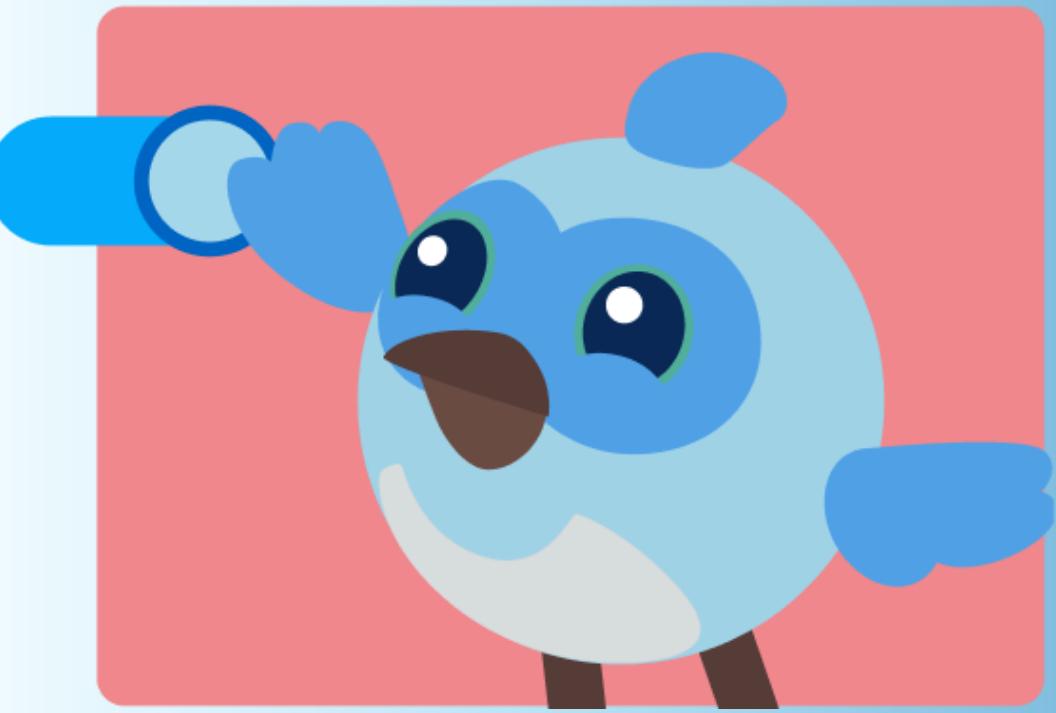


Understanding Testing: Tools for Better Code

November 17, 2024





Our Agenda



- Introduction
- Why Care About Tests?
- Part 1 - Unit, UI and Integration Tests
- Part 2 - Golden Tests
- Q&A



KELLY BENTES

- Mobile Developer
- 9+ Years Of Experience
- Meaningful Apps
- Started on Research



<https://www.linkedin.com/in/kelly-bentes/>

Why Care About Tests?





WHAT KIND OF SOFTWARE DO WE WANT TO BUILD?

- WITH A GOOD CODE QUALITY
- RELIABLE
- EFFICIENT
- BUILD IN A TEAM
- BUG FREE?
- ACCESSIBLE
- THAT MAKES THE USER HAPPY

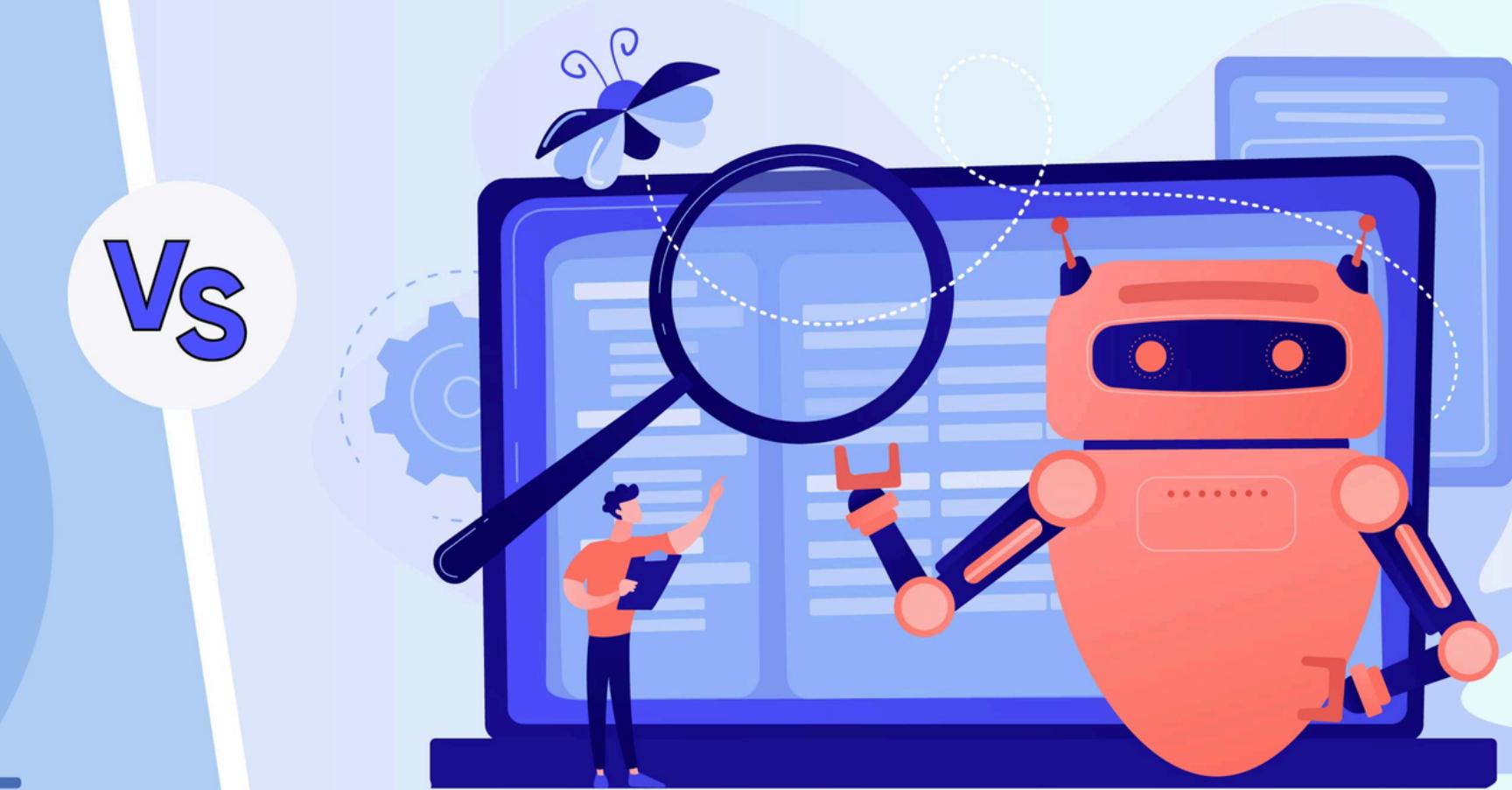


■ HOW DO WE DO THAT?

Manual Testing



Automation Testing



Vs



HOW DO WE DO THAT?

MANUAL TESTS

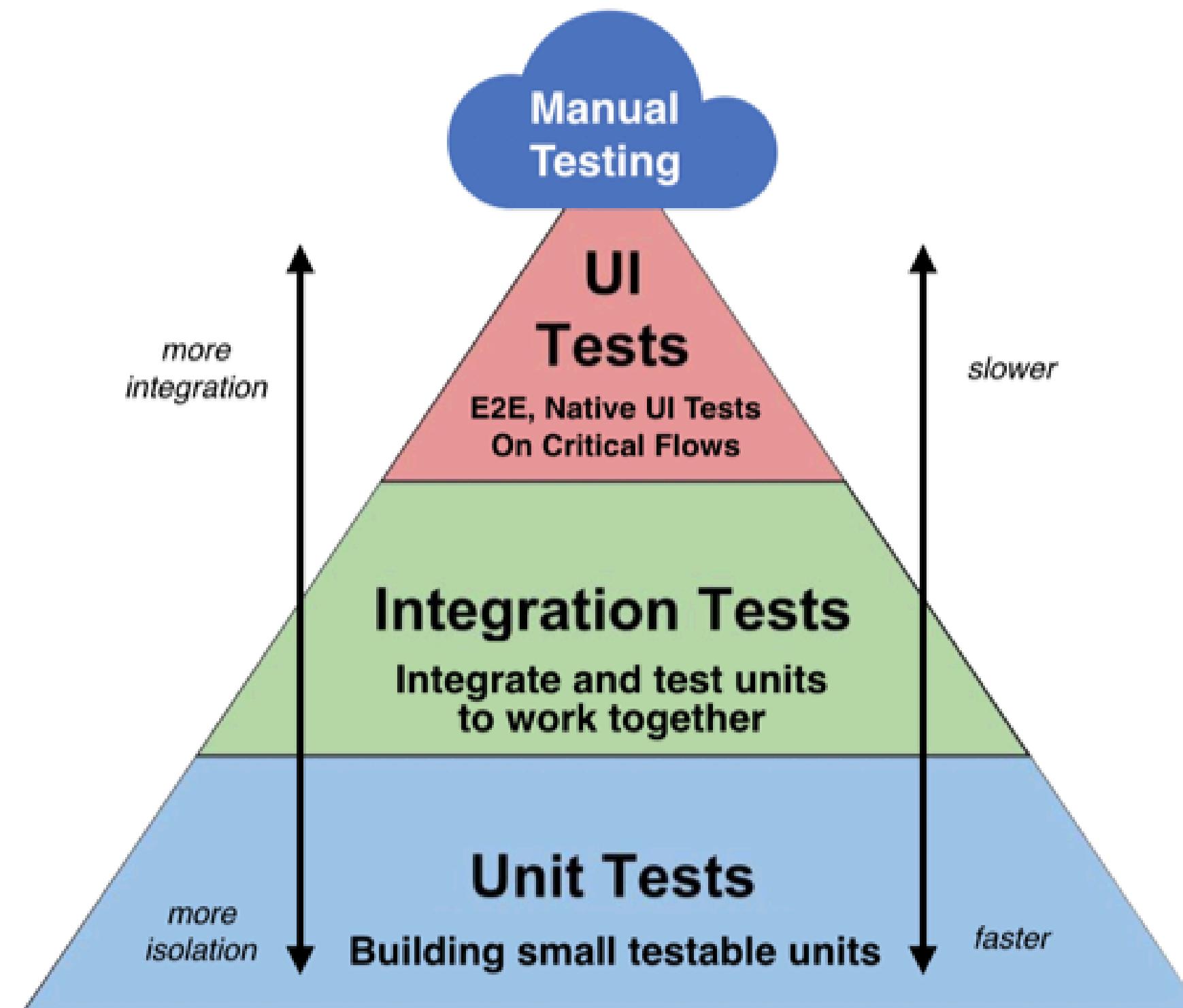
- PERFORMED BY A HUMAN TESTER
- SLOWER, ESPECIALLY FOR REPETITIVE TASKS
- PRONE TO HUMAN ERRORS
- BEST FOR EXPLORATORY, USABILITY, OR ONE-OFF SCENARIOS
- LOWER UPFRONT COST, BUT COSTLY FOR FREQUENT EXECUTION

AUTOMATED TESTS

- PERFORMED BY SCRIPTS/TOOLS
- FAST AND EFFICIENT FOR REPETITIVE TASKS
- RELIABLE AND CONSISTENT
- IDEAL FOR REPETITIVE, REGRESSION, AND LARGE-SCALE TESTS
- HIGHER UPFRONT COST, BUT COST-EFFECTIVE LONG-TERM



TEST PYRAMID



Part I - Unit, UI and Integration Tests



■ PREPARATION

- GOOGLE HAVE AMAZING RESOURCES FOR LEARNING
- WE ARE GOING TO DO A CODELAB TOGETHER

WIFI

Name

Scionova Guest

Password

FreeConnectivity

CODELAB



<https://codelabs.developers.google.com/codelabs/flutter-app-testing#0>

GITHUB

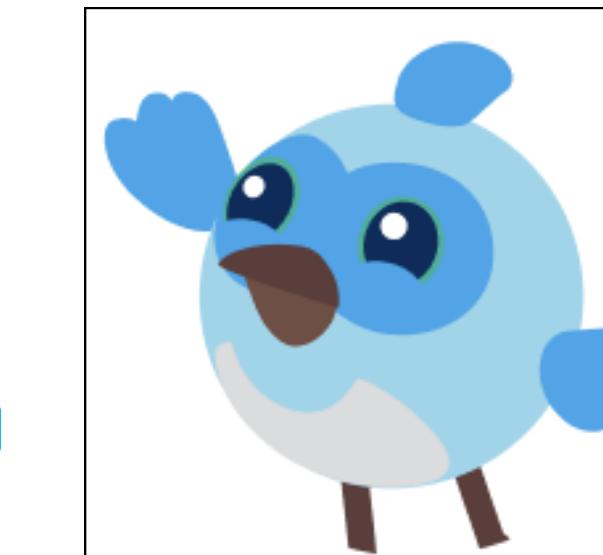
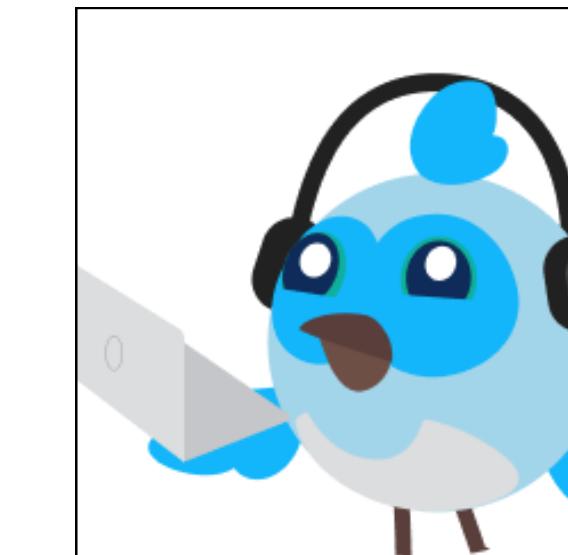
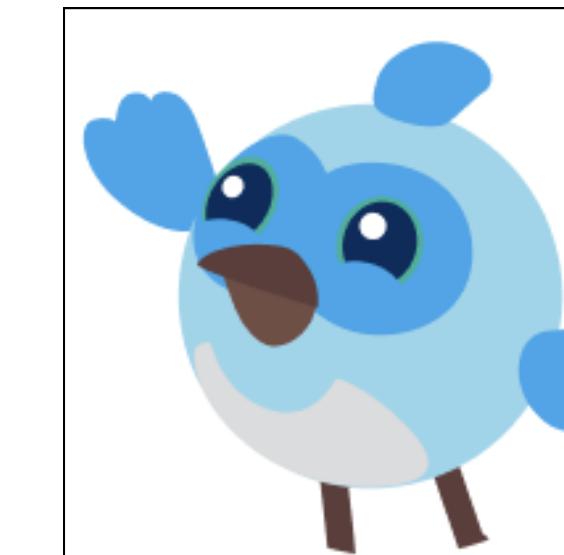
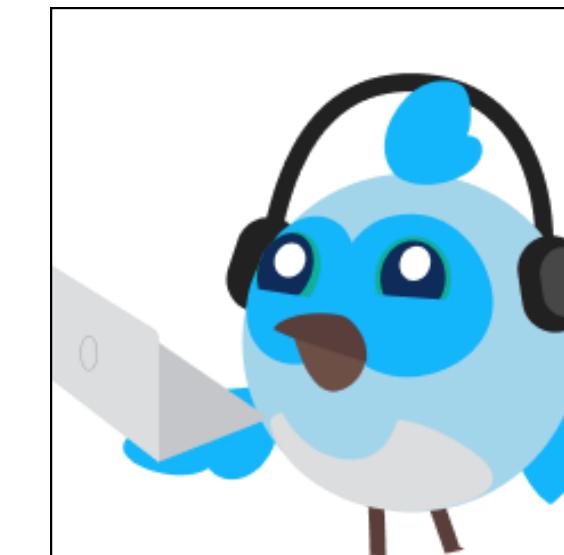
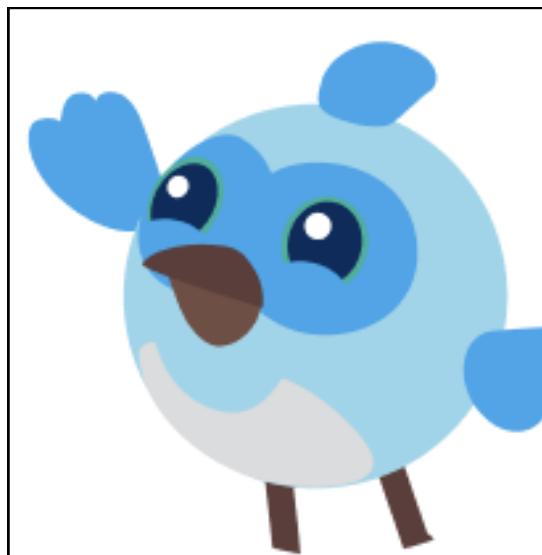
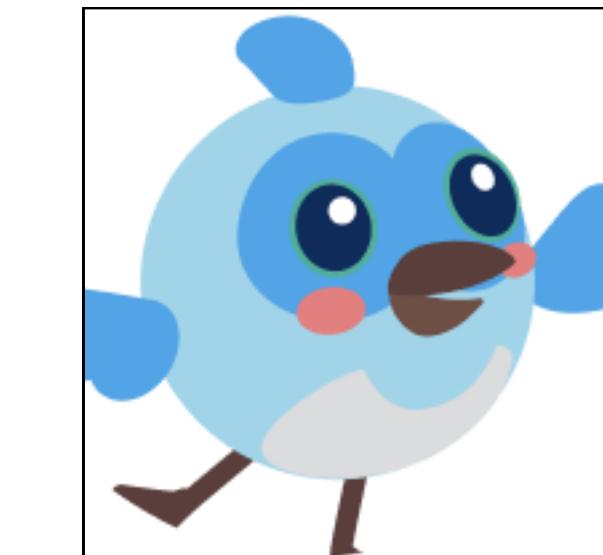
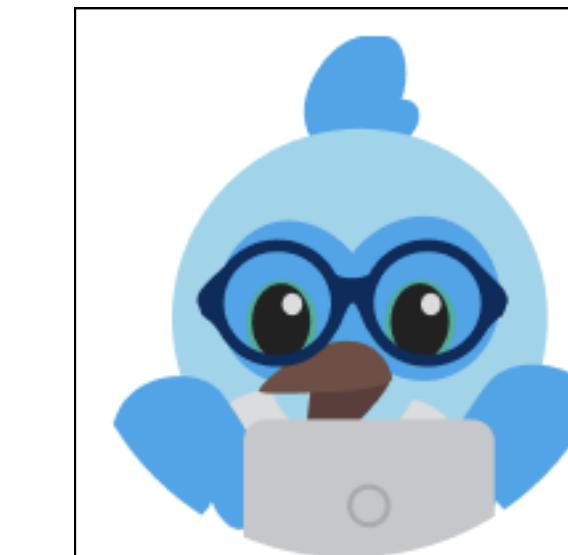
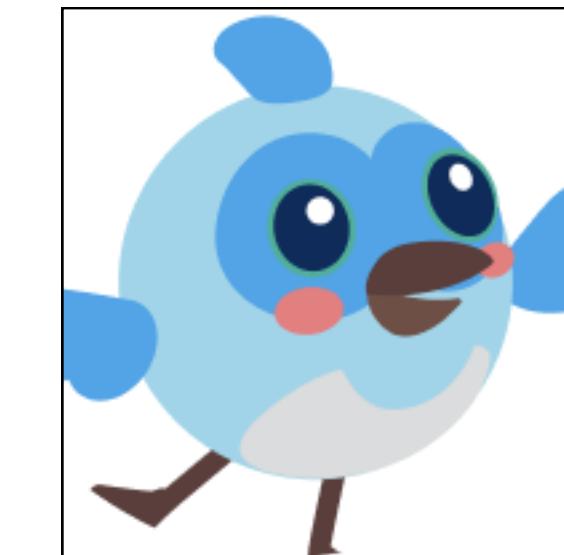
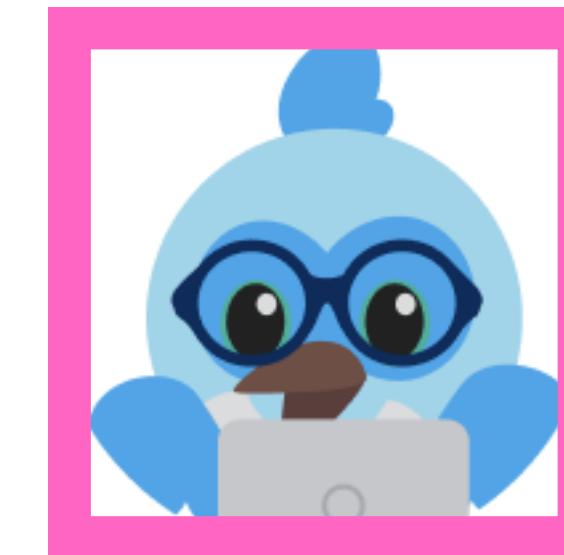
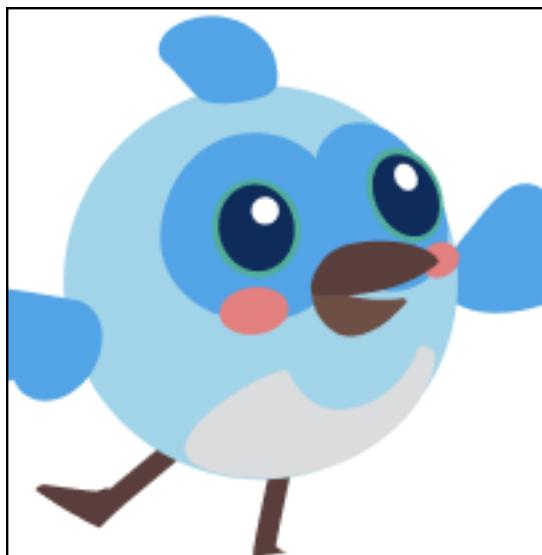


https://github.com/KellyMBentes/pink_testing_app



UNIT TESTS

UNIT TESTING, IS A FORM OF SOFTWARE TESTING BY WHICH ISOLATED SOURCE CODE IS TESTED TO VALIDATE EXPECTED BEHAVIOR.





WIDGETS TESTS (UI TEST)

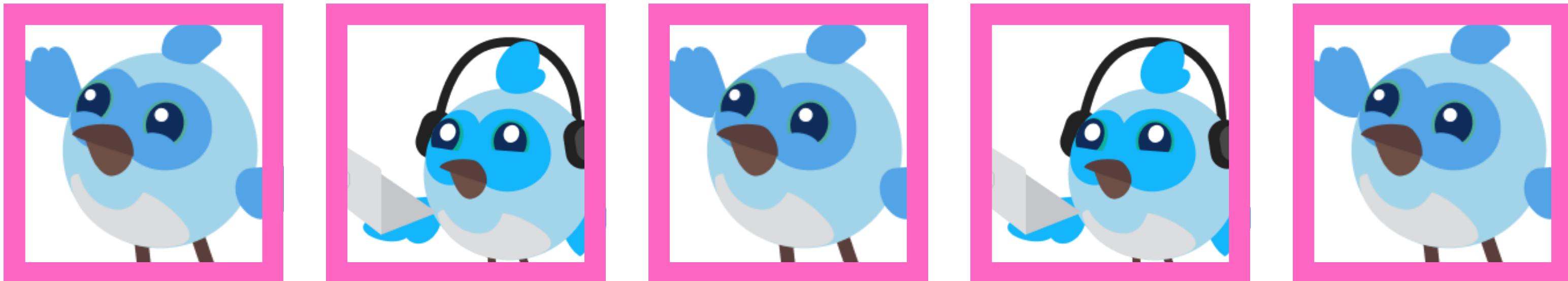
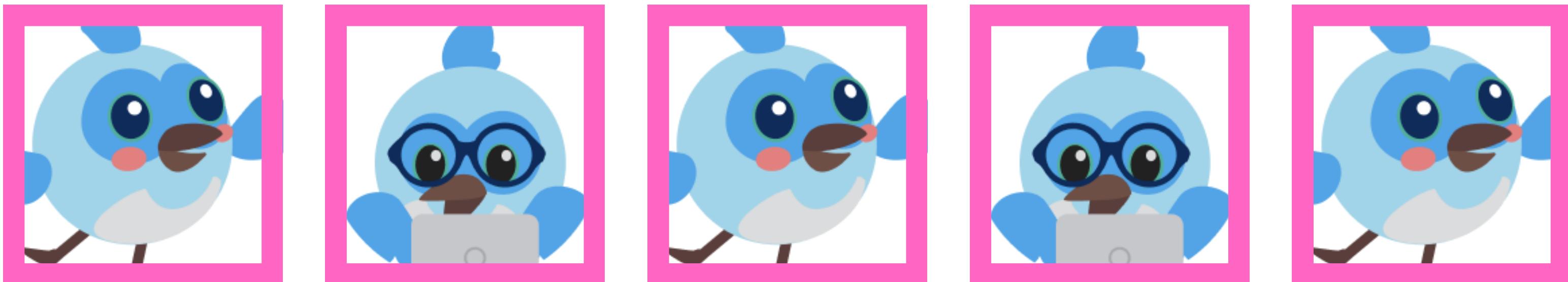
WIDGET TESTING IN FLUTTER INVOLVES TESTING THE APP'S UI COMPONENTS.





INTEGRATION TESTS

INTEGRATION TESTING DESCRIBES TESTS THAT ARE RUN AT THE INTEGRATION-LEVEL TO CONTRAST TESTING AT THE UNIT OR SYSTEM LEVEL.



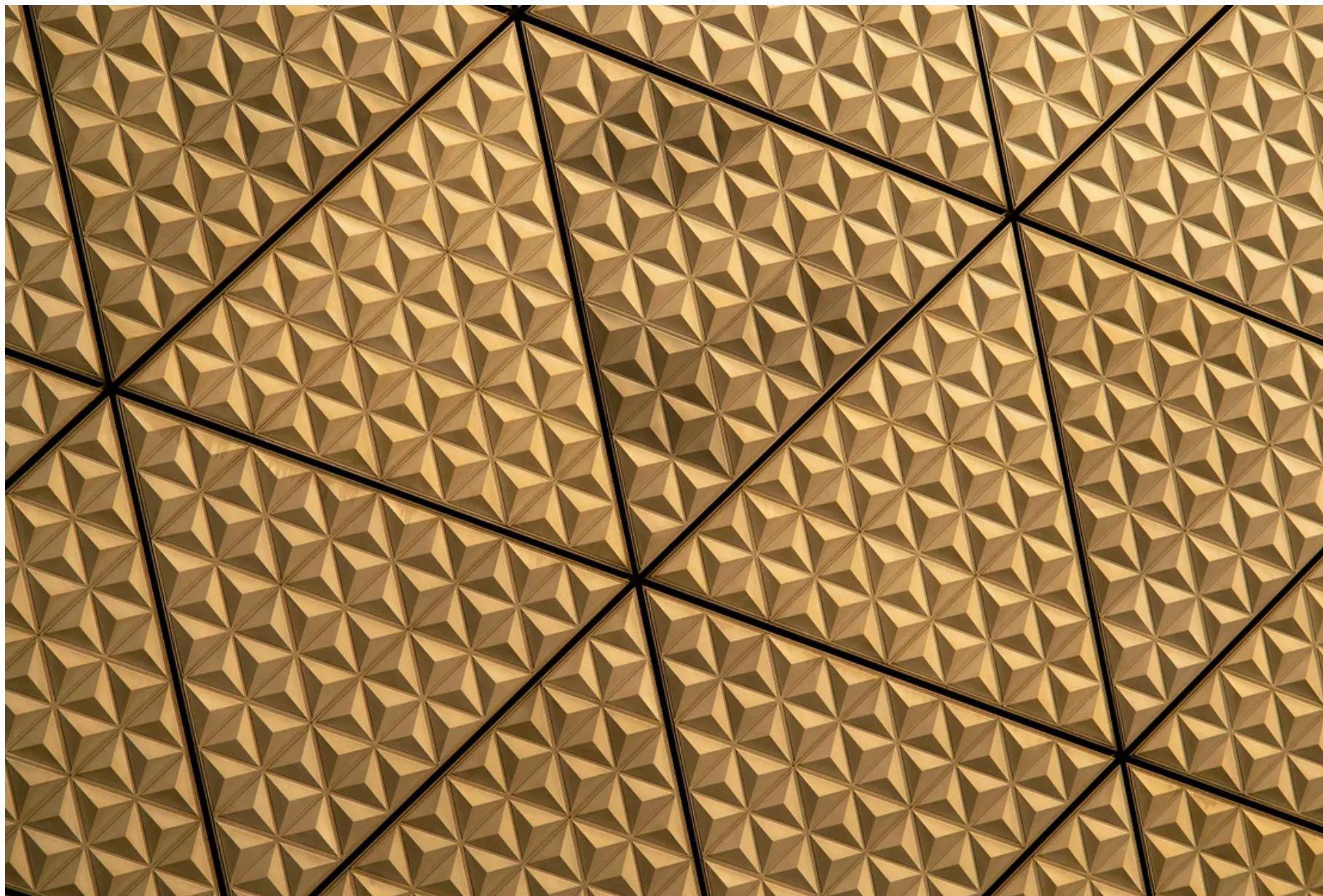
Part 2 - Golden





GOLDEN TESTS

GOLDEN TESTS ARE BASICALLY WIDGET TESTS. A SPECIAL MATHER COMPARES YOUR WIDGET WITH AN IMAGE FILE AND EXPECTS THAT IT LOOKS THE SAME.



Q&A



THANK YOU!!

