



Mosh Hamedani

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October 22nd, 2018

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53 Python Exercises and Questions for Beginners

In this post, I'm going to list a bunch of Python exercises and questions for beginners. If you're starting out with Python, this post is a good way to test your knowledge and learn new things. You may also want to check out my [Python 3 Cheat Sheet](#).

NOTE: This post is a work in progress and I'll regularly add new questions to the list. So, be sure to come back for new coding exercises. If you enjoy this post, please spread the love by share it with others.

Let's get started!

Questions

Basics

1. What is an expression?

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2. What is a syntax error?
3. What is PEP8?
4. What does a linter do?
5. What is the result of this expression: `"*" * 10`
6. What is CPython?
7. How is CPython different from Jython?
8. How is CPython different from IronPython?

Primitive Types

1. What is a variable?
2. What are the primitive built-in types in Python?
3. When should we use `"""` (triple quotes) to define strings?
4. Assuming `(name = "John Smith")`, what does `name[1]` return?
5. What about `name[-2]`?
6. What about `name[1:-1]`?
7. How to get the length of `name`?
8. What are the escape sequences in Python?
9. What is the result of `f"{2+2}+{10%3}"`?
10. Given `(name = "john smith")`, what will `name.title()` return?
11. What does `name.strip()` do?
12. What will `name.find("Smith")` return?
13. What will be the value of `name` after we call `name.replace("j", "k")`?
14. How can we check to see if `name` contains `"John"`?
15. What are the 3 types of numbers in Python?

Control Flow

1. What is the difference between `10 / 3` and `10 // 3`?
2. What is the result of `10 ** 3`?
3. Given `(x = 1)`, what will be the value of `x` after we run `(x += 2)`?
4. How can we round a number?
5. What is the result of `float(1)`?
6. What is the result of `bool("False")`?
7. What are the falsy values in Python?
8. What is the result of `10 == "10"`?
9. What is the result of `"bag" > "apple"`?
10. What is the result of `not(True or False)`?
11. Under what circumstances does the expression `18 <= age < 65` evaluate to True?
12. What does `range(1, 10, 2)` return?
13. Name 3 iterable objects in Python.

Functions

1. What is the difference between a parameter and an argument?
2. All functions in Python by default return ...?
3. What are keyword arguments and when should we use them?
4. How can we make a parameter of a function optional?
5. What happens when we prefix a parameter with an asterisk (*)?
6. What about two asterisks (**)?
7. What is scope?
8. What is the difference between local and global variables?
9. What is using the `global` statement a bad practice?

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Coding Exercises

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1. Write a function that returns the maximum of two numbers.
2. Write a function called **fizz_buzz** that takes a number.
 1. If the number is divisible by 3, it should return "Fizz".
 2. If it is divisible by 5, it should return "Buzz".
 3. If it is divisible by both 3 and 5, it should return "FizzBuzz".
 4. Otherwise, it should return the same number.
3. Write a function for checking the speed of drivers. This function should have one parameter: speed.
 1. If speed is less than 70, it should print "Ok".
 2. Otherwise, for every 5km above the speed limit (70), it should give the driver one demerit point and print the total number of demerit points. For example, if the speed is 80, it should print: "Points: 2".
 3. If the driver gets more than 12 points, the function should print: "License suspended"
4. Write a function called **showNumbers** that takes a parameter called **limit**. It should print all the numbers between 0 and limit with a label to identify the even and odd numbers. For example, if the limit is 3, it should print:
 - 0 EVEN
 - 1 ODD
 - 2 EVEN
 - 3 ODD
5. Write a function that returns the sum of multiples of 3 and 5 between 0 and **limit** (parameter). For example, if limit is 20, it should return the sum of 3, 5, 6, 9, 10, 12, 15, 18, 20.
6. Write a function called **show_stars(rows)**. If **rows** is 5, it should print the following:
 - *
 - **
 - ***
 - ****
 - *****
7. Write a function that prints all the prime numbers between 0 and **limit** where limit is a parameter.

Want to learn all the Python skills you need? Check out my [Complete Python Course for Beginners](#).



Mosh

Hi! My name is Mosh Hamedani. Over the last three years, I've taught over 1M students how to code or how to become a better coder through my online courses and YouTube channel. I've been working as a software engineer for the past 18 years and I love to

share my knowledge with you. It's my mission to make coding accessible to everyone.



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19 responses to "53 Python Exercises and Questions for Beginners"



Manish says:

[October 23, 2018 at 6:16 pm](#)

Instead of Python 3 Cheat Sheet its spelled out Python 3 Chat Sheet in the hyperlink on 3rd line.

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[Coding and More](#) says:

[November 3, 2018 at 3:21 pm](#)

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[January 16, 2019 at 9:23 pm](#)

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[Cynthia Bakhita](#) says:

[February 15, 2019 at 10:05 pm](#)

Hey Mosh. Could you please provide the answers to the practical questions?

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[Vikas verma](#) says:

[March 10, 2019 at 12:59 pm](#)

This is the condition .no answer sheets provided by examiner u know!

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[Subhraneel Mazumder](#) says:

[March 21, 2019 at 5:28 am](#)

Do you want the answers to the Coding Exercises?

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[Nishath](#) says:

[February 19, 2019 at 8:22 am](#)

How should I enroll with this online course and get started to learn python..

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[Mosh](#) says:

[February 26, 2019 at 4:31 am](#)

Here's the link to the course:

<https://codewithmosh.com/p/python-programming-course-beginners>

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[abbas820abbass](#) says:

[February 25, 2019 at 5:41 am](#)

please provide the answer sheet

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[Shailesh](#) says:

[March 3, 2019 at 1:22 pm](#)

hey mosh your tutorials are awesome.... Can you please provide tutorials on Django ?

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[Michael Caefm](#) says:

[March 8, 2019 at 1:25 pm](#)

I want to check my answers. Please provide the answer sheet!

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Julián Varela says:

[March 8, 2019 at 7:33 pm](#)

I'm breaking my head with this exercise:

5. Write a function that returns the sum of multiples of 3 and 5 between 0 and limit (parameter). For example, if limit is 20, it should return the sum of 3, 5, 6, 9, 10, 12, 15, 18, 20.

I've wrote this code:

```
def sum_of_multiples(limit):  
    result = 0  
    limit += 1  
    for x in [3, 5]:  
        for y in range(1, limit):  
            if x*y <= limit:  
                result += x*y  
    return result
```

The problem is that I can't figure out how to eliminate the duplicates of the multiples of 3 and 5, like 15 or 30. Please help!

[Reply](#)



Julián Varela says:

[March 8, 2019 at 7:35 pm](#)

Sorry but the indentation disappears when I send the comment

[Reply](#)



Raghul Reerag says:

[March 17, 2019 at 6:31 am](#)

did you get the answer

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Rey Luke says:

[April 2, 2019 at 0:52 am](#)

[April 2, 2019 at 9:53 am](#)

after a month not sure have u solved.

```
def three_five_sum(limit):  
    result = 0  
    for number in range(limit):  
        if number % 3 == 0:  
            result += number  
        elif number % 5 == 0:  
            result += number  
    return result
```

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Dapo says:

[April 3, 2019 at 7:18 am](#)

```
def sum_multiples(limit=20):  
    l = []  
    limit+=1  
    for i in xrange(limit):  
        if(i%3 == 0 or i%5 == 0):  
            l.append(i)  
    print(l)  
  
sum_multiples()
```

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Mecandris says:

[March 9, 2019 at 1:33 pm](#)

Here is the code:

2. FizzBuzz

```
def FizzBuzz(number):  
    if number % 3 == 0 and number % 5 != 0:  
        return 'FizzBuzz'  
    elif number % 5 == 0:  
        return 'Buzz'  
    elif number % 3 == 0:  
        return 'Fizz'
```



```
else:
```

```
return number
```

```
number = int(input('>'))
```

```
drink = FizzBuzz(number)
```

```
print(drink)
```

3. Speed, License, Points

```
def lic_suspension (speed):
```

```
suspension_pt = 0
```

```
while suspension_pt != 12:
```

```
if speed = 12:
```

```
return 'License Suspended', suspension_pt
```

```
return "You're overspeeding and license may get revoked",
```

```
suspension_pt
```

```
speed = int(input('<'))
```

```
vel, msg = lic_suspension(speed)
```

```
print(vel)
```

```
print(f"You've incurred {msg} points")
```

4. ODD EVEN

```
def showNumbers(limit):
```

```
coll_1 = {}
```

```
for item in range(limit+1):
```

```
if int(item) % 2 == 0:
```

```
num = item
```

```
type = "EVEN"
```

```
coll_1.update({num:type})
```

```
# num = "EVEN"
```

```
else:
```

```
num = item
```

```
type = "ODD"
```

```
coll_1.update({num:type})
```

```
return coll_1
```

```
limit = int(input("<"))
```

```
type = showNumbers(limit)
```

```
print(type)
```

5. Sum of Multiples of 3 and 5

```
def multiples (limit):
```

```
sum = 0
```

```
if limit <= 2:
```

```
print("Sum is zero. \nPlease enter a non zero number, preferably  
greater than 3")
```

```
return sum
```

```
else:
```

```
for item in range(limit + 1):
```

```
if int(item) % 3 == 0 or int(item) % 5 == 0:
```

```
sum += int(item)
```

```
return sum
```

```
limit = int(input('<'))
```

```
total = multiples(limit)
```

```
print(f"Total sum of multiples of 3 and 5 till {limit} is {total}")
```

```
print('Total sum of multiples of 3 and 5 till 1000 is %d' % total)
```

6. Stargazing

```
def show_start(limit):
    for item in range(limit+1):
        gaze = ""
        for totem in range(item):
            gaze += 'x'
        print(gaze)
```

```
star = int(input("<"))
limit = show_start(star)
print("Isn't it a wonder?")
```

[Reply](#)



severi says:

[April 15, 2019 at 3:59 pm](#)

```
def buzzfizz(number):
    if number == 0:
        return number
    elif number / 3 == (round(number / 3)) and number / 5 ==
    (round(number / 5)):
        print("Buzzfizz")
    elif number / 3 == (round(number / 3)):
        print("Buzz")
    elif number / 5 == (round(number / 5)):
        print("Fizz")
    else:
        return number
```

```
print(buzzfizz(15))
```

why does this return answer and "none"

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