BTree

BeeKey Software Development Plan (Small Project) Version <1.1>

BeeKey	Version: <1.1>
Software Development Plan (Small Project)	Date: 25/09/2021

Revision History

Date	Version	Description	Author
06/09/2021	1.0	First project Plan	Bùi Đăng Khoa
			Đỗ Vương Phúc
25/09/2021	1.1	Additional to Risk Management	Chung Kim Khánh
		Add top-up task, more detail for testing	
		Update the break week in sprint 3	

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Software Development Plan (Small Project)

1. Introduction

BeeKey is the first project BTree team builds for the Introduction of Software Engineering subject. Teacher Nguyễn Minh Huy and TA Hồ Tuấn Thanh are mentors of this project.

Software Development Plan provides details about Purpose, Scope, Definition, Organization, ect. of BeeKey Project

1.1 Purpose

The purpose of the *Software Development Plan* is to gather all 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 managers to direct the development effort.

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* describes the overall plan to be used by the BeeKey project, including deployment of the product.

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

BeeKey's mission:

- Provide clients and lancers with a market where they can take advantage concurrently.
- Clients can find lancers who help build products with an ideal price.
- Create an environment for a Lancer to earn more money.

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.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

BeeKey connects clients and lancers offering programming services. We provide clients and lancers with a market where they can take advantage concurrently. More clearly, clients can find lancers who help build products with an ideal price, meanwhile, lancers are provided with potential programming projects to work on and gain decent income.

BeeKey's feature:

- Post request: Upload your request on the newsfeed.
- Counter-Offer: Clients and lancers can bargain for a task.
- Chatting: The lancer and client can chat on the application to make the problem cleaner.
- Feedback: After the job is done, you can write reviews about BeeLancers. They also can write reviews about you.
- Rating: Rate lancers on the number of projects they well-done.

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2.2 Assumptions and Constraints

• Budget: Weeks: 12

Cost per Week: 10\$

• Staff:

Project Manager: 1 Developer: 4

• Equipment:

Each member prepares a Laptop for themselves to implement.

Server: Raspberry Pi

Test device: 3 Android Phones and emulator.

• Schedule:

Starting date: 6/1/2021 Primary week: 11 Reserve week: 1

2.3 Project Deliverables

Deliverables for each project phase are identified in the Development Case. Deliverables are delivered towards the end of the iteration, as specified in section 4.2.4 Project Schedule

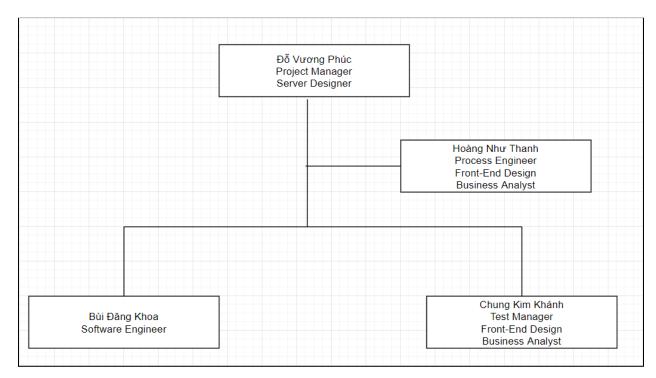
List of the artifacts:

- Server
- Android Application
- Database

3. Project Organization

3.1 Organizational Structure

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3.2 Roles and Responsibilities

Person	Role
Đỗ Vương Phúc	Responsible for project planning, Build and Implement Server: Design database, Server API and implement in Raspberrypi
Bùi Đăng Khoa	Responsible for implement software: Design Front-End, Implement Back-End.
Hoàng Như Thanh	Responsible for following, control the Agile Scrum, Design Front-End, Business Analyst
Chung Kim Khánh	Responsible for testing Design Front-End, Business Analyst, Testing.

4. Management Process

4.1 Project Estimates

Cost estimates: \$10/week, total project 120\$
Schedule estimates: 11 primary weeks
Basis cost: 10% of the total: 12\$

Basis cost. 1070 of the total. 12\$
 Basis schedule: I reserved week

• Re-estimation: The re-estimation is occured when the requirement changes or the risk occurs.

4.2 Project Plan

4.2.1 Phase Plan

In this section, the project plan is represented as a table and gantt chart (inside Google Drive). The

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following tables are the project plan for each sprint (2 week/sprint). Each type of tasks in the plan has different background color as table below:

Color	Type of tasks
Red	Meeting
Green	Document
Orange	Training
Yellow	Front-end task
Purple	Back-end task
Blue	API task
Pink	Testing

Sprint 0

Start	End	Task	Staff	Output
Fri 28/05/2021	Fri 28/05/2021	Kick-off meeting	Đỗ Vương Phúc	Project Idea Product Backlog Training introduction
Fri 28/05/2021	Mon 07/06/2021	Self learning A Learn about Scrum Learn Android unit 1, 2	Đỗ Vương Phúc Hoàng Như Thanh Chung Kim Khánh Bùi Đăng Khoa	Know how to use Kotlin and Android studio. Have skill to create UI
Fri 28/05/2021	Fri 04/06/2021	Design logo	Hoàng Như Thanh	Logo file includes: .png, .psd
Fri 28/05/2021	Fri 04/06/2021	Project proposal	Chung Kim Khánh	Project proposal PA0 document

Start	End	Task	Staff	Output
Mon 07/06/2021	Mon 07/06/2021	Sprint planning meeting	Đỗ Vương Phúc	Sprint planning schedule
Mon 07/06/2021	Thu 17/06/2021	Self learning B Learn Android unit 3, 4	Hoàng Như Thanh Bùi Đăng Khoa Chung Kim Khánh	Know basic of activity, RESTful API to request server
Mon	Thu	Self learning D	Đỗ Vương Phúc	Know how to create

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07/06/2021	17/06/2021	Learn Nodejs, Express, JWT		a RESTful API server with auth
Mon 07/06/2021	Fri 11/06/2021	Project plan (section 1 to 3)	Bùi Đăng Khoa	Project plan from section 1 to 3
Mon 07/06/2021	Fri 11/06/2021	Project plan (section 4)	Đỗ Vương Phúc	Fully project plan
Mon 07/06/2021	Fri 11/06/2021	Vision document (section 1 to 3)	Chung Kim Khánh	Vision document from section 1 to 3
Mon 07/06/2021	Fri 11/06/2021	Vision document (section 4 to 6)	Hoàng Như Thanh	Fully vision document
Fri 11/06/2021	Sun 13/06/2021	Weekly report 1	Chung Kim Khánh	Weekly report of week 1
Fri 18/06/2021	Sat 19/06/2021	Weekly report 2	Chung Kim Khánh	Weekly report of week 2 Done PA1
Mon 14/06/2021	Fri 18/06/2021	Login UI design	Bùi Đăng Khoa	UI prototype XML file
Mon 14/06/2021	Fri 18/06/2021	Sign up UI design	Bùi Đăng Khoa	UI prototype XML file
Mon 14/06/2021	Fri 18/06/2021	Show information UI	Hoàng Như Thanh	UI prototype XML file
Mon 14/06/2021	Fri 18/06/2021	Setting UI	Hoàng Như Thanh	UI prototype XML file
Mon 14/06/2021	Fri 18/06/2021	Change password UI	Chung Kim Khánh	UI prototype XML file
Mon 14/06/2021	Fri 18/06/2021	Change information UI	Chung Kim Khánh	UI prototype XML file
Mon 14/06/2021	Fri 18/06/2021	Design database	Đỗ Vương Phúc	ERD model SQL source Implemented server
Mon 14/06/2021	Fri 18/06/2021	Design login API	Đỗ Vương Phúc	Update sheet Create API
Mon 14/06/2021	Fri 18/06/2021	Design sign up API	Đỗ Vương Phúc	Update sheet Create API
Mon 14/06/2021	Fri 18/06/2021	Design get information API	Đỗ Vương Phúc	Update sheet Create API
Mon	Fri	Design change password	Đỗ Vương Phúc	Update sheet

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14/06/2021	18/06/2021	API		Create API
Mon 14/06/2021	Fri 18/06/2021	Design change information API	Đỗ Vương Phúc	Update sheet Create API

Start	End	Task	Staff	Output
Sat 19/06/2021	Fri 25/06/2021	Revised Project Plan	Chung Kim Khánh	Version 2.0 of Project Plan
Sat 19/06/2021	Fri 25/06/2021	Detail Vision Document	Đỗ Vương Phúc	Version 2.0 of Vision Document
Sat 19/06/2021	Fri 25/06/2021	Use-case model	Hoàng Như Thanh	Version 1.0 of Use-case model
Sat 19/06/2021	Fri 25/06/2021	Use-case specification	Bùi Đăng Khoa	Version 1.0 of Use-case specification
Fri 25/06/2021	Sun 27/06/2021	Weekly report 1	Hoàng Như Thanh	Weekly report 1
Fri 02/07/2021	Sat 03/07/2021	Weekly report 2	Hoàng Như Thanh	Weekly report 2 Done PA2
Sat 19/06/2021	Wed 30/06/2021	Self learning C Model-View-Controller	Đỗ Vương Phúc Chung Kim Khánh Hoàng Như Thanh Bùi Đăng Khoa	Team knows how to manage source as a MVC model
Mon 28/06/2021	Fri 02/07/2021	Post task UI	Hoàng Như Thanh	UI prototype XML file
Mon 28/06/2021	Fri 02/07/2021	View list request with filter UI	Hoàng Như Thanh	UI prototype XML file
Mon 28/06/2021	Fri 02/07/2021	Counter-offer UI	Chung Kim Khánh	UI prototype XML file
Mon 28/06/2021	Fri 02/07/2021	Report UI	Chung Kim Khánh	UI prototype XML file
Mon 28/06/2021	Fri 02/07/2021	List of my request UI	Bùi Đăng Khoa	UI prototype XML file
Mon 28/06/2021	Fri 02/07/2021	List of task UI	Bùi Đăng Khoa	UI prototype XML file

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Mon 28/06/2021	Fri 02/07/2021	Implement signup	Bùi Đăng Khoa	Testable signup account
Mon 28/06/2021	Fri 02/07/2021	Implement login	Bùi Đăng Khoa	Testable login
Mon 28/06/2021	Fri 02/07/2021	Implement show information	Hoàng Như Thanh	Testable show information after login
Mon 28/06/2021	Fri 02/07/2021	Implement setting	Hoàng Như Thanh	Testable open setting and redirect activity, logout must through dialog box
Mon 28/06/2021	Fri 02/07/2021	Implement change information	Chung Kim Khánh	Testable change information
Mon 28/06/2021	Fri 02/07/2021	Implement change password	Chung Kim Khánh	Testable change password
Mon 28/06/2021	Fri 02/07/2021	Post task API	Đỗ Vương Phúc	Update sheet Create API
Mon 28/06/2021	Fri 02/07/2021	Get list request by filter API	Đỗ Vương Phúc	Update sheet Create API
Mon 28/06/2021	Fri 02/07/2021	Add counter-offer API	Đỗ Vương Phúc	Update sheet Create API
Mon 28/06/2021	Fri 02/07/2021	Report API	Đỗ Vương Phúc	Update sheet Create API
Mon 28/06/2021	Fri 02/07/2021	Get list request of user API	Đỗ Vương Phúc	Update sheet Create API
Mon 28/06/2021	Fri 02/07/2021	Get list task of user API	Đỗ Vương Phúc	Update sheet Create API

Start	End	Task	Staff	Output
Sat 10/07/2021	Fri 16/07/2021	Revise use-case specification	Chung Kim Khánh	Version 2.0 of use-case specification
Sat 10/07/2021	Fri 16/07/2021	Define software architecture (SAD)	Hoàng Như Thanh	Version 1.0 of SAD
Sat 10/07/2021	Fri 16/07/2021	Class diagram	Bùi Đăng Khoa	Class diagram model

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Sat 17/07/2021	Sun 18/07/2021	Weekly report 1	Đỗ Vương Phúc	Weekly report 1
Fri 23/07/2021	Sat 24/07/2021	Weekly report 2	Đỗ Vương Phúc	Weekly report 2 Done PA3
Sat 17/07/2021	Fri 23/07/2021	Request view UI	Bùi Đăng Khoa	UI prototype XML file
Sat 17/07/2021	Fri 23/07/2021	Task view UI	Bùi Đăng Khoa	UI prototype XML file
Sat 17/07/2021	Fri 23/07/2021	Feedback UI	Chung Kim Khánh	UI prototype XML file
Sat 17/07/2021	Fri 23/07/2021	Counter list UI	Chung Kim Khánh	UI prototype XML file
Sat 17/07/2021	Fri 23/07/2021	Chatting UI	Hoàng Như Thanh	UI prototype XML file
Sat 17/07/2021	Fri 23/07/2021	Top-up UI	Đỗ Vương Phúc	UI prototype XML file
Sat 17/07/2021	Fri 23/07/2021	Implement post task	Hoàng Như Thanh	Testable create new task
Sat 17/07/2021	Fri 23/07/2021	Implement view list request with filter	Hoàng Như Thanh	Testable search request by filter
Sat 17/07/2021	Fri 23/07/2021	Implement counter-offer	Chung Kim Khánh	Testable do a counter-offer on the task
Sat 17/07/2021	Fri 23/07/2021	Implement report	Chung Kim Khánh	Testable create an issue
Sat 17/07/2021	Fri 23/07/2021	Implement list of my request	Bùi Đăng Khoa	Testable view all the request of the user
Sat 17/07/2021	Fri 23/07/2021	Implement list of my task	Bùi Đăng Khoa	Testable view all the on-going task of user
Sat	Fri	Implement top-up	Đỗ Vương Phúc	Testable top-up

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17/07/2021	23/07/2021			money for user
Sat	Fri	Get information of a request	Đỗ Vương Phúc	Update sheet
17/07/2021	23/07/2021	API		Create API
Sat	Fri	Get information of a task	Đỗ Vương Phúc	Update sheet
17/07/2021	23/07/2021	API		Create API
Sat	Fri	Get all counters	Đỗ Vương Phúc	Update sheet
17/07/2021	23/07/2021	of request API		Create API
Sat	Fri	Accept/Decline request	Đỗ Vương Phúc	Update sheet
17/07/2021	23/07/2021	counter API		Create API
Sat 17/07/2021	Fri 23/07/2021	Top-up API	Đỗ Vương Phúc	Update sheet Create API

Start	End	Task	Staff	Output
Sat 24/07/2021	Fri 30/07/2021	UI Prototype	Hoàng Như Thanh	UI Prototype
Sat 24/07/2021	Fri 30/07/2021	Revise SAD	Đỗ Vương Phúc	Version 2.0 of SAD
Fri 30/07/2021	Sun 01/08/2021	Weekly report 1	Bùi Đăng Khoa	Weekly report 1
Fri 06/07/2021	Sat 07/07/2021	Weekly report 2	Bùi Đăng Khoa	Weekly report 2 Done PA4
Sat 31/07/2021	Fri 06/07/2021	Implement request view	Bùi Đăng Khoa	Testable gets the information of a request. Testable click done, chat.
Sat 31/07/2021	Fri 06/07/2021	Implement task view	Bùi Đăng Khoa	Testable gest the information of a task Testable click chat.
Sat 31/07/2021	Fri 06/07/2021	Implement counter list	Chung Kim Khánh	Testable view all the counter list of user request

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Sat 31/07/2021	Fri 06/07/2021	Implement feedback	Chung Kim Khánh	Testable create feedback after done task
Sat 31/07/2021	Fri 06/07/2021	Implement chatting	Hoàng Như Thanh	Testable chatting by message, send file.
Sat 31/07/2021	Fri 06/07/2021	Design feedback API	Đỗ Vương Phúc	Update sheet Create API
Sat 31/07/2021	Fri 06/07/2021	Chatting API	Đỗ Vương Phúc	Update sheet Create API

Start	End	Task	Staff	Output
Sat 08/08/2021	Fri 13/08/2021	Test plan and test case	Hoàng Như Thanh	Test plan and test case
Sat 08/08/2021	Fri 13/08/2021	Automated testing	Đỗ Vương Phúc	Automated testing
Fri 13/08/2021	Sun 15/08/2021	Weekly report 1	Chung Kim Khánh	Weekly report 1
Fri 20/08/2021	Sat 21/08/2021	Weekly report 2	Chung Kim Khánh	Weekly report 2 Done PA5
Sat 14/08/2021	Fri 20/08/2021	Test login	Chung Kim Khánh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test signup	Chung Kim Khánh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test change password	Bùi Đăng Khoa	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test change basic information	Bùi Đăng Khoa	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test view information	Bùi Đăng Khoa	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test view list request with filter	Bùi Đăng Khoa	Test and fix to be accepted bases on test plan

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Sat	Fri	Test top-up	Bùi Đăng Khoa	Test and fix to be
14/08/2021	20/08/2021			accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test upload new request	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test make counter-offer	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test view list counter-offer of a request	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test accept/decline a counter-offer	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test chatting	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test done a request	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test feedback	Đỗ Vương Phúc, Hoàng Như Thanh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test view my list request	Chung Kim Khánh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test view my list task	Chung Kim Khánh	Test and fix to be accepted bases on test plan
Sat 14/08/2021	Fri 20/08/2021	Test logout	Chung Kim Khánh	Test and fix to be accepted bases on test plan

Start	End	Task	Staff	Output
Sat 21/08/2021	Sun 22/08/2021	Project presentation	Đỗ Vương Phúc Chung Kim Khánh Hoàng Như Thanh Bùi Đăng Khoa	Final presentation of team in front of teachers

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Sat 21/08/2021	Sun 22/08/2021	Final submission	Đỗ Vương Phúc	Done PA6
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4.2.2 Iteration Objectives

None

4.2.3 Releases

There will be 2 release version:

- Version 1.0 (demo): Is the product after implementation
- Version 2.0: The product after being tested and upgraded. This is the final product.

4.2.4 Project Schedule

The gantt chart is included in the same folder of this document to show the milestone and project schedule.

4.2.5 Project Resourcing

- Staffing plan: The staff of this project is provided in section 3.1
- Resource acquisition plan: No applicable
- *Training plan:* The staff will be trained in Sprint 0, Sprint 1, Sprint 2 to acquire enough skill needed to implement the system. The training plan will work parallelly with other tasks such as implementation.

4.3 Project Monitoring and Control

This section is to provide the monitoring of:

- Requirements managements
- Reporting and measurement
- Risk management
- Configuration Management

4.3.1 Requirements Management

The requirements for this system are captured in the Vision document.

4.3.2 Reporting and Measurement

None

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.

Risk Ranking (High, Medium, Low)	Risk Description and Impact	Mitigation Strategy and/or Contingency Plan
Probability: High Risk: Very High		Training Android Studio with Kotlin on the website of Android Studio. Training to use Nodejs to build the server with Raspberry Pi.
Probability: High Risk: High	The plan is too heavy to implement, slow progress	Adjust the amount of work for 1 week.
Probability: Low Risk: Medium		Prepare a briefing document showing how the project is make an important and why cuts to the budget would not be cost-effective
Probability: Medium Risk: High	Raspberry Pi cannot work as a server	Using ngrok with local laptop as a server, instead of Raspberry Pi
Probability: Medium Risk: Low	Training on the website of Android Studio has not been effective for some members	Expand reference sources and increase deadlines for self learning
· · · · · · · · · · · · · · · · ·	Database postgresQL, Mariadb (MySQL) cannot provide enough feature to work on	Using Microsoft SQL Server instead of those database and use laptop as a server

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,	′	Every member in the team must be trained to use Android studio.
		After a document is written, every member must read. All the team members must know the purpose of each document.

4.3.4 Configuration Management

None