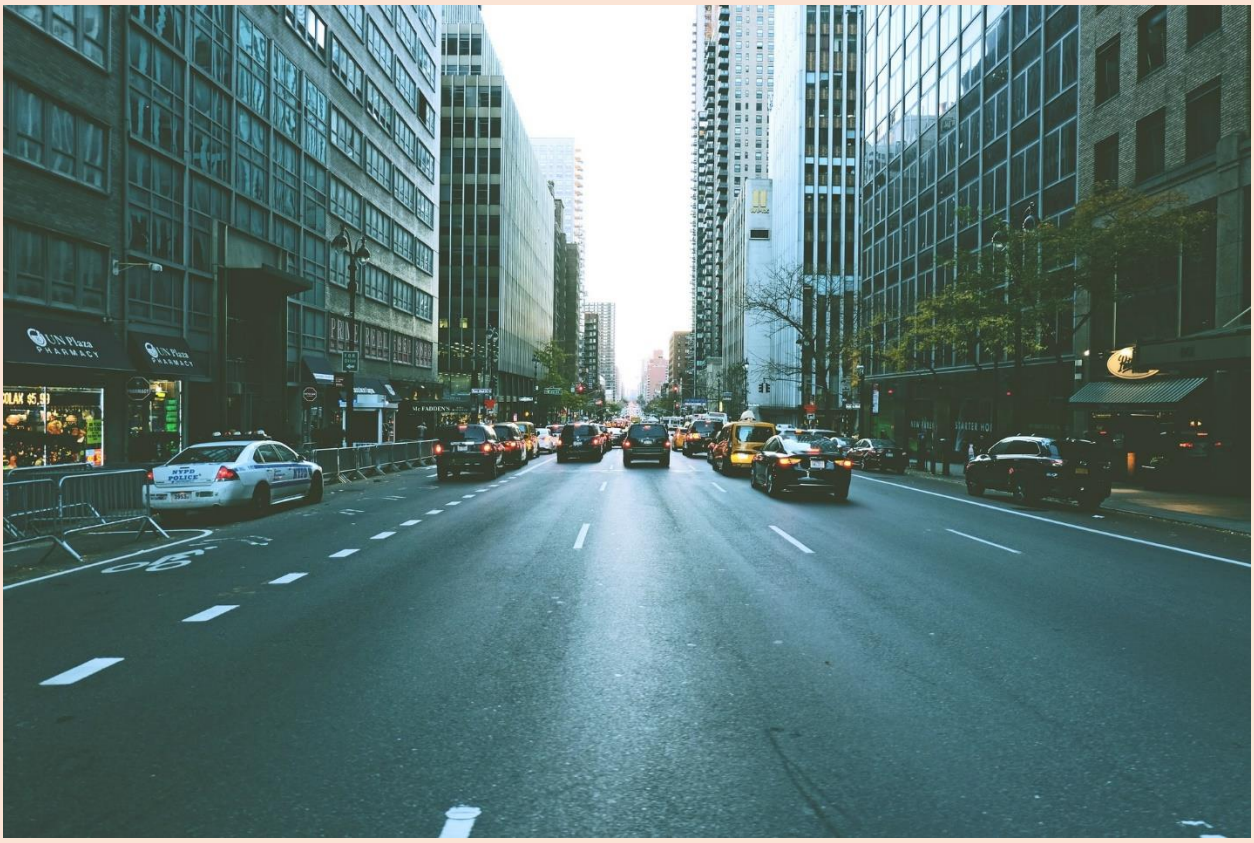
Aptech®
Unleash your potential



Software Requirements Specification
Version 1.0

Urban Traffic Portal (UTP)

Domain: Traffic Management

Category: Website Design and Development

Contents

1.0 Introduction

What is the Purpose of this Document?

The purpose of this document is to present a detailed description of UTP.

UTP is intended to be an informational portal/Website regarding traffic measures and updates.

Individuals as well as persons from traffic control department can use this Website.

This document explains the purpose and features of the portal, the interfaces of the portal, what the portal will do, and the constraints under which it must operate. This document is intended for both stakeholders and developers of the portal and will be proposed to the client for approval.

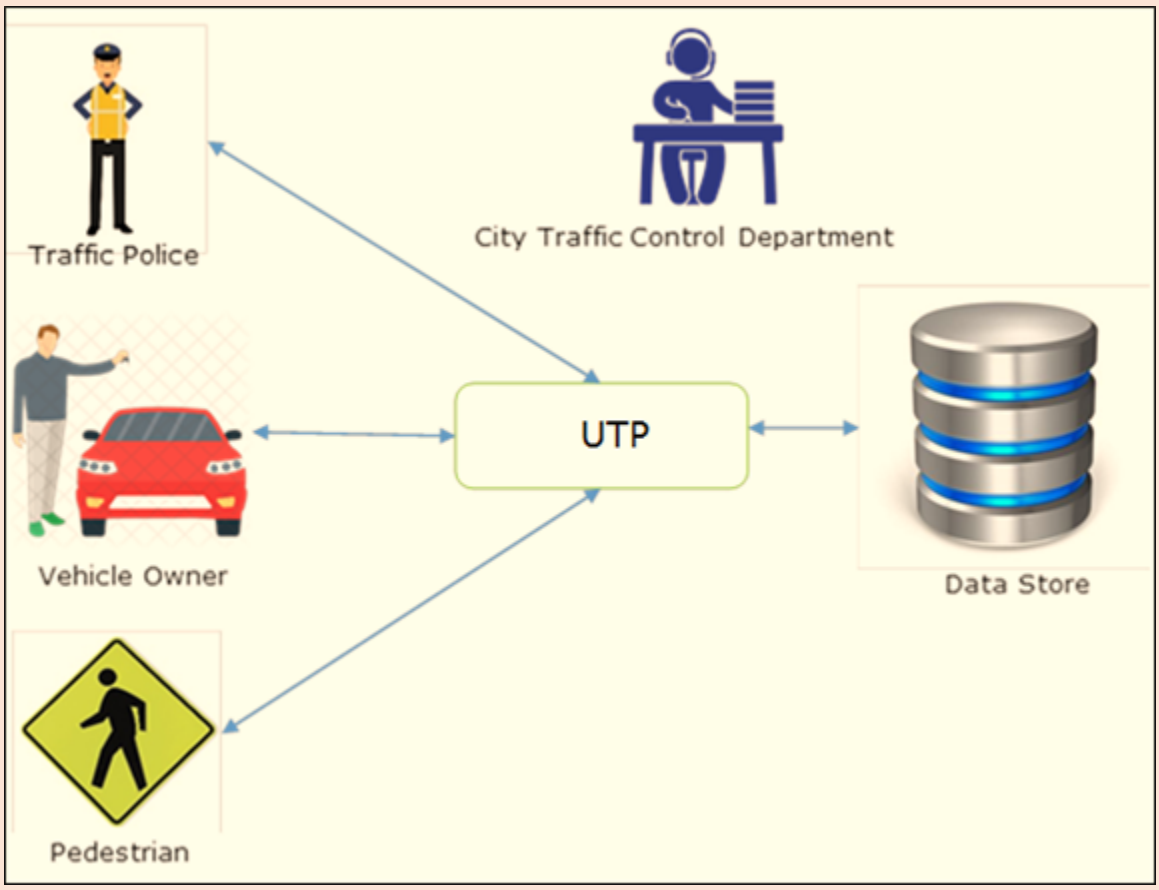
1.1 Need for the Portal

The amount of traffic is ever-increasing these days in urban cities across the world. Handy information regarding traffic rules, safety measures, and blockages in important areas of a city on any given day can help people. This can impact day-to-day lives of individuals as well as emergency facilities.

1.2 Proposed Solution

City traffic department has reached out to your organization to design and build this portal.

The proposed application will be titled 'Urban Traffic Portal' (UTP) and should be an informational guide to its users regarding traffic safety measures, rules, and daily blockages inside the city. This portal allows various types of users to view safety measures, traffic rules, and blockage information.



Broad View of the Portal

1.3 Scope of Project

This Web portal will be a responsive and visually appealing Website to be used by individuals as well as city traffic control department. This portal will be designed to provide various types of information such as traffic rules, safety measures, and so on.

1.4 Constraints

The Web portal will not have any facility to store information on the server. Information can be fetched from pre-populated JSON or TXT files and displayed, however, information cannot be written to the files from within the portal.

1.5 Functional Requirements

The portal will be designed as a Single-Page-Application and responsive Website with a set of pages and menus that represent choice of activities to be performed. The pages, menus, and other visual elements must be designed in a visually appealing manner with attractive fonts, colors, and animations.

All of these should also be laid out in a responsive manner.

Following are the functional requirements of the portal:

i. **Welcome Message:** The home page should accept first name from the user and display a personalized welcome message. At the top corner, the user's first name should be displayed for the entire duration that the portal is loaded.

ii. **Traffic Safety Measures**: Menu sub-options should include Audio Message and Video Message under Traffic Safety Measures main menu option. Based on the user's choice, traffic safety measures in the form of audio and video should be displayed to users in the center of the page. The audio and video files should be of appropriate browser-supported formats and should be short in duration.

iii. **Traffic Rules:** This menu option upon clicking should display traffic rules in the form of an image gallery, where each image will represent a rule.

iv. **View Traffic Blockage Information**: This menu option upon clicking should display traffic blockage information for the day provided by city traffic department. Traffic blockage text will include location, date, time, and description. Information will be retrieved from a pre-populated JSON file and displayed. (Hint: Use AngularJS directives, filters, services, controllers, and other features to implement this).

v. **Reports:** Upon clicking this menu option, users should be able to view reports of traffic blockages based on sorted order of date or location. (Hint: Retrieve the data from pre-populated JSON file using $http.get. Use AngularJS directives such as ng-repeat, filters such as OrderBy, services, controllers, and other features to implement this).

vi. **Buy Traffic Safety Merchandise:** Upon clicking this menu option, a variety of items such as caps, placards, banners, flags, and so on should be displayed in a tabular grid with respective image and price in currency such as dollars. (Hint: For displaying formatted currency, you can use the filters feature of AngularJS). The price details can be hard-coded in the form of text arrays. You need not implement the actual purchase functionality, as it will be beyond the scope of the site.

Over and above this, the portal should implement the following functionalities:

- Display a continuous scrolling ticker at the bottom of the page with current date, time, and location (hint: Use geolocation features of HTML5).
- Display a visitor count at the top right corner of the page beside a logo image.
- The menu options should change color on hover and also after clicking.
- Fade in and fade out options can be used for the menus.

1.6 Non-Functional Requirements

There are several non-functional requirements that should be fulfilled by the system.

The system should be:
Safe to use: The system should not result in any malicious downloads or unnecessary file downloads.

Accessible: The system should have clear and legible fonts, user-interface elements, and navigation elements.

User-friendly: The system should be easy to navigate with clear menus and other elements and easy to understand.

Operability: The system should operate in a reliably efficient manner.

Performance: The system should demonstrate high value of performance through speed and throughput. In simple terms, the system should be fast to load and page redirection should be smooth.

Capacity: The system should support large number of users.

Availability: The system should be available 24/7 with minimum down time.

Compatibility: The system should be compatible with latest browsers.

1.7 Interface Requirements

1.7.1. Hardware

Intel Core i3 Processor or higher
4 GB RAM or above
Color SVGA
120 GB Hard Disk space
Mouse
Keyboard

1.7.2. Software

Technologies to be used:

1. Frontend: HTML5, CSS, Bootstrap, JavaScript, jQuery, AngularJS, XML
2. Data Store: JSON files or TXT files

Other Requirements:

3. Operating Portal: Windows
4. Browsers: Edge, Chrome, Mozilla Firefox, Safari

1.8 Project Deliverables

You need to design and build the project and submit it along with a complete project report that includes:

- Problem Definition
- Design specifications
- Diagrams such as flowcharts for various activities, Data Flow Diagrams, and so on
- Source Code
- Test Data Used in the Project
- Project Installation Instructions (if any)

The consolidated project will be submitted as a zip file with a ReadMe.doc file listing assumptions (if any) made at your end and JSON/TXT files containing test data.

Over and above the given specifications, you can apply your creativity and logic to improve the portal.

~~~ End of Document ~~~