Design Doc Template Dhvani

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# Introduction

## Summary

This project is all about operating an elevator through voice . A person can give a voice command to the lift, where he wants to go. This is a simple, advanced mode of operating an elevator.

## Background

It helps the specially abled people to operate the elevator as common people. It will be useful at the times when you are unsure about floor of destination and also helpful at the times of emergency.

At present we have the modern elevators addressing this issue by naming all the commodities in respective floor levels on a bulletin board. That is not the most appropriate solution for the issue.

We are addressing the problem through voice commands that wasn't used in the past which introduces the user friendliness to the elevator eco-system.

## Definitions, Acronyms, and Abbreviations

VUI: voice user inetrface

# Design Overview

## Requirements

An elevator switch board equipped with dhvani .

### Documentation

One time presentation about the working of the model.

## Minimum Viable Product

A detailed description of the deliverable for this project, this is the minimal functionality required for the project to be considered successful and should not include stretch goals or future work.

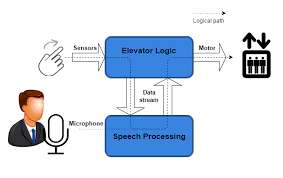
## Stretch goals

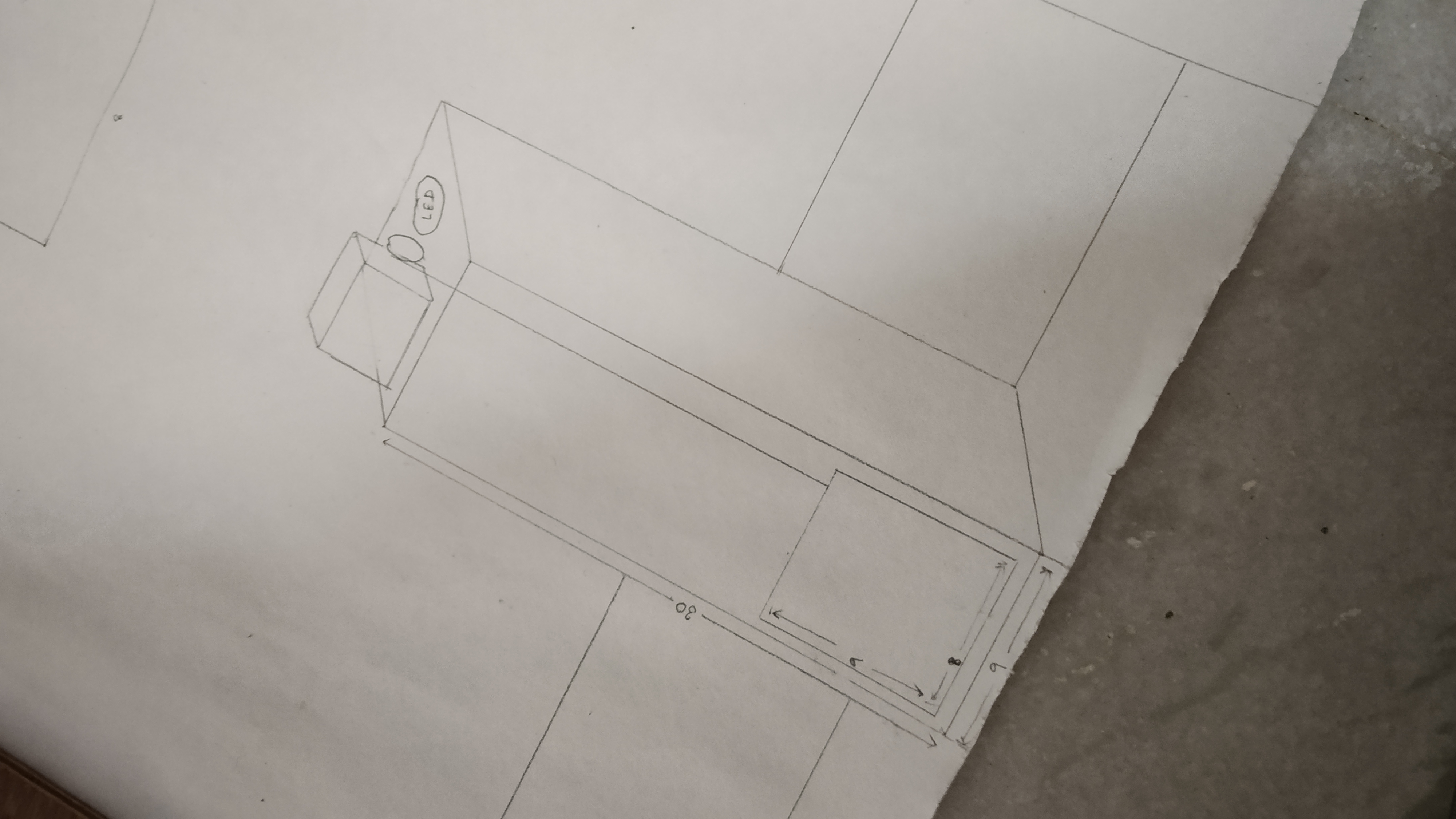
Stretch goals include functionality beyond the scope of the minimum viable product that should be include in the project should time and budget permit. Unlike future work, stretch goals would be smaller tasks for features in support of the minimum viable product.

## Future work

This may include ongoing support, expansion of the original scope, work that requires transitions in project ownership, or details of projects designed to be broken up into multiple phases.

# Architectural Diagrams





# System Diagrams

This section, sometimes referred to as a ‘System Context Diagram’, would typically consist of a UML diagram which illustrates the boundary and interaction with external systems. For a CLI this may show which backend systems provide the data, for services it may indicate dependencies such as databases, Kafka, or downstream services.

# Application Programming Interface

Voice enabled user interface

## Recommendations

Using a versioned endpoint simplifies the process of making future backwards incompatible API changes;

/api/v0

# User Interface

A commuter can interact with the elevator with the switch board equipped with dhvani.

# Data Models and Storage

For projects requiring messages queue such as Kafka, MySQL, etc.

Kafka

* How many partitions are needed for this topic?
* How many days of retention will be needed?
* What will the partitioning key become?
* How much data will be written to the topic during peak hours?
* What type of Kafka cluster will be needed? (E.g. aggregate, queuing, tracking, metrics, logging)

MySQL

* What does the table schema look like and how are they all tied together (provide a UML)?
* What sort of updates will be made to the tables?
* How will users make queries to the tables? (e.g. Complex joins, pre-filtering, single record gets)
* What the strategy for indexing?

# Service Operability

## Key Performance Indicators

Key performance indicators (KPI), describe how a service should be monitored and how its performance can be gauged. This would typically include an overview of the types of metrics an application will need to emit, call time, error rate, etc.

## Service Level Objectives

Real time data is recorded for security and management purposes for the respective domain.

Regular updations on language and accents.

# Project Overview

## Communication and Tracking

Planning to be a B-B interface, not directly interacting with the customers but reaching them through the companies like OTIS , JOHNSON, SCHINDLER

## Risks

At present we have issues in recognizing different language accents and slangs.

## Milestones

At present short term goal is to achieve interfacing with all kinds of company’s backend software.

To cover atleast 100 hospitals in the first year.

And increase the percentage of coverage 20% by year.

## Project Phases

Initially a generic product is to be built followed by products built in specific domains.

## Cost

Level of effort, number of resources, number of hours or weeks, unlike milestones which tracks project time cost should only include engaged time.

1) For the all tasks which are deliverables/visible on user-end side needs to be documented as stories.

2) Need to guess/estimate the time required in number of hours for the completing that stories which can be captured in taiga.

3) Assign that task to the right person and document the actual time taken for completing that task.

4)estimated cost is around 7000 INR.

# Frequently Asked Question

# References

Links to any supporting documentation, other projects, or reference material

# Addendum

An alternate voice search engine has to be consulted for including only a particular set of voice commands in the data base.