AskMeAnswerMe - AMAM

Software Development Plan

Version 2.0

Revision History

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 07/11/2022 | 1.0 | Initial release | Từ Khai Hoài, Lâm Hiền Toàn, Nguyễn Việt Hùng, Thái Võ Đức Trọng, Nguyễn Đình Quốc |
| 25/11/2022 | 2.0 | This release is to update the assignments of our project. | Từ Khai Hoài, Lâm Hiền Toàn, Nguyễn Việt Hùng, Thái Võ Đức Trọng, Nguyễn Đình Quốc |
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Software Development Plan

# 

# Introduction

## 1.1 Purpose

The purpose of the Software Development Plan is to gather information necessary to control the project. It describes the approach to the development of the software and is the top-level plan generated and used by the managers to direct the development effort.

The following people use the *Software Development Plan*:

* **Project manager** uses it to plan the project schedule and resource needs, and to track progress against the schedule.
* **Project team members** use it to understand what they need to do, when they need to do it, and what other activities they are dependent on.

## 1.2 Scope

This *Software Development Plan* describes the overall plan to be used by the AskMeAnswerMe project, including the deployment of the product. The details of the individual iterations will be described in the Iteration Plans.

The plans outlined in this document are based upon the product requirements as defined in the Vision Document.

## 1.3 Overview

This *Software Development Plan* contains the following information:

Project Overview — provides a description of the project’s purpose, scope, and objectives. It also defines the deliverables that the project is expected to deliver.

Project Organization — describes the organizational structure of the project team.

# Project Overview

## Project Purpose, Scope, and Objectives

AskMeAnswerMe (AMAM) is a web application that helps people to raise questions and get relevant answers from other people. Using this application, users can easily search for questions about the topic they are interested in. Moreover, users can easily follow other people and get notified of their activities. In general, AMAM is a platform where people can connect with each other, and help people to improve their knowledge.

## Assumptions and Constraints

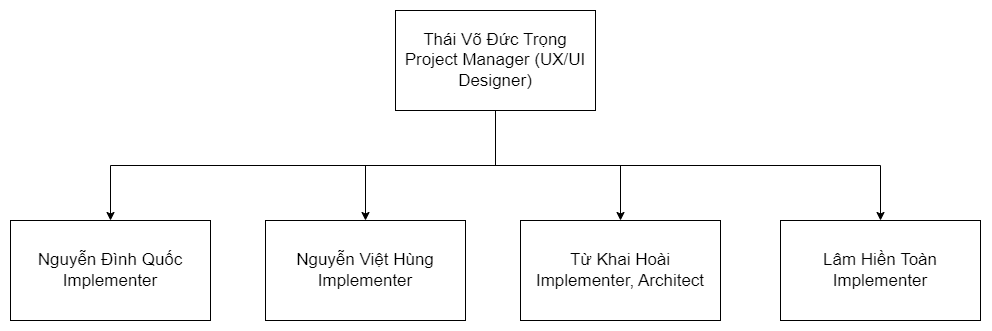
* Project has a fixed schedule of 10 weeks.
* This project does not need any extra cost.
* Project has a fixed size of 5 people, there will be no more people added during the project.

## Project Deliverables

* Creative Design Briefs
* Navigation Map
* User Interface Prototype
* Data Model
* Design Model
* Database Design
* Software Architecture Document
* Implementation Subsystem
* Test Package
* Test Summary

# Project Organization

## Organizational Structure

**

## Roles and Responsibilities

| **Person** | **Role** |
| --- | --- |
| Thái Võ Đức Trọng, UI/UX Designer, Project Manager | Coordinate team weekly meetings  Define the web app’s requirement and design the UI |
| Nguyễn Đình Quốc, Implementer | Design web’s APIs to process and provide data to the client (frontend)  Design the NoSQL database schema based on query-driven approach. |
| Nguyễn Việt Hùng, Implementer | Design web’s backend, comment on database. |
| Từ Khai Hoài, Implementer, Architect | Design the overall architecture for the web app (frontend and backend). Implement the logic and functions in frontend. |
| Lâm Hiền Toàn, Implementer | Design web’s frontend |

# Management Process

## Project Estimates

| **Task** | **Estimation (weeks)** |
| --- | --- |
| Building Question component | 2 |
| Building Comment component | 2 |
| Authentication/Authorization | 3 |
| Web styling | 1 |
| Database implementation | 2 |
| API endpoint implementation | 2 |
| Deployment | 1 |

## Project Plan

### Phase and Iteration Plan

**Inception (31/10/2022 - 13/11/2022): *Establish the business case for the system***

* Vision statement
* Risk assessment
* Building project plan
* Research market and competitors
* Collect requirements for the project

**Elaboration (14/11/2022 - 27/11/2022): *Develop an understanding of the problem domain and the system architecture***

* Analyzing requirements
* Role assignment for team members
* Preparing the development plan
* Design the overall architecture for the application
* Design UI, database
* Choosing technology used in the project

**Construction (28/11/2022 - 25/12/2022): *System design, programming and testing***

* Design complete workflows for both client-side and server-side
* Implementing the application
* Writing test cases

**Transition (26/12/2022 - 8/1/2022): *Deploy the system in its operating environment***

* Configuration and change management
* Deploy the application

### Releases

This software is in development. The first demo will be released soon.

### Project Schedule

| **Phase** | **Sprint** | **Task** | **Start Date** | **End Date** | **Assigned to** | **Status** |
| --- | --- | --- | --- | --- | --- | --- |
| **Inception** | **1** | Write important documents for our project (plan, vision,...) | October 31, 2022 | November 2, 2022 | All members | Completed |
| Researching about market and competitors | October 31, 2022 | November 5, 2022 | All members | Completed |
| Define use cases | November 4, 2022 | November 7, 2022 | All members | Completed |
| Collect and define the requirements for the project | November 4, 2022 | November 13, 2022 | All members | Completed |
| Assess possible risks that can occur during project development | November 7, 2022 | November 13, 2022 | All members | Completed |
| Estimate our budget | November 1, 2022 | November 5, 2022 | All members | Completed |
| **Elaboration** | **2** | Choose the framework to use (We use VueJS for the web’s front end and FastAPI for the backend). | November 14, 2022 | November 16, 2022 | All members | Completed |
| Assign tasks for each members | November 17, 2022 | November 19, 2022 | Hoài | Completed |
| Design the architecture for this project | November 20, 2022 | November 27, 2022 | Hoài | Completed |
| Design the UI/UX for this project | November 20, 2022 | November 27, 2022 | Trọng | Completed |
| Design the database for this project | November 20, 2022 | November 27, 2022 | Quốc, Hùng | Completed |
| **Construction** | **3** | Design the workflows for client-mode and server-mode | November 28, 2022 | December 3, 2022 | Hoài | In progress |
| Implement components and layouts | December 4, 2022 | December 11, 2022 | Trọng, Hoài, Toàn | In progress |
| Implement API, queries,... | December 4, 2022 | December 11, 2022 | Quốc, Hùng | In progress |
| **First demo** | December 12, 2022 | December 13, 2022 | All members | Not started |
| **4** | Write test cases and testing | December 11, 2022 | December 19, 2022 | All members | Not started |
| **First beta** | December 20, 2022 | December 21, 2022 | All members | Not started |
| Bug fixing and **second beta** | December 21, 2022 | December 25, 2022 | All members | Not started |
| **Transition** | **5** | Prepare configuration and change management | December 26, 2022 | December 27, 2022 | Hoài, Quốc, Hùng | Not started |
| Building environment for deployment | December 27, 2022 | December 31, 2022 | Hoài, Quốc, Hùng | Not started |
| Building pipeline to deploy the app | January 1, 2023 | January 4, 2023 | Hoài, Quốc, Hùng | Not started |
| **Release first version of our application** | January 5, 2023 | January 7, 2023 | All members | Not started |

## Project Monitoring and Control

### Reporting

Approaches to report project status:

* **Weekly meeting** **(via Slack, Google Meet, Zoom,...):** on every Monday and Friday from October 17th 2022 to early January 2023. Changes will be announced later, if any.
* **Weekly status report** **(Google Docs):** on alternate Fridays, starting from October 21st 2022.
* **Informal chats (via Slack, Discord, Messenger,...):** to discuss problems, brainstorm ideas, interact with other team members,...

### Risk Management

| **Risk ID** | **Risk Description** | **Probability** | **Impact** | **Priority** | **Mitigation Strategy or Contingency Plan** |
| --- | --- | --- | --- | --- | --- |
| **1** | Security Vulnerability in the using technology | Unlikely | Catastrophic | High | Try to fix the security vulnerability and if the security vulnerability is serious |
| **2** | Choose a wrong framework | Occasional | Serious | High | Continue to use the current framework as much as each member can. If the framework cannot be used to complete the project anymore, change the framework and restart the training process. |
| **3** | Team members get sick | Seldom | Serious | Low | Give some day off to that team members and force they to work more in others day after they recover |
| **4** | Requirement suddenly changes | Occasional; | Serious | High | Give a point in the contract that the requirement change is prohibited. If we forget to give this rule in the contract, ask the user to pay more for the requirement change then restart the project if the requirement change is huge |
| **5** | Time needed for a task is underestimated | Occasional | Serious | High | Discuss with the users about the difficulty of the project and extend the time of the project. Force the members to work overtime - also pay for that overtime |
| **6** | Wrong database design in the middle of the implementation phase | Seldom | Moderate | Low | Try to fix the database design as much as possible to match the code. If unable, restart the backend implement and do the following task in time underestimated risk |

### Configuration Management

Tools to be used in this project:

* **Google Drive, Notion:** to store and share important documents and files,...
* **Trello:** to keep track of the progress of our project.
* **Github:** to share source code.
* **Figma:** to design the UI of this project, ship UI designers’ ideas to other members and stakeholders.