ASSERTIVE PROGRAMMING

Fail Fast. Fail Visibly.

What's meant by writing code the assertive way ?

- Make your code ASSERT itself!
- Break code where it should. Don't continue with faulty data.
- Don't assume anything. Even impossible can happen.

ARE YOU SURE IT WILL NEVER HAPPEN ?

- A month with fewer than 28 days
- In C++: a = 2; b = 3; but (a + b) does not equal 5
- A minute that doesn’t have 60 seconds
- A triangle with an interior angle sum ≠ 180°

Source : The Pragmatic Programmer

POSSIBLE EXPLANATIONS:

- September, 1752 had only 19 days. This was done to synchronize calendars as part of the Gregorian Reformation.
- Operator overloading might have defined +, =, or != to have unexpected behavior. Also, a and b may be aliases for the same variable.
- Leap minutes.
- In non-Euclidean geometry, the sum of the angles of a triangle ≠ 180°. E.g. A triangle mapped on the surface of a sphere.

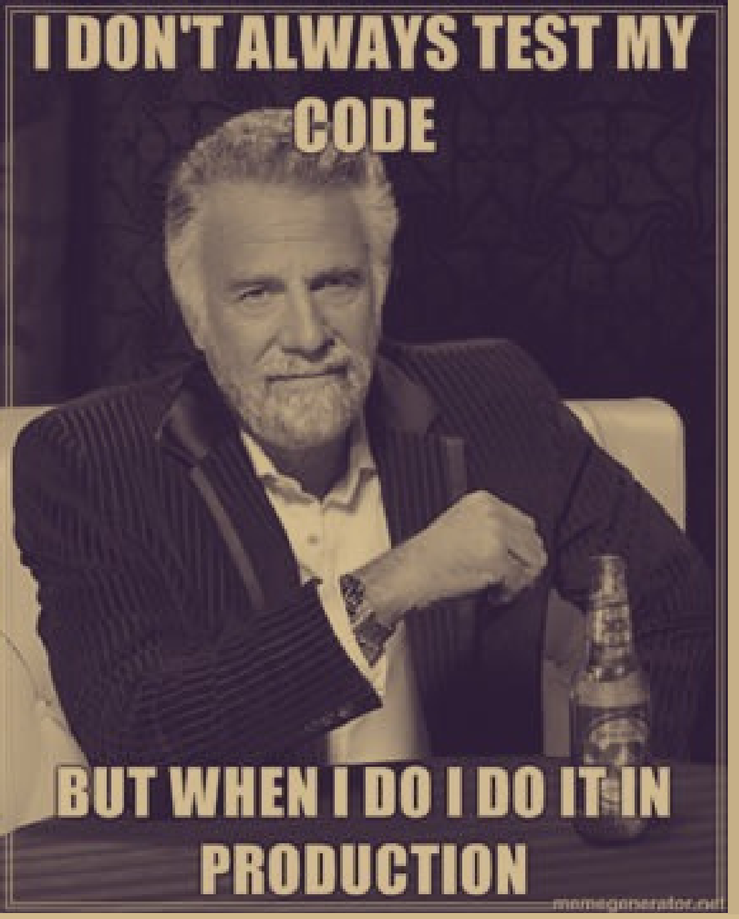
Source : The Pragmatic Programmer

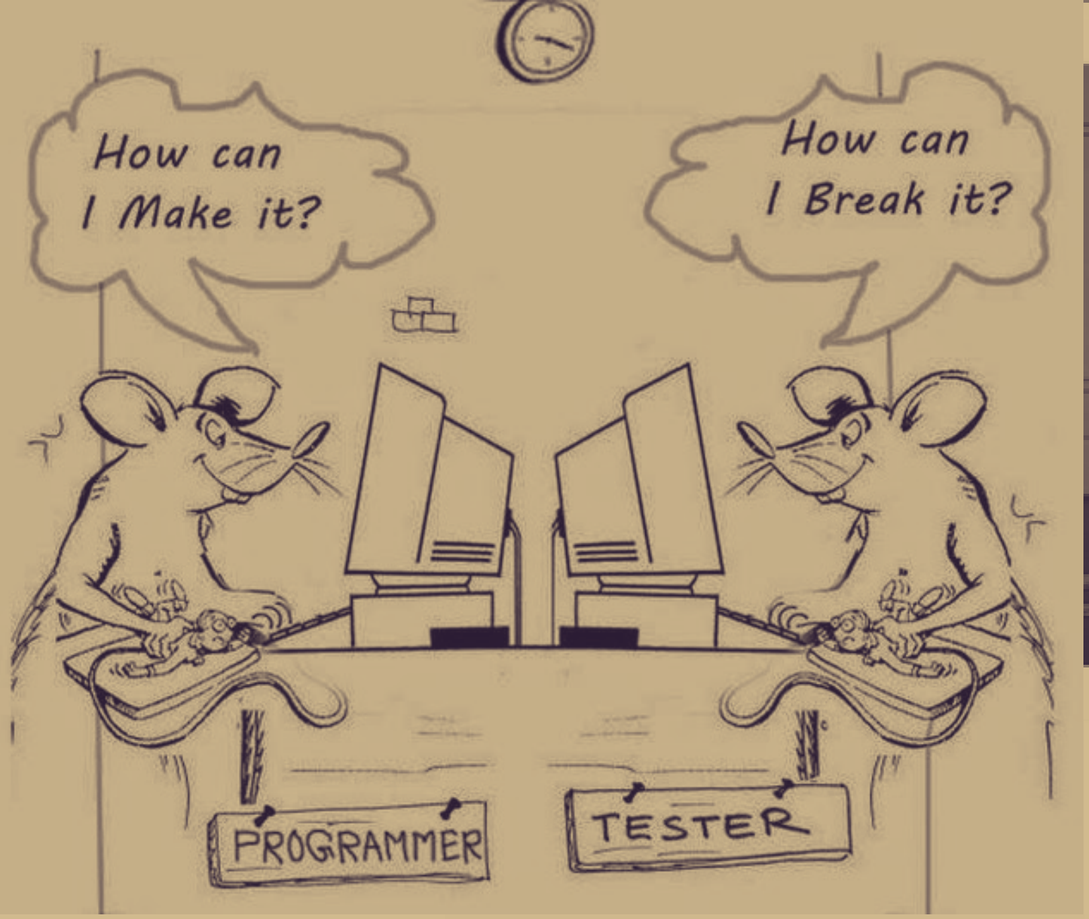
NEED FOR ASSERTIVE CODE IN DYNAMICALLY TYPED LANGUAGES

- In a dynamically typed language, the data type is checked at runtime, as opposed to statically typed languages which do type checking in compile time.
- Statically typed languages: C, C++, Java
- Dynamically typed languages: Python, Javascript
- Common errors in data types mismatch can lead to bugs later down the line. It is better to stop them beforehand.

ASSERTION IS BUG HANDLING NOT ERROR HANDLING

- Assertions are generally used to fix bugs in the program (mistakes of the programmer).
- They should not be used to fix external errors. E.g. - wrong user input, network error, file error.
- It is a common practice to user assertions in development mode only.



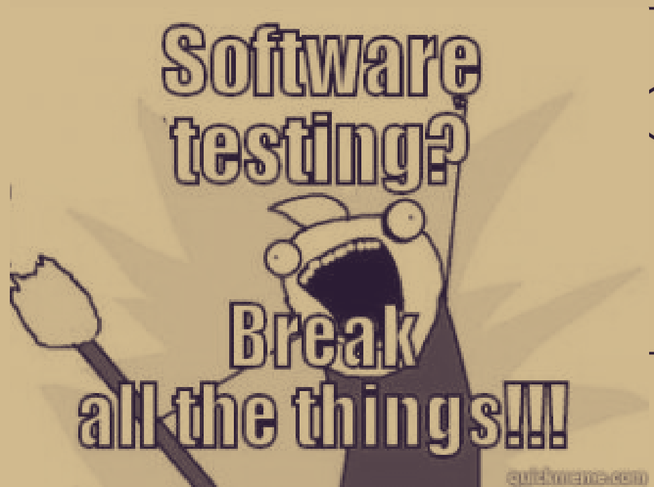


The reaction to a "BUG"

DevOps Dan
@scripticles

one of our developers left this some time before he took a job elsewhere #programming

```
// Happy debugging, suckers
# define true (rand() > 10)
```



Thank You

CHIRAG GHOSH