

Assignment #2

The 'if' Statement

Write definitions for each of the following Python functions, and for each function, include a clear and concise comment to describe its purpose. Use *only* the Python topics covered so far in class.

1. LetterGrade(percentage)

The letter grade corresponding to the numerical grade 'percentage', according to:

Numerical Grade	85–100	70–84	55–69	40–54	25–39	0–24
Letter Grade	"A"	"B"	"C"	"D"	"E"	"F"

Values of 'percentage' outside the range 0–100 should return the grade "X".

2. And(b1, b2)

Takes two Boolean values 'b1' and 'b2', and return True if both of these values are True, and False otherwise (for practice, do *not* use the '&&' operator here).

And(False, True) ⇒ False

And(7 > 3, 1+1 == 2) ⇒ True

3. Or(b1, b2)

Takes two Boolean values 'b1' and 'b2', and return False if both of these values are False, and True otherwise (for practice, do *not* use the '||' operator here).

Or(False, True) ⇒ True

Or(7 < 3, "a" == "A") ⇒ False

4. AllEqual(x1, x2, x3)

Are 'x1', 'x2', 'x3' all equal to one another?

AllEqual(5, 5, 5) ⇒ True

AllEqual(5, 2, 5) ⇒ False

5. AllDifferent(x1, x2, x3)

Are 'x1', 'x2', 'x3' all different from one another?

AllDifferent(4, 5, 6) ⇒ True

AllDifferent(5, 5, 5) ⇒ False

AllDifferent(5, 2, 5) ⇒ False

Experiment:

Try calling 'AllEqual' and 'AllDifferent' but with three *strings*, rather than three *numbers*.

Program Submission:

Store the function definitions in a file named 'a02.py', and turn it in for grading by typing:

submit-cs1117 a02.py

Due Date: Fri Sep 25, 11:00am