Data types and conversions

- int
- float
- str

In [1]:

```python
f = 13.8
print(f)
print(type(f))
```

13.8
<class 'float'>

In [2]:

```python
print(int(f))
```

13

In [4]:

```python
s = str(f)
print(s)
print(type(s))
```

13.8
<class 'str'>

In [5]:

```python
print(type(str(f)))
```

<class 'str'>

In [6]:

```python
s = '123'
print(type(s))
```

<class 'str'>

In [8]:

```python
print(int(s))
print(type(int(s)))
```

123

In [10]:

```python
1  print(float(s))
2  print(type(float(s)))
```

```
123.0
<class 'float'>
```

In [11]:

```python
1  s2 = "123"
2  print(s2)
3  print(type(s2))
```

```
123
<class 'str'>
```

In [12]:

```python
1  s3 = "python"
2  print(s3)
3  print(type(s3))
```

```
python
<class 'str'>
```

In [13]:

```python
1  print(int(s3))
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-13-3874692c18f7> in <module>
----> 1 print(int(s3))

ValueError: invalid literal for int() with base 10: 'python'
```

In [17]:

```python
1  print(ord('a'))
2  print(ord('z'))
```

```
97
122
```

In [18]:

```python
1  print(ord('A'))
2  print(ord("Z"))
```

```
65
90
```

In [21]:

```python
print(chr(100))
print(chr(70))
print(chr(150))
```

d
F
▯

In [24]:

```python
n1 = 13
n2 = 12
if(n1>n2):
    print(n1,"is greater than",n2)
```

13 is greater than 12

Reading input dynamically

In [29]:

```python
s = input()
print(type(s))
```

123
<class 'str'>

In [30]:

```python
n = int(input())
print(n)
print(type(n))
```

123
123
<class 'int'>

In [31]:

```python
f = float(input())
print(f)
print(type(f))
```

123
123.0
<class 'float'>

Operators

1. Arithmetic operators
2. Assignment operators
3. Comparision operators

4. Logical operators
5. Identity operators
6. Membership operators
7. Bitwise operators

1. Arithmetic Operators

- +, -, , /, %, //, *

In [35]:

```python
a = int(input())
b = int(input())
print(a/b)
print(a//b)
print(a**b)
```

```
5
3
1.6666666666666667
1
125
```

2. Assignment Operators

In [41]:

```python
a = 13
print(a)
```

```
13
```

In [42]:

```python
a += 1 # a = a + 1
print(a)
```

```
14
```

In [43]:

```python
a -= 2
print(a)
```

```
12
```

3. Comparision operators

--> ==, !=, <, <=, >, >=

In [44]:

```python
a,b = 5,3
print(a==b)
```

False

In [45]:

```python
print(a != b)
```

True

In [46]:

```python
print(a < b)
```

False

In [47]:

```python
print(a <= b)
```

False

In [48]:

```python
print(a > b)
```

True

In [49]:

```python
print(a >= b)
```

True

4. Logical operators

==> and, or, not

In [51]:

```python
a = 6
print(a<6 and a>4)
print(a<=6 and a>5)
```

False
True

In [52]:

```python
1  print(a<6 or a>4)
```

True

In [53]:

```python
1  print(a<=6 or a>5)
```

True

In [54]:

```python
1  not(a<=6 or a>5)
```

Out[54]:

False

In [ ]:

```python
1
```