Python

```
# single line comment
""" multiline
    comment """
```

```
import module
module.method()
print("message")
```

```
type("word")      # <class 'str'>
type(5) is int    # True
input("name: ")
```

Variables

```
x = 1
```
< no keyword, function scoped, not hoisted

```
num = 10
decimal = 10.0
myStr = "hi"
myBool = False
```

casting variables

```
decimal = float(10)
myStr = str("hi")
myBool = bool(True)
```

```
myStr.upper()             # "HI"
myStr.find("i")           # 1
myStr.replace("h","P")    # "Pi"

pow(num, 2)      # 100
abs(-2)          # 2
round(2.5673)    # 3
```

Collections

	change	duplicates	order
myList = ["A","B"]	Y	Y	Y
myTuple = ("A","B")	N	Y	Y
mySet = {"A","B"}	N	N	N
myDict = {"key":"A"}	Y	N	Y*

```
myList[0]     # "A"
myTuple[1]    # "B"
"A" in mySet # True
myDict["key"]# "A"

len(myList)   # 2
myList.extend(["C","D"])# [A,B,C,D]
myList[2:]    # [C,D]
myList[1:-1]  # [B,C]
myList.index("B")   # 1
myList.count("A")   # 1 ~ Counts "A"
myList.remove("B")  # ~ Removes "B"
```

Loops

```
for i in range(1, 11, 1):
    print(i)
```
< loops 10 times (1 to 10)

```
for item in myList:
    print(item)
```
< loops over collection

```
while num < 15:
    print(num)
    num += 1
```

Operators

```
x, y = 1, 2
```

Comparison

```
x == y   # False
x != y   # True
x < y    # True
x >= y   # False
```

Arithmetic

```
x + y   # 3
x - y   # -1
x * y   # 2
x / y   # 0.5
```

Assignment

```
x = 1    # x is now 1
x += 1   # x is now 2
x -= 1   # x is now 1
```

String

```
"Hi" + "World"      # "HiWorld"
```

Logical

```
x == 50 and y == 2 # False
x == 50 or y == 2  # True
```

Membership

```
"Z" in myList       # False
"rl" in "World"     # True
```

Conditionals if else

```
if num > 20:
    # if num is greater than 20
elif num <= 20 and num > 10:
    # if num is 20 or less AND
    # num is greater than 10
else:
    # if none of the above
    # are True i.e. num <= 10
```

Functions

```
def add(n1, n2=0):
    return n1 + n2
```
< declaring func

calling function

```
addNums(1, 2)  # becomes 3
addNums(5)     # becomes 5
```

```
python --version
cd <drag folder containing python files here>
python fileName.py
```