Cheatography

Coding Cheat Sheet

by J2003J via cheatography.com/47352/cs/13592/

Input & Output

Output a message to the user

```
print("Hello There")
```

Ask the user for a text input (string)

```
name = input("What is your name?")
```

Ask the user for a number input (Integer)

```
age = int(input("How old are you?"))
```

Add a new line

```
name = input("What is your name?\n")
```

Concatenate strings

```
print("Hello "+ name )
```

Concatenate different data types

```
print("You are",age ,"years old")
```

Output the first letter

```
print(name[0])
```

Uppercase/Lowercase format

```
print(name.upper()) | print(name.lower())
```

Uppercase then lowercase format

```
print(name[0].upper()+name[1:].lower())
```

IF Statements

IF

```
x = 3
if x == 3:
print("x = 3")
```

IF / ELSE

```
x = 7
if x > 8:
print("Yes")
else:
print("No")
```

ELIF

```
x = 4
if x > 8:
print("A")
```

IF Statements (cont)

```
elif x > 5:
print("B")
elif x > 2:
print("C")
else:
print("F")
```

Remember to indent your code [Press the 'Tab' button n the keyboard]

Editing Lists

Replace third item

```
mylist[2] = 43
```

Insert in position

```
mylist.insert(1, "OCR")
```

Add to the end of a list

```
mylist.append("GCSE")
```

Remove all Sciences

```
mylist.remove("Science)
```

Delete all items

```
mylist = []
```

Delete third item

```
del mylist[2]
```

Reverse list order

```
mylist.reverse()
```

Sort list order

```
mylist.sort()
```

Join items using a space

```
print(" ".join(mylist))
```

Dictionaries

Creating a dictionary

```
mydict = {"a":1, "b":2, "c":3}
```

Returns the value of b

```
mydict["b"]
```

Check in dictionary

```
"c" in mydict
```

Dictionaries (cont)

Display the keys

```
mydict.keys()
```

Display keys and items

```
mydict,items()
```

Inequalities

Equal to

```
x == 3
```

Not equal to

```
x != 4
```

Less than / equal to

```
x <= 2
```

More than / equal to

```
x >= 1
```

Between two numbers

```
<= 3 x <= 12
```

AND

```
x == 1 and z == 4
```

OR

```
x == "A" or x == "a"
```

For Loop

Repeat 5 times

```
for x in range (5):
print("Owen")
```

Repeat length of string

```
for x in "Nathan":
print(x)
```

Count from 1 to 10

```
for x in range (1,11):
print(x)
```

Count from 1 to 10 in 2's

```
for x in range (1,11,2):
print(x)
```

Repeats code a predefined number of times

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While Loops

Repeat until false
while True:
print("Hello There!")

Using 'break' to end the loop
while True:
x = input("Say Yes")
if x == "Yes":
break

Until x is more than 100
x = 0
while x < 100:
x = int(input("x ?"))

A while loop will repeat infinitely until the program or user input tells it to stop
Repeats code until a condition is met [within the program]

Creating And Using Files

Create document

```
myfile = open("Filename.txt","w")
```

Add data to the text file

```
myfile.write("Hello World")
```

Reads entire file into one string

```
myfile.read()
```

Reads first 4 characters into one string

```
myfile.read(4)
```

Reads one line of a file

```
myfile.readline()
```

Reads entire file into a list of strings, one per line

```
myfile.readlines()
```

Steps through lines in a file

```
for eachline in myfile:
```

Close the file

```
myfile.close()
```

("w" write, "r" read, "a" append)
.csv will create a spreadsheet

Demonstrating knowledge

Annotate / Comment on a line of code

```
#short comments
```

Annotate / comment on a block of code

```
'''for longer comments'''
```

Always annotate you code

Variables

Creating a variable

```
name = "Josh"
```

Length of string

```
len(name)
```

Print a variable

```
print(name)
```

Coverting [String↔Integer]

```
str(age) 'or' int(age)
```

All variables are strings [str] by default

Numbers

Addition

```
2+2
```

Subtraction

```
4-1
```

Multiplication

```
3*5
```

Division

```
15/10
```

To the power of...

```
1.5**2
```

Multiplying A String

```
"Ethan" *14
```

Numbers follow the BIDMAS / BODMAS rule

Creating And Accessing Lists

Creating a list

```
mylist = ["Computer", "Science", 17]
```

Output full list

```
print(mylist)
```

Access first item

```
mylist[0]
```

Access first to second

```
mylist[1:2}
```

Access third item to the end

```
mylist[2:]
```

Access up to the third item

```
mylist[:2]
```

Check for in list

```
"Computer" in mylist
```

Concatenate

```
mylist + ["a"]
```

Remove third item and use

```
mylist.pop(2)
```

Remove last item and use

```
mylist.pop()
```

Find position in the list

```
mylist.index(Science)
```

Count appearances

```
mylist.count(17)
```

Add values

```
sum(mylist)
```

Length of List

```
len(mylist)
```

Compare lists

```
cmp(mylist, list)
```

Biggest number in list

```
max(mylist)
```

Smallest number in list

```
min(mylist)
```


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