TW-02 LEAD VERSION (Sprint-1 Week-2)

TEAMWORK

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- ▶ Icebreaking
- ▶ Questions
- ▶ Interview Questions
- ▶ Coding Challenge
- ▶ Video of the week
- ▶ Retro meeting

Teamwork Schedule

Ice-breaking 10m

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

Ask Questions 20m

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. DISTINCT
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 20m

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.

4. How does inheritance work in python? Explain it with an example.

Answer: Inheritance gives the power to a class to access all attributes and methods of another class. It aids in code reusability and helps the developer to maintain applications without redundant code. The class inheriting from another class is a child class or also called a derived class. The class from which a child class derives the members are called parent class or superclass.

Coding Challenge 10m

Students should work in small teams to complete the coding challenge at workshop activity(Saturday).

- **Code Challenge Run**

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Coffee Break 10m

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Video of the Week 15m

- What is OOP

Retro Meeting on a personal and team level 10m

Ask the questions below:

- **What went well?**
- **What could be improved?**
- **What will we commit to do better in the next week?**

Closing 5m

-Next week's plan

-QA Session
