Programación

October 5, 2024

[2]:
```
# Importar librerias
import os
import sys
```

[3]:
```
#Decalarar variables - Python toma el tipo de variable del dato que está␣
 ↪recibiendo
nombre1 = "Hayde"
type(nombre1)
```

[3]:
```
str
```

[5]:
```
numdealumnos = 13
type(numdealumnos)
```

[5]:
```
int
```

[7]:
```
mitadnumalumnos = 6.5
type(mitadnumalumnos)
```

[7]:
```
float
```

[8]:
```
ejemplolista = [1, 2,
                3]
type(ejemplolista)
```

[8]:
```
list
```

[9]:
```
listadevar = [nombre1, numdealumnos, mitadnumalumnos, ejemplolista]
print(listadevar)
```

```
['Hayde', 13, 6.5, [1, 2, 3]]
```

0.1 Cadenas de texto

[12]:
```
c = "una cadena"
c = c.upper()
```

[13]:
```
c
```

[13]:
```
'UNA CADENA'
```

[14]:
```
c = c.lower()
```

[23]:
```
c = "cadena"
```

[24]:
```
c[3]
```

[24]:
```
'e'
```

[26]:
```
# for por valor
for letra in c:
    print(letra)
```

```
c
a
d
e
n
a
```

[27]:
```
# for con indices
for indice in range(0,len(c)):
    print(c[indice])
```

```
c
a
d
e
n
a
```

[28]:
```
c[2:5]
```

[28]:
```
'den'
```

[31]:
```
c[3:] + c[:3]
```

[31]:
```
'enacad'
```

[83]:
```
frase = "Hola como estas"
dividida = frase.split()
dividida
```

[83]:
```
['Hola', 'como', 'estas']
```

[84]:
```
"1-2-3-4-5-6".split("-")
```

[84]:
```
['1', '2', '3', '4', '5', '6']
```

0.2 Listas

[32]:
```
s = [1,2,1+1,6/2]
s
```

[32]: [1, 2, 2, 3.0]

[33]:
```
s.insert(0,6)
s
```

[33]: [6, 1, 2, 2, 3.0]

[34]:
```
s.append(15)
s
```

[34]: [6, 1, 2, 2, 3.0, 15]

[37]:
```
s.index(3.0)
```

[37]: 4

[38]:
```
s.remove(3.0)
```

[39]:
```
s
```

[39]: [6, 1, 2, 2, 15]

[41]:
```
s.sort()
s
```

[41]: [1, 2, 2, 6, 15]

[44]:
```
s.reverse()
s
```

[44]: [15, 6, 2, 2, 1]

[46]:
```
s.count(15)
```

[46]: 1

[47]:
```
s[:3]
```

[47]: [15, 6, 2]

[50]:
```
s[3] = 8
s
```

[50]: [15, 6, 2, 8, 1]

[68]:
```
lista = [1, "dos", False, [45, "cien"]]
```

[70]:
```
lista[3]
```

[70]:
```
[45, 'cien']
```

[71]:
```
lista[3][0]
```

[71]:
```
45
```

[72]:
```
lista.sort()
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[72], line 1
----> 1 lista.sort()

TypeError: '<' not supported between instances of 'str' and 'int'
```

[75]:
```
lista[0:3]
```

[75]:
```
[1, 'dos', False]
```

[77]:
```
lista[-2]
```

[77]:
```
False
```

[78]:
```
len(lista)
```

[78]:
```
4
```

[79]:
```
lista.extend(["hola", 75])
```

[80]:
```
lista
```

[80]:
```
[1, 'dos', False, [45, 'cien'], 'hola', 75]
```

[85]:
```
estudiantes = ["Martin", "Jose", "Raul", "Jose"]
estudiantes
```

[85]:
```
['Martin', 'Jose', 'Raul', 'Jose']
```

[89]:
```
list(set(estudiantes))
```

[89]:
```
['Jose', 'Raul', 'Martin']
```

[90]:
```
lista.pop()
```

[90]: 75

[91]:
```
lista
```

[91]: [1, 'dos', False, [45, 'cien'], 'hola']

[94]:
```
tuple(lista)
```

[94]: (1, 'dos', False, [45, 'cien'], 'hola')

0.3 Tuplas

[48]:
```
a = (1,2,3)
```

[49]:
```
a[2]
```

[49]: 3

[51]:
```
a[2] = 9
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[51], line 1
----> 1 a[2] = 9

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

[92]:
```
1 in a
```

[92]: True

[93]:
```
list(a)
```

[93]: [1, 2, 3]

0.4 Diccionario

[52]:
```
dict = {}
```

[53]:
```
dict["Hayde"]=12345
dict
```

[53]: {'Hayde': 12345}

[54]:
```
dict["Alberto"]=521348
dict["Marco"] = 12345
```

[55]:
```
dict
```

[55]: {'Hayde': 12345, 'Alberto': 521348, 'Marco': 12345}

[56]:
```
dict["Hayde"]
```

[56]: 12345

[57]:
```
dict.items()
```

[57]: dict_items([('Hayde', 12345), ('Alberto', 521348), ('Marco', 12345)])

[58]:
```
dict.keys()
```

[58]: dict_keys(['Hayde', 'Alberto', 'Marco'])

[59]:
```
"Hayde" in dict.keys()
```

[59]: True

[60]:
```
"Laura" in dict.keys()
```

[60]: False

[61]:
```
dict.values()
```

[61]: dict_values([12345, 521348, 12345])

[62]:
```
12345 in dict.values()
```

[62]: True

[63]:
```
123456 in dict.values()
```

[63]: False

[64]:
```
dict.clear()
```

[65]:
```
dict
```

[65]: {}

[66]:
```
dict = {"Azalea": 7232535, "Dario":824723894, "Milthon":1293891283}
```

[67]:
```
dict
```

[67]: {'Azalea': 7232535, 'Dario': 824723894, 'Milthon': 1293891283}

[95]:
```
materias = {}
materias["lunes"] = [6103, 7540]
materias["martes"] = [6201]
materias["miércoles"] = [6103, 7540]
materias["jueves"] = []
materias["viernes"] = [6201]
```

[98]:
```
materias.get("Domingo", "no existe")
```

[98]:
```
'no existe'
```

[99]:
```
materias.get("Domingo")
```

[100]:
```
for dia in materias:
    print(dia, ":", materias[dia])
```

```
lunes : [6103, 7540]
martes : [6201]
miércoles : [6103, 7540]
jueves : []
viernes : [6201]
```

[101]:
```
for dia, codigos in materias.items():
    print(dia, ":", codigos)
```

```
lunes : [6103, 7540]
martes : [6201]
miércoles : [6103, 7540]
jueves : []
viernes : [6201]
```

[ ]:
```

```