Quiz Submissions - Midterm 2

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Attempt 2


Submission View

Your quiz has been submitted successfully.

Part 1

**Question 1**

How many times is X printed when this code is run?

```python
def foo():
    print('X')
    return 'Y'
def bar():
    print('X')
    X = foo()
    print(X)
def baz():
    print('X')

bar()
```

- [ ] 4
- [ ] 1
- [ ] 2
- [ ] There is an error when this code is run
- [ ] 3

**Question 2**

How many of the following programs will output the letters a, b, c, d, e, f, g, h, and i, in that order, when they are run?

### PROGRAM 1
L = 
[ ['a', 'b', 'c'],
[ 'h', 'i', 'd'],
[ 'g', 'f', 'e'],
]
for ch in L[0]:
    print(ch)
print('d')
for i in range(1, 4):
    print(L[2][-i])
for ch in L[1][0:2]:
    print(ch)

### PROGRAM 2
L = 
[ ['a', 'f', 'g'],
[ 'b', 'e', 'h'],
[ 'c', 'd', 'i'],
]
y = 0
dy = 1
for x in range(3):
    for i in range(3):
        print(L[y][x])
    y = y + dy
    dy = dy * -1
y = y + dy

### PROGRAM 3
L = 
[ ['a', 'g', 'e'],
[ 'h', 'b', 'd'],
[ 'i', 'f', 'c'],
]
C = [ (0,0), (-2,1), (2,-1),
     (2,1), (2,0), (1,2),
     (1,0), (0,1), (0,-1) ]
for coord in C:
    x = coord[0]
y = coord[1]
    print(L[y][x])
Question 3

What does this code print when it is run?

```python
x = 1
for i in range(4):
    x = x * 5
    if x > 5:
        print('A')
    elif x > 10:
        print('B')
    else:
        print('C')
```

- Something else not listed here
- C, A, A, A, in that order
- C, A, A, A, C, in that order
- C, A, B, A, B, A, B, in that order
- C, A, B, B, in that order

Question 4

What does this code print when it is run?

```python
x = 1
for i in range(4):
    x = x * 5
    if x > 5:
        print('A')
```

- C, A, A, A, in that order
- C, A, B, A, B, A, B, in that order
- C, A, B, B, in that order
if x > 10:
    print('B')
else:
    print('C')

C, A, A, A, in that order

C, A, B, B, in that order

C, A, B, A, B, A, B, in that order

C, A, A, A, C, in that order

Something else not listed here

Question 5

How many different times does this program need to be run (with different input each time) to ensure that every line of this code is executed at least once?

```python
inn = input()
out = inn
if 'in' in inn:
    inn = 'out'
else:
    inn = 'in'
if 'out' in inn:
    print(out)
else:
    print(inn)
```

3

4

More than 5

5

2

Question 6

C, A, A, A, C, in that order

C, A, B, B, in that order

C, A, B, A, B, A, B, in that order

C, A, A, A, C, in that order

Something else not listed here
What should AAA be replaced with, to best complete the function?

def add2(n):
    AAA

    return n + 2

    n + 2
    return n

    return n

Question 7

How many times is X printed when this code is run? (The code is shown in its entirety.)

def foo():
    print('X')
    print('X')
    print('X')
    return
    print('X')

    0
    1
    2
    3
    4

Question 8

Consider the following code.

def add(x, y):
    return x + y

How many of the following calls would not result in an error?

add(2, 3)
add('2', 3)
add('2', '3')
add([1, 2], [3])

- 2
- 0
- 3
- 4
- 1

**Question 9**

What does this code print when run?

```python
import sys
def foo():
    print('W')
    return 99
    print('X')
sys.exit()

print('Y')
foo()
print('Z')
```

- W, X, Y, Z, in that order
- Y, W, and Z, in that order
- W and X, in that order
- Y, W, and X, in that order
- Y, W, X, Z, in that order

**Question 10**

Lists have an `insert` method that takes two arguments: the first is a list index, the second is an item to insert. The item is inserted into the list immediately before the specified index. What does
this code print when run?

```python
L = [4]
L.append(2)
L.insert(1, 3)
print(L)
L.sort()
```

- [3, 2, 4]
- [4, 3, 2]
- [3, 4, 2]
- [4, 2, 3]
- [2, 3, 4]

**Question 11**

What should AAA be replaced with so that the string is printed entirely in uppercase?

```python
s = 'Hello, COVID-19!
AAA
print(s)
```

- upper(s)
- s.upper()
- Nothing
- s = upper()
- s = s.upper()

**Part 2**

Use the definitions below to answer the questions in this section.

```python
L = [1, 2, 3, 4]
D = {2: 7, 3: 4, -1: 3, 0: 5}
```
T = (4, 3, 2)
S = '3.14159'

**Question 12**

What is len(L)?

- [ ] 3
- [ ] 5
- [ ] Some other number not listed here
- [ ] 1
- [ ] 4

**Question 13**

What is len(D)?

- [ ] 4
- [ ] 8
- [ ] 3
- [ ] 1
- [ ] 7

**Question 14**

What is L[-2]?
Question 15
What is D[3]?

- 0
- 3
- -1
- 4
- None of these values

Question 16
How many of these four variables’ types are mutable?

- 2
- 3
- 0
- 4
- 1

Question 17
How many of these expressions are equal to 5?

- Some number not listed here
Question 18

How many of these expressions are equal to True?

- 4 in D
- 4 in L
- ’3’ not in S[1:-1]
- L[1] in D

○ 0
○ 3
○ 4
○ 2
○ 1

Question 19

What is S[0] * (D[0] - T[0] + L[0])?

○ 0
○ 3
○ 1
○ 2
○ 4
Part 3

Recall the data file with fictitious student data that has been used a number of times as an example in class. The fields are tab-separated, and the data file ends with the sentinel EOF.

The program in this section is run as:

```
python3 program.py < datafile
```

It is supposed to print the frequency with which different email domains occur. For example, given the data file

```
360283 Baranowski Georgia BIOL lilian@shaw.ca
682697 Crossley Rod BIOL noelle.alcantar@gmail.com
268501 Romeo Elijah ENGG wardl@hotmail.com
468795 Land Homer GEOG harknesse@shaw.ca
496111 Dowling Desiree BIOL oliverj@gmail.com
956629 Carrier Jeanne ARKY alba@shaw.ca
277759 Egan Ashley MATH tcbrammer@shaw.ca
EOF
```

the output is:

```
shaw.ca 4
hotmail.com 1
gmail.com 2
```

Starting with the following code:

```
SENTINEL = 'EOF'
AAA
```

```
while True:
    line = input()
    if line == BBB:
        CCC
    fields = DDD
    email = EEE
    L = FFF
```
```python
domain = GGG
HHH

for domain in D:
    III
```

**Question 20**
What should AAA be replaced with?

- D = (, )
- D = ( )
- D = { }
- D = [ ]
- Nothing

**Question 21**
What should BBB be replaced with?

- SENTINEL
- 'SENTINEL'
- 'EOF'
- EOF

**Question 22**
What should CCC be replaced with?
Question 23
What should DDD be replaced with?

- line.split('\t')
- split('/t')
- split('\t')
- split(line)
- line.split('/t')

Question 24
What should EEE be replaced with?

- fields
- fields[4]
- fields[5]
- fields[3]

Question 25
What should FFF be replaced with?

- continue
- break
- sys.exit()
- return
Question 26

What should GGG be replaced with?

- L[1]
- L
- L[2]
- L[0]

Question 27

What should HHH be replaced with?
if domain not in D:
    D[domain] = D[domain] + 1
else:
    D[domain] = 1

if domain not in D:
    D[domain] = 1
else:
    D[domain] + 1

if domain not in D:
    D[domain] = 1
else:
    D[domain] = 1

if domain not in D:
    D[domain] = 1
else:
    D[domain] = D[domain] + 1

print(D[domain], domain)
print(domain)
print(D, D[domain])
print(domain, D[domain])
print(D)

Question 28
What should III be replaced with?

- print(D[domain], domain)
- print(domain)
- print(D, D[domain])
- print(domain, D[domain])
- print(D)