



NATIONAL SCHOOL OF BUSINESS MANAGEMENT

Faculty of Engineering

2nd Year Project

Project Proposal

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Bus Tracking System

Introduction

Our project is to create a bus tracking system where using a web application we can detect the exact location of the specific bus and the estimated time of arrival of the bus to the required location.



Background and Problem to solve

By following this system, the passengers could save time and could reduce the possibility of missing the bus. This would benefit every citizen in every level. Also, this would be useful for the passengers to get to know about routes of buses as well.

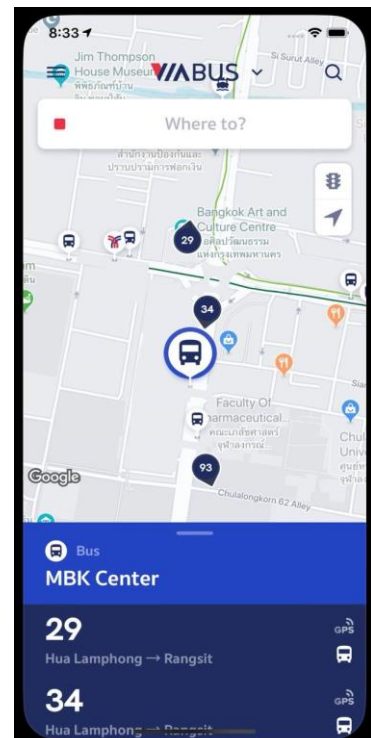
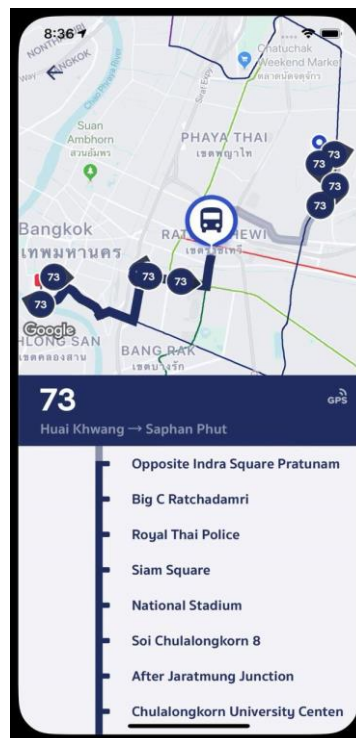
Objective of Project

The objective of the project is to make a system that can track buses and help passengers in their day to day travelling.

Literature Survey

Similar Systems Available at Present:

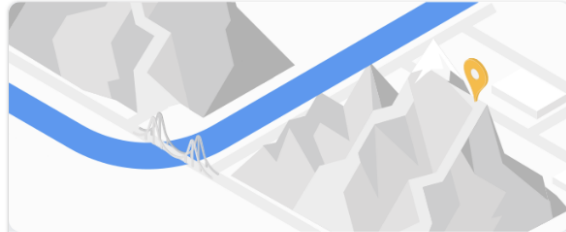
Some of well-developed countries have these systems already implemented on their transportation systems. Our goal is to present this system in a suitable manner for our country.



Proposed Methodology

Step 1: Researching on google maps API

Researching on google maps, google route, and learn coding in JavaScript and java.



Maps

Dynamic maps

Bring the real world to your users with interactive maps for the web and mobile.

HTML JS Android iOS

Static maps

Display a static map image on your website.

URL



Routes

Directions

Provide directions for multiple transportation modes, featuring real-time traffic information.

JS API

Distance Matrix

Calculate travel times and distances for multiple origins and destinations.

JS API

Step 2: Create the system for tracking the bus

Using Raspberry Pi board, GPS module for Raspberry Pi and other required components, create a system to get the exact GPS location of the bus and send it to the servers.

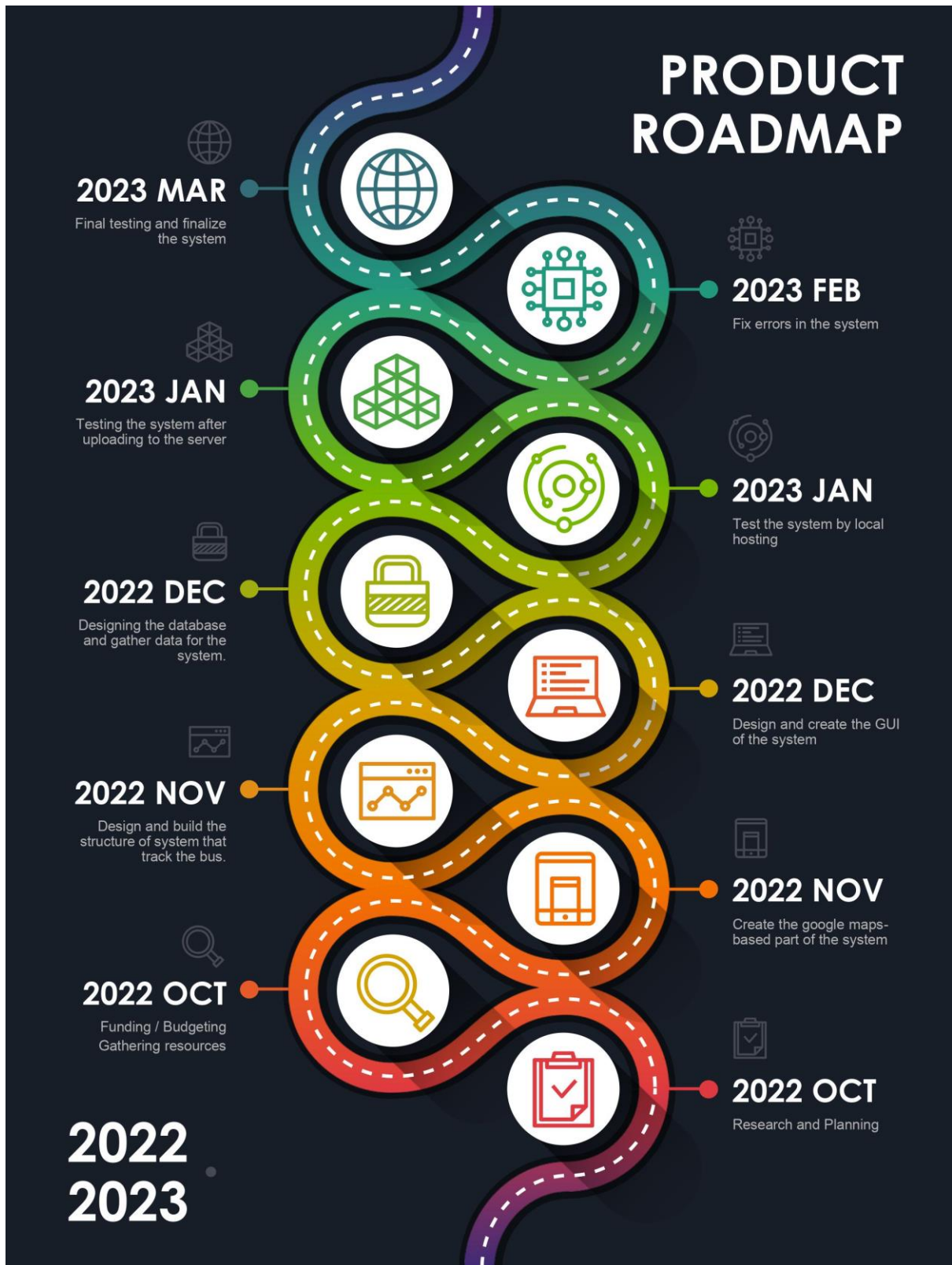
Step 3: Create the interface for the applications

Using JavaScript and java design and create the GUI which the user would interact with

Step 4: Create the database and finalize on the system

Using MySQL create a database to hold data of buses and their routes and finalize on the systems design.

TimeLine



Budget

Components and Services	Quantity	Cost
Raspberry Pi Zero WH	2	14,000
16GB SD-Card	2	5,000
SIM808 GSM/GPRS/GPS Module with Antennas	2	10,000
Redmi 20000mAh Power Bank	1	12,000
Prepaid Sim	2	0
Google maps API	1	0
Web Server	1	0
Total		41,000