16 October 2025

In [1]:
```
#Float
1e0
```

Out[1]: 1.0

In [2]:
```
f = 1e0
f
```

Out[2]: 1.0

In [3]:
```
f1 = 2e1
f1
```

Out[3]: 20.0

In [4]:
```
f2 = 2.4e2
f2
```

Out[4]: 240.0

In [5]:
```
f3 = 2.5e3
f3
```

Out[5]: 2500.0

In [2]:
```
   type(f3)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[2], line 1
----> 1 type(f3)

NameError: name 'f3' is not defined
```

In [3]:
```
import numpy as np
a = np.nan
type(a)
```

Out[3]: float

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In [6]:
```
i = 34
i
```

Out[6]: 34

In [7]:
```
id(i)
```

Out[7]: 140715211732936

In [8]:
```
p = 20
q = 20
r = 20
```

In [9]:
```
print(id(p))
```

```
140715211732488
```

In [10]:
```
print(id(q))
```

```
140715211732488
```

In [11]:
```
print(id(r))
```

```
140715211732488
```

In [12]:
```
r = 30
id(r)
```

Out[12]: 140715211732808

In [14]:
```
str = 'hello'
str
```

Out[14]: 'hello'

In [15]:
```
str[0]
```

Out[15]: 'h'

In [16]:
```
str[1]
```

Out[16]: 'e'

In [17]:
```
str[4]
```

Out[17]: 'o'

In [18]:
```
print(str[0])
print(str[1])
print(str[2])
print(str[3])
print(str[4])
```

```
h
e
l
l
o
```

In [19]:
```
str
```

Out[19]: 'hello'

In [20]:
```
print(str[-1])
print(str[-2])
print(str[-3])
print(str[-4])
print(str[-5])
```

```
o
l
l
e
h
```

In [21]:
```
str
```

Out[21]: 'hello'

In [22]:
```
len(str)
```

Out[22]: 5

In [23]:
```
str
```

Out[23]: 'hello'

In [24]:
```
str[1:3]
```

Out[24]: 'el'

In [25]:
```
str
```

Out[25]: 'hello'

In [26]:
```
str[0:4]
```

Out[26]: 'hell'

In [27]:
```
s = 'hellopython'
s
```

Out[27]: 'hellopython'

In [28]:
```
s[0:6]
```

Out[28]: 'hellop'

In [29]:
```
s
```

Out[29]: 'hellopython'

In [30]:
```
s[0:10:3]
```

Out[30]: 'hlyo'

In [31]:
```
s
```

Out[31]: 'hellopython'

In [32]:
```
s[1:8:2]
```

Out[32]: 'elpt'

In [33]:
```
# Backward indexing
s
```

Out[33]: 'hellopython'

In [34]:
```
s[::1]
```

Out[34]: 'hellopython'

In [35]:
```
s[::2]
```

Out[35]: 'hloyhn'

In [36]:
```
s[::3]
```

Out[36]: 'hlyo'

In [37]:
```
s[:]
```

Out[37]: 'hellopython'

In [39]:
```
s3 = 'hello'
s4 = 'hi'

print(s3+s4)
```

```
hellohi
```

In [6]:
```
s3 = 'hello'
s4 = ' hi'

print(s3+s4)
```

```
hello hi
```

In [ ]: