Python Questions and Answers – List Comprehension

« Prev   Next »

This set of Python Multiple Choice Questions & Answers (MCQs) focuses on "List Comprehension".

1. What will be the output of the following Python code snippet?
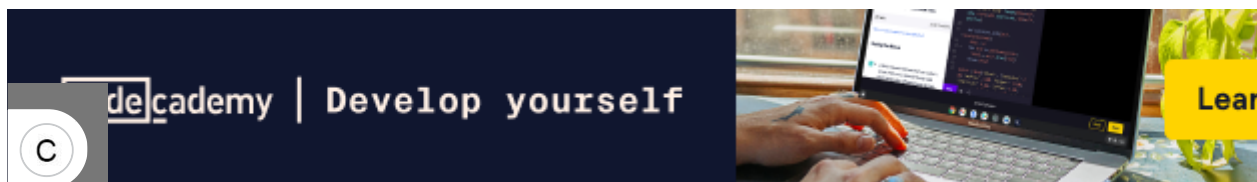
→ print (i) is executed if the given char

```
k = [print(i) for i in my_string if i not in "aeiou"]
```

is not a vowel.

a) prints all the vowels in my_string
b) prints all the consonants in my_string
c) prints all characters of my_string that aren't vowels
d) prints only on executing print(k)

C

View Answer

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2. What is the output of print(k) in the following Python code snippet?

```python
k = [print(i) for i in my_string if i not in "aeiou"]
print(k)
```

a) all characters of my_string that aren't vowels

B b) a list of Nones   *print ( ) returns None.*

c) list of Trues

d) list of Falses

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3. What will be the output of the following Python code snippet?

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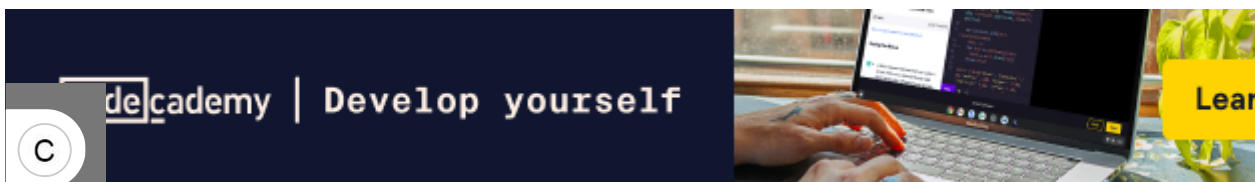
Q5.   → *(i)^** (+1)*

```python
x = [i**+1 for i in range(3)]; print(x);
```

A a) [0, 1, 2]

b) [1, 2, 5]

c) error, **+ is not a valid operator

d) error, ';' is not allowed

iterating over each letter

```python
my_string = "hello world"
k = [(i.upper(), len(i)) for i in my_string]
print(k)
```
in the string.

a) [('HELLO', 5), ('WORLD', 5)]

B b) [('H', 1), ('E', 1), ('L', 1), ('L', 1), ('O', 1), (' ', 1), ('W', 1), ('O', 1), ('R', 1), ('L', 1), ('D', 1)]

c) [('HELLO WORLD', 11)]

d) none of the mentioned

Q10.

10. Which of the following is the same as list(map(lambda x: x**-1, [1, 2, 3]))?
a) [x**-1 for x in [(1, 2, 3)]]
b) [1/x for x in [(1, 2, 3)]]
c) [1/x for x in (1, 2, 3)]
d) error

C

4. Which of the following is the correct expansion of list_1 = [expr(i) for i in list_0 if func(i)]?
a)

```
list_1 = []
for i in list_0:
    if func(i):
        list_1.append(i)
```

b)

```
for i in list_0:
    if func(i):
        list_1.append(expr(i))
```

C c)

create an empty list.

```
list_1 = []
for i in list_0:          → loop over the contents of the existing list
    if func(i):               Check if a condition is satisfied
        list_1.append(expr(i))    before performing operations
```

d) none of the mentioned

and adding it to the new list.

[View Answer]

5. What will be the output of the following Python code snippet?

```
x = [i**+1 for i in range(3)]; print(x);
```

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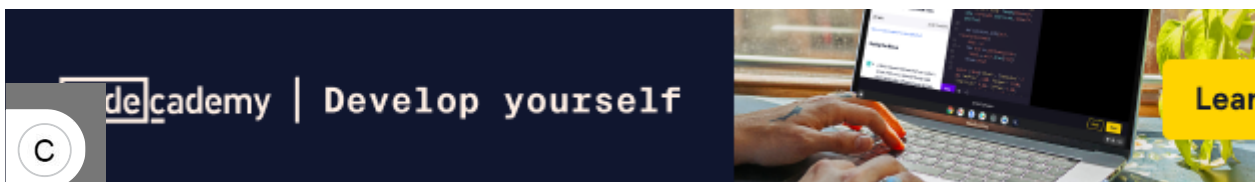
d) error, ';' is not allowed

View Answer

6. What will be the output of the following Python code snippet?

```python
print([i.lower() for i in "HELLO"])
```

↳ *iterating over each letter in the string*

A a) ['h', 'e', 'l', 'l', 'o']
b) 'hello'
c) ['hello']
d) hello

View Answer

7. What will be the output of the following Python code snippet?

```python
print([i+j for i in "abc" for j in "def"])
```

{ i : outer loop
{ j : inner loop

a) ['da', 'ea', 'fa', 'db', 'eb', 'fb', 'dc', 'ec', 'fc']
b) [['ad', 'bd', 'cd'], ['ae', 'be', 'ce'], ['af', 'bf', 'cf']]
c) [['da', 'db', 'dc'], ['ea', 'eb', 'ec'], ['fa', 'fb', 'fc']]
d) ['ad', 'ae', 'af', 'bd', 'be', 'bf', 'cd', 'ce', 'cf']

View Answer

8. What will be the output of the following Python code snippet?

```python
print([[i+j for i in "abc"] for j in "def"])
```

→ *the inner list is generated once for each value of j.*

a) ['da', 'ea', 'fa', 'db', 'eb', 'fb', 'dc', 'ec', 'fc']
B b) [['ad', 'bd', 'cd'], ['ae', 'be', 'ce'], ['af', 'bf', 'cf']]
c) [['da', 'db', 'dc'], ['ea', 'eb', 'ec'], ['fa', 'fb', 'fc']]
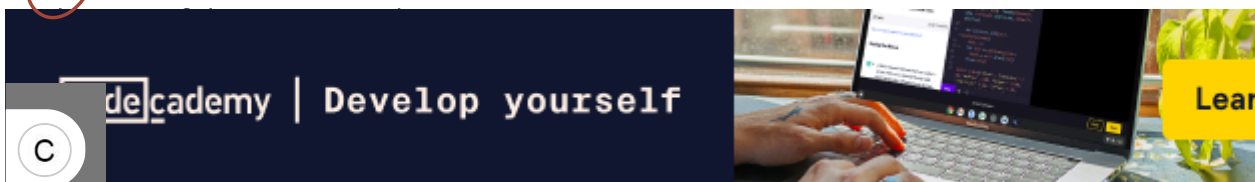d) ['ad', 'ae', 'af', 'bd', 'be', 'bf', 'cd', 'ce', 'cf']

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9. What will be the output of the following Python code snippet?

```python
print([if i%2==0: i; else: i+1; for i in range(4)])
```

→ *Syntax Error.*

i=0, 0   i=3 4
i=1   2
j=2   2

a) [0, 2, 2, 4]
b) [1, 1, 3, 3]
C c) error

Python Questions and Answers – List Comprehension – 1

« Prev
Next »

This set of Python Multiple Choice Questions & Answers (MCQs) focuses on "List Comprehension – 1".

1. What will be the output of the following Python code?

000 1   00 1 0   00 1 1   0 1 00   0 1 0 1

```
l=[1,2,3,4,5]
[x&1 for x in l]
```
⟶ AND-ed with 1

a) [1, 1, 1, 1, 1]
b) [1, 0, 1, 0, 1]
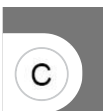c) [1, 0, 0, 0, 0]
d) [0, 1, 0, 1, 0]

View Answer

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2. What will be the output of the following Python code?

```
l1=[1,2,3]
l2=[4,5,6]
[x*y for x in l1 for y in l2]
```

→ returns x * y.
(x in l1, y in l2)

a) [4, 8, 12, 5, 10, 15, 6, 12, 18]
b) [4, 10, 18]
c) [4, 5, 6, 8, 10, 12, 12, 15, 18]
d) [18, 12, 6, 15, 10, 5, 12, 8, 4]

→ 顺序: 1×4. 1×5. 1×6
　　　　 2×4. 2×5. 2×6
　　　　 3×4. 3×5. 3×6.

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3. Write the list comprehension to pick out only negative integers from a given list 'l'.
a) [x<0 in l]
b) [x for x<0 in l]
c) [x in l for x<0]
d) [x for x in l if x<0]

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4. What will be the output of the following Python code?

a) Error
b) ['PUNE', 4, 'MUMBAI', 6, 'DELHI', 5]
c) [PUNE, 4, MUMBAI, 6, DELHI, 5]
d) [('PUNE', 4), ('MUMBAI', 6), ('DELHI', 5)]

View Answer

① return each word in Upper Case.
→ ② + length of the word.

$S = [$ 'pune', 'mumbai', 'delhi' $]$ advertisement

$[(w.upper()), len(w))$ for w in $S].$

- if we need to generate 2 results, we need to put it in the form of tuple.

5. What will be the output of the following Python code?

```python
l1=[2,4,6]
l2=[-2,-4,-6]
for i in zip(l1, l2):
    print(i)
```

(2, -2)
(4, -4)
(6, -6)

a)

2, -2
4, -4
6, -6

C. b) [(2, -2), (4, -4), (6, -6)]
c)

(2, -2)
(4, -4)

d) [-4, -16, -36]

[View Answer]

6. What will be the output of the following Python code?

```
l1=[10, 20, 30]
l2=[-10, -20, -30]
l3=[x+y for x, y in zip(l1, l2)]     ⟶ returns x+y.
l3
```

a) Error
b) 0
c) [-20, -60, -80]
d) [0, 0, 0]

[View Answer]

7. Write a list comprehension for number and its cube for l=[1, 2, 3, 4, 5, 6, 7, 8, 9].
a) [x**3 for x in l]
b) [x^3 for x in l]
c) [x**3 in l]
d) [x^3 in l]

[View Answer]

8. What will be the output of the following Python code?

```
l=[[1 ,2, 3], [4, 5, 6], [7, 8, 9]]
[[row[i] for row in l] for i in range(3)]
```
↓ index.
if number > index : return Error.

a) Error
b) [[1, 4, 7], [2, 5, 8], [3, 6, 9]]
c)

```
1 4 7
2 5 8
3 6 9
```

d)

```
(1 4 7)
```

C

View Answer

9. What will be the output of the following Python code?

```python
import math
[str(round(math.pi)) for i in range (1, 6)]
```

[handwritten note: round (pi(3.14)) = 3, done 5 times]

a) ['3', '3', '3', '3', '3', '3']
b) ['3.1', '3.14', '3.142', '3.1416', '3.14159', '3.141582']
c) ['3', '3', '3', '3', '3'] *[handwritten: C, circled c]*
d) ['3.1', '3.14', '3.142', '3.1416', '3.14159']

View Answer

10. What will be the output of the following Python code?

```python
l1=[1,2,3]
l2=[4,5,6]
l3=[7,8,9]
for x, y, z in zip(l1, l2, l3):
        print(x, y, z)
```

a) *[handwritten: A, circled a]*

```
1 4 7
2 5 8
3 6 9
```

b)

```
(1 4 7)
(2 5 8)
(3 6 9)
```

c) [(1, 4, 7), (2, 5, 8), (3, 6, 9)]
d) Error

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