Python assignment 1

1. Declare an integer variable 'a' with the value 10 and a float variable 'b' with the value 3.14. Print their sum.

```
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@author: Adithyash BC
"""
a= 10
b = 3.14
print (a,b)
sum = a+b
print(sum)
```

```
In [2]: runcell(0, 'C:/Users/Adithyash BC/untitled0.py')
10 3.14
13.14
```

2. Assign the value 'True' to a variable 'is_valid' and the value 'False' to a variable 'is_empty'. Print both variables.

```
In [8]: isValid=True
   ...: isEmpty=False
   ...: print ("is valid:", isValid)
   ...: print("is empty:",isEmpty)
is valid: True
is empty: False
```

3. Create a complex number variable 'c' with the value '2 + 3j' and print its real and imaginary parts.

```
In [9]: c = 2 + 3j
   ...: print("Real:", c.real)
   ...: print("Imaginary:", c.imag)
Real: 2.0
Imaginary: 3.0
```

4. Declare a byte variable 'byte_data' with the value "b'hello'"and print its length.

```
In [12]: bd='hello'
   ...: print("Length of byte_data:", len(bd))
Length of byte_data: 5
```

5. Create a 'bytearray' variable 'byte_array' initialized with the byte sequence "b'\x01\x02\x03'". Modify the first byte to '0x04' and print the modified 'bytearray'.

```
In [14]: byte_array = bytearray(b'\x01\x02\x03')
    ...: byte_array[0] = 0x04
    ...: print("Modified byte_array:", byte_array)
Modified byte_array: bytearray(b'\x04\x02\x03')
```

6. Convert the integer '255' to a binary string using the 'bin' function and print the result.

```
In [15]: binary_string = bin(255)
    ...: print("Binary string of 255:", binary_string)
Binary string of 255: 0b11111111
```

7. Given two Boolean variables 'x = True' and 'y = False', print the result of the logical 'AND' operation between 'x' and 'y'.

```
In [17]: x = True
    ...: y = False
    ...: andres = x and y
    ...: print("Result of x AND y:", andres)
Result of x AND y: False
```

8. Assign the result of '5 > 3' to a variable 'result' and print its type.

```
In [18]: result = 5 > 3
    ...: print("Type of result:", type(result))
Type of result: <class 'bool'>
```

9. Create a float variable 'pi' with the value '3.141592653589793' and round it to 4 decimal places. Print the rounded value.

```
In [19]: pi = 3.141592653589793
    ...: rounded = round(pi, 4)
    ...: print("Rounded value of pi:", rounded)
Rounded value of pi: 3.1416
```

10. Assign the hexadecimal value '0x1A' to an integer variable 'hex_value' and print its decimal equivalent.

```
In [20]: hex_value = 0x1A
    ...: print("Decimal equivalent of hex_value:", hex_value)
Decimal equivalent of hex_value: 26
```