Cheat Sheet - Introduction to Computer Science — 67101

January 10, 2026

Example 0.1 (bool function):

```python
def bool_examples() {
    print("--- The following will print False: ---")
    print(bool(None))
    print(bool(False))
    print(bool(0))
    print(bool(0.0))
    print(bool())
    print(bool(""))
    print(bool([]))
    print(bool(()))
    print(bool({}))
    print("--- The following will print True: ---")
    print(bool(42))
    print(bool(7.4))
    print(bool("Bla"))
    print("Hello, world!");
}
```

Example 0.2 (array shortcuts):

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

Example 0.3 (string functions):

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

Example 0.4 (math functions):

```python
def math_functions_examples() {
    10 / 3 = 3.3333333333333335 #Divide
    10 // 3 = 3 #Divide without reminder (scale down)
    10 % 3 == 1 #Reminder from division
    2 ** 3 == 8 #2 in the power of 3
    "a".upper() == "A"
    "a".lower() == "a"
    "a".lower() == "a"
    "1".lower() or "1".upper() == "1"
    " a ".strip() == "a" #Removes white space from start or end only
    "a b".split() == ["a", "b"] #Split to list by indicating sign, default space
    "-".join(["a", "b"]) == "a-b" #Just as in C#
}
```