Fpt University

TRƯỜNG ĐẠI HỌC FPT

CAPSTONE PROJECT REPORT

EasyDoctor - An e-health platform that connects patients and doctors

Report 2 – Project Management Plan

– Da Nang, August 2022 –

Table of Contents

I. Record of Changes

Date	A* M, D	In charge	Change Description
11/04	A		Bắt đầu làm v1.1

*A - Added M - Modified D - Deleted

II. Project Management Plan

1. Overview

The project is divided into 7 phases of project initiation, project planning, product design, product implementation, monitoring and control, testing, and project closing. Each phase in software development requires a different effort. We focus on analysis and development of key functions such as scheduling, patient management, and doctors.

1.1 Scope & Estimation

#	WBS Item	Complexity	Est. Effort (man-days)
1	***Initial Project***		**5**
1.1	Team Meeting	Simple	1
1.2	Register for a topic	Simple	1
1.3	Email and schedule Mentor for a meeting	Simple	1
1.4	Create Project Introduction	Medium	2
2	***Planning Project***		**10**
2.1	Define scope	Medium	2
2.2	Plan Cost Management	Medium	2
2.3	Plan Risk Management	Medium	2
2.4	Deliver Project Management Plan	Medium	2
2.5	Create Software Requirements	Medium	2
3	***Design***		**15**
3.1	Create use-case Diagram	Complex	3
3.2	Design Prototype UX/UI	Complex	3
3.3	Design ERD of database	Medium	3
3.5	Setup environment and version control	Medium	3
4	***Executing Project***		**55**
	Coding front-end about authenticate	Simple	1
	Coding back-end about authenticate	Medium	4
	Coding front-end about appointment for patient	Complex	2
	Coding back-end about appointment for patient	Complex	8
	Coding front-end about appointment for doctor	Complex	2

	Coding back-end about appointment for doctor	Complex	8
	Coding front-end about Blog	Medium	5
	Coding back-end about Blog	Complex	10
	Coding front-end about admin	Medium	5
	Coding back-end about admin	Medium	15
5	***Monitor and Controlling***		**20**
	Control source Code	Medium	8
	Test and fix bug	Complex	8
	Track all process	Medium	4
6	***Testing***		**10**
	Perform Unit Test	Medium	5
	Fix bugs	Complex	5
7	***Closing***		**10**
7.1	Create user guideline	Medium	3
	Create Final Project Report	Medium	3
	Perform for presentation	Medium	4

Total Estimated Effort (man-days) ***125***

1.2 Project and Team Objectives

1.2.1 Project Objectives

Similar to what was described in section 1.1, our objective in this project is to build a web-based medical platform that links patients and doctors. Our system focuses on offering a solution so that patients may schedule appointments with the doctors they prefer or who are close to where they live. Additionally, patients may rate and comment on doctors using our system, as well as read official health information that is supplied to doctors.

It is designed to solve the medical examination problem of digital transformation in healthcare and deliver an easy and good quality user experience.

1.2.2 Team objectives

- Team finishes project before 2022/08/15.
- Team members improve skill in working in groups.
- Each member improves both technical skills and soft skills.
- All business requirements are covered.
- Team applies successfully applied a software development process.

- Allocated Effort (man-days): 125 man-days

1.2.3 Project Risks

#	Risk Description	Impact	Possibility	Response Plans
1	Hard to understand business processes	High	High	Research on patient visits. Research on the process of managing doctors in the clinic. Research on basic medical knowledge, bills, prescriptions, ...
2	Missing person	Medium	Medium	Maybe the members have unexpected work, so please withdraw from the project and some other reasons.
3	Conflict among team members	Medium	Medium	Everyone has their own thoughts. All members should discuss to conflict resolution.
4	Lack of skills	High	Medium	Training members before starting the project
5	Requirement changes	Medium	Medium	All members should discuss carefully at the beginning of each iteration to define scope and requirements.

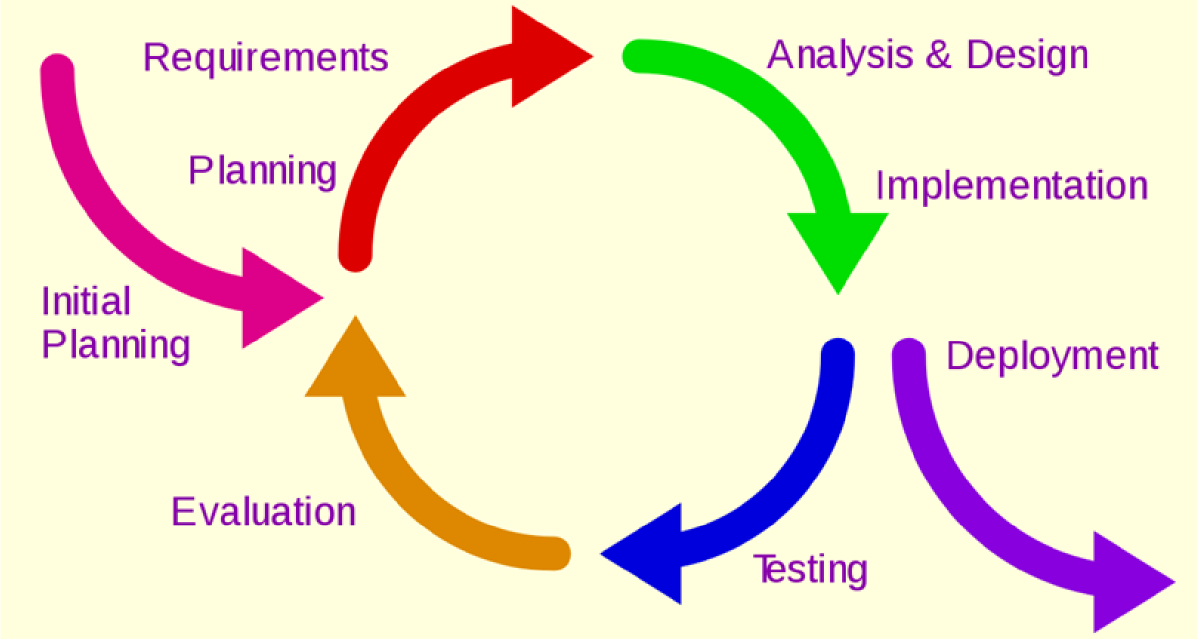


Figure 1: EasyDoctor development life cycle

2. Management Approach

2.1 Project Process

We use the iterative model to develop this product. The iterative model is a particular implementation of a software development life cycle (SDLC) that focuses on an initial, simplified implementation, which then progressively gains more complexity and a broader feature set until the final system is complete. Each cycle (iteration) ends with a usable system. This model includes several phases as shown below:

- ❖ Planning & Requirements: the first step is to go through an initial planning stage to map out the specification documents.
- ❖ Analysis & Design: the second step is performed to nail down the appropriate business logic, database models. The design stage also occurs here, establishing any technical requirements to meet the needs of the analysis and design stage.
- ❖ Implementation: the actual implementation and coding process can now begin. All planning, specification, and design docs up to this point are coded and implemented into this initial iteration of the project.
- ❖ Verification and testing: the next step is to go through a series of testing procedures to identify and locate any potential bugs or issues that have cropped up.
- ❖ Evaluation: the last step is evaluating the development up to this stage. This allows the entire team to examine where the project is at, where it needs to be, what should change.

2.2 Quality Management

We adhere to the following quality assurance rules:

- ❖ Coding conventions: easy maintenance, debugging, members can understand other people's code, consistent code among team members. Follow Java Coding Convention at:

  https://www.oracle.com/technetwork/java/codeconventions-150003.pdf

- ❖ Review: apply to review at different levels: self-review: member reviews his source code by himself, peer review: each member reviews other member's source code, final review: leader review source code of his/her team and merge if there are no problems.
- ❖ Analysis of requirements documents and execution of quality control.
- ❖ Using test management software (unit test, system test, user test).
- ❖ Every weekend, review, rewrite, and memorise (team meeting).
- ❖ Automation (CI/CD, github workflow, etc.) should be used to test early and frequently. CodeQL is a source code analysis platform used by security researchers to automatically analyse bugs.

2.3 Training Plan

Training Area	Participants	When, Duration	Waiver Criteria

Java Spring Boot	HuyTPG, SonCT, LongLQ	23/04/2022 7 days	Mandatory
Figma	HuyTV, ThangPHC	25/04/2022 7 days	Mandatory
Draw.io	HuyTV, ThangPHC	25/04/2022 7 days	Mandatory
Git, Github	SonCT, LongLQ	30/05/2022 3 days	Mandatory
Ajax	HuyTPG, LongLQ	05/07/2022 7 days	Mandatory

3. Project Deliverables

Please move to Report2_EasyDoctor Project Schedule file for details. We presented detailed project deliverables in this file.

4. Responsibility Assignments

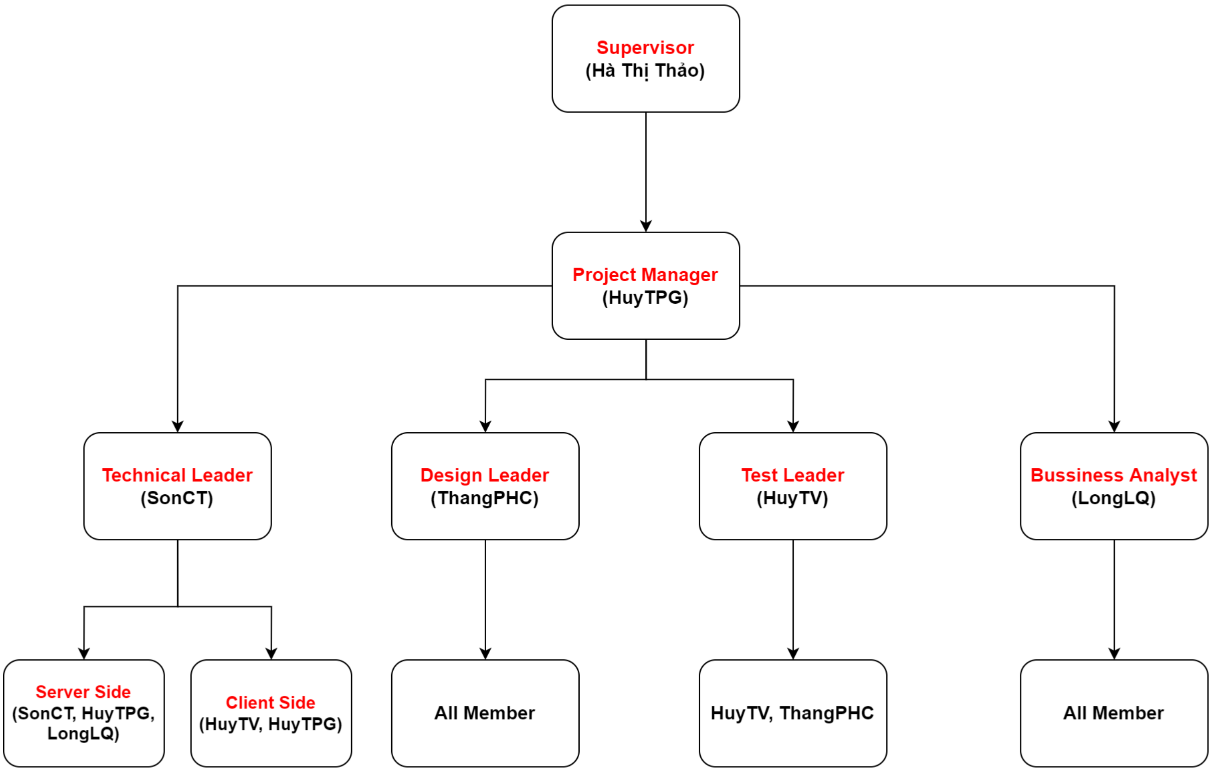
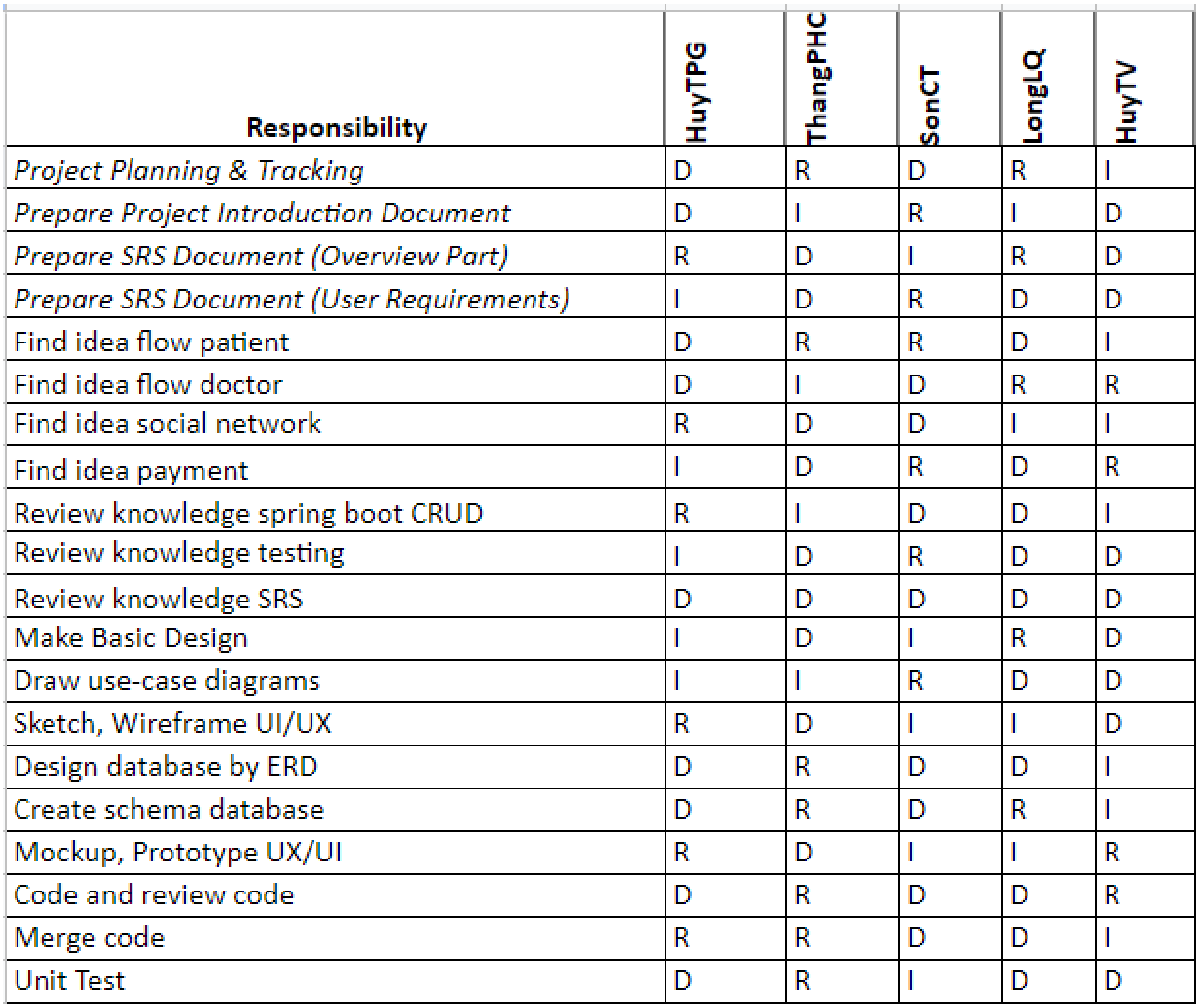


Figure 2: Responsibility Assignments

Role	Member	Responsibility
Project Manager	HuyTPG	Planning schedules, tracking process of project Communication with team members and supervisors Take responsibility with all requirements and

		schedule of school Keep project in direct goals
Analysis Leader	LongLQ	Analyse project requirements Define project scope, generate SRS documentation Evaluate SRS generated by analyst members Research. Learn about hospital appointment scheduling and find ideas to apply to projects.
Analysis Member	HuyTPG, SonCT, ThangPHC	Define requirements: functional and non-functional requirements Track and contribute to SRS documentation Define detailed flow of features Rate other members and comment Find ideas from other systems to apply
Designer	ThangPHC, HuyTV	Define screens, flow between screens Design UI, UX for application
Backend Developer	HuyTPG, SonCT, LongLQ	Design database Study technical requirement to apply into project Initial and develop backend server Review code for each other Fix bugs Deploy code to server Optimising the business flow of roles
Frontend Developer	ThangPHC, HuyTV	Initial and develop frontend Study technical requirement to apply into project Review code for each other Fix bugs
Test Leader	ThangPHC	Define test plan Assign tasks for other member Study and research testing tools Create test template Take responsibility about coverage of test
Test Member	LongLQ, HuyTV	Create test cases Implement test follow test plan Create test report and inform to development teams about bugs



Responsibility	HuyTPG	ThangPHC	SonCT	LongLQ	HuyTV
Project Planning & Tracking	D	R	D	R	I
Prepare Project Introduction Document	D	I	R	I	D
Prepare SRS Document (Overview Part)	R	D	I	R	D
Prepare SRS Document (User Requirements)	I	D	R	D	D
Find idea flow patient	D	R	R	D	I
Find idea flow doctor	D	I	D	R	R
Find idea social network	R	D	D	I	I
Find idea payment	I	D	R	D	R
Review knowledge spring boot CRUD	R	I	D	D	I
Review knowledge testing	I	D	R	D	D
Review knowledge SRS	D	D	D	D	D
Make Basic Design	I	D	I	R	D
Draw use-case diagrams	I	I	R	D	D
Sketch, Wireframe UI/UX	R	D	I	I	D
Design database by ERD	D	R	D	D	I
Create schema database	D	R	D	R	I
Mockup, Prototype UX/UI	R	D	I	I	R
Code and review code	D	R	D	D	R
Merge code	R	R	D	D	I
Unit Test	D	R	I	D	D

Figure 3: Responsibility Member

Please move to Report2_EasyDoctor Project Schedule file for details. We presented detailed responsibility members in this file.

Report2_EasyDoctor Project Schedule.xlsx

5. Project Communications

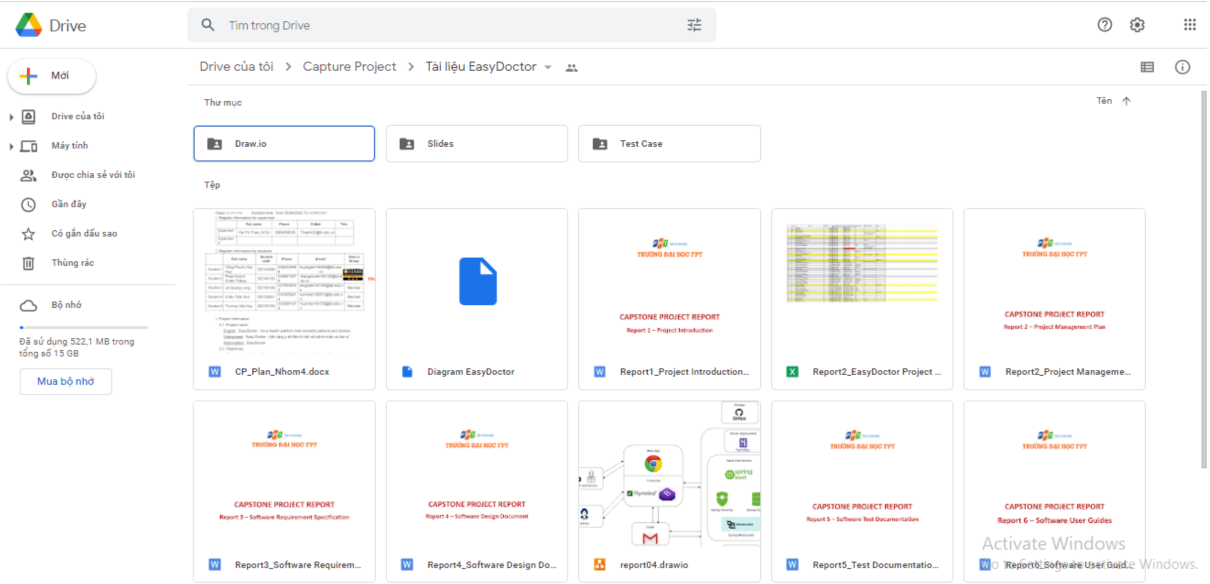
Communication Item	Who/ Target	Purpose	When, Frequency	Type, Tool, Method(s)
Supervisor communication	Supervisor, members	Report project status, Q &A	Every weekday	Slack, google meet,offline
Daily meeting	Members	Discussing about project, sharing files, sharing source code	Everyday	Message, google meet
Team weekly offline meeting	Members	Training, discuss	2 times a week	Face to face, coffee

6. Configuration Management

6.1 Document Management

All documents about reports, Q&A, references will be stored on google drive. So all team members can access, view and edit documents online on google sheet, google docs. Will log the time and update the description of changes. All reports will be forwarded to the supervisor on the Slack team. If there is an edit comment from the supervisor, it will automatically notify the message via Slack.

On google drive, our folder is here.


Drive
Tìm trong Drive
Mới
Drive của tôi
Máy tính
Được chia sẻ với tôi
Gần đây
Có gắn dấu sao
Thùng rác
Bộ nhớ
Đã sử dụng 522,1 MB trong tổng số 15 GB
Mua bộ nhớ
Drive của tôi > Capture Project > Tài liệu EasyDoctor
Thư mục
Tên
Draw.io
Slides
Test Case
Tệp
CP_Plan_Nhom4.docx
Diagram EasyDoctor
Report1_Project Introduction...
Report2_EasyDoctor Project ...
Report2_Project Manageme...
Report3_Software Requirem...
Report4_Software Design Do...
report04.drawio
Report5_Test Documentatio...
Report6_Software User Guid...
CAPSTONE PROJECT REPORT
Report 1 – Project Introduction
Report 2 – Project Management Plan
Report 3 – Software Requirement Specification
Report 4 – Software Design Document
Report 5 – Software Test Documentation
Report 6 – Software User Guides
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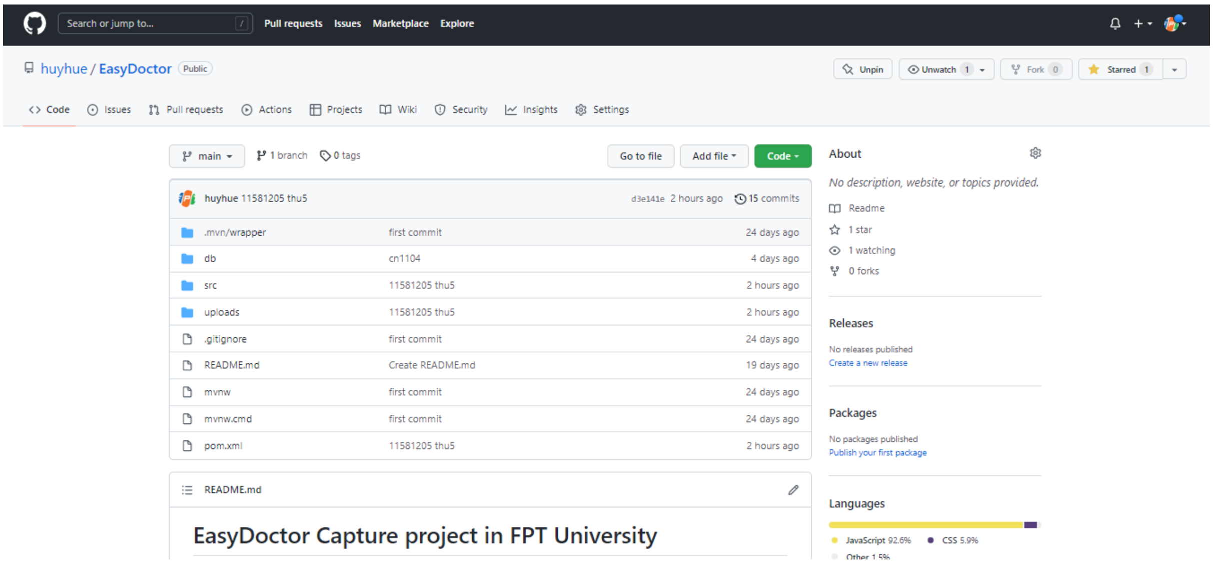
Activate Windows

Figure 4: Document Management

6.2 Source Code Management

The source code will be hosted on GitHub. Only team members can access the repository on GitHub for project safety. All coding branches must be reviewed by at least one developer before merging into the default branch. Developers must do unit testing and code review before creating a merge request.

On GitHub, our project is here.



huyhue 11581205 thu5 d3e141e 2 hours ago 15 commits

.mvn/wrapper	first commit	24 days ago
db	cn1104	4 days ago
src	11581205 thu5	2 hours ago
uploads	11581205 thu5	2 hours ago
.gitignore	first commit	24 days ago
README.md	Create README.md	19 days ago
mvnw	first commit	24 days ago
mvnw.cmd	first commit	24 days ago
pom.xml	11581205 thu5	2 hours ago

README.md

EasyDoctor Capture project in FPT University

About

No description, website, or topics provided.

Readme

1 star

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Languages

JavaScript 92.6% CSS 5.9% Other 1.5%

Figure 5: Source Code Management

6.3 Tools & Infrastructures

Category	Tools / Infrastructure
Technology	HTML/CSS/JS Bootstrap (FrontEnd), Java/SpringBoot (BackEnd)
Database	MySQL
IDEs/Editors	Visual Studio Code, Spring Tools 4 for Eclipse
Diagramming	StarUML, DrawIO
Documentation	Google Drive, Google Docs/Sheets/Slides
Version Control	GitHub (Source Codes), Google Drive (Documents)
Deployment server	Heroku Web Service
Project management	Google Sheet (Schedule), ClickUp(Tasks, Defects)