**DIAGNOSTIC CENTER CLIENT MANAGEMENT SYSTEM**

**PROJECT PLAN**

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# Scope

## Introduction

The program aims at bridging the gap between the diagnostic center and end-users. It is essential in today’s world where technology is taking over most domains. The project requires rigorous planning so that the execution can be smooth.

End-users expect the security of their data while clients want the process to be faster and easier for them. Some competitors in this domain are Alosan, EliHealthMR, DoctorLive365, etc. To set us apart from the competition, we are ensuring better security and easier navigation within the website. The website is going to be easy-to-use and will ensure maximum transparency between the clients & end-users.

The website has clear requirements from the end-users. However, the resources that will be received from the clients are not very clear. This is due to the privacy policy that varies for different diagnostic centers. Knowing this, a Waterfall approach or even the iterative approach could help to move this project forward. Initially, a Waterfall approach will be tested. Consequently, merging of Waterfall and Iterative approaches will take place.

The project will involve a hierarchical structure. The project has one leader who will ensure that the project is moving at a sensible pace and that deadlines are being met. The project team will be divided to ensure that work is done parallelly in order to finish the website faster. One team will take care of the client end while another will handle the end-users. The integration of both will be done towards the latter half of the project. Once the website is up and ready to run, it can be used indefinitely. However, there will be periodic updates which will be intimated to both the clients and end-users.

Throughout this process, the sponsors will be updated about any and all changes being made. All communication w.r.t the project happens via mail. All updates made to the code are committed to a GitHub repository. This ensures that separation of work is done clearly.

## Inclusions & Exclusions

### Inclusions

For the two roles (clients & end-users) there are specific features that the website intends to include.

End-User Functionalities:

1. Login (Create Account):
   1. Login using username and password.
   2. If the end-user doesn’t have an account, he will be asked to create an account by giving his details (mail-id, name, address, mobile number).
2. Choose a location:
   1. The end-user types his location in the text box.
3. Choose tests:
   1. The app will show all the tests that are available close to the location entered.
   2. The end-user can choose the test(s) you want to take up.
4. Choose Diagnostic Centre:
   1. Depending on the location and the tests were chosen all the diagnostic centers will be visible to the end-user.
   2. The user can choose the center that is convenient for him.
5. Select date:
   1. The user will be allowed to enter the date on which he wants to get his tests done.
6. Select time:
   1. On a selected date the diagnostic center’s schedule will be available indicating the slots at which the requested test will be conducted.
   2. The user will select one of the given slots.
7. Depending on the test, you can choose whether it’s to be done at home or at DC:
   1. If the test that the user has requested can be done at home, a checkbox is provided.
   2. If the user wants to get the test done at home, he checks this box.
8. If it’s at home, the Lab Assistant will be assigned:
   1. If the user checks the box, he will be assigned a lab assistant the name and the phone number of the assistant will be made visible to him/her.
9. Otherwise, the appointment will be booked:
   1. If the box remains unchecked an appointment is booked with the diagnostic center.
10. A confirmation message of the appointment/lab assistant will be sent as a notification to web-app/email.
    1. The user will receive a confirmation mail and a notification on the app once the appointment is approved by the diagnostic center.
11. Billing
    1. A bill will be generated and displayed to the user.
12. Payment
    1. The user has the option of paying online or paying using cash.
    2. If he chooses to pay online, he will be taken to a payment gateway.
13. Cancellation
    1. The user is allowed to cancel his appointment 12 hours before the time of the appointment.
14. Report
    1. The test report is mailed to the user.
    2. The user receives a notification on the application telling him that the report has been mailed to his registered email-id.

Client Functionalities:

Personal Verification

1. This will be done manually by our team, to make sure the diagnostic center (DC) is certified to conduct medical tests.
   1. Only after this verification, DC is accepted as a client.
2. Login (Create Account)
   1. Each DC will be provided with a username and password once the verification is done.
   2. Client login can be done using this username and password.
3. Template
   1. A template is provided to the client in the form – Date, Time, Lab Test, Rates, Maximum No. of Patients, Lab Assistants Availability.
   2. The client creates a schedule for a given day according to this template.
   3. The schedule is updated every 72 hours.
4. Upload Button
   1. The schedule can be uploaded through the web-app.
5. See Schedule
   1. The uploaded schedule for the current day, the next day and the day after is made visible to the clients and to the end-users.
6. Report
   1. The report is uploaded by entering the password.
   2. The report is sent to the email ID of the registered user.
   3. The format for the uploaded file must be of the form PatientName\_LabTest.

### Exclusions

1. Actual conduction of tests or generations of reports is not done by this website.
2. Assignment of lab assistants or hiring/firing of lab assistants is not taken care of.
3. Schedules for lab tests are not done.

# Software Project Management Plan

## Introduction

The Diagnostic Center Client Management Website aims at bridging the gap between end-users and clients. The website intends to be a one-stop solution and a hassle-free experience when it comes to booking appointments for lab tests.

### Project Overview

The project described within this document is a web application designed with the specific goal of providing hassle free experience for users who need to get diagnostic tests done and also for clients who need to manage their appointments. The application is designed to fill the gap between patients and the diagnostic centers.

The application is focused on health care service domain because of the rising need for diagnosis tests to be done on an everyday basis. More so, the prospective end users will find this application more useful than the traditional aids.

The aim of this project is two-fold. First, the preliminary requirements given by the client will be refined into a detailed requirements description which captures real customers’ real needs as precisely, concisely and conceptually as possible. Secondly, a prototype will be developed which should demonstrate the key features of the detailed requirements in the real world.

This document gives a preliminary plan for how the company aims to achieve the above stated aims. The first section gives an overview, describes project deliverables and itemizes the evolution of this document. Lastly, the first section gives the meaning of the acronyms that may be encountered in the rest of the document and lists references from which guidelines have been drawn. In the second section, the organizational structure of the executing team is given and the third section how the team as well as the project will be managed from its inception to completion. Technical processes used are described in section 4 while the fifth and final section details the work elements, schedule and budget for the project.

### Project Deliverables

1. Prepare Project Plan: Identify the milestones and timelines of the project.
2. Design wireframes: Design the basic layout of the website.
3. Implement general website functionalities which include:
   1. Login/Register Module.
   2. Deletion Module.
   3. Report Module –
      1. Uploading of the report is done by the client.
      2. Report will be sent to end-user via a third-party application.
4. Implement end-user functionalities which include:
   1. Booking Module
      1. Flexibility in choosing location, tests, diagnostic center, date, time, and whether it can be done in the comfort of the end user's home or at the diagnostic center.
      2. Flexibility in cancelling an appointment.
      3. Confirmation message to be sent – via email and/or notification.
5. Payment Module
   1. Mode of payment can be chosen by the user.
   2. Payment can be done via cash/card002E
6. Implementing client functionalities which include:
   1. Scheduling Module
      1. Upload a schedule
      2. Flexibility to change the schedule every 72 hours.
      3. Flexibility to filter the schedule according to patients and/or lab tests.

## Project Organization

This detail the organizational plan of the proposed project plan. Sections detailed here are the process model, organizational structure, organizational boundaries and interface and project responsibilities.

### Process Model

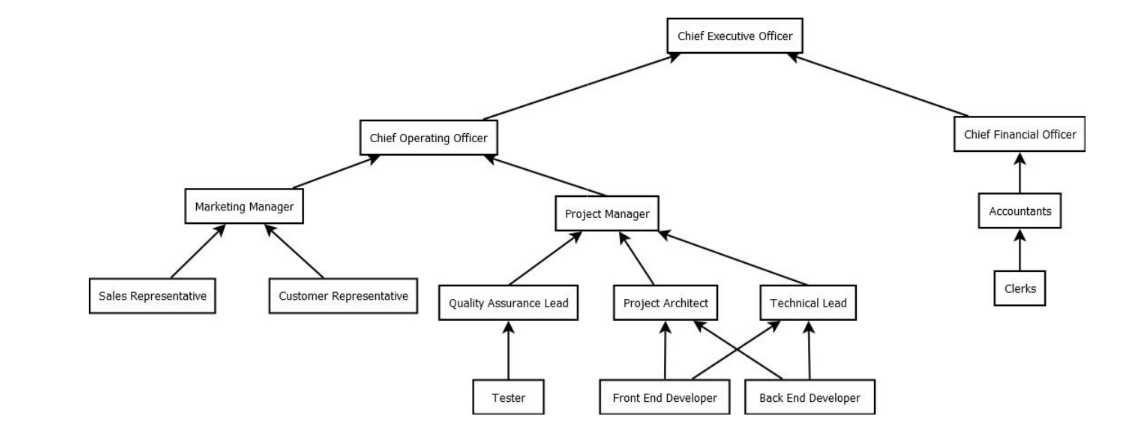
Product – the end-to-end flow of the application is smooth leading to a high degree of certainty.

Process – the development and testing can be done simultaneously because of the number of independent modules. Therefore, the degree of certainty is quite high.

Resource – since the resources required, vary from client to client, the degree of certainty is relatively low.

From the above points, it can be concluded that V model will be apt for the project.

### Organizational Structure



### Organizational Boundaries and Interfaces

The predominant relationship is that between the project team and our organization’s client. As the project is implemented this relationship will extend to the company as well as the customers to this establishment. These relationships are crucial to the success of this project, and full cooperation is dire. Stakeholders in this project include the client, project sponsor company and its end user.

Team leaders/Project managers during each phase will be responsible for coordinating team meetings, updates, communications, and team deliverables.

### Project Responsibilities

For successful projects we need careful planning and talent and collaboration of a project’s team members. Projects can be taken forward with the help of project managers, project team members, project sponsors, business analyst.

The responsibilities of each of the roles are:

1. Project Manager

* They will help us develop a project plan.
* Manage deliverables according to the plan. The deliverables include general website functionalities, the end-user functionalities, client functionalities.
* Recruit the project staff to perform these deliverables.
* Assigns tasks to project team members, to complete and deliver the project.
* Schedule the project delivery to meet the deadlines.

1. Project team members/Programmers

* They work on one or more phases of the project.
* Complete individual deliverables.
* Work with users to establish and meet business needs.
* Document the process.

1. Project sponsor

* They are members of senior management, closely related to project managers.
* They make key business decisions for the project like segregating the functionalities like client side, end user, website functions.
* They approve the budget of the project which includes compensation of the project manager, project team members, developers, business analysts.

1. Business Analyst

* They assist in defining the project.
* Gather requirements from business units or users.
* Test solutions to validate objectives.

## Managerial Process

### Management Objectives and Priorities

* The main objective is to secure maximum results with minimum efforts and resources.
* The measurement and comparison of an [employee](https://en.wikipedia.org/wiki/Employee)'s actual [performance](https://en.wikipedia.org/wiki/Performance_management) with the standards set.

### Risk Management

1. Process Risks:
   * + Taking a lot of time to reach the market
     + Schedule overruns
     + Market Risks
     + Disaster (Natural Calamity) Risks
2. Product Risks:
   * + Low product quality
     + Process overruns
3. Other risks may include the following:
   * + Experienced staff leaving the project and new staff coming in.
     + Change in organizational management.
     + Requirement change or misinterpreting the requirement.
     + Under-estimation of required time and resources.
     + Technological changes
     + Business competition.

To manage and reduce this risk we take the following steps:

* Risk Avoidance

We store all our user data in highly secure databases making it highly difficult for hackers to gain access to sensitive healthcare data.

* Risk Mitigation

We store the passwords of our customers by using secure encryption techniques.

* Transfer of Risks

Errors and omissions insurance taken to protect the company from lawsuits.

* Loss Reduction

We have consulted with Health Administration and public health department to make sure all our policies are compliant with law enforcement authorities. These laws by default are meant to reduce losses in case of breaches.

### Staffing Plan

The number of people required for this project: 7

* We need 1 Project Manager, Quality Assurance Lead, Tester, Project Architect and 3 developers.
* We are currently hiring two people for the role of a developer and tester individually.

## Work Packages, Schedule, and Budget

### Work Packages

The following will be the work packages for Diagnostic Center Client Management:

* Front-end for the user
* Back-end for the user
* Front-end for client
* Back-end for client

### Resource Requirements

The resources required for this project would be:

* Workspace and office stationery.
* Skilled software developers and testers.
* Legal team to verify if a particular diagnostic center is authorized to conduct tests.
* Appropriate database to store user information, diagnostic centre information and schedule.
* The server of sufficient capacity to cater to all the users in our DB.

### Budget and Resource Allocation

Cost Budgeting is important for the project to estimate the cost or efforts of the project or work packages of the project. So, to come up with a workable project, the cost will be involved in:

* Cost of equipment
* Cost of labs
* Cost of software
* Compensation of project developers
* Compensation of project managers
* Compensation of project architects/engineers

### Schedule

This project is scheduled as follows:

Week 1 – Feasibility Report submitted and reviewed.

Week 4 – Basic UI structure ready.

Week 5 – Backend integration.

Week 7 – Testing done for both roles.

Week 10 – Final website ready for deployment.

So, the project will require a minimum of 2.5 months to be presented as a great working website.