

UNIT TESTS

An Introduction to Computer Science



Unit Tests

Make it easier to...

1. Find problems earlier
2. Change things later
3. Glue together code



Example Unit Test

```
from cisc108 import assert_equal
```

Test module

```
def feet_to_inches(distance:int)->int:  
    return distance * 12
```

Function

```
assert_equal(feet_to_inches(2), 24)
```

Unit Test



Representative Cases

	Input	→	Output
Positive Integer	1	→	12
Positive Float	.5	→	6.0
Zero	0	→	0
	-4	→	-48
Negative Integer	10000	→	120000
Large Positive Integer			



Code Coverage

```
from cisc108 import assert_equal
```

```
def feet_to_inches(distance:int)->int:  
    return distance * 12
```

```
assert_equal(feet_to_inches(2), 24)  
assert_equal(feet_to_inches(.5), 6.0)  
assert_equal(feet_to_inches(0), 0)  
assert_equal(feet_to_inches(-4), -48)  
assert_equal(feet_to_inches(10000), 120000)
```



Failing Unit Tests

Function: `inches_to_feet()`

Given input: 1

Expected output: 12

Actual output: -5

12 **!=** 5, you have an error in your calculation!



Passing Unit Tests

Feedback: Incorrect Answer

 Trace Variables

Instructor Feedback

Your `make_polite` function did not produce the correct output for the values `''`.

Expected: `',' please'`

Actual: `'No'`

