RMIT UNIVERSITY

EEET2578 Engineering Quality Assurance
ISYS2092 Software Testing

SOFTWARE TEST MANAGEMENT PRESENTATION

Produced for the Tangerine company

SEMESTER 2 – September 2024

Group administrivia

Team number: 2

Team members:

- Tran Minh Nhat – s3926629
- Tran Tan Phat – s3836612
- Dang Vinh Luan – s3927222
- Pham Nguyen Minh Dang – s3922418

What's in this video?

- Introduction to the Testing Project
- Objectives and Scope
- Testing Project in Details
- Allocation of Position and Duties
- Entry and Exit Criteria
- Risk and Defect Management
- Metrics for Measuring Success

Introduction to the Testing Project

Project Name: The Tangerine Product Series

Version: v1.0-2024

Objectives and Scope

The beginning to every project...

Objectives of the project

- Verify the functionality and quality of Tangerine and its components
  - These includes Tangerine, Tangerine: Class, Tangerine: Tutor
- Guarantee that Android devices (v2.3 or newer) are compatible.
- Confirm that the product satisfies all functional and non-functional specifications.
- Guarantee the security of data that is stored locally and transmitted over the internet.
- Guarantee the system's efficacy and usability in low-resource environments.

Scope of the project

In-Scope:

- Functional testing of core components.
- Performance testing under a variety of network and device conditions.
- Conducting usability testing on a variety of Android devices.
- Data storage and synchronization security testing.
- Testing for compatibility with Android devices that are operating version 2.3 or higher.

Out-of-Scope:

- RTI does not offer integration with third-party analytics tools.
- Testing of hardware that is not in accordance with the prescribed specifications of the device.

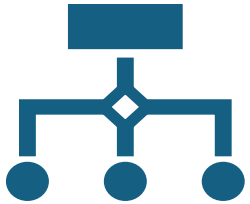
Testing Project in Details

Now, with those information ready, let’s get to test!

Testing Project – Items Under Test

- Core components of the Tangerine product series, including:
  - EGRA/EGMA assessments
  - Built-in timers for precise measurement
  - Surveys and classroom observations
  - Data export to CSV
  - Data synchronization (offline/online scenarios)

Testing Project – Levels and Types



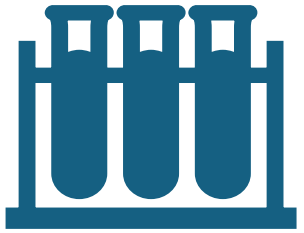
Test Levels:

Unit Testing: Individual module testing (e.g., timers, data collection components).

Integration Testing: Testing interactions between different modules.

System Testing: End-to-end testing of the products.

User Acceptance Testing (UAT): Testing against real-world scenarios from RTI's userbase.



Testing Types:

Functional Testing: Guaranteeing that the fundamental features function as anticipated.

Regression Testing: Ensuring that modifications do not affect extant functionalities.

Performance Testing: Evaluating the stability of the application in low-resource and high-stress environments.

Security Testing: Evaluating encryption and data protection mechanisms.

Usability Testing: Assessing the user experience on various devices.

Testing Project – Environment and Technologies

Optimization of technologies such as:

The usage of those provided good quality testing from automation to compatibility and load testing.

Testing Project - Schedule

Activity	Start Date	End Date	Responsible
Test Planning	End of Week 1	Week 2	Test Lead
Test Case Design	Week 2	Mid-Week 3	Test Engineers
Unit Testing	Mid-Week 3	Week 5	Development Team
Integration Testing	Week 5	Week 6	QA Team
System Testing	Week 6	Week 7	QA Team
User Acceptance Testing	Week 7	Week 9	QA Team
Regression Testing	Week 9	Week 10	QA Team
Test Closure	Week 10	Week 11	Test Lead

Testing Project - Deliverables

- Test Plan document
- Test Cases (covering functionality, performance, security, and usability)
- Automated Test Scripts (for regression and performance testing)
- Test Results and Defect Reports
- Test Summary Report

Allocation of Position and Duties

Now we know what is in the testing project, now the next question is: WHO? Who will do it?

Allocation of Position and Duties

Role	Responsibilities	Person/Team
Test Manager	Planning, strategy, and oversight	Team 2
Test Engineers	Writing, executing, and documenting test cases	Team 2
Developers	Fixing defects, supporting testing	Team 2
Business Analyst	Clarifying requirements	Team 2
Project Manager	Overall governance	Tangerine Supervisor

Other Details about the Project

Here, we are going to talk about:

- Entry and Exit Criteria
- Risks and Defect Management
- Metrics for Measuring Success

Entry and Exit Criteria

Entry Criteria:

Requirements finalized.

Test environment set up.

Test data created.

All created Test Cases must be approved by the test manager

Exit Criteria:

All tests executed.

No high-priority defects remaining.

The product meets all of the requirement according to the test.

All documents prepared.

Risk and Defect Management - 1

Risks that may happened:

Compatibility issues on older devices.

Data leakage risks in insecure network environments.

Delays in testing due to device unavailability.

Mitigation Strategies:

Expand testing to cover a wide range of OSes.

Implement strong encryption and data protection measures.

Plan ahead for resource allocation and backup devices.

Risk and Defect Management - 2

- Defect Logging Tools are as above
- Defect Life Cycle:
  - Report → Triage → Fix → Retest → Close

Metrics for Measuring Success

Metrics:

- Test Case Execution Progress
- Defect Density (Function that has the most defects)
- Test Coverage
- Defect Turnaround Time (Optional)

Reporting Frequency:

- Weekly status updates and a Test Summary Report at the end.

Thank you for your cooperation.

This has been a presentation from the team 2.