Project Plan
for
Product Item Module

Myanmar Software Engineer Contest 2020

Team Name: Charmers Tech

Date: 5/11/2020

Version: Third Version

Updated Area: Test Plan, Layering architecture

Content

1. Project Overview

"**Product Item Module**" project is an outsourcing project which intends to solve the human resource problem of Active-A company. This web application allows users to insert new product items, search product items, delete products and edit product information if users have appropriate permission.

2. Project Organization

This describes the way in which the development team is organized, the people involved and their roles and responsibilities in the team. Team name is "Charmers Tech" which are grouped by five members.

No	Name	Role	Responsibilities
1.	Kaung Myat Soe	Team Leader	Backend, Documentation
2.	Tint Tint Tun	Team Member	Frontend, Documentation
3.	Nann Phue Phue Pwint Wai	Team Member	Frontend, Documentation
4.	Hlaing Yamin Thu	Team Member	Tester, Documentation
5.	Wunna Moe	Team Member	Tester, Documentation

Table 1: Project Organization

3. Project Scope

Project Name	"Product Item Module"
In Scope	Users can operate CRUD of Product Items via laptop or desktop.
Out of Scope	This web application is a part of Stock controller system and CRUD of product item. So, we assumed that users use this web app via laptop or desktop. So, our project has some limitation for mobile phones.
Deliverable	Throughout the project, our team must deliver the first version of documentation, deployment note and final version of documentation.
Timeline	27/10/2020 : Submit First Version of Documentation 1/11/2020: Present update version of documents and prototype of UI and API 7/11/2020: Submit Deployment Note and UAT 9/11/2020: Submit Final Version of Documentation and code development

Table 2: Project Scope

4. Project Schedule

No	Task	Start Date	End Date
1.	Set Up System Requirements	24/10/2020	25/10/2020
2.	Assign Tasks to all members	25/10/2020	25/10/2020
3.	Prepare First Version of Documentation	26/10/2020	27/10/2020
4.	Submit First Version of Documentation	27/10/2020	27/10/2020
5.	Start User Interface Design and Backend	27/10/2020	29/10/2020
6.	Working on UI Design, Backend, Presentation, Testing and Updating the documentation	30/10/2020	31/10/2020
7.	Make Presentation	1/11/2020	1/11/2020
8.	Continuously, Working on UI Design, Backend, Testing and Updating the documentation	2/11/2020	6/11/2020
9.	Submit Deployment Note, UAT document and Project Demo	7/11/2020	7/11/2020
10.	Submit Final Version of Documentation	8/11/2020	9/11/2020

Table 2: Project Schedule

5. Milestones and Monitoring

	Date	Documentation	Backend	Frontend	Testing
Milestone 1 For First Version of Project Plan	25/10/2020	Start	Start	Start	Start
	26/10/2020	Working on it	Working on it	Start	Start
	27/10/2020	Done(1st Version)	Working on it	Stuck	Start
Milestone 2 For Presentation and Demo	28/10/2020	Working on it	Working on it	Working on it	Working on it
	29/10/2020	Working on it	Working on it	Working on it	Working on it
	30/10/2020	Stuck	Working on it	Working on it	Working on it
	31/10/2020	Done (2nd Version)	Done (API)	Done (Main Dashboard)	Working on it
Milestone 3 For Deployment Note, and Final Version of Project	1/11/2020	Working on it	Working on it	Working on it	Working on it
	2/11/2020	Working on it	Working on it	Working on it	Working on it
	3/11/2020	Stuck	Working on it	Working on it	Working on it
	4/11/2020	Working on it	Working on it	Working on it	Working on it
	5/11/2020	Done (3rd Version)	Done (1st Demo)	Done(1st Demo)	Working on it
	6/11/2020				
	7/11/2020				
	8/11/2020				
	9/11/2020				

Table 3: Milestones and Monitoring

❖ **Represent a preparing condition of project**

❖ **Represent a working condition of project**

❖ **Represent a finishing condition of project**

❖ **Represent a trying condition of project**

6. Development Plan

The hardware and software required for the development and deployment of the system includes:

Hardware Requirement		PC and Internet Access
Software Requirements	Operating System	Window 10pro
	Application	Xampp (V: 3.2.4), VS Code, Post Man, GitHub
	Web Server	Apache(V: 2.4.46)
	Browser	Chrome, Microsoft Edge
Using Language	Frontend	HTML5, CSS, Bootstrap4
	Backend	PHP 7.4.11
	Database	MySql 15.1

Table 4: Project Scope

7. Risk Plan

No	Category	Identify Risks	Risk Level	Mitigate Strategy
1.	Technology Risk	Unknown Technology such as API	High	Prepare prototype and tested
		Difficulties in deployment process	High	More detail on deployment note (step by step)
2.	Organization Risk	Misunderstanding with client regarding project requirements and expectations	High	Update client more frequently along the way with project progress
		Adjust the time with team members for meetings	High	Set a specific meeting date and time in advance
3.	Project Management Risk	Unexpected loss of valuable information and forget to save modified some files	High	Use GitHub to share valuable information within members and to use as a backup file
		The final project may be delayed	High	Learn more for each responsibility and help with each member

Table 5: Identify Risks and Mitigate Strategy

8. High Level Design

Frontend		REST		Web Server		File System
User	⇄	API	⇄	Apache	⇄	To store images & other files

MySql
Database

9. Layering Architecture
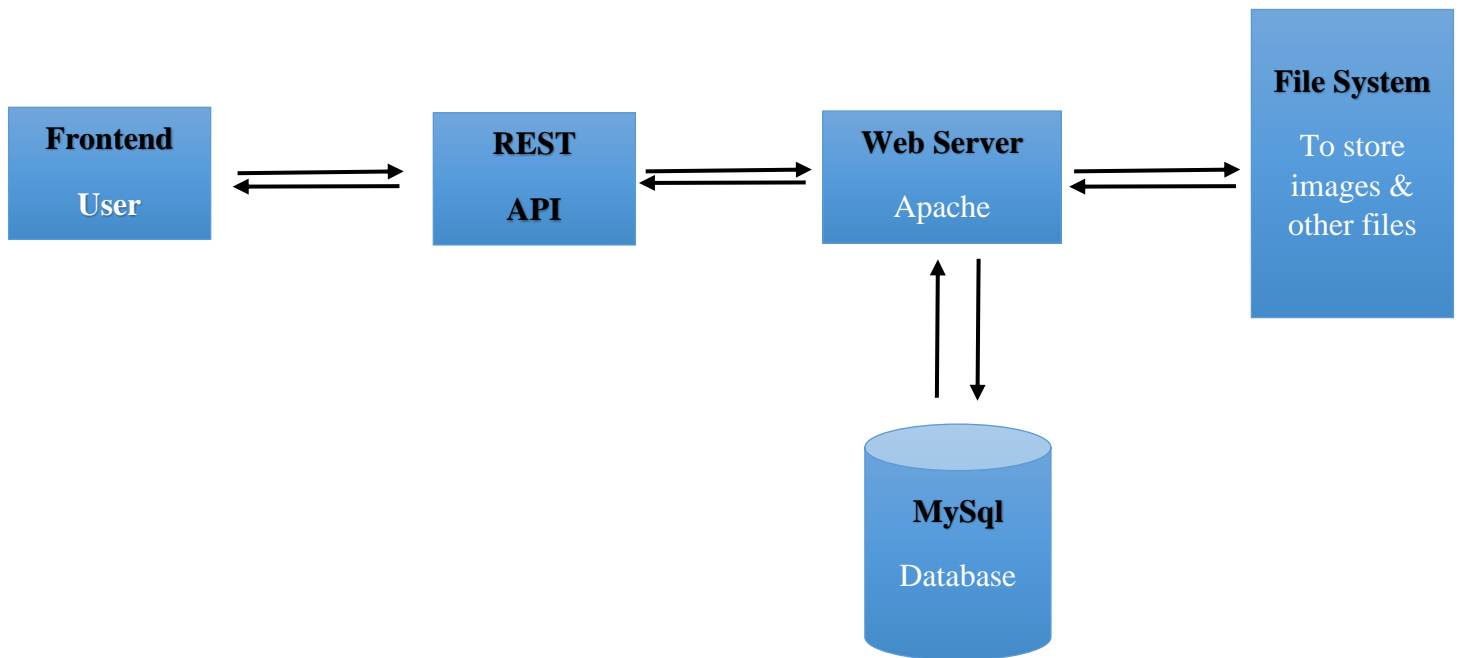
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                    ┌─────────────────────────────────┐
                    │  User Interface Web application   │
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┌──────────┐       ┌─────────────────────────────────┐       ┌──────────┐
│          │       │            Rest API               │──────▶│          │
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│          │                   │                              │          │
│  Unit    │                   ↓                              │          │
│  Test    │       ┌─────────────────────────────────┐       │  Model   │
│          │       │       Business Logic Layer         │──────▶│          │
│          │       └─────────────────────────────────┘       │          │
│          │                   │                              │          │
│          │                   ↓                              │          │
│          │       ┌─────────────────────────────────┐       │          │
│          │       │     Data Access Layer (DAL)       │──────▶│          │
│          │       │        PHP Data Object            │       │          │
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                            │   MySql     │
                            │  Database   │
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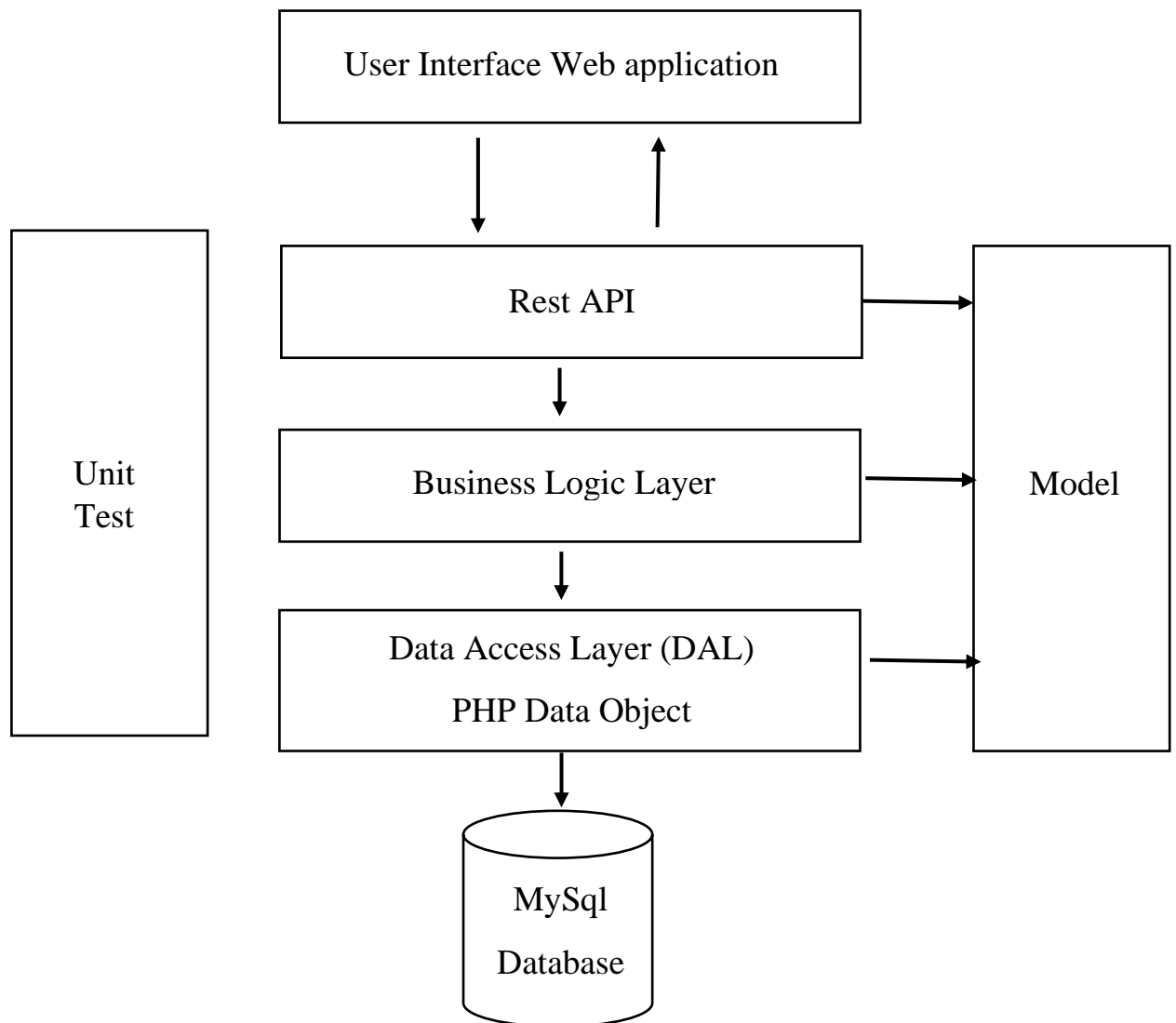
10. Test Plan

10.1 Overview of Test Plan

Test plan is vital to the system. It makes a logical assumption that if all parts of the system are correct, the goal will be successfully achieved. "**Product Item Modules**" is tested by using **unit testing**. A series of testing are performed for the proposed system before the system is ready for **user acceptance testing.**

10.2 Testing Scope

In Scope: Users can operate CRUD of Product Items via laptop or desktop browsers such as Chrome, Microsoft Edge and Mozilla Firefox.

Functional testing for the following functions is in Scope of Testing

1. Main Dashboard

2. Search Product

3. View Product Detail

4. Add Product

5. Edit Product

6. Delete Product

Out of Scope: Performance Testing was not done for this application.

10.3. Test Type

1) Unit Testing
2) User Acceptance Testing
3) Browser Comparability Testing

Since this application is browser-based web application, "Comparability Testing" shall be performed with different browsers and different hardware.

No	Item To be Tested	Description
1.	Desktop browser compatibility	Microsoft Edge (Version :86.0.622.61), Chrome (Version:86.04240.111),

10.4. Test Environment and tools

URL	This application can be tested via following link, **http://itemmodule.herokuapp.com/SE2020/App/**
Operating System	**Window 10 Pro (64bit)**
Application	**Xampp (Version: 3.2.4), VS Code (Version: 1.50)**
Database	**MySql (Version: 10.4.14)**

10.5. Test Cases

Describes the test cases that will be employed to test CRUD of product item module.

Test Case	Description	Expected Result	Pass/Fail	Actual Result
1.	Click on "View Detail"	Make sure "View" Page should appear	Pass	"View Product" Page appear
2.	Click on "Add Product"	Make sure "Add Product" Page should appear	Pass	"Add Product" Page appear
3.	Click on "Edit Product"	Make sure "Edit Product" Page should appear	Pass	"Edit Product" Page appear
4.	Click "Delete Product"	Make sure "Confirmation box" appear	Pass	"Confirmation Box" appear

Table 6: Sample Test Cases of CRUD

10.6 Test Data

This web application will use following test data validations:

Data Type

Application uses varchar type and integer for product name and description, integer for stock balance, float for price.

Length

If it defines stock balance length is 5, then it stores either equal to length or less than length but not equal to zero.

Blank Filed

If the data needed field is blank then it displays alert message box.

Format

The format of file type must be (.jpg and .png) format. If user inserts another format then it never accepts.

11. References