

High Level Design & Low Level Design

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# Introduction

The introduction of the High Level Design (HLD) and Low Level Design (LLD) provides an overview of the entire document with purpose, intended audience, scope and key objectives. The purpose of this High Level Design (HLD) Document is to add the necessary detail to the **State Vaccination Drive Application’s** description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level. This application will manage vaccine registrations and the data involved in the vaccination drive.

## Intended Audience

* + - People can easily understand and utilize the services using below application
    - On the awareness of vaccination

## Project Purpose

* + - Vaccinating the people by checking their age. Everyone should have to take 3 doses
    - After the 3 doses the data will be deleted by the admin

## Key Project Objectives

* + - Beneficiary id is created whenever user register to application.
    - Authenticated User are only modifies the beneficiary data.
    - Multiple users can connect at a time
    - Users who are not authenticated are unable to get access

## Project Scope and Limitation

* + - The scope of vaccination drive is for people who are of age 18 years and above
    - The beneficiaries can easily add, edit their own data.
    - The admin also can modify the beneficiary data
    - The data should be confidential.
    - Authentication persons can only allowed to modify the data by using username and password

## Functional Overview

Following header files are included in the program:

# Design Overview

The following modules in maintain database:

|  |  |
| --- | --- |
| Name of the Module | Beneficiary\_Registration() |
| Handled by |  |
| Description | This function is used for registration |

|  |  |
| --- | --- |
| Name of the Module | Add\_beneficiarydata() |
| Handled by |  |
| Description | This function is used for adding name,phone number, aadhar number,address |

|  |  |
| --- | --- |
| Name of the Module | Edit\_beneficiarydata() |
| Handled by |  |
| Description | this function is used to edit phone number,vaccination status |

|  |  |
| --- | --- |
| Name of the Module | View\_ beneficiarydata() |
| Handled by |  |
| Description | This function is used to see the beneficiary data |

|  |  |
| --- | --- |
| Name of the Module | Delete \_beneficiarydata |
| Handled by |  |
| Description | This function is used to delete the benefiaciary data who got complete vaccination |

|  |  |
| --- | --- |
| Name of the Module | Beneficiary |
| Handled by |  |
| Description | It is a data structure which can operate add, edit, view |

|  |  |
| --- | --- |
| Name of the Module | Admin |
| Handled by |  |
| Description | This is also a data structure which can operate the add, edit, delete, view |

## Design Objectives

* + - View\_beneficiarydata() will print the desired output
    - Edit\_beneficiarydata() can edit beneficiary data
    - Delete\_beneficiarydata() can delete the data of beneficiary
    - Add\_beneficiarydata() can add the beneficiary data
    - Admin and beneficiary will do the operations

## Architectural Strategies

# Design Alternative

Admin, Beneficiary

# User Interface Paradigms

Registration(),add\_beneficiarydata(),edit\_beneficiarydata(), delete\_beneficiarydata, view\_beneficiarydata()

# Error Detection / Exceptional Handling

* + - * Beneficiary have a access to add, edit operations.
      * If the user gives invalid username and password, it shows user not authenticated .

# Performance

The system will work on the user’s terminal. The performance shall depend upon admin and beneficiary.

# Maintenance

The Benficiary data should be maintain until the vaccination is completed

# System Architecture

## Database Architecture

* + - The authenticated persons only allowed to do operations in vaccination

drive. The user can have the updates about vaccination drive about three doses

* + - Beneficiary can do operations on his address data only.
    - The username and passwords are key roles in vaccination drive.
    - Beneficiary and Admin have their own username and password to login into vaccination drive.

Username : Bargavi Vadladi Password : xxxxxxxxxxxx

Authenticated user

File System

Connection

Anonymous user

Authentication

Anonymous

/vr/edit

Admin

Beneficiary

Add,Edit,Del

Exit

Processing Commands

User Database

Authenticated

/home dir

# Detailed System Design

## DFD level 0

Registration request

Adding data

Admin

Editing data

Deleting data

Beneficiary

## 4.1.2. DFD Level 1

Authentication Failed

Checkpassword

Check

# Environment Description

## Time Zone Support

IST-Kolkata

## Language Support

English

## User Desktop Requirements

* + - 64-bit processor, 1 GHz or faster
    - At least 10 GB free hard drive space
    - At least 1 GB RAM server

## Server-Side Requirements

* + - 64-bit processor, 1 GHz or faster
    - At least 2GB free hard drive space
    - At least 1GB RAM

# Deployment Considerations

* + - * Local storage is used
      * No network latency to consider
      * To scale buy a bigger CPU, more memory, larger hard drive, or additional hardware

# Application Server Disk Space

No such disk space is required as the program is fully functional on online IDE(s) as well.

Local Operating System is required and txt file to store the records of users.

# Database Server Disk Space

No such disk space is required as the program is fully functional on online IDE(s) as well.

Local Operating System is required and txt file to store the records of users.

# Integration Requirements

* + - * Language: - C
      * Tools: - Valgrind, Makefile, Gcoverage, Gprof, Splint
      * Complier: - gcc
      * Linux Environment

# Network

End to End

## Configuration

**5.5.1. Operating System**

Linux environment