

 visual programming

Evaluating Solution



Bachelor of Information Systems
Institut Teknologi Del



Learning Objective(s)

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This material should address the following question(s).

- Why bother evaluating our solution?
- How to evaluate a solution?

Discussion Point

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Why bother **evaluating**
our solution?

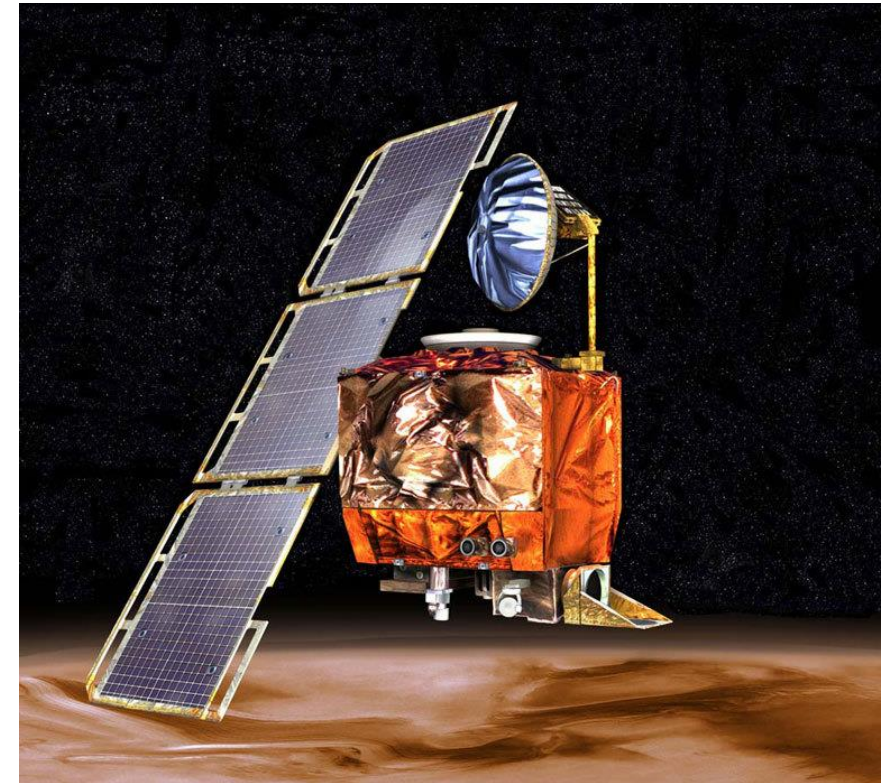


What was Mars Climate Orbiter?

NASA's Mars Climate Orbiter was designed to study Mars from orbit and to serve as a communications relay for the Mars Polar Lander and Deep Space probes. The mission was unsuccessful due to a navigation error caused by a failure to translate English units to metric.

Nation	United States of America (USA)
Objective(s)	Mars Orbit
Spacecraft	MCO
Spacecraft Mass	1,407 pounds (638 Kilograms)
Mission Design and Management	NASA / Jet Propulsion Laboratory
Launch Vehicle	Delta 7427-9.5 (no. D264)

<https://solarsystem.nasa.gov/missions/mars-climate-orbiter/in-depth/>
<https://youtu.be/lcYkOh4nweE>



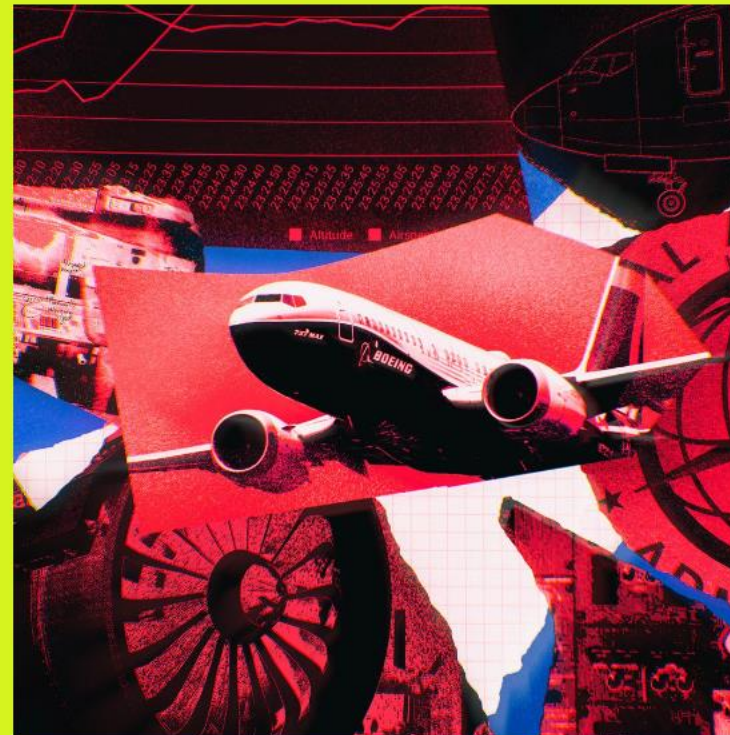
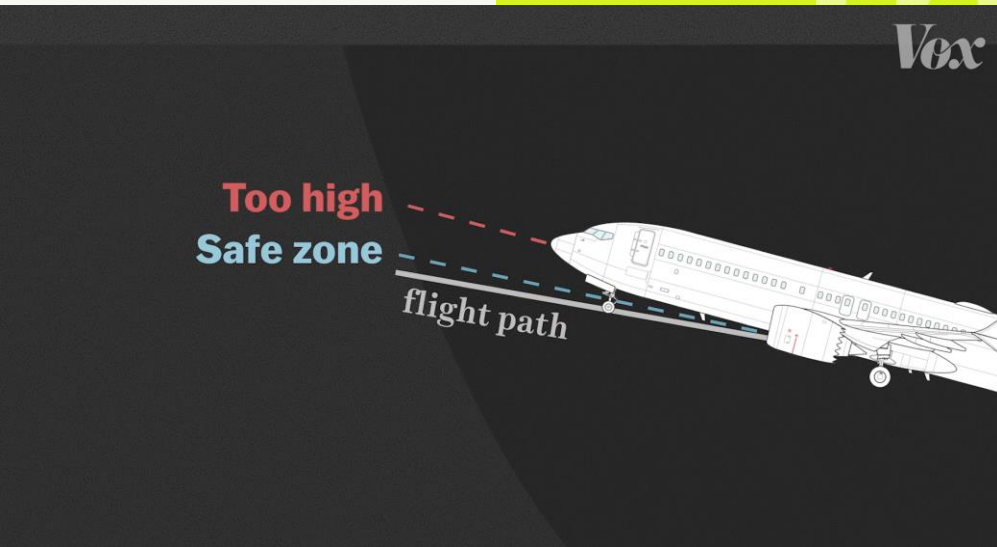


Illustration by Alex Castro / The Verge

TRANSP0

The ancient computers in the Boeing 737 Max are holding up a fix

The perils of fixing a hardware problem with software

By DARRYL CAMPBELL

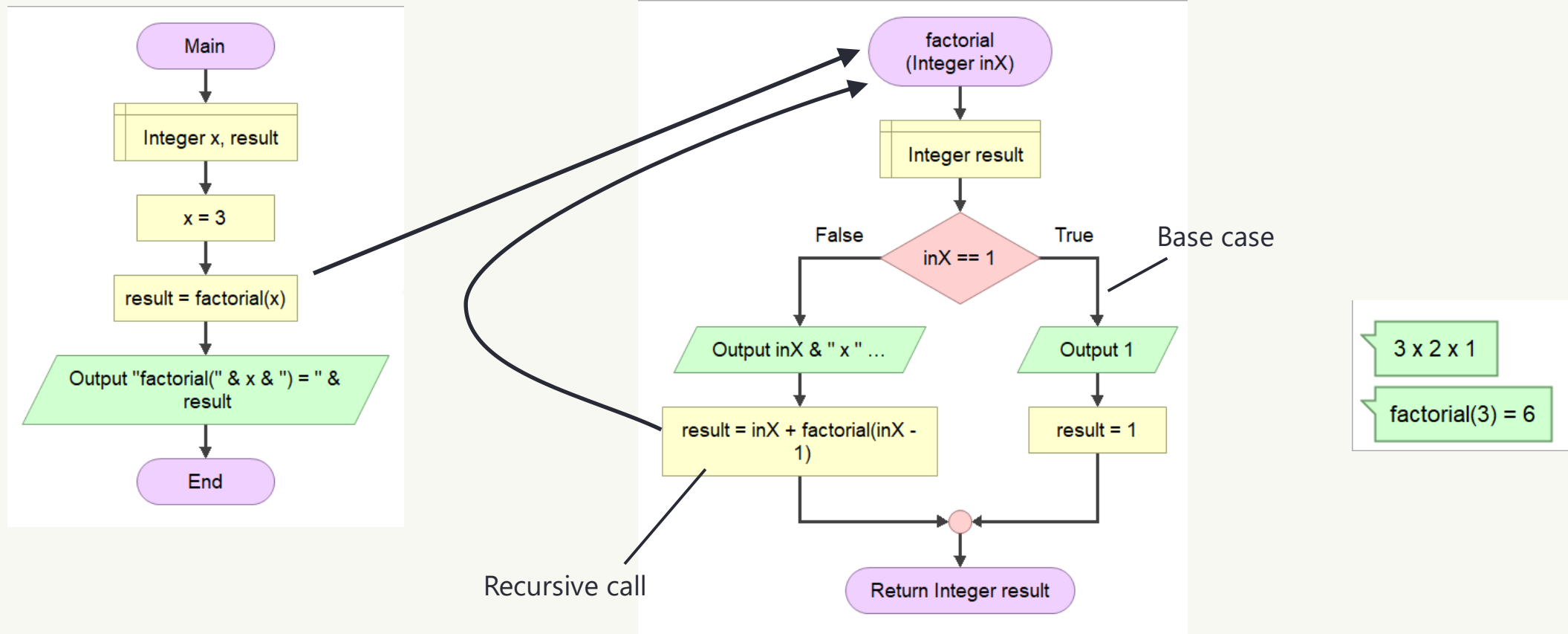
Apr 9, 2020, 7:00 PM GMT+7 | 0 Comments / 0 New



A brand-new Boeing 737 Max gets built in just nine days. In that time, a team of 12,000 people turns a loose assemblage of parts into

<https://youtu.be/H2tuKiiznsY>

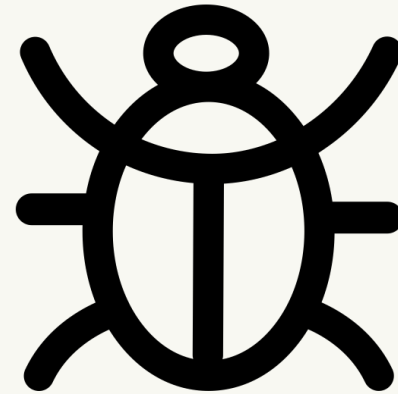
<https://www.theverge.com/2020/4/9/21197162/boeing-737-max-software-hardware-computer-fcc-crash>



An ineffective factorial

The Take Away

- In practice, a perfect solution is simply a myth.
- Bugs (faults) are always lurking.
 - They will make failures during the software operational.
- Minimizing the occurrence of bugs in the solution.



Software Fault

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In a solution (software), a **fault** (bug) is an incorrect routine. When it is executed, the solution will very likely behave unexpectedly. Sometimes, it is life threatening.

A set of **tests** procedure should take place to reveal faults.

Discussion Point

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Evaluating Solution: **Testing**.

Testing

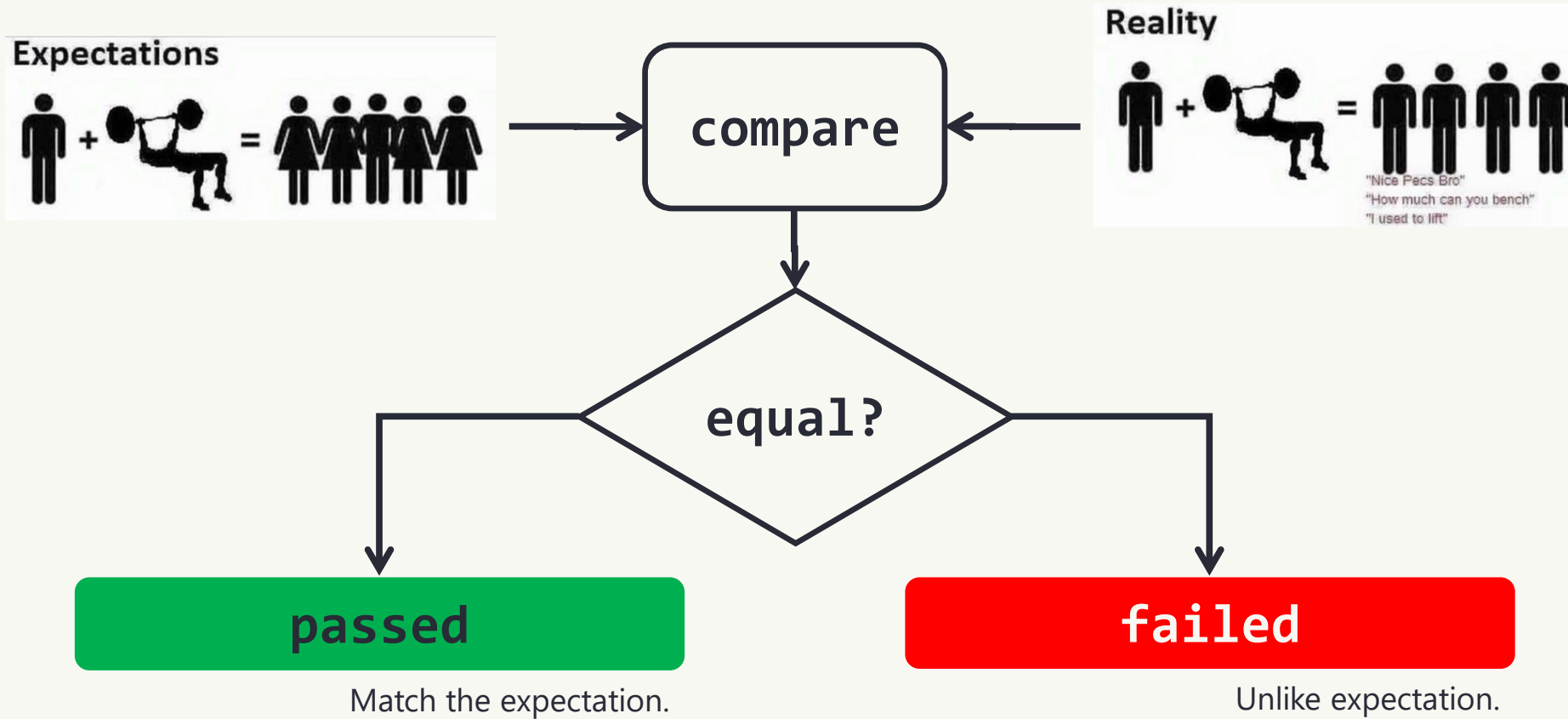
- It is a process of comparing the reality with the expectation.
- It can show the presence of failures, not their absence.

Expectations



Reality





Basic testing process

Final Thoughts.



Conclusion

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1. Our solution may contain faults (**bugs**).
 - An executed fault, failures, brings consequences.
 - Some consequences may severe.
2. A way to find out the existence of failures (faults) is by conducting enough testing.



References



Wassberg, J. (2020). Computer Programming for Absolute Beginners. Packt.



– EOF –



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