
Test 02

Artificial Intelligence

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AUGUST 1

Team Alpha

94/
100

1. How would you remove first item from a list 'dogs'?

```
dogs = ['1', '2', '3']  
print(dogs)  
['1', '2', '3']  
  
del dogs[0]  
  
dogs  
['2', '3']
```

2. What symbols surrounds set, list, tuple & dictionary when creating them?

set: {} **list:** [] **tuple:** () **dict:** {}, but we use : to separate key and value

3. How many quotes are used to make a multiline string?

Three quotes are used to make a multiline string

```
sentence = """A Quick brown fox jumps over a  
              Lazy dog  
              """  
  
print(sentence)  
A Quick brown fox jumps over a  
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```

4. Where do parameter or argument go in a function?

parameter are the values that we pass into a functions while defining function. **def func(val, val2)** While **argument** are the values that we pass to a function. **func(val, val2)**

```
def even(a): # parameter  
    return a%2==0
```

```
isEven = even(4) # argument
```

5. How do you add an item in a list?

We use different methods to insert/add elements in a list

```
dogs.append(5) # If we want to append item in the last
dogs.extend([4,5,6]) # If we want to extend list
dogs.insert(5,6) # If we want to insert element in a specific position
dogs
['2', '3', 5, 4, 5, 6, 6]
```

6. How would you access first two items in a list?

```
list = [4,5,6,7]
print(list[:2]) # It is also called list slicing
[4, 5]
```

7. To use math module, what must we include at the top of our code?

To use math module we import `math` library at the top of our code. With `import math`

```
import math
n = 2
print(math.sqrt(2))
1.4142135623730951
```

8. `hello.compile()` is a string method or not?

`hello.compile()` is not a string method

```
hello = "Mansoor"
```

```
hello.compile()
```

```
-----  
-----  
AttributeError                                Traceback (most recent call  
last)  
Cell In[15], line 1  
----> 1 hello.compile()
```

```
AttributeError: 'str' object has no attribute 'compile'
```

9. How would you define a function that concatenate two strings?

We take two strings as an input and then return them by adding them

```
def concatenate(str1, str2):  
    return str1 + str2  
print(concatenate("Hello ", "World"))
```

10. What grant access to a file?

'a': append

'w': write

'r': read

and other arguments are used to give us permission that how much access we have to a specific file.

```
with open('file.txt', 'a') as f: # we only use it if we have file name  
    file.txt, if not we cannot use it  
    f.write("Hello World")
```

11. What is self variable used inside the class.

self variable refers to the current instance of the object inside the class. We pass it as an argument in a function

```
class Numbers:  
    def __init__(self, number):  
        self.number = number
```

```

def isEven(self):
    return self.number %2 == 0

n = Numbers(5)

b = Numbers(6)

b.isEven()

n.isEven()

```

12. Write a code that make a list of number by incrementing it by 5 (100,0)

```

n = [n for n in range(100,0,-5)]

n = []
for i in range(100,0,-5):
    n.append(i)
print(n)

print(n)

```

13. what will print given this code

try: 10/0 except ArithmeticError: print("Arithmetic Error") except Exception: print("Exception")

```

try:
    10/0
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It print arthimatic error

14. What is the value of "4" * 4?Also mention the type of output

```

A="4"*4
print(A)  # 4 is a string its muiltiply by 4 time return answer
type(A)

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It print 4, 4 time, b/c '4' is a string, and its type is also str

15. print Hello world in the output if "a" is greater than ""b"

```
a=input("enter first value")
b=input("enter second value")
if a>b:
    print("Hello world")

if 'a'>'b':
    print("Hello World")
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We do it through two method, in which first we take two variable a and b and try it on that basis, and in second we try it using str.

16. Write down the syntax of while loop

Here is the syntax of while loop initialization while condition: statement increment/decrement

```
i = 9
while i<5:
    print(i)
    i+=1
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17. What happens 'when this code runs

```
var=(1,2,3) var.append(4)
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It print error 'tuple' object has no attribute 'append', because we cannot add elements in tuple

```
var = (1,2,3)
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18.what is the value of 456 % 10?

```
print(456 % 10)
```

It print 6, b/c after dividing 456 with 10, 6 is reminder

19.create three dictionaries of your wish,then create one dictionary that will contain other three dictionaries

```
dic1 = {"name": "mughal", "Age": 24, "city": "muzaffarabad"}
dic2 = {"name": "abdul", "Age": 6, "city": "muzaffarabad"}
dic3 = {"name": "abdullah", "Age": 7, "city": "athmuqam"}
dict4 = {}
dict4['dict1'] = dic1
dict4['dict2'] = dic2
dict4['dict3'] = dic3
print(dict4)
```

20. Change the following line of code so that it give the list three time

```
def my_function(food): for x in food: print(x)

fruits = ['apple','banana','cherry'] my_function(fruits)
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21. Explain the working of the following code. also if there is any exception error handle it by using it by using exceptional handling technique

```
try:
    f.write("programming is Fun")
except NameError:
```

```

        print("name 'f' is not defined")
    except:
        print("something went wrong when writing to file")
    finally:
        try:
            f.close()
        except NameError:
            print("name 'f' is not defined")

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22. What is the purpose of assert keyword in the following code, what if you replace the assert keyword with if.

```

try:
    num = int(input("Enter a number: "))
    assert num%2==0
except:
    print("Not an even Number!")
else:
    reciprocal = 1/num
    print(reciprocal)

try:
    num = int(input("Enter a number: "))
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assert is used to check condition of any statement. Here nothing happen if we replace assert with if, but we need to write more code, b/c we cannot leave if block empty

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