



Quality Assurance Testing

UCSB Robotics, Winter 2021 | Alex Mei

QUALITY ASSURANCE

DAILY RUNDOWN

- Why QA Testing?
- Types of Testing
- Project Testing
- Project Wrap Up

Me: Hey can you show me what is the err-
C++:



WHY DO WE NEED QA TESTING?

- Catch bugs early rather than later
- Quality Assurance
- Trust and Reputation
- Safety

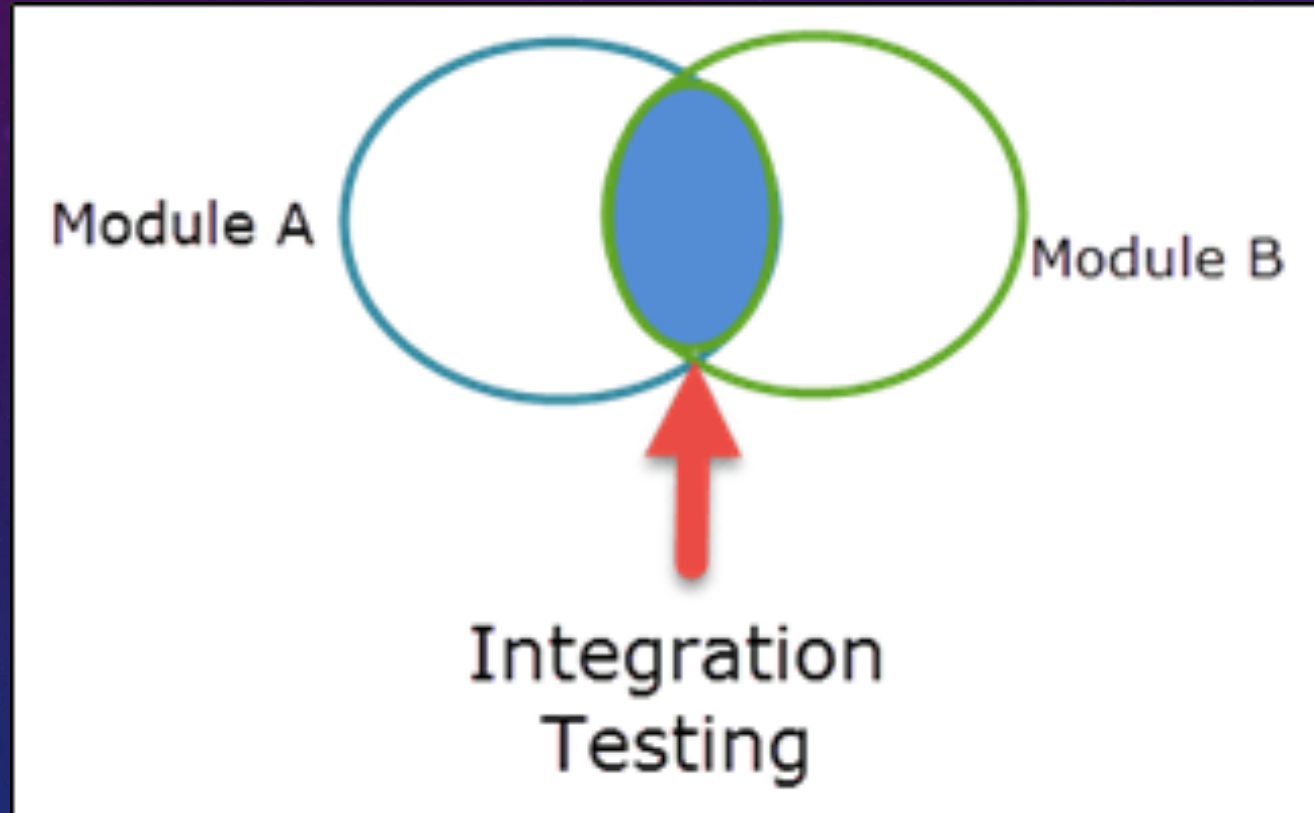
TYPES OF TESTING

- Unit Testing: testing each component to validate functionality
- Integration Testing: testing to confirm components have been integrated correctly
- End to End Testing: testing to confirm system works as a whole
- Acceptance Testing: client confirms requested features work

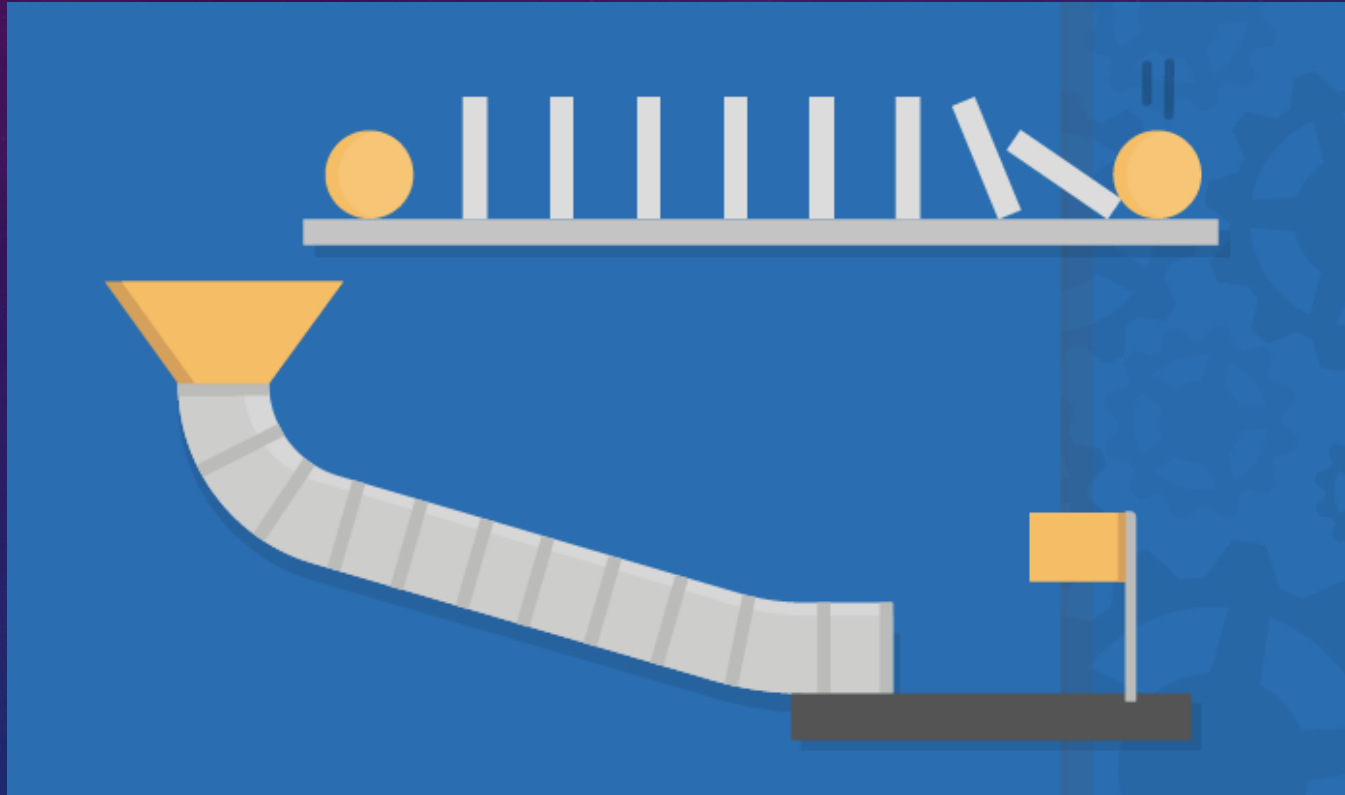
UNIT TESTING EXAMPLE

```
namespace ExampleProject
{
    2 references
    public class ClassForTesting
    {
        2 references | 1/1 passing
        public object MethodForTesting1(string thing)
        {
            switch (thing)
            {
                case "true":
                    return true;
                case "something":
                    return "something";
                case "tomatoes":
                    return "tomatoes";
                default:
                    return thing;
            }
        }
    }
}
```

INTEGRATION TESTING EXAMPLE



END TO END TESTING EXAMPLE



ACCEPTANCE TESTING EXAMPLE

USER ACCEPTANCE TESTING





BETA USERS OF THE MOST RECENT RELEASE OF INSTAGRAM IS AN
EXAMPLE OF WHAT PHASE OF TESTING?

- A) Unit Testing
- B) Integration Testing
- C) End to End Testing
- D) Acceptance Testing

TESTING BOUNDARY VALUES OF A FUNCTION IS AN EXAMPLE OF WHAT PHASE OF TESTING?

- A) Unit Testing
- B) Integration Testing
- C) End to End Testing
- D) Acceptance Testing

PROJECT TESTING

- Wrap up project sprint 2; perform sprint review and retrospective
- Start testing your app using all four types of testing



PROJECT SHOWCASE SCHEDULE

- 2:00 – 2:25: Last Minute Preparation
- 2:30 – 3:30: Project Presentations (15 minutes per group)
- 3:35 – 4:00: Software Team Social

PROJECT PRESENTATIONS

- 15 minutes per group [10 min presentation + demo; 5 min Q&A]
 - Talking Points: Goal of Project, Key Technologies, User Stories, Challenges, Retrospectives
 - Q&A: Audience + Judging Panel on various aspects of your Project

PROJECT FEEDBACK

- Please share Github with Rory (@RoryZahedi) and I (@alexmeigz)
- We will provide technical and non-technical feedback in Breakout Rooms

SOFTWARE TEAM SOCIAL

- Please fill out the following form (1 robochip): <https://forms.gle/DGo1dKfFuuLFs2Y19>
- Kahoot about Software Team! See who knows the team best!