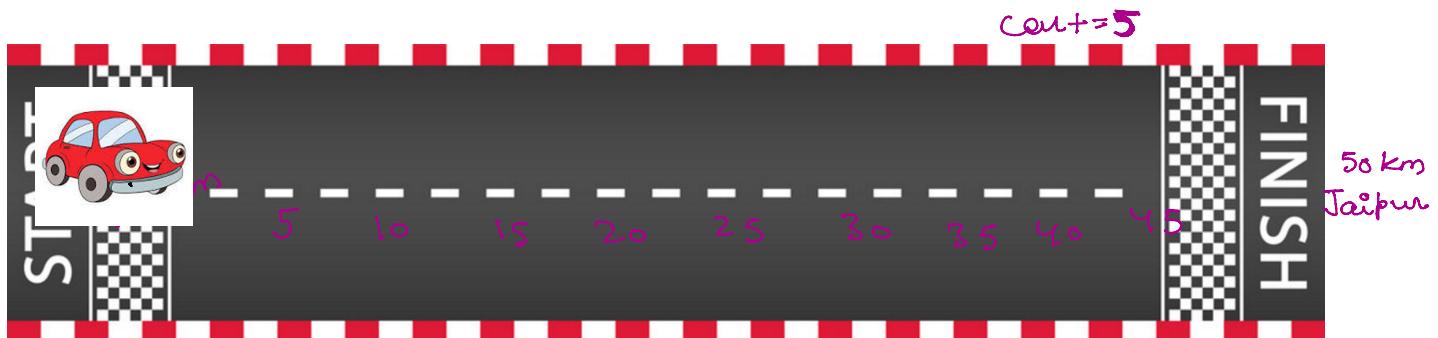
Sample Output 1

```
hihellohi
```

# # Loops in programming

- I will not do it again

↳ 1000

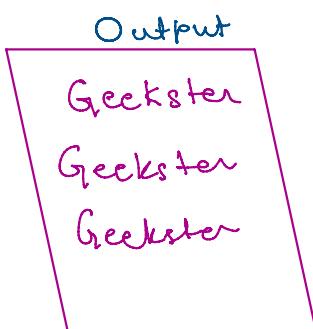
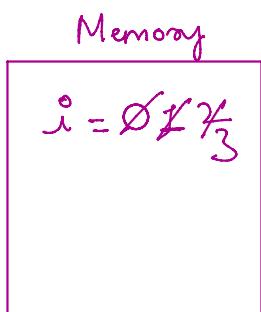


Syntax → for loops

```
for(initialization; test condition; update)
```

for(int car = 0;  
car <= 50; car += 5) {  
 }  
 }

variable       $i \leq 3$   
 for(int i = 0 ; i < 3 ; i++) { ✓  
 System.out.println("Geekster");  
 }  
 $i++ \rightarrow$  Always incremented by 1



```

for(int i = 1 ; i <= 5 ; i++){
    System.out.print(i + " ");
}

```

1 2 3 4 5

~~# Infinite Loop~~

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

~~# Infinite Loop~~

Memory

i = 1 0 -1
------------------

→ true  
0, -1, -2, -3

## # Recap of for loop

- A for-loop is used to repeat a block of code.
- The loop always runs test cond<sup>n</sup> is true
- If test cond<sup>n</sup> never evaluates to false  
    ↳ infinite loops.

# GKSTR09 Print\_Range

$n \rightarrow \text{input}$

Problem

Submissions

Leaderboard

Given a number  $n$ , print all integers in *range 1 to n*.

You can assume that input is a positive integer

for ( $i=1$  ;  $i \leq n$  ;  $i++$ )  
    System.out.println( $i$ );

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt(); — 5, 100, 2000
for(int i = 1 ; i <= n ; i++){
    System.out.println(i);
}
```