

Python Cheat Sheet

Commenting

Comment

```
# my note to me
```

Variables

Assignment

```
myAge = 36
```

Constants

```
pi = 3.14
```

Global Variables

```
lives = 3  
global lives
```

Input/Output

Input

```
pwd = input("Please enter a password")
```

Output

```
print("You have logged in succesfully")
```

Selection

If-Then-Else

```
if hour < 12:  
    print("Good Morning!")  
elif (hour < 18):  
    print("Good Afternoon!")  
else:  
    print("Good Evening!")
```

Switch Case

Does not exist in Python

Iteration

FOR Loop

```
for i in range (5):  
    print ("i = " + i) //1,2,3,4,5
```

FOR Loop

```
for i in range (0,9,2):  
    print ("i = " + i) //0,2,4,6,8
```

WHILE Loop

```
while password != "Password123":  
    password = input("Guess again")
```

Casting

To String

```
str(36)
```

To Integer

```
int("13")
```

To Float

```
float("3.14")
```

To Bool

```
bool("True")
```

Operators

Comparison Operators

```
myAge == 36 #equal  
lives != 0 #not equal  
health < 1 #less  
score > 0 #greater  
marks <= 40 #less or  
equal  
marks >= 80 #greater or  
equal
```

Logical Operators

```
age > 18 AND age < 60  
hour < 9 OR hour > 17  
NOT day == "Sunday"
```

Arithmetic Operators

```
4 + 5 #add  
9 - 6 #subtract  
2 * 4 #multiply  
5 ^ 3 #exponent  
6 / 3 #divide  
7 % 2 #modulus  
8 // 3 #quotient
```

String Operations

String Length

```
len(name)
```

Substrings

```
name[0:4] #0-3  
name[-3:] #last 3  
name[:5] #first 5
```

Concatenation

```
print("Hi" + name)
```

Change Case

```
name.upper()  
name.lower()
```

ASCII Conversion

```
ASC(K) # returns 75  
CHR(75) # returns K
```

Arrays

Declaration

```
score = [5]  
users["Dan","Ali"]  
ages[4, 4]
```

Assignment

```
score[0] = 59  
users[1] = "Dave"
```

Length

```
len(score)
```

Random Numbers

Random Numbers

```
import random  
r = random.randint(1,9)
```

File Handling

Open

```
f = open("data.txt","r")
```

Close

```
f.close()
```

Read Line

```
f.readLine()
```

Write Line

```
f.writeLine("Hello")
```

End of File

```
for line in f:  
    print f.readLine()
```

Write to File (removes anything already there)

```
f = open("data.txt","w")
```

Write to File (adds to the bottom of the list)

```
f = open("data.txt","a")
```

Sub Programs

Procedure

```
def sum(n1,n2):  
    print(n1 + n2)
```

Function

```
def sum(n1,n2)  
    return(n1 + n2)
```

Output a Function

```
print(sum(8,9))
```

Call a Function

```
result = sum(8,9)
```