Project Vision and Planning

3820ICT Work Integrated Learning

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Pocket Midwife Website

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Chapter 1

Introduction

This document puts forward the vision and planning of the product/project. We aim to follow the model, view and control structure in this project. The client interface is the view, the data storage schemes makes up the model and control is the code that will act as the bridge between the entities involved. We also aim to follow data security practices as this product might deal with sensitive data.

1.1 Project and client information

The project "Pocket Midwife" is website that is a one stop solution to all the prenatal and postnatal queries. The client has more than 25 years of experience in this domain. The project will consist of content provided by the client. The project should be mobile friendly and should have rich UI/UX component.

1.2 Project team

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Goutham Sai Kasarla - gowthamsai.95@gmail.com

1.3 Definition and acronyms

Client Interface : This is the view of the client i.e. the page that will be visible to the client.

Mobile Friendly Website : We aim to follow standardized stylesheet rules on the frontend side to make the website mobile friendly. The final aim is to make the interface device independent.

Scrum : Scrum is a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value. Scrum itself is a simple framework for effective team collaboration on complex products

Agile : In software development, agile approaches development requirements and solutions through the collaborative effort of self-organizing and cross-functional teams and their customer/end user.

PIP : PIP is a de facto standard package-management system used to install and manage software packages written in Python.

Model View Control: It is a software design pattern commonly used for developing user interfaces that divides the related program logic into three interconnected elements. This is done to separate internal representations of information from the ways information is presented to and accepted from the user.

Chapter 2

Product Vision

The "Pocket Midwife Website" is:

- **For:**
  - Anyone curious about child birth
  - Close acquaintances of a newly-pregnant woman
  - Couples seeking expert advice
  - Women planning to have a baby
  - Other midwives
  - Medical professionals
- **Who:**
  - Needs prenatal information to plan out their future decisions
  - Wants to connect a newly-pregnant woman with the right prenatal information.
  - Are planning to have a baby and needs expert advice
  - Is already pregnant and wants to make her journey smooth.
  - Are in the industry and wants to update their knowledge
  - Are trying to find a one stop solution to all their prenatal queries
- The "Pocket Midwife" is a one stop solution to all the prenatal and postnatal queries. It is designed to remove the inconvenience of finding a trustworthy expert opinion and suggestion regarding the complications of child birth.
- It follows a more wholesome and comprehensive approach that helps in dealing fairly well with the fears and hesitations of someone wanting to get an outside help but is unsure about the credibility of the source.
- Unlike many of the current solutions available in the market, our product is backed by some highly credible sources of knowledge with more than 25 years of industry experience.
- Our product also uses relevant data security solutions to protect the privacy of users which is lacking in many popular market players.

2.1 Customers and benefits

- Primary user group: People directly associated with prenatal and postnatal processes in some way with 0^{th} degree of separation. (Women, couples, other midwives e.t.c)
  Benefits: Our product will provide a one stop solution to all the prenatal and postnatal queries with expert advice.

- Secondary user group: People who are associated with prenatal and postnatal processes in 1 or more degree of separation.
  Benefits: Our product helps in dealing fairly well with the fears and hesitations of someone wanting to get an outside help or need information related to child birth

  For both of the user groups, our product removes the barrier of finding a trustworthy expert voice.

- User age: Teen-age to 50 years
- User education: Must be able to read and understand English language.

2.2 Key factors used to judge quality

- User Interface: The user interface must be dynamic and clean. It should be mobile friendly.
- User Experience: The usage of the website should be self explanatory. Studies suggest that an intelligent and simple interface generates more user traffic.
- Maintenance: The website design should be modular and clean for easier maintenance in the future. Relevant pieces of code should be properly commented.
- Data Security: Proper steps should be taken to make the sensitive data in the system secure.
- Authentic information: Information displayed and given to the users should be credible and authentic. This should be provided by the experts in the field. Its update should be seamless.

2.3 Key features and technology

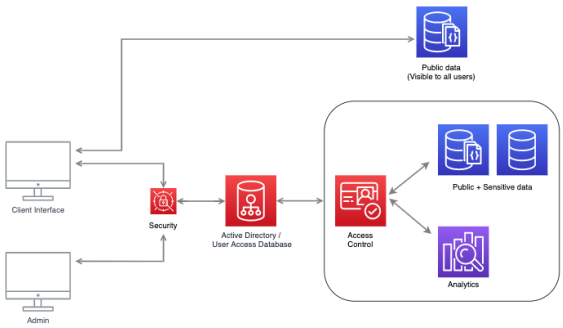

Figure 2.1: Data flow and architecture

- Mobile friendly UI/UX (Front-end) : HTML, CSS, Javascript, Jquery
- Control (Back-end) : Python
- Model Database : SQL database (MySQL), NoSQL Database (Elastic or MongoDB)

2.4 Other product factors

- Quality and reliability : Proper use of error codes and system log details for quick detection of errors in the system
- Proprietary software agreement infringement/protection : Use of open source and free tools.
- User education: Self explanatory UI/UX components to reduce external user education.
- Potential for design growth or modification: Modular design and architecture of the product website to accommodate future modifications easily.

Chapter 3

Project Organisation

3.1 Organisational Structure

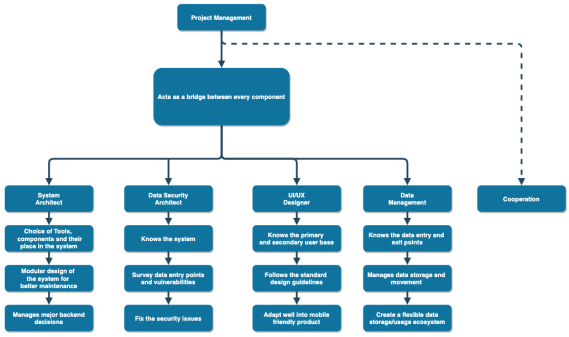

Figure 3.1: Project organization

List of people:
Dola Krishna Manu Mandalaneni - Project management,security
Goutham Sai Kasarla - System architecture
Naveen Prasad Nekkanti - Data Management
Vishnu Teja Yarlagadda - UI/UX Component

3.2 Project Responsibilities

- Project Management - Responsible for management of the project timeline, division of the project into suitable subtasks and acting as the bridge between different roles as well as client and team.
- Data Security - Reponsible for handling the security aspect of the project along with the protection of sensitive data.
- System architecture - Responsible for the architecture design of the software system eg. How the server to serve web pages will be built, what should be the tools used as middlewares and backend softwares along with error reporting.
- UI/UX - Responsible for the look and feel of the website. How can the user experience be better. Consistency in the website interface design and ease of use to facilitate the usage of the website. Make their website experience better.
- Data Management - Responsible for the database management system's architecture. Managing the entry and exit points of data along with data collection, storage and analysis.

3.3 Identification of skill needed

- Project management skills
- Information Technology management skills
- Data security management skills
- Business communication skills
- Coding Skills
- User experience skills

3.4 Satisfaction of skill needs

- Project management skills: We are getting ourselves familiar with agile methodology and we are planning to follow the same. Currently we are beginners but with time we will improve our skills.
- Information Technology management skills: Our bachelors and masters degree will help us bridge this gap. We have taken relevant courses for acquiring this skill.
- Data security management skills: Our team members have taken relevant courses in the past semester to acquire this skill. We will also improve this skill with time.
- Business communication skills: We have satisfactory business communication skills as we have been trained in the same since our bachelors degree.
- Coding Skills: This is the most important skill. We have divided work and roles amongst ourselves and we are simultaneously acquiring the relevant coding skills for the same. Currently we are familiar with it at basic level but we are confident that we will improve with time and that will be reflected in the outcome of the project.
- User experience skills: This is another very direct skill needed to engage the customer. We have started the study of this skill to incorporate it effectively in our project.

We have effectively carved out relevant skills for this project which is itself an indication that we know the destination as well as journey. We are confident that we will improve and perfect these skills in the near future.

3.5 Success Criteria

Success is primarily the outcome of how it is achieved. The criteria to achieve success are:

- Proper use case identification : The ways in which this product will be used
- Regular inputs in project : The project is built regularly in a progressive way using proper code repository
- Transparent Execution : Stakeholders know what's going on in the project
- Right tools : The team should select the right tools to complete the project
- Skill acquisition : Ability to learn new skills if it makes the project better
- Product documentation : The features as well as issues of the project should be well documented

3.6 Standards for work products

- Model-View-Control architecture for proper segregation of the back-end, front-end and middleware code
- Agile methodology for promotion of continuous iteration of development and testing throughout the software development life cycle.
- System documentation for the system itself and its parts. It includes requirements documents, design decisions, architecture descriptions, program source code, and help guides.
- User documentation **(if necessary)** for end-users of the product and system administrators. User documentation includes tutorials, user guides, troubleshooting manuals, installation, and reference manuals.

3.7 Work product evaluation

Use of standards mentioned in the previous section will act as an aid to evaluate the product. Our project will be stored on a public code repository which can be viewed by the client. The repository will be updated regularly. We will follow documentations to update the content of the website. Any stakeholder of the product can view the documentation at any time and comment on the project. We also aim to use an application tracking software such as Jira to track the progress and errors.

Chapter 4

Risk Management

Risk Analysis and Management is a key project management practice to ensure that the least number of surprises occur while your project is underway. Our approach to risk management would be :

- Continuous risk identification
- Risk evaluation
- Risk mitigation and contingency measure definition
- Risk monitoring and control

Taxonomy-Based Risk Management involves using, during the Risk Identification tasks, a checklist of risk grouping structured according to different classes :

- Phase 1 – Customization
  - Risks Identification Rules Development.
- Phase 2 – Execution
  - Risks Identification Rules Execution.
  - Project Manager response to Risks
- Phase 3 – Tracking
  - Identified Risks Tracking.
  - Opportunities to Improve Detection.

We plan on using an online issue tracking system to handle risk management. A potential contender for such tool is "Jira". We aim to have regular update meetings or scrum and have regular risk reviews.

4.1 Risk Identification

Following is the **risk register** for primary risk:

Risk	Impact	Impact-level(I)	Probability(P)	Priority(I x P)	Mitigation
Custom coding	Maintenance issues	2	2	4	Standard libraries
Time mgmt.	Project Delay	3	1	3	Strict Agile
Cross Platform	Mobile friendly	4	2	8	Follow CSS standards
Data Security	Information leak	4	2	8	Survey data points

Based on the risk register mentioned above, We can see that data security and cross platform risks are of highest priorities. We want our website to work on all platforms i.e. destop/mobile and on all systems. Similarly we must secure the data. To do those, we must follow CSS style standards and regularly survey data points respectively. To manage time, we must follow agile practices strictly and rely on standard free third party libraries to avoid creating custom code but these two are not high priority risks.

Chapter 5

Change Control

5.1 Configuration Management

Docker: We will use it to create environment that will host our system. This will remove bottlenecks of creating correct environment with correct version of tools.

Python PIP: PIP is the package installer for Python. We will use it in an automated approach to install relevant modules that can be installed easily in our environment.

Any website management tool like Django admin to manage website database attributes

5.2 Track and Control Changes

Github: It is an online code repository. We will use it to track code changes and version control.

Jira: It is an issue tracking application. It gives us an interface to track project life cycle. It also facilitates the practice of agile methodology. We will use it to create code sprints and track errors raised.

Chapter 6

Project Agreement

6.1 Intellectual Property Rights

PROJECT TEAM grant to CLIENT and CLIENT accepts a non-exclusive licence to use all intellectual property rights in any work created solely or jointly by the Project Team in the course of developing the program. The PROJECT TEAM is indefinitely free to use the whole or any parts of the Program, or any intellectual property rights in the Program/Product (including any product that incorporates the Program) as part of their work portfolio.

6.2 Responsibilities

6.2.1 Client

The client should submit and regularly update the content of the website. Submitting content at the start of the project would help in managing the project life cycle. The client should provide feedback (written would be better) in any meeting that is conducted.

6.2.2 Team

The team should hold regular scrum meets and proper code sprints. The team should also follow agile practices and cycles for better task tracking. Each member must divide their tasks independent of another member's task and skills. They should also support mudular development process.

6.2.3 Team member

The members of the team should be regular in the meetings. Each team member must contribute significantly to the project. Division of work should be equal and each member should improve their relevant skills with time which will eventually produce a better outcome.

6.3 Conflict Resolution

6.3.1 With client

A formal business communication in form of a formal email should be the first form of conflict resolution. In case of any further unresolved conflicts, an intervention of course convener as a mediator is expected.

6.3.2 With Team member

A formal business communication in form of a formal email should be the first form of conflict resolution. In this, the course convener should be kept in loop throughout the conversation. In case of further conflicts, Team meetings should be held and minute of the meeting must me sent to

the course convener as well. In case of any further unresolved conflicts, an intervention of course convener as a mediator is expected.

6.3.3 With Convener

A formal business communication in form of a formal email should be the first form of conflict resolution. In case of further conflicts, Team meetings should be held with the convener to solve the conflict. This is a tricky conflict hence all the stakeholders must agree on common terms to end the conflict in any case.

6.3.4 With Assessor

A formal business communication in form of a formal email should be the first form of conflict resolution. In this, the course convener should be kept in loop throughout the conversation. In case of any further unresolved conflicts, an intervention of course convener as a mediator is expected.

Chapter 7

Agreements

Client

Name	Signature	Date

Project Team

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date