TEAM LEAD VERSION (Backend Sprint-1 Week-2)

TEAMWORK

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- ▶ Icebreaking
- ▶ Questions
- ▶ Interview Questions
- ▶ Coding Challenge
- ▶ Video of the week
- ▶ Retro meeting
- ▶ Case study / project

Teamwork Schedule

Ice-breaking 5m

- Personal Questions (Stay at home & Corona, Study Environment, Kids etc.)
- Any challenges (Classes, Coding, studying, etc.)
- Ask how they're studying, give personal advice.
- Remind that practice makes perfect.

Team work 5m

- Ask what exactly each student does for the team, if they know each other, if they care for each other, if they follow and talk with each other etc.

Ask Questions 15m

1. What is the output of the following program?

```
L1 = []
L1.append([1, [2, 3], 4])
L1.extend([7, 8, 9])
print(L1[0][1][1] + L1[2])
```

A. 12
B. 11
C. 13
D. 10

Answer: B

2. Given the following three list, how would you create a new list that matches the desired output printed below in Python?

```
fruits = ['Apples', 'Oranges', 'Bananas']
quantities = [5, 3, 4]
prices = [1.50, 2.25, 0.89]
# Desired output
[('Apples', 5, 1.50),
```

```
('Oranges', 3, 2.25),
('Bananas', 4, 0.89)]
```

A.

```
fruits = ['Apples', 'Oranges', 'Bananas']
quantities = [5, 3, 4]
prices = [1.50, 2.25, 0.89]
output=[]

fruit_tuple_0 = (fruits[0], quantities[0], prices[0])
output.append(output)
fruit_tuple_1 = (fruits[1], quantities[1], prices[1])
output.append(output)
fruit_tuple_2 = (fruits[2], quantities[2], prices[2])
output.append(output)
print(fruit_tuple_0, fruit_tuple_1, fruit_tuple_2)
```

B.

```
fruits = ['Apples', 'Oranges', 'Bananas']
quantities = [5, 3, 4]
prices = [1.50, 2.25, 0.89]
i = 0
output = []
for fruit in fruits:
    temp_qty = quantities[i]
    temp_price = prices[i]
    output.append((fruit, temp_qty, temp_price))
    i += 1
print(output)
```

C.

```
fruits = ['Apples', 'Oranges', 'Bananas']
quantities = [5, 3, 4]
prices = [1.50, 2.25, 0.89]

groceries = zip(fruits, quantities, prices)
print(list(groceries))
```

D.

```
fruits = ['Apples', 'Oranges', 'Bananas']
quantities = [5, 3, 4]
prices = [1.50, 2.25, 0.89]
i = 0
output = []
for fruit in fruits:
  for qty in quantities:
    for price in prices:
        output.append((fruit, qty, price))
  i += 1
print(output)
```

Answer: B and C

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

```
def printMax(a, b):
    if a > b:
        print(a, 'is maximum')
    elif a == b:
        print(a, 'is equal to', b)
    else:
        print(b, 'is maximum')
printMax(3, 4)
```

A. 3
B. 4
C. 4 is maximum
D. 3 is maximum

Answer: C

4. What is the output of the following program?

```
x = 50
def func(x):
    print('x is', x)
    x = 2
    print('Changed local x to', x)
func(x)
print('x is now', x)
```

A.

```
x is 50
Changed local x to 2
x is now 50
```

B.

```
x is 50
Changed local x to 2
x is now 2
```

C.

```
x is 50
Changed local x to 2
x is now 100
```

D.None of the mentioned

Answer: A

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

```
def function1(var1=5, var2=7):
    var2=9
    var1=3
    print (var1, " ", var2)
function1(10,12)
```

A. 5 7
B. 3 9
C. 10 12
D. error

Answer: B

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

```
def san(x):
    print(x+1)
x=-2
x=4
san(12)
```

A. 13
B. 10
C. 2
D. 5

Answer: A

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

```
num = 2013
reversed_num = 0

while num != 0:
    digit = num % 10
    reversed_num = reversed_num * 10 + digit
    num //= 10

print(reversed_num)
```

A. Error
B. 2013
C. 3102
D. 2222

Answer: C

8.Which of the following is not an exception handling keyword in Python?

A. try
B. except
C. accept
D. finally

Answer: C

9.What will be the output of the following Python code if we enter 10 as a number?

```
valid = False
while not valid:
```

```
try:
    n=int(input("Enter a number"))
    while n%2==0:
        print("Bye")
    valid = True
except ValueError:
    print("Invalid")
```

A. Bye (printed once)
B. No output
C. Invalid (printed once)
D. Bye (printed infinite number of times)

Answer: D

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

```
f=lambda x:bool(x%2)
print(f(20), f(21))
```

A. False True
B. False False
C. True True
D. True False

Answer: A

11. How can you filter duplicate data while retrieving records from a table in SQL?

A. DISTINC
B. WHERE
C. LIMIT
D. AS

Answer: A

12. Which of the following is not a valid aggregate function?

A. COUNT
B. COMPUTE
C. SUM
D. MAX

Answer: B

13. Which data manipulation command is used to combines the records from one or more tables?

A. SELECT
B. PROJECT
C. JOIN
D. PRODUCT

Answer: C

Interview Questions 15m

1. What is a lambda function in Python?

Answer:

A lambda function is an anonymous function (a function that does not have a name) in Python. To define anonymous functions, we use the 'lambda' keyword instead of the 'def' keyword, hence the name 'lambda function'. Lambda functions can have any number of arguments but only one statement.

2. What is init?

Answer:

Init is a contructor method in Python and is automatically called to allocate memory when a new object/instance is created. All classes have a init method associated with them. It helps in distinguishing methods and attributes of a class from local variables.

3. What are decorators in Python?

Answer:

Decorators in Python are essentially functions that add functionality to an existing function in Python without changing the structure of the function itself. They are represented the @decorator_name in Python and are called in a bottom-up fashion

Coding Challenge 35m

- Code Challenge Run

Coffee Break 10m

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Video of the Week 10m

- Fundamental Concepts of Object Oriented Programming

Retro Meeting on a personal and team level 5m

Ask the questions below:

- What went well?
- What went wrong?
- What is the improvement areas?

Case study/Project 10m

Python

- Workshop 1 - Pyhton Interview Challenge

Closing 5m

-Next week's plan

-QA Session
