



FAST National University of Computer and Emerging Sciences

Software Project Management: Assignment 2

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Communications Management Plan:

This is the plan which keeps stakeholders informed and engaged with the project. This plan details all communication methods and collaborations.

Objective: To ensure timely communication and update to all stakeholders of HealthBridge.

Stakeholders:

1. Patients.
2. Doctors.
3. Research and Medical Institutes.
4. IT Department.
5. Healthcare Providers.

Communication Channels:

- **Email:** Email will be used to provide updates on project progress and weekly summaries.
- **Weekly Team Meetings:** These are weekly meetings for in depth discussions on tasks assigned, and issues.
- **Monthly Progress Reports:** High-level summaries sent to stakeholders to review project progress and milestone completion

Frequency and Content:

- **Weekly Updates:** Weekly reports of status updates, tasks, and problems solved during team meetings.
- **Monthly Summaries:** Monthly reports on the project's issues and risks

Communication Stakeholder Register:

Stakeholder	Role	Interest	Influence	Preferred Communication Method	Engagement Strategy
Patients	End-users for the platform	High	High	Email.	Weekly Updates.
Doctors	Regular appointments and assistance with diagnostic reports	High	High	Email.	Weekly Updates.
Research and Medical Institutes	For analyzing diagnostic reports data and research purposes	Medium	Low	Email.	Weekly Updates.
IT Department	Maintain the overall structure of the Platform.	Medium	High	Email.	Daily Updates and monthly milestone reports.
Healthcare Providers	Use the platform for reports.	High	Medium	Email.	Monthly Updates.

Quality Assurance Plan:

Quality Assurance plans make sure that all developed and running components of HealthBridge are up and running and do not face any issues.

Testing Phases:

- **Unit Testing:** Unit testing is conducted after the development of each module to verify functionality.
- **Integration Testing:** Integration testing ensures interaction between modules is conducted every 2 weeks to identify issues.
- **User Acceptance Testing:** The final testing phase where clients and users validate the product's functionality.

Change Management Plan:

The change management plan is an organized approach to manage the changes requested into HealthBridge, which could be from project scope to timelines to modules etc. This plan is meant to ensure the changes that are approved are in the best interests of HealthBridge.

Change Request Submission: Any stakeholder can request a change by submitting a change request form.

Impact Assessment:

- **Scope Impact:** This evaluates how the requested change affects project deliverables.
- **Time Impact:** This assesses any additional time required to implement the change.
- **Resource Impact:** This analyzes resource reallocation or additional needs.
- **Risk Impact:** This examines new risks introduced by the change.

Documentation: All approved changes are recorded in a Log, including the date, description, assessment results, approval status, and actions taken.

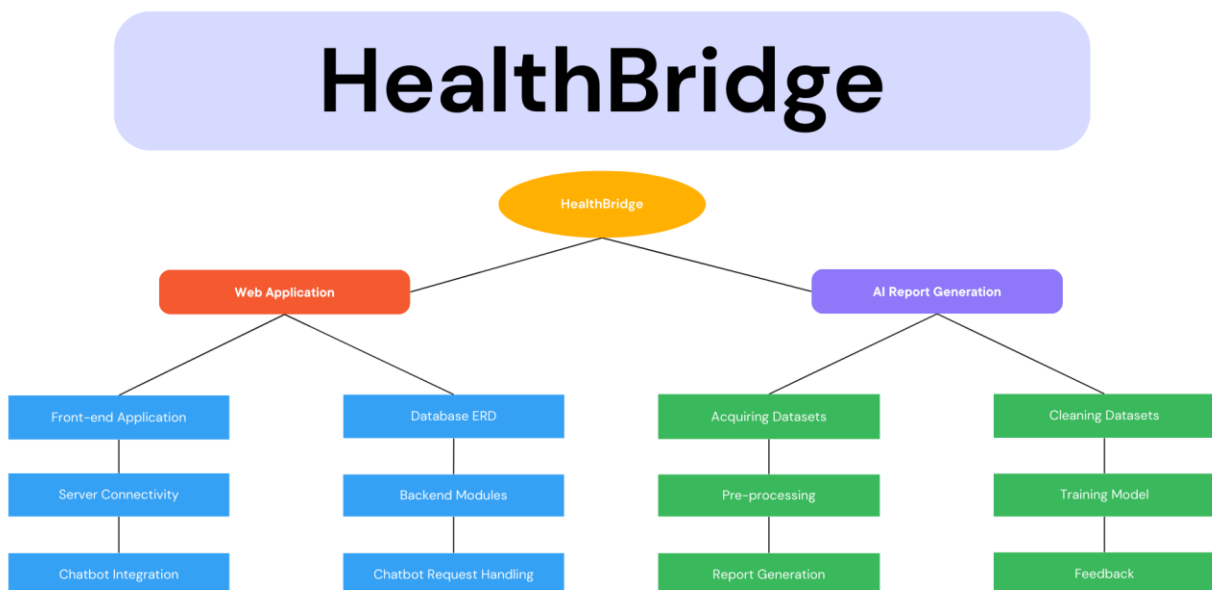
Scope Statement:

Project Objectives: To develop a healthcare management system which improves patient and doctor communication and engagement, and improve efficiency of medical reporting.

Deliverables:

- **Functional Components:** The components descriptions of how they work and their relationships.
- **Documentation:** User manuals, technical documentation.

Work Breakdown Structure (WBS):



Phase 1: Initiating

- 1.1. Project Charter
- 1.2. Stakeholder Identification and Analysis
- 1.3. Requirement Gathering
 - 1.3.1. Functional Requirements
 - 1.3.2. Non-Functional Requirements
- 1.4. Risk and Issue Identification
- 1.5. Kick-off Meeting

Phase 2: Planning

- 2.1. Scope Definition
- 2.2. Project Schedule Development
 - 2.2.1. Timeline Estimation
 - 2.2.2. Task Sequence
 - 2.2.3. Milestone Identification
- 2.3. Budget Estimation and Approval
- 2.4. Modules Breakdown
 - 2.4.1. Environment Setup
 - 2.4.2. User Management System
 - 2.4.3. Chatbot
 - 2.4.4. Diagnostic Model
 - 2.4.5. System Integration
- 2.5. User Classes and Characteristics
- 2.6. Use-case /Event Response Table/Storyboarding
- 2.7. System Architecture Design
- 2.8. Design Models
- 2.9. Budget Estimation and Approval
- 2.10. Quality Management Plan
- 2.11. Risk Management Plan
- 2.12. Communication Management Plan

Phase 3: Executing

- 3.1. Web Application
 - 3.1.1. UI/UX Design (Frontend)
 - 3.1.2. Backend and Database
 - 3.1.3. Chatbot Integration
- 3.2. AI Model Development for Liver Diagnostics
 - 3.2.1. Gathering Dataset
 - 3.2.2. Pre-processing Dataset
 - 3.2.3. Model Training
 - 3.2.4. Model Testing
- 3.3. Backend Integration
- 3.4. System Integration

Phase 4: Monitoring and Controlling

- 4.1. Progress Tracking and Reporting
 - 4.1.1. Weekly Updates
 - 4.1.2. Monthly Progress Report
- 4.2. Quality Assurance
 - 4.2.1. Unit Testing
 - 4.2.2. Integration Testing
 - 4.2.3. User Acceptance Testing
- 4.3. Risk and Issue Tracking
 - 4.3.1. Risk Register Updates
 - 4.3.2. Issue Log Updates
- 4.4. Scope Verification

Phase 5: Testing and Deployment

5.1. Final Deployment

5.2. User Documentation

5.2.1. User Manual

5.2.2. App Features

5.3. Project Closure and Review

5.3.1. Final Project Report

5.4. Data Security Compliance Check

Project Schedule:

Phase	Task ID	Task Name	Start Date	End Date	Duration (Days)	Dependencies
1	1.1	Project Charter	16-08-2024	19-08-2024	3	-
	1.2	Stakeholder Identification and Analysis	20-08-2024	22-08-2024	3	1.1
	1.3	Requirement Gathering	23-08-2024	27-08-2024	5	1.2
	1.3.1	Functional Requirements	28-08-2024	30-08-2024	3	1.2
	1.3.2	Non-Functional Requirements	31-08-2024	01-09-2024	2	1.3.1
	1.4	Risk and Issue Identification	02-09-2024	03-09-2024	2	1.3.2
	1.5	Kick-off Meeting	05-09-2024	05-09-2024	1	1.4
2	2.1	Scope Definition	06-09-2024	08-09-2024	3	1.5
	2.2	Project Schedule Deployment	09-09-2024	13-09-2024	5	2.1
	2.2.1	Timeline Estimation	14-09-2024	15-09-2024	2	2.1

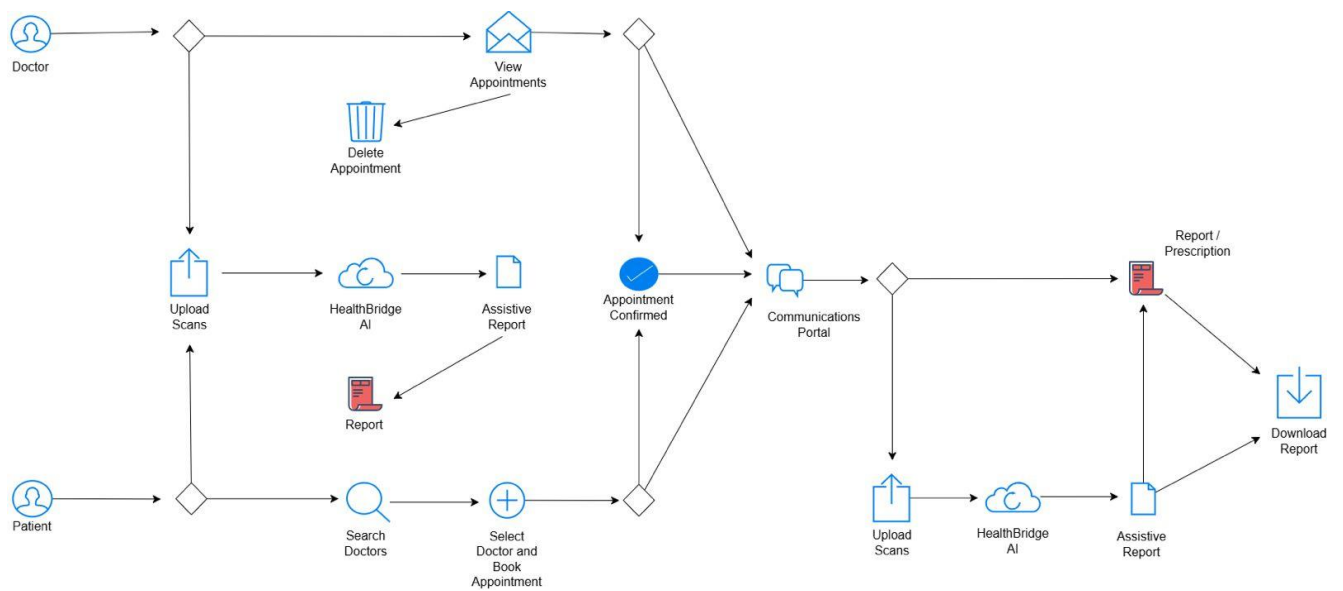
	2.2.2	Task Sequence	16-09-2024	17-09-2024	2	2.2.1
	2.2.3	Milestone Identification	18-09-2024	18-09-2024	2	2.2.2
	2.3	Budget Estimation and Approval	19-09-2024	19-09-2024	1	2.2
	2.4	Modules Breakdown	20-09-2024	24-09-2024	5	2.3
	2.4.1	Environment Setup	25-08-2024	30-08-2024	6	2.3
	2.4.2	User Management System	25-09-2024	27-09-2024	3	2.4.1
	2.4.3	Chatbot	28-09-2024	30-09-2024	3	2.4.2
	2.4.4	Diagnostic Model	22-09-2024	30-09-2024	9	2.4.3
	2.4.5	System Integration	01-10-2024	03-10-2024	3	2.4.4
	2.5	User classes and Characteristics	04-10-2024	04-10-2024	1	2.4
	2.6	Use-case/Event Response Table/Storyboarding	05-10-2024	09-10-2024	5	2.5
	2.7	System Architecture Design	10-10-2024	11-10-2024	2	2.6
	2.8	Design Models	05-10-2024	09-10-2024	5	2.7
	2.9	Budget Estimation and Approval	12-10-2024	13-10-2024	2	2.8

	2.10	Quality Management Plan	12-10-2024	13-10-2024	2	2.9
	2.11	Risk Management Plan	12-10-2024	13-10-2024	2	2.10
	2.12	Communication Management Plan	12-10-2024	12-10-2024	1	2.11
3	3.1	Web Application	15-10-2024	25-10-2024	11	2.12
	3.1.1	UI/UX Design	15-10-2024	17-10-2024	3	3.1
	3.1.2	Backend and Database	24-10-2024	6-11-2024	14	3.1.1
	3.1.3	Chatbot Integration	26-10-2024	29-10-2024	4	3.1.2
	3.2	AI Model Development for Liver Diagnostics	31-10-2024	27-11-2024	28	3.1
	3.2.1	Gathering Dataset	31-10-2024	06-11-2024	7	3.2
	3.2.2	Pre-processing Dataset	07-11-2024	09-11-2024	3	3.2.1
	3.2.3	Model Training	10-11-2024	21-11-2024	12	3.2.2
	3.2.4	Model Testing	22-11-2024	27-11-2024	6	3.2.3
	3.3	Backend Integration	27-11-2024	30-11-2024	4	3.2.4
	3.4	System Integration	30-11-2024	02-12-2024	3	3.3
4	4.1	Progress Tracking and Reporting	03-12-2024	10-12-2024	8	3.4

	4.1.1	Weekly Updates	11-12-2024	16-12-2024	6	4.1
	4.1.2	Monthly Progress Report	11-12-2024	16-12-2024	6	4.1.1
	4.2	Quality Assurance	05-12-2024	14-12-2024	10	4.1.2
	4.2.1	Unit Testing	05-12-2024	14-12-2024	10	4.1.2
	4.2.2	Integration Testing	15-12-2024	18-12-2024	4	4.2.1
	4.2.3	User Acceptance Testing	15-12-2024	18-12-2024	4	4.2.2
	4.3	Risk and Issue Tracking	20-12-2024	25-12-2024	6	4.2.3
	4.3.1	Risk Register Updates	20-12-2024	25-12-2024	6	4.2.3
	4.3.2	Issue Log Updates	27-12-2024	30-12-2024	4	4.3.1
	4.4	Scope Verification	26-12-2024	31-12-2024	6	4.3.2
5	5.1	Final Deployment	04-01-2025	05-01-2025	2	4.4
	5.2	User Documentation	06-01-2025	10-01-2025	5	5.1
	5.2.1	User Manual	08-01-2025	12-01-2025	5	5.1
	5.2.2	App Features	08-01-2025	15-01-2025	8	5.2.1
	5.3	Final Project Closure and Review	16-01-2025	20-01-2025	5	5.2.2

	5.3.1	Final Project Review	16-01-2025	20-01-2025	5	5.2.2
	5.4	Data Security and Compliance Check	21-01-2025	25-01-2025	5	5.3.1

Network Diagram:



Risk Register:

Risk	Impact	Probability	Mitigation Strategy
Technical Issues with Integration	Medium	Low	Using online platforms and weekly meetings to handle such problems.
Data Security Breaches	High	Low	Advanced encryption-based storage and separate layers of security.
Delays in AI model development	High	Medium	Weekly progress meetings with the Co-supervisor for the issues faced.
Data Flow	Medium	Medium	Code first approach for better system.
Multi-Layered Architecture	High	Medium	Correct implementation for each layer.
Labelled Dataset for correct segmentation	High	Medium	Request to various Medical labs and departments for labelled dataset.

Issue Register:

Issue	Date Raised	Impact	Action Taken
Labeled Dataset for Liver Diagnostics	19th September 2024	High	Additional dataset acquired from several websites. Dataset Request from medical institutes for model training.
Environment Setup Details	26th September 2024	Medium	Use of GitHub for efficient management and divided work. Different libraries for all the work.
Use-cases	28 th September 2024	High	Correct use of extend and include for all use-cases. In depth details for fully dresses use-cases.
Activity Diagram	28 th September 2024	Medium	More detailed symbols and efficient work flow.

Milestone Report:

Milestone	Completion Date	Status
Initial platform setup	12th October 2024	Completed
Data Refining and Chatbot System for AI model	10th November 2024	In Progress
Finalization of AI model	27th November 2024	On Track
Testing	5th December 2024	On Track