



Verification & Validation

Test Plan

AU SPARK

Submitted to

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Semester 2/2017

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Introduction

The Test Plan prescribe the strategy, objective, criteria, resources, test environment, schedule, and deliverables of testing AU SPARK.

The plan identify the items to be tested, types of testing of the project, risk and issues associated with the plan, the personnel responsible for testing, the necessary tools and system resource, the inputs required to execute the test. The objectives, criteria, schedule and estimated effort of each task, and the deliverables of before, during and after testing phases.

1 Test Strategy

1.1 Scope of Testing

1.1.1 Featured to be tested

Module Name	Applicable Roles	Description
Login	Student	A student is granted access to his/her profile after inputting the registered combination of ID and password.
Logout	Student	A student can sign out of the system at any time.
Reset Password	Student	If or when a student forget their password, they can reset it to get a new password.
Calendar of University	Student	Check holiday, examination period of university

Search Class	Student	Check detail of subject such as room, date, code and name of teacher.
Save Favorite Plan	Student	Student can save favorite plan after creating their plan for registration.
Show preregistration result	Student	After a student pre-register, they can see the result of it.
Pay e-payment	Student	Student can pay tuition through application.
Check amount of tuition	Student	Student can check total tuition fee.
Check period of registration	Student	When period of registration arrives, a student can see the time to registration according to their ID.
Curriculum	Student	Student can view the subjects that they are required to enroll.
Grade Estimation	Student	Estimate total GPA after completing the on-going semester.

1.1.2 Feature not to be tested

These feature are not be tested because they are not included in the software requirement specs

- Hardware Interfaces
- Database logical
- Website Security and Performance

1.2 Test Type

There are two types of test that to be conducted on AU SPARK.

User Interface Testing – to ensure UI interactions works as intended.

Functional Testing - to ensure specified functionalities of the software works.

1.3 Risk and Issues

Risk	Mitigation
Team member lack skill for testing	Plan training course to skill up your member
The project schedule is too tight; it's hard to complete this project on time	Set test priority for each of the test activity
A lack of cooperation negatively of team member	Encourage team members in his task, and inspire them to greater efforts.
Test manager has poor management skill	Plan leadership training for manager

1.4 Test Logistics

1.4.1 Who will test?

The project will in-source testers.

1.4.2 When will test occur?

The tester will start the test execution when all the following inputs are ready

- Test specification is created
- Test Environment is built
- Software is available for testing
- Enough human resources for testing

2. Test Objective

The test objectives are to verify the functionalities of the application AU SPARK (Android version), the project focus on testing from the viewpoint of a student. The test will check the shown information from curriculum and class look up... etc. to guarantee that they show the correct result, and that all core functionalities such as, login, log-out, etc. works normally.

3. Test Criteria

3.1 Suspension Criteria

If the team member report that there are **30%** of test cases failed, suspend testing until the development team fixes all the failed case.

3.2 Exit Criteria

Specifies the criteria that denote a successful completion of test phase

- **Run** rate is mandatory to be 100% unless a clear reason is given.
- **Pass** rate is 90%, achieving the pass rate is mandatory.

4. Resource Planning

4.1 System Resource

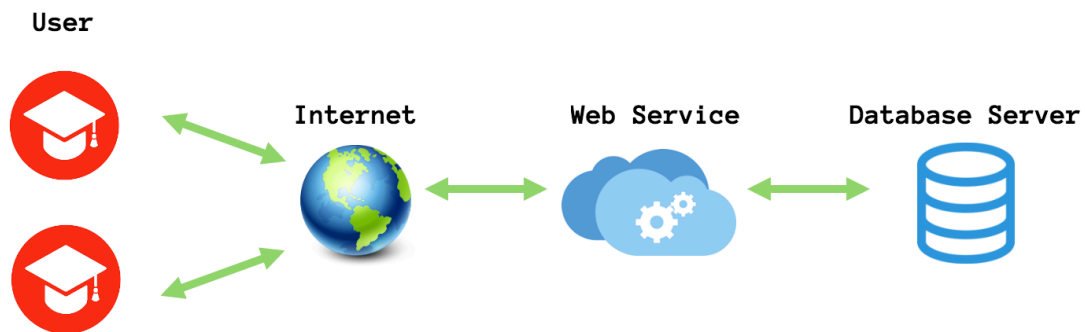
Resources	Descriptions
Automated UI Testing Tool	Test tool, which can test UI elements on an android emulator.
Network	Setup a LAN Gigabit and 1 internet line with the speed at least 3 Mb/s
Computer	Computers on Windows 10 ram 8GB 3.5GHZ for each tester.
AU SPARK APK	Application APK of AUSPARK for installation
Android Emulator	An emulator to simulate an android device on windows.
IDE(with testing support)	IDE software to create test cases.

4.2 Human Resource

No.	Member	Descriptions
1	Test Manager	Manage whole project, Define project direction and acquire appropriate resources
2	Test	Identifying and describing appropriate test technique tools/automation architecture. Verify and asses the test approach. Execute the test, Log results, Report the defects

5. Test Environment

The Test Environment should be setup as figure below



6. SCHEDULE & ESTIMATION

6.1 All project task and estimation

Task	Members	Estimate effort
Create test specification	Test Designer	200 hour
Perform Test Execution	Tester	100 hour
Test Report	Tester	15 hour
Test Delivery		20 hour
Total		335 hour

7. TEST DELIVERABLES

Test deliverables are provide as below

7.1 Before testing phase

- Test plans document.
- Test cases document.
- Test Design specification.

7.2 During the testing

- Test Data
- Test Tool
- Simulators
- Error logs and execution logs

7.3 After the testing cycles is over

- Test results / reports
- Defect Reports
- Installation / Test procedure guidelines
- Release notes