BJP5 Self-Check 4.24: secondHalfLetters

Language/Type: Java char method basics String
Author: Marty Stepp (on 2019/09/19)

Write a method named `secondHalfLetters` that accepts a string as its parameter and returns an integer representing letters in the string come from the second half of the alphabet (that is, have values of `'n'` through `'z'` inclusive). Compa insensitively, such that uppercase values of `'N'` through `'Z'` also count. For example, the call `secondHalfLetters("ruminates")` should return 5 because the `'r'`, `'u'`, `'n'`, `'t'`, and `'s'` come from the secc alphabet. You may assume that every character in the string is a letter.

Type your solution here:

```
1  public int secondHalfLetters(String a){
2      int count = 0;
3      int amount = 0;
4
5      while (count < a.length()){
6          if (Character.toLowerCase(a.charAt(count)) >= 'n') {
7              amount ++;
8          }
9          count++;
10     }
11     return amount;
12 }
```

This is a **method problem.** Write a Java method as described. Do not write a complete program or class; just the method(s) above.

Submit

You passed 7 of 7 tests.

Go to the next problem: printTriangleTypePreconditions

test #1:	`secondHalfLetters("ruminates")`
return:	5
result:	pass
test #2:	`secondHalfLetters("mississippi")`
return:	6

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BJP5 Exercise 5.3: toBinary

Language/Type: Java binary numbers method basics mod while
Author: Leslie Ferguson (on 2019/09/19)

Write a method named `toBinary` that accepts an integer as a parameter and returns a string of that number's representation in binary. For example, the call of `toBinary(42)` should return `"101010"`.

Type your solution here:

```
1  public static String toBinary(int num){
2      String result = "";
3      String binary = "";
4
5      if (num == 0)
6          result = result + 0;
7
8      while (num != 0){
9          result = result + (num % 2);
10         num = num/2;
11     }
12
13     for (int i = result.length() - 1; i >= 0; i--){
14         binary = binary + result.charAt(i);
15     }
16
17     return binary;
18 }
```

This is a **method problem.** Write a Java method as described. Do not write a complete program or class; just the method(s) above.

4 Indent

Submit

Sound F/X
Highlighting

You passed 5 of 5 tests.

Go to the next problem: randomX

test #1:	`toBinary(44)`
return:	`"101100"`
result:	pass
test #2:	`toBinary(0)`

BJP5 Self-Check 5.1: whileLoops

Language/Type: Java basics while loops
Author: Will Beebe (on 2019/09/19)

For each of the following `while` loops, how many times will the loop execute its body? Remember tha
"unknown" are legal answers.

1.
```
int x = 1;
while (x < 100) {
    System.out.print(x + " ");
    x += 10;
}
```
2.
```
int max = 10;
while (max < 10) {
    System.out.println("count down: " + max);
    max--;
}
```
3.
```
int x = 250;
while (x % 3 != 0) {
    System.out.println(x);
}
```
4.
```
int x = 2;
while (x < 200) {
    System.out.print(x + " ");
     x *= x;
}
```
5.
```
String word = "a";
while (word.length() < 10) {
    word = "b" + word + "b";
}
System.out.println(word);
```
6.
```
int x = 100;
while (x > 0) {
    System.out.println(x / 10);
    x = x / 2;
}
```

1. 10
2. 0
3. infinity
4. 3
5. 5
6. 7

Submit

You passed 6 of 6 tests.

Go to the next problem: forToWhile

#	question	your answer	result
1	1.	10	pass

BJP5 Self-Check 5.3: whileLoopMystery1

Language/Type: Java basics mystery while loops
Author: Marty Stepp (on 2019/09/19)

Given the following method:

```
public static void mystery(int x) {
    int y = 1;
    int z = 0;
    while (2 * y <= x) {
        y = y * 2;
        z++;
    }
    System.out.println(y + " " + z);
}
```

Write the output of each of the following calls.

`mystery(1);`	`1 0`
`mystery(6);`	`4 2`
`mystery(19);`	`16 4`
`mystery(39);`	`32 5`
`mystery(74);`	`64 6`

Submit

You passed 5 of 5 tests.

Go to the next problem: whileLoopMystery2

#	question	your answer	result
1	`mystery(1);`	`1 0`	pass
2	`mystery(6);`	`4 2`	pass

BJP5 Self-Check 5.4: whileLoopMystery2

Language/Type: Java mystery while loops
Author: Leslie Ferguson (on 2019/09/19)

Given the following method:

```
public static void mystery(int x) {
    int y = 0;
    while (x % 2 == 0) {
        y++;
        x = x / 2;
    }
    System.out.println(x + " " + y);
}
```

Write the output of each of the following calls.

`mystery(19);`	`19 0`
`mystery(42);`	`21 1`
`mystery(48);`	`3 4`
`mystery(40);`	`5 3`
`mystery(64);`	`1 6`

Submit

You passed 5 of 5 tests.

Go to the next problem: randomRangeABCDE

#	question	your answer	result
1	`mystery(19);`	`19 0`	pass
2	`mystery(42);`	`21 1`	pass

BJP5 Exercise 5.18: digitSum

Language/Type: Java method basics mod
Author: Marty Stepp (on 2019/09/19)

Write a method named `digitSum` that accepts an integer as a parameter and returns the sum c
example, `digitSum(29107)` returns 2+9+1+0+7 or 19. For negative numbers, return the same
were positive. For example, `digitSum(-456)` returns 4+5+6 or 15.

Type your solution here:

```
1  public static int digitSum(int x){
2      x = Math.abs(x);
3      int sum = 0;
4
5      while (x > 0){
6          sum = sum + (x%10);
7          x = x/10;
8      }
9
10     return sum;
11 }
```

This is a **method problem.** Write a Java method as described. Do not write a complete program or class; just the metho

Submit

You passed 11 of 11 tests.

Go to the next problem: firstDigit

test #1: `digitSum(29107)`
return: 19
result: pass