assignment

August 4, 2023

[1]:
```
a = "mehak"
```

[2]:
```
type(a)
```

[2]:
```
str
```

[3]:
```
fruits = ['apple', 'bunana', 'orange', 'grapes','kiwi', True]
```

[4]:
```
print(fruits[0])
```

```
apple
```

[5]:
```
print(fruits[5])
```

```
True
```

[6]:
```
c=45.12
```

[7]:
```
type(c)
```

[7]:
```
float
```

[8]:
```
my_tuple = ("apple", "bunana","cherry")
```

[9]:
```
print(my_tuple)
```

```
('apple', 'bunana', 'cherry')
```

[10]:
```
var1=''
```

[ ]:
```
string
```

[ ]:
```
var2'[DS, ML, Python]'
```

[ ]:
```
string
```

[ ]:
```
var3 = ['DS', 'ML', 'Python']
```

[ ]:
```
list
```

[ ]:
```
var4 = 1
```

[ ]:
```
integer
```

[14]:
```
4/2
```

[14]: 2.0

[15]:
```
5%4
```

[15]: 1

[16]:
```
6//2
```

[16]: 3

[17]:
```
1**3
```

[17]: 1

[18]:
```
my_list = [5,"Hello", 3.14, True, "world", 0,[1,2,3], None, {1:"one"}, False]
```

[19]:
```
for element in my_list:
    print(f"Element: {element}, Data type: {type(element)}")
```

```
Element: 5, Data type: <class 'int'>
Element: Hello, Data type: <class 'str'>
Element: 3.14, Data type: <class 'float'>
Element: True, Data type: <class 'bool'>
Element: world, Data type: <class 'str'>
Element: 0, Data type: <class 'int'>
Element: [1, 2, 3], Data type: <class 'list'>
Element: None, Data type: <class 'NoneType'>
Element: {1: 'one'}, Data type: <class 'dict'>
Element: False, Data type: <class 'bool'>
```

[20]:
```
a = 36
b = 4
count = 0
while a % b == 0 :
    a = a/b
count += 1
if count > 0 :
    print(f"{a} is purely divisible by {b} for {count} times.")
else:
```

```
    print (f"{a} is not purely divisible by {b}.")
```

```
9.0 is purely divisible by 4 for 1 times.
```

[21]:
```
my_list = [13,9,4,1,20,7,8,15,16,17,24,5,22,19,11,3,2,6,23,14,10,21,18,12,25]
for num in my_list:
    if num % 3 == 0:
        print(f"{num} is divisible by 3")
else:
    print(f"{num} is not divisible by 3")
```

```
9 is divisible by 3
15 is divisible by 3
24 is divisible by 3
3 is divisible by 3
6 is divisible by 3
21 is divisible by 3
18 is divisible by 3
12 is divisible by 3
25 is not divisible by 3
```

[ ]:
```
Mutable data types are data types that can be changed after they are created.␣
 ↪Any operation that changes the value of a mutable object will affect the
object itself. Example of mutable data types include lists, sets, and␣
 ↪dictionaries.
```

[24]:
```
list1 = [1,2,3]
list1.append(4)
print(list1)
```

```
[1, 2, 3, 4]
```

[ ]:
```
Immutable data types are data types that cannot be changed once they are␣
 ↪created. Any operation that appears to change the value of an immutable
object will actually create a new object with the new value. Example: the␣
 ↪following code assigns anew value to an integer (which is immutable) and
generates an error.
```

[27]:
```
my_tuple = (1,2,3)
my_tuple[2] = 4
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[27], line 2
      1 my_tuple = (1,2,3)
----> 2 my_tuple[2] = 4
```

```
TypeError: 'tuple' object does not support item assignment
```

[ ]:

[ ]: