assignment=2

July 22, 2023

1 Q1. How do you comment code in python ? What are the different types of comments ?

Ans. there are 2 type of comment in python:

1. single line comment in which we use '#' to comment the code

2. multi line comment in which we use triple single quote '''and triple double quote ''' to

```
[1]: #single line comment

'''milti line comment
we can use it as a string too'''
```

```
[1]: 'milti line comment \nwe can use it as a string too'
```

2 Q2. What are variables in python ? How do you declare and assign values to variables?

Ans . variable is used as a container which store values or data for us . After declaring the vaeiable we can use it anywhere in the programme with the help of its name and manuplate it .

we can follow these step to declare the variable :

1. we decide name of the variable it start with the alphabet 's and _underscore only . ex a,A,_a,_A It's also a case sensitive python treated lowercase 'a' &uppercase 'A' as a different variable names.

2.We assign the values (string , int , boolean , flot etc) to the variable with the help of assign operator '=' Ex a='hello' , A=20, _a = True , _A= 2.0

3 Q3. How do you convert one data type to another in python?

We use typecasting method to convert one type to another . here is the few example below:

```
[2]: #string to int (only if it contain  a valid integer representation)
a = "23"
b = int(a)
```

```
print (f'convert "{a}" type  {type(a)} to {b}  type {type(b)}')
```

convert "23" type <class 'str'> to 23 type <class 'int'>

[13]:
```
#string to float (only if it contain a valid float representation)
a = "23.56"
b = float(a)

print (f'convert "{a}"type {type(a)} to  {b}  type {type (b)}')
```

convert "23.56"type <class 'str'> to 23.56 type <class 'float'>

[15]:
```
#int to string
a = 32
b = str(a)

print(f'convert {a} type {type(a)} to "{b}" type {type(b)}')
```

convert 32 type <class 'int'> to "32" type <class 'str'>

[18]:
```
#list to tuple
l = [1,2,3]
t = tuple(l)

print(f'convert {l} type {type(l)} to {t} type {type(t)}')
```

convert [1, 2, 3] type <class 'list'> to (1, 2, 3) type <class 'tuple'>

4 Q4. How do you write and execute a python script from the command line?

Ans. We can follow this steps to execute the python script :

1. open the texteditor for example: visual studio code

2. write a code into it for example: print ("hello pw skills ")

3. save the file with .py extenstion into your local pc for example : hello.py

4. open a 'terminal' into the mac or in window open a 'command promt'

5. Navigate the file it with the help of cd command for example you save it on you desktop : c

6. once you nevigate it execute it with the help of python 3 command for example : python3

5 Q5. Given a list my __list = [1,2,3,4,5,], write the code to slice the list and obtain the sub-list [2,3].

```
[19]: my_list = [1,2,3,4,5]

      sub_list = my_list[1:3]

      sub_list
```

```
[19]: [2, 3]
```

6 Q6. What is a complex number in mathematics , and how is it represented in python?

Ans. complex number is the number that can express it like a + bi , where a&b is real number and i is the imaginary unit . a is the real part of the complex number and b is the imaginary part of the complex number

In python we can write j insted of i to represent the imaginary unit of the complex number. so, in python we can write it like this a+bj . for example:

```
[21]: #complex number
      num = 9+1j

      print(f'real part of the complex number is {num.real} & Imaginary part of the␣
        ↪complex number is {num.imag}')
```

```
real part of the complex number is 9.0 & Imaginary part of the complex number is
1.0
```

7 Q7.What is the correct way to daclare a variable named age and assign the value 25 to it?

```
[22]: age = 25
```

8 Q8.Declare a variable named price and assign the value 9.99 to it. What data type does this variable belong to ?

```
[23]: price = 9.99

      type(price)
```

```
[23]: float
```

9 Q9.Create a variable named name and assign your full name to it as a string . How would you print the value of this variable?

```python
[24]: name = "Sonal jinjala jadavbhai "

      print(f"Hello{name}!")
      print(name)
```

```
HelloSonal jinjala jadavbhai !
Sonal jinjala jadavbhai
```

10 Q10. Given the string "Hello,World!", extract the substring "world".

```python
[28]: string = "Hello, World!"

      sub_string = string[7:12]

      sub_string
```

```
[28]: 'World'
```

11 Q11. Create a variable named "is_student" and assign it a boolean value indicating whether you are currently a student or not .

```python
[30]: is_student = True
      type(is_student)
```

```
[30]: bool
```

```
[ ]:
```