

Cheat Sheet(Shit) - Introduction to Computer Science – 67101

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Example 0.1 (bool function):

```
1 def bool_examples() {  
2     print("--- The following will print False: ---")  
3     print(bool(None))  
4     print(bool(False))  
5     print(bool(0))  
6     print(bool(0.0))  
7     print(bool(()))  
8     print(bool(""))  
9     print(bool([]))  
10    print(bool(()))  
11    print(bool({}))  
12    print("--- The following will print True: ---")  
13    print(bool(42))  
14    print(bool(7.4))  
15    print(bool("Bla"))  
16    print("Hello, world!");  
17 }
```

Python

Example 0.2 (array shortcuts):

```
1 def array_shortcuts_examples() {  
2     text = "Python"  
3     text[0] == "P" # Takes the value in the index  
4     text[-1] == "n" # Takes the last  
5     text[1:4] == "yth" # Slice from 1 to 4 (meaning indices {1,2,3})  
6     text[:3] == "Pyt" # Take from start 3 values  
7     text[3:] == "hon" # Take from end 3 values  
8     text[::-2] == "Pto" # Take every second value (meaning mod 2)  
9     text[::-1] == "nohtyP" # Reverse  
10 }
```

Python

Example 0.3 (string functions):

```
1 def string_functions_examples() {  
2     "a".upper() == "A"  
3     "a".lower() == "a"  
4     "a".lower() == "a"  
5     "1".lower() or "1".upper() == "1"  
6     " a ".strip() == "a" #Removes white space from start or end only  
7     "a b".split() == ["a", "b"] #Split to list by indicating sign, default space  
8     "-".join(["a", "b"]) == "a-b" #Just as in C#  
9 }
```

Python

Example 0.4 (math functions):

```
1 def math_functions_examples() {  
2     10 / 3 = 3.333333333333335 # Divide  
3     10 // 3 = 3 # Divide without remainder (scale down)  
4     10 % 3 == 1 # Remainder from division  
5     2 ** 3 == 8 # 2 in the power of 3  
6     "a".upper() == "A"  
7     "a".lower() == "a"  
8     "a".lower() == "a"  
9     "1".lower() or "1".upper() == "1"  
10    " a ".strip() == "a" # Removes white space from start or end only  
11    "a b".split() == ["a", "b"] # Split to list by indicating sign, default space  
12    "-".join(["a", "b"]) == "a-b" # Just as in C#  
13 }
```

Python

Example 0.5 (C# VS Python):

C#	Python
1 Select()	1 map
1 Where()	1 filter
1 Aggregate()	1 reduce
1 OrderBy()	1 sorted
1 OrderByDescending()	1 sorted(reverse=True)
1 Sum()	1 sum
1 Count()	1 len
1 Any()	1 any
1 All()	1 all
1 First()	1 next
1 FirstOrDefault()	1 next(, default)
1 Skip()	1 [n:]
1 Take()	1 [:n]
1 Distinct()	1 set