

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

Answer : in python for comment a specific line we use #,"" "",""

1. For single line comment we can use #, ' , " "
2. For multiple line comments we use """ """
3. Example : # hello this is python programing
""" hello
This is python
Programming """

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

Answer: in python variables used for store data and refer the values , variable acts like a container

In variable we can store list,tuples ,set...

Example = a = 25 (in this example (a) is variable which stores the value 25)

List = [1,5,4,9,2165]

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

Answer :

In Python, you can convert one data type to another using type conversion functions or techniques. Here are some commonly used methods

```
x = 10
y = 4.5

x_float = float(x) # Converts x to a float
y_int = int(y) # Converts y to an integer

print(x_float) # Output: 10.0
print(y_int) # Output: 4
```

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

Answer :

To write and execute a Python script from the command line, you can follow these steps:

- 1) First write a python code in note pad or python idle
- 2) Save this code in .py format in desktop
- 3) Open the command prompt type

Cd desktop

Python filename.py

Example :

```
print("Hello, World!")
```

cd Desktop

python print.py

Hello,World

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]`.

Answer :

To obtain the sub-list `[2, 3]` from the given list `list = [1,2,3,4,5]`, you can use slicing in Python.

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

print(sub_list)
```

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

Answer :

In mathematics, a complex number is a number that comprises both a real part and an imaginary part. It is written in the form $a + bi$ where a represents the real part, b represents the imaginary part, and i represents the imaginary unit

```
z1 = 3 + 2j
z2 = -1.5 + 0.5j
z3 = 2j
type(z1)
```

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

To declare a variable named `age` and assign the value 25 to it in Python, you would use the following syntax:

```
age = 25
```

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

Answer:

To declare a variable named `price` and assign the value 9.99 to it in Python

```
price = 9.99
type(price)
```

```
#output = folat
```

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?

Answer :

```
name = "pratish chandu khurdamoje "  
print(name)  
#output : pratish chandu khurdamoje
```

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

Answer :

```
name = "Hello,World"  
name[6:]  
#output : world
```

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

Answer :

```
is_student = True  
type(is_student)  
#output = boolean
```