

**Capstone Project Report**

**Report 5 – Software Test Documentation**

– Ho Chi Minh, April 2022 –

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# V. Project Management Plan

## 1. Overall Description

### 1.1 Test Model

Diagram

Description automatically generated

Figure 1. Test Model

* Since VaLua project team uses the SCRUM workflow, agile testing approach is suitable for changing requirements with each cycle is a completely new test phase, allows the testing team to spot bugs easily and prevent the development team to repeat a bug type too many times. Additionally, agile testing model has the following advantages:
* Is suitable in small or medium project.
* Provide a common ground for stakeholders to communicate incrementally.

### 1.2 Testing Levels

* **Unit testing:** To ensure each function works properly, must be written by developers who own the function’s work package.
* **System testing:** To ensure that the system’s components work with each other and form a complete information system.

### 1.3 Testing Types

* **Functional testing:** To ensure the system’s functionalities follow the actual business functional requirements.
* **Non-functional testing:** To ensure the system’s user interface, performance and user experience follow the actual business non-functional requirements with the provided hardware and internet transmission speed.

## 2. Test Plan

### 2.1 Test Stages

Table 1. Test Stages

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Test** | **Stage of Test** | | | |
| ***Unit*** | ***Integration*** | ***System*** | ***Acceptance*** |
| Function test | X |  | X |  |
| User Interface test | X |  | X |  |

### 2.2 Resources

#### a. Human Resources

Table 2. Human Resources

|  |  |  |
| --- | --- | --- |
| **Worker/Doer** | **Role** | **Specific Responsibilities/Comments** |
| Tran Cam Long | Test Leader | Write test plan, test cases, run tests, write reports and verifying test deliverables |
| Nguyen Thi Kim Hang | Tester | Write test cases, run tests and report for detection |
| Nguyen Huu Huy | Tester | Write test cases, run tests and report as planned |
| Ngo Tan Duc | Tester | Write test cases, run tests and report as planned |

#### b. Environment

Table 3. Environment

|  |  |  |  |
| --- | --- | --- | --- |
| **Purpose** | **Tool** | **Provider** | **Version** |
| Integration test web app with UI/UX | Chrome | Google | 87.0 |
| Run server side | Visual Studio Code | Microsoft | 1.55.0 |
| Integration test mobile app with UI/UX | Galaxy Note 5, Pixel 4 | Samsung, Google | Android 9,10 |

### 2.3 Test Milestones

Table 4. Test Milestones

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestone Task** | **Effort (md)** | **Start Date** | **End Date** |
| Setup environment | 6 | 10/01/2022 | 16/01/2022 |
| Unit test for backend functions | 27 | 14/02/2022 | 13/03/2022 |
| System test | 34 | 14/03/2022 | 17/04/2022 |
| Write final report test | 6 | 18/04/2022 | 24/04/2022 |

### 2.4 Deliverables

Table 5. Deliverables

|  |  |  |
| --- | --- | --- |
| **No** | **Deliverables** | **Due Date** |
| 1 | System test report | 17/04/2022 |
| 2 | Final report | 24/04/2022 |

## 3. Test Cases

Table 6. Test Cases

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **TEST CASE LIST** | | | | | |
| **Project Name** | | | Attendance Support System for Exams at FPTU HCM | | |
| **Project Code** | | | VaLua | | |
| **Test Environment Setup Description** | | | 1. Windows 10 (Professional edition version 1903 or higher) or Ubuntu 20.0.4 2. Java (JDK 11 or 1.8) 3. Python 3.7.9 4. Mobile: Android 10 5. Database: Postgres SQL 13.6 6. Web Browser: Chrome (version 87.0.4280 or higher) 7. Hardware:  + CPU: Intel Core i5 8th Generation processor or higher + Ram: minimum 8 GB , 16 GB or higher is recommended + GPU: NVIDIA GeForce GTX 1050ti or higher | | |
|  |  | |  |  |  |
| **No** | **Function Name** | **Sheet Name** | | **Description** | **Pre-Condition** |
| 1 | Web\_Authentication | [Web\_Authentication](#gid=1796122859) | |  |  |
| 2 | Web\_ProfileManagementAndNotifications | [Web\_ProfileManagementAndNotifications](#gid=1525477226) | |  |  |
| 3 | Web\_ToolManagement | [Web\_ToolManagement](#gid=916183453) | |  |  |
| 4 | Web\_RoomManagement | [Web\_RoomManagement](#gid=1454352906) | |  |  |
| 5 | Web\_SubjectManagement | [Web\_SubjectManagement](#gid=546512737) | |  |  |
| 6 | Web\_SemesterManagement | [Web\_SemesterManagement](#gid=11474339) | |  |  |
| 7 | Web\_AccountManagement | [Web\_AccountManagement](#gid=1910207620) | |  |  |
| 8 | Web\_ShiftManagement | [Web\_ShiftManagement](#gid=108499795) | |  |  |
| 9 | Web\_ExamRoomManagement | [Web\_ExamRoomManagement](#gid=1715499882) | |  |  |
| 10 | Web\_ExamineeManagement | [Web\_ExamineeManagement](#gid=1569423001) | |  |  |
| 11 | Web\_ReportManagement | [Web\_ReportManagement](#gid=1796679066) | |  |  |
| 12 | Web\_Dashboard | [Web\_Dashboard](#gid=2142770437) | |  |  |
| 13 | Mobile\_Authentication | [Mobile\_Authentication](#gid=1866813070) | |  |  |
| 14 | Mobile\_ProfileManagementAndNotifications | [Mobile\_ProfileManagementAndNotifications](#gid=814489948) | |  |  |
| 15 | Mobile\_RegisterShifts | [Mobile\_RegisterShift](#gid=633131246) | |  |  |
| 16 | Mobile\_ReportManagement | [Mobile\_ReportManagement](#gid=1640266767) | |  |  |
| 17 | Mobile\_ViewSchedule | [Mobile\_ViewSchedule](#gid=622365752) | |  |  |
| 18 | Mobile\_AttendanceManagement | [Mobile\_AttendanceManagement](#gid=807155194) | |  |  |
| 19 | Mobile\_AttendanceChecking | [Mobile\_AttendanceChecking](#gid=1666070672) | |  |  |
| 20 | Mobile\_ExamManagement | [Mobile\_ExamManagement](#gid=1381440589) | |  |  |

* [Test Case Document](https://docs.google.com/spreadsheets/d/1yhwEREVPF3AaKvy3kgYD_OV3vRUEF8Rt/edit?usp=sharing&ouid=109616883623060733421&rtpof=true&sd=true)

## 4. Test Reports

Table 7. Test Reports

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **TEST REPORT** | | | | | | |
| **Project Name** | Attendance Support System for Exams at FPTU HCM | | **Creator** | | Nguyễn Hữu Huy | |
| **Project Code** | GSP22SE09 | | **Reviewer/Approver** | | Trần Cẩm Long | |
| **Document Code** | GSP22SE09\_Test Report\_v1.0 | | **Issue Date** | | 22/03/2021 | |
| **Notes** |  | | | | | |
|  | | | | | | |
| **No** | **Module code** | **Pass** | **Fail** | **Untested** | **N/A** | **Number of test cases** |
| 1 | Web\_Authentication | 12 | 0 | 0 | 0 | 12 |
| 2 | Web\_ProfileManagementAndNotifications | 9 | 0 | 0 | 0 | 9 |
| 3 | Web\_ToolManagement | 14 | 0 | 0 | 0 | 14 |
| 4 | Web\_RoomManagement | 12 | 0 | 0 | 0 | 12 |
| 5 | Web\_SubjectManagement | 12 | 0 | 0 | 0 | 12 |
| 6 | Web\_SemesterManagement | 12 | 0 | 0 | 0 | 12 |
| 7 | Web\_AccountManagement | 20 | 0 | 0 | 0 | 20 |
| 8 | Web\_ShiftManagement | 19 | 0 | 0 | 0 | 19 |
| 9 | Web\_ExamRoomManagement | 15 | 0 | 0 | 0 | 15 |
| 10 | Web\_ExamineeManagement | 12 | 0 | 0 | 0 | 12 |
| 11 | Web\_ReportManagement | 8 | 0 | 0 | 0 | 8 |
| 12 | Web\_Dashboard | 4 | 0 | 0 | 0 | 4 |
| 13 | Mobile\_Authentication | 12 | 0 | 0 | 0 | 12 |
| 14 | Mobile\_ProfileManagementAndNotifications | 7 | 0 | 0 | 0 | 7 |
| 15 | Mobile\_RegisterShifts | 7 | 0 | 0 | 0 | 7 |
| 16 | Mobile\_ReportManagement | 8 | 0 | 0 | 0 | 8 |
| 17 | Mobile\_ViewSchedule | 4 | 0 | 0 | 0 | 4 |
| 18 | Mobile\_AttendanceManagement | 11 | 0 | 0 | 0 | 11 |
| 19 | Mobile\_AttendanceChecking | 6 | 0 | 0 | 0 | 6 |
| 20 | Mobile\_ExamManagement | 5 | 0 | 0 | 0 | 5 |
|  | **Sub total** | 209 | 0 | 0 | 0 | 209 |
|  | | | | | | |
|  | **Test coverage** |  | **100.00** | % |  |  |
|  | **Test successful coverage** |  | **100.00** | % |  |  |
|  |  |  |  |  |  |  |