DUGBET SOFTWARE DEVELOPMENT PLAN

(SMALL PROJECT)

Group 03

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Revision History

Date	Version	Description	Author
01/11/2023	1.0	Initial version	Huynh Huu Phuc
02/11/2023	1.1	Adding risk expose	Huynh Huu Phuc
04/11/2023	1.2	Formatting document	Nguyen Truc Nhu Binh

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Software Development Plan (Small Project)

1. INTRODUCTION

This document is to provide the plan for developing the **Dugbet** project, which includes the **Project Overview** of the project purpose, scope, objectives and assumptions, constraints, and project deliverables. In addition, we also provide the Project organization with structure, roles, and responsibilities. Finally the details of the Project process, plan, and monitoring used during the project.

1.1. PURPOSE

The purpose of the **Software Development Plan** for a money tracker application is to provide a structured and organized approach to developing the software. This plan will serve as a roadmap for the development process, and it helps ensure the successful creation of a functional and reliable money-tracking application.

The following people use the **Software Development Plan**:

- The **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 upon.

1.2. SCOPE

This **Software Development Plan** provides an overview of the software project, including its purpose, goals, and objectives. It should also specify the identification and any relevant background information. This document defines the boundaries of the project, including what is included and excluded. It sets the context for what the development team will be working on and helps in managing expectations.

The plans as 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 what are the assumptions and constraints in this project. And provide the deliverables that the project is expected to deliver.

Project Organization — The Organizational Structure will be divided into one project manager with 05 sub-teams: Business Analysis Team, UI/UX Design Team, Front-end Team, Back-end Team, and Testing Team. Each team will have one leader to control and be responsible for and four members to help and contribute to some subtasks.

Management Process - First is the information about the project estimates which will be completed in total of 10 weeks and divided into 5 sprints.

Secondly is the project plan for each sprint, in each sprint we will report the complete task, to do the task and take note of any problem occurring during the project. So far the requirements management and risks will be identified in the Inception Phase using the steps identified in the RUP for Small Projects activity Identify and Assess Risks

2. PROJECT OVERVIEW

2.1. PROJECT PURPOSE, SCOPE, AND OBJECTIVES

- **Project Purpose:** Currently, the quality of life is increasingly improving, leading to the strong development of entertainment services, online shopping... The lack of money management in spending for living expenses leads to wasteful consumption. In addition, the inconvenience and time-consuming of notetaking makes people not really ready to spend time on it.
- **Scope:** Dugbet is an application integrated on the phone that will help process and enhance the habit of recording personal income and expenses. The target audience of Dugbet is everyone who wants to manage their personal spending in a planned manner. We believe that they are the most likely customers for our app because financial management is a major issue for students, not only in Vietnam but also in other Asian countries.
- **Objectives:** By integrating on the phone, Dugbet helps everyone to conveniently and comfortably record their spending. In addition, the application automatically compiles and reports in various forms such as diagrams and text in a scientific manner. Instead of typing by hand, Dugbet provides several other ways to take notes via processing

images, and text from the chat. Thanks to its superior features, tracking and managing spending has become easier than ever. Dugbet wants the act of recording expenses to become an essential habit in life, helping people avoid wasting money and have a reasonable spending plan for themselves.

2.2. ASSUMPTIONS AND CONSTRAINTS

2.2.1. Assumptions:

- Dugbet is built using Flutter in combination with Firebase. As a result, the application doesn't face many difficulties in terms of operating costs.
- The project will last for 10 weeks, and it is estimated that each of us will work about 20 hours/per week, and the salary will be about 30 dollars per hour. Therefore, the salary cost is estimated at 6000 dollars.
- The number of programmers for the project is about 5 people, so scheduling is easy and reasonable.
- The utilities used by the application are supported by a community at a reasonable cost or free.

2.2.2. Constraints:

- Obtaining information and spending from third-party applications can be difficult due to privacy policies. This leads to some features of the app that may not be implemented.

2.3. PROJECT DELIVERABLES

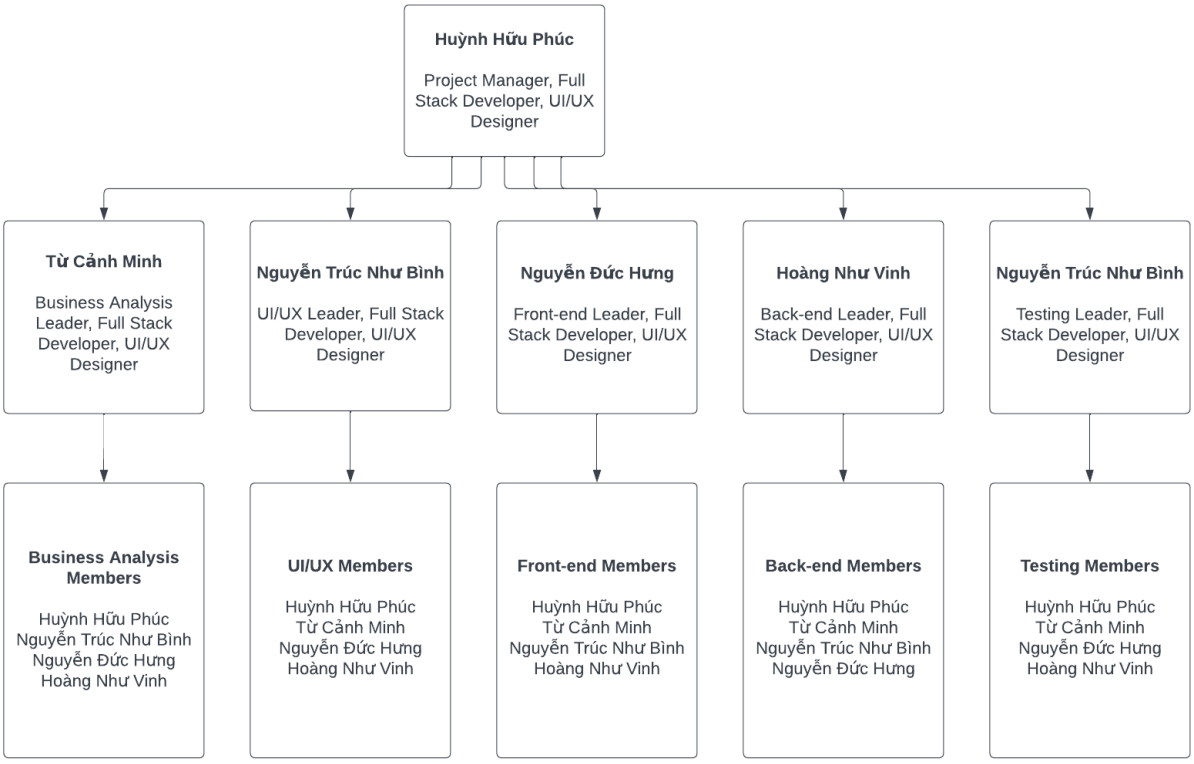
Dugbet	Date
Software Development Plan (Small	01/11/2023

Project)	
Project Design in Figma	15/11/2023
Software application without backend.	30/11/2023
Software application connected to Firebase.	10/12/2023
Software application with APIs.	20/12/2023
Test all the features Of the Application.	29/12/2023

The expected delivery date for deliverables may be adjusted during development.

3. PROJECT ORGANIZATION

3.1. ORGANIZATIONAL STRUCTURE



3.2. ROLES AND RESPONSIBILITIES

Role	Responsibility
Project Manager	Responsible for managing the overall Project Management discipline.
Business Analyst	Responsible for analyzing requirements, defining features, and ensuring alignment with strategic objectives.

UI/UX Designer	Ensure a seamless and engaging user experience, enhancing the overall usability and aesthetic appeal of the application.
Front-end Developer	Translate design concepts into a responsive and user-friendly interface. Deliver a seamless and interactive experience for users.
Back-end Developer	Responsible for designing and implementing server-side logic, databases, and APIs. Ensure the app's functionality, security, and seamless integration, enabling a robust and efficient user experience. Responsible for designing and optimizing the database structure. Ensure efficient data storage and retrieval.
Tester	Test features, identify bugs, and validate system functionalities. Contribute to a seamless and error-free user experience.

4. MANAGEMENT PROCESS

4.1. PROJECT ESTIMATES

The project will be completed in 10 weeks and the development process is divided into 5 sprints.

4.2. PROJECT PLAN

Phase	Sprints	Start	End	Objectives
Inception	Sprint 1	19/10/2023	02/11/2023	• Kick-off Meeting • Recap the lists of requirements • Define roles and responsibilities among team • Software Development Plan • Vision document • Database design • UI design (detail in detail task section) • Implement front-end (detail in detail task section) • Training
Elaboration	Sprint 2	02/11/2023	15/11/2023	• The use-case model nearly complete • Front-end implementation • Architecture & Back-end Design

				• Training
Construction	Sprint 3	16/11/2023	29/11/2023	• Software Architecture document • Front-end implementation • Back-end implementation
	Sprint 4	30/11/2023	13/12/2023	• UI Prototype • Release beta • Back-end implementation
Transition	Sprint 5	14/12/2023	27/12/2023	• Test plan and test case • Testing the application to validate it against the end users' expectations • Release production

Detail tasks:

4.2.1. Sprint 1

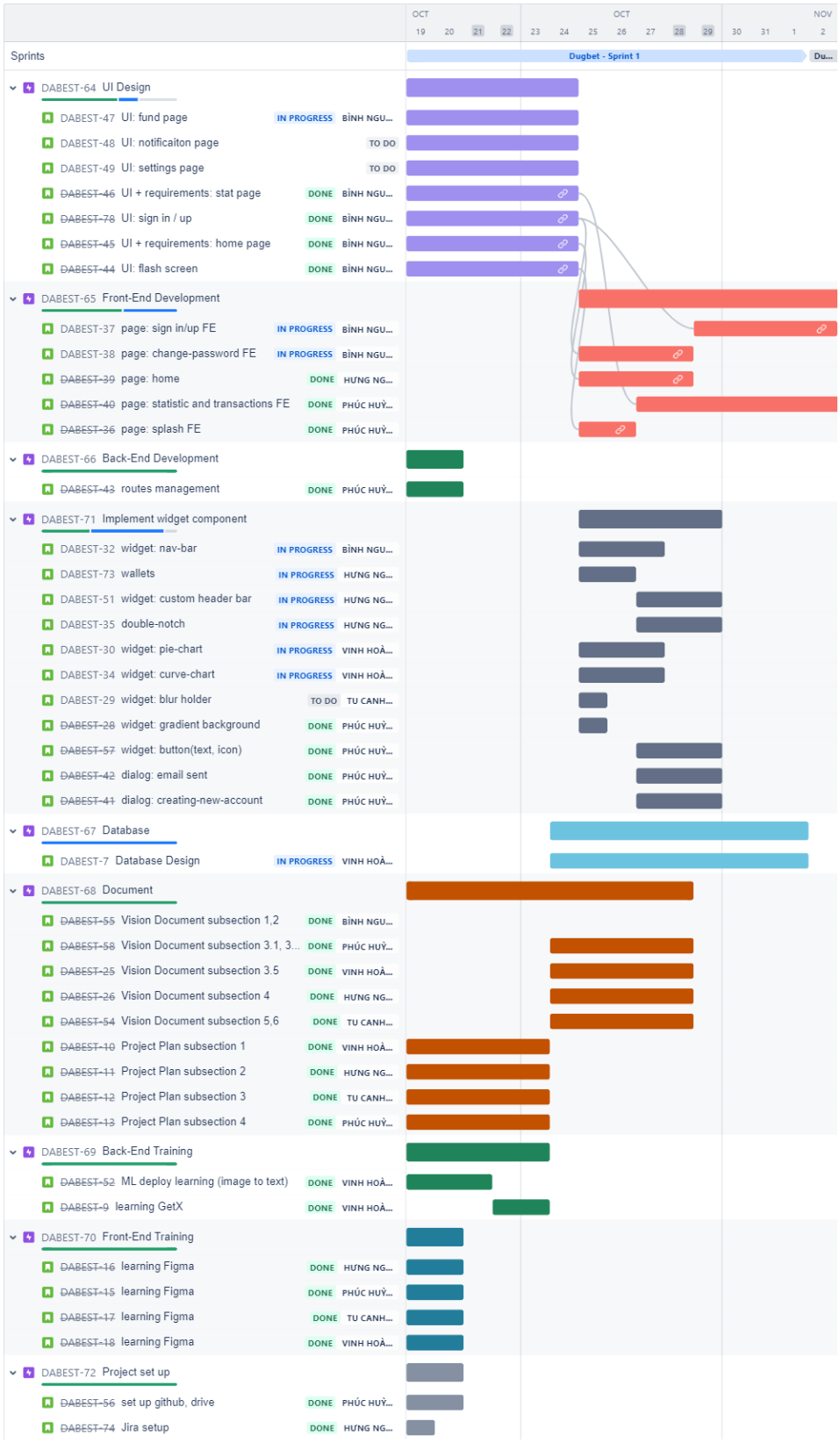
- Huynh Huu Phuc

- Project plan document (subsection 4)
- Vision document (subsection 3.1, 3.2, 3.3, 3.4)
- Implement screen FE (splash screen, transaction and statistic screen)
- Implement dialog widgets (email sent, log in)
- Implement component widgets (string button, widget button, gradient background)
- Setup routes management
- Setup github, drive
- Learning Figma

- Tu Canh Minh
  - Project plan (subsection 3)
  - Vision document (subsection 5, 6)
  - Database design
  - Learning Figma
- Nguyen Duc Hung
  - Project plan document (subsection 2)
  - Vision document (subsection 4)
  - Implement screen FE (home screen)
  - Implement component widgets (double-notch, header-bar, wallet)
  - Learning Figma
- Hoang Nhu Vinh
  - Project plan document (subsection 1)
  - Vision document (subsection 3.5)
  - Database design
  - Implement component widgets (pie-chart, line-chart)
  - Learning Figma, GetX
- Nguyen Truc Nhu Binh
  - Vision document (subsection 1, 2)
  - Implement component widgets (nav-bar)

- Implement screen FE (change password screen, sign in/up screen)
- Design UI (splash screen, sign in/up screen, change password screen. home screen, transaction and statistic screen)

Gantt chart


OCT
OCT
NOV
19 20 21 22 23 24 25 26 27 28 29 30 31 1 2
Sprints
Dugbet - Sprint 1
DABEST-64 UI Design
DABEST-47 UI: fund page IN PROGRESS BÌNH NGU...
DABEST-48 UI: notificaiton page TO DO
DABEST-49 UI: settings page TO DO
DABEST-46 UI + requirements: stat page DONE BÌNH NGU...
DABEST-78 UI: sign in / up DONE BÌNH NGU...
DABEST-45 UI + requirements: home page DONE BÌNH NGU...
DABEST-44 UI: flash screen DONE BÌNH NGU...
DABEST-65 Front-End Development
DABEST-37 page: sign in/up FE IN PROGRESS BÌNH NGU...
DABEST-38 page: change-password FE IN PROGRESS BÌNH NGU...
DABEST-39 page: home DONE HƯNG NG...
DABEST-40 page: statistic and transactions FE DONE PHÚC HUỲ...
DABEST-36 page: splash FE DONE PHÚC HUỲ...
DABEST-66 Back-End Development
DABEST-43 routes management DONE PHÚC HUỲ...
DABEST-71 Implement widget component
DABEST-32 widget: nav-bar IN PROGRESS BÌNH NGU...
DABEST-73 wallets IN PROGRESS HƯNG NG...
DABEST-51 widget: custom header bar IN PROGRESS HƯNG NG...
DABEST-35 double-notch IN PROGRESS HƯNG NG...
DABEST-30 widget: pie-chart IN PROGRESS VINH HOÀ...
DABEST-34 widget: curve-chart IN PROGRESS VINH HOÀ...
DABEST-29 widget: blur holder TO DO TU CANH...
DABEST-28 widget: gradient background DONE PHÚC HUỲ...
DABEST-57 widget: button(text, icon) DONE PHÚC HUỲ...
DABEST-42 dialog: email sent DONE PHÚC HUỲ...
DABEST-41 dialog: creating-new-account DONE PHÚC HUỲ...
DABEST-67 Database
DABEST-7 Database Design IN PROGRESS VINH HOÀ...
DABEST-68 Document
DABEST-55 Vision Document subsection 1,2 DONE BÌNH NGU...
DABEST-58 Vision Document subsection 3.1, 3... DONE PHÚC HUỲ...
DABEST-25 Vision Document subsection 3.5 DONE VINH HOÀ...
DABEST-26 Vision Document subsection 4 DONE HƯNG NG...
DABEST-54 Vision Document subsection 5,6 DONE TU CANH...
DABEST-10 Project Plan subsection 1 DONE VINH HOÀ...
DABEST-11 Project Plan subsection 2 DONE HƯNG NG...
DABEST-12 Project Plan subsection 3 DONE TU CANH...
DABEST-13 Project Plan subsection 4 DONE PHÚC HUỲ...
DABEST-69 Back-End Training
DABEST-52 ML deploy learning (image to text) DONE VINH HOÀ...
DABEST-9 learning GetX DONE VINH HOÀ...
DABEST-70 Front-End Training
DABEST-16 learning Figma DONE HƯNG NG...
DABEST-15 learning Figma DONE PHÚC HUỲ...
DABEST-17 learning Figma DONE TU CANH...
DABEST-18 learning Figma DONE VINH HOÀ...
DABEST-72 Project set up
DABEST-56 set up github, drive DONE PHÚC HUỲ...
DABEST-74 Jira setup DONE HƯNG NG...

4.3. Project Monitoring and Control

4.3.1. Requirements Management

The requirements for this system are captured in the Vision document. Requested changes to requirements are captured in Change Requests and are approved as part of the Configuration Management process.

4.3.2. Reporting and Measurement

Updated cost and schedule estimates, and metrics summary reports, will be generated at the end of each iteration.

The Minimal Set of Metrics, as described in the RUP Guidelines: Metrics, will be gathered on a weekly basis. These include:

- Earned value for completed tasks. This is used to re-estimate the schedule and budget for the remainder of the project, and/or to identify the need for scope changes.
- Total defects open and closed – shown as a trend graph. This is used to help estimate the effort remaining to correct defects.
- Acceptance test cases passing – shown as a trend graph. This is used to demonstrate progress to stakeholders.

In addition, overall costs will be monitored against the project budget.

4.3.3. Risk Management

Risks will be identified in the Inception Phase using the steps identified in the RUP for Small Projects activity “Identify and Assess Risks”. Project risk is evaluated at least once per iteration and documented in this table. The risks of the greatest magnitude are listed first in the table.

Rank	Risk Description	Impact	Probability	Loss	Risk expose	Mitigation Strategy and/or Contingency Plan
1	Changes to requirements that require major design rework are proposed.	Delay work and might cause conflict in the project's structure.	Occasional	Serious	3750	A precise and comprehensive list of the features that will be created from the beginning should be included in the development plans. Furthermore, modifications will be permitted up to a specific stage of progress
2	Underestimate feature requirements	Influence the objectives and purposes for which the product is designed	Occasional	Moderate	2500	Arrange a meeting to discuss options, such as removing the features or asking mentors for further assistance.
3	Lack of domain knowledge or skill	Affect the schedule of other tasks	Likely	Insignificant	1875	Notify the project manager to split the task or change the person in charge with someone who has the required knowledge. Assign tasks to team members based on their skills and experience. Provide training and support to team members as needed.
4	Timeline Estimates Unrealistic	Delay in delivering production	Likely	Insignificant	1875	Timeline reviewed after each sprint by Project Manager to prevent undetected timeline departures
5	Personal issues (e.g. accident, illness, ...)	Significantly slow down the project's progress	Unlikely	Catastrophic	900	Ensure members in the team have knowledge on the other tasks
6	Sensitive financial data may be vulnerable to breaches or unauthorized access	Influence the user's trust.	Unlikely	Catastrophic	900	Examine the database's credibility and encrypt user data both at rest or in transmission.
7	Users find the software difficult to adopt	Increase the leave rate of users	Seldom	Negligent	250	Allow users to fill in a feedback section in the app to enhance the user-friendly interface

4.3.4. Configuration Management

None