

Lecture2 - Introduction to python

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1 Python introduction

1.1 Print hello

```
[1]: print("hello")
```

hello

1.2 Intialization

```
[3]: a,b,c =10, 20, 30  
     print(a, b, c)
```

10 20 30

1.3 Datatypes

```
[4]: a=10  
     print(type(a))  
     print(a)
```

<class 'int'>
10

```
[5]: b=10.5  
     print(type(b))  
     print(b)
```

<class 'float'>
10.5

```
[6]: c=True  
     print(type(c))  
     print(c)
```

<class 'bool'>
True

1.4 User input

```
[8]: a = int(input("Enter your number here"))  
     print(a)
```

Enter your number here2

2

1.5 Arithmetic operations

```
[9]: a=10  
     b=3  
  
     print(a+b)  
     print(a-b)  
     print(a*b)  
     print(a/b)  
     print(a%b)  
     print(a//b)  
     print(a**b)
```

13

7

30

3.3333333333333335

1

3

1000

##Relational operator

```
[12]: print(a<b)  
      print(a>b)  
      print(a<=b)  
      print(a>=b)
```

False

True

False

True

1.6 Membership operator

```
[14]: s = 'hello'  
      print('e' in s)  
      print('a' in s)
```

True

False

1.7 Comments

```
[20]: #Single line comment
      """
      Multi line comment
      """
```

```
[20]: '\nMulti line comment\n'
```

1.8 List

```
[41]: a = [1,2,3,4,5,6,7]
```

```
[42]: #Length
      print(len(a))

      #Print by index
      print(a[3])

      #Slicing
      print(a[2:6:2])    #list[start:stop:step]
      print(a[2:6])

      #Reverse
      print(a[::-1])
```

```
7
4
[3, 5]
[3, 4, 5, 6]
[7, 6, 5, 4, 3, 2, 1]
```

```
[43]: #deleting
      del(a)
      a
```

```
-----
NameError                                Traceback (most recent call last)
Cell In[43], line 3
      1 #deleting
      2 del(a)
----> 3 a

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

1.9 Tuple

```
[47]: a = (1,2,3,4,5,6,7)
```

```
[48]: #Length
print(len(a))

#Print by index
print(a[3])

#Slicing
print(a[2:6:2])    #list[start:stop:step]
print(a[2:6])

#Reverse
print(a[::-1])
```

```
7
4
(3, 5)
(3, 4, 5, 6)
(7, 6, 5, 4, 3, 2, 1)
```

```
[49]: #deleting
del(a)
a
```

```
-----
NameError                                Traceback (most recent call last)
Cell In[49], line 3
      1 #deleting
      2 del(a)
----> 3 a

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

1.10 Sets

```
[44]: a = {1,2,3,4,5,6,7}
```

```
[45]: #Length
print(len(a))
```

```
7
```

```
[46]: #deleting
del(a)
a
```

```
-----  
NameError                                Traceback (most recent call last)  
Cell In[46], line 3  
      1 #deleting  
      2 del(a)  
----> 3 a  
  
NameError: name 'a' is not defined
```

1.11 Dictionary

```
[52]: d = {'a':3, 'b':"Hello", 'c':True, 'e':3.5}  
      print(d)
```

```
{'a': 3, 'b': 'Hello', 'c': True, 'e': 3.5}
```

```
[53]: print(d['a'])  
      print(d['c'])
```

```
3  
True
```