DATE 29 06 24 01

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- Batch - 2
- DA - 21
- 1st Assesment Test
- Date - 29/06/24.

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Q1
→

List	Tuple
1) List is a mutable that contains in list can be change.	1) Tuple is immutable data type which can not be change.
2) List is enclosed within Square brakects. Example:- L = [ ]	2) Tuple is enclosed within round parenthesis syntax. Example. T = ( )
3) List is slower than tuple and read intensive task	3) Tuple is faster than list due to fixed size
4) Dynamic data frequently change	4) Static data constant and unchangable.
5) Example: L = [1, 2, 3, 4, "String"]	5) Example: T = (1, 2, 3, 4, 5)

Q2
→ 1) Sets are the unordered and mutable datatype in Python.
2) Each and every element in set is unique. Set do not include duplicate values.
3) In python, Sets are highly useful to efficiently remove duplication of the duplicate value from a collection like a list and a collection a list to perform common math operations.
as follows:-

(2)
i) Union
ii) Intersection
iii) difference
iv) Symmectic difference.

for eg:-

```
S1 = { 1, 2, 3, 4, 5, 6 }
S1 = { 5, 6, 7, 8, 9, 10 }

S3 = S1 | S2
print (S3)
```

Output → { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 }

Q3
→

Integer	Float
1) Integer is numeric data type. (2)	1) Float is the number with decimal point representation.
2) Integer can be +ve or -ve.	2) Float can be +ve or -ve but in decimal float.

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Integer	Float
2) Integer is commonly used for counting indexing and arithmetic operations.	3) Float is used to fractional calculations.
4) The key difference is that integer takes 4 bytes and stores the integer value.	4) But float we can store fractional value also.
Example: int (a) a = 10 b = 5 print (a/b) Output → 5.0	Example: float (a)

- Float would be more appropriate that integer hence it is proved in the above example.

Q4

→ 1) Dictionaries are the built in data type which include (Key : value) pair.

2) Dictionaries are different from list and tuple because it includes Keys with their values.

3) Dictionaries is mutable data type which can be change.

- Structure of Dictionary.

D1 = {"Scienu" : 90,
"Maths" : 82,
"English" : 74 }

This is the structure of dictionary which are enlcosed with curly braces.

Q5
→ 1) Doc string is documentation string it provides a convenient way of associating documentation with python ~~values~~ modules, methods and classes.
2) It is specified in solution code that is used like a comment to document.
3) A specific segment of code is doc string.

Q6
→ 1) II

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Q6

→ i) // operator is use for the float clivision in python.

for eg:-

(2) • If we perform simple division, it will return the floating value.

```
a= 10
b= 5
print(a/b)
```

Output → 5.0

• But if we perform float division it will return integer value.

```
a = 10
b=5
print (a//b)
```

Output → 5

Q7

→ i) == Operator is relational operator which use to check equility of two variables.

eg- print (a==b)

Output (false).

~~2) Example:-~~

(2) 2) == operator check if the value of two object are equal

3) (is) operator is used to check same operator

Q8
→ 1) += operator is also assignment operator.
2) It is used to assign value with incrementation.
3) Example:

```
a = 10
print (a+=1)
```

Output- 11.

In above example we increment the value of a with 1 and assign to a variable.

Q9
→ 1) in operator is the membership operator which is used to check the value and present in that series or not.

Example:-

```
L = [1, 2, 3, 4, 5]
```

Output:- True.

Q11.
→ 1) If Statement is used to check the condition.
2) If the condition will True it will perform some task.
3) Example

```
a=10
if a == 2
    print (a)
else :
    print ("a is not equal to 2")
```

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Q12

→ 1) While loop :-

While loop check the condition ~~first~~ first and then performs a task.

Example.

```
i = 0
while i<=5
    print (i)
    it = 1
```

2) For loop :-

for loop is used. For iterating sequence that is either in list, set, dict and tuple

Example

```
L = [1, 2, 3, 4]
for i in L
    print (i)
```

Q13

→ 1) Break statement is used to break Keyword break the loop.

Eg.

```
i = 1
while i<=5 :
    print (i)
    break
```

This will break the loop.

Output :- 1
2
3
4
5.

Q14

→ i) Continue statement is used to skip the iteration.

Eg -

```
i = 1
while i<=5:
    if i == 3
        print(i)
        ~~continuee~~
        continue.
```