Data Types(2)

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1 Numbers in Python

[1]:
```
x = 5
y = 3.5
z = 2 + 3j
```

[3]:
```
print(x, "is of type", type(x))
print(y, "is of type", type(x))
print(z, "is of type", type(x))
```

```
5 is of type <class 'int'>
3.5 is of type <class 'int'>
(2+3j) is of type <class 'int'>
```

2 Lists in Python

[4]:
```
mix = [2,3.7, "hi"]
print(type(mix))
```

```
<class 'list'>
```

[16]:
```
print("First item", mix[0])
print("Second item", mix[1])
print("Third item", mix[2])
```

```
First item 1
Second item 2
Third item 3
```

[8]:
```
print(mix[0:2])
print(mix[1:])
```

```
[2, 3.7]
[3.7, 'hi']
```

[9]:
```
#mutable
mix[1] =  5
print(mix)
```

```
[2, 5, 'hi']
```

[10]:
```
mix = [1 , 2 , 3, "python"]
```

[11]:
```
print(mix)
```

```
[1, 2, 3, 'python']
```

3 Tuple in Python

[12]:
```
mix_t = (10, "app", 3 , 2+5j)
print(mix_t)
```

```
(10, 'app', 3, (2+5j))
```

[15]:
```
print("First item", mix_t[0])
print("Second item", mix_t[1])
print("Third item", mix_t[2])
```

```
First item 10
Second item app
Third item 3
```

[19]:
```
print(mix_t[0:2])
```

```
(10, 'app')
```

[20]:
```
print(mix_t[1:])
```

```
('app', 3, (2+5j))
```

4 String in Python

[21]:
```
str = "Single line string"
print(str)
```

```
Single line string
```

[23]:
```
str = '''Multiple
line
string'''
print(str)
```

```
Multiple
line
string
```

[24]:
```
new_str = "Hi string"
print("First char:", new_str[0])
print("Second char:", new_str[1])
```

```
First char: H
Second char: i
```

[27]:
```
#string is immutable
new_str[0] = "p"
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
/var/folders/6t/xy3pcrwn7r50cmfvm_58m4xm0000gn/T/ipykernel_2032/931525035.py in
 ↪<module>
      1 #string is immutable
----> 2 new_str[0] = "p"

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

5 Sets in Python

[28]:
```
numbers_set = {5, 10, 3, 20}

# set variables or items
print(numbers_set)

#type of numbers_set
print(type(numbers_set))
```

```
{10, 3, 20, 5}
<class 'set'>
```

6 Dictionaries in Python

[29]:
```
new_d = {1:"First value", "second key" : 5}
```

[30]:
```
type(new_d)
```

[30]: dict

[31]:
```
new_d[1]
```

[31]: 'First value'

[32]:
```
new_d["second key"]
```

[32]: 5

[33]:
```
new_d[2]
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
/var/folders/6t/xy3pcrwn7r50cmfvm_58m4xm0000gn/T/ipykernel_2032/2514105878.py i
 ↪<module>
----> 1 new_d[2]

KeyError: 2
```

[ ]: