Muğla Sıtkı Koçman University

Department of Computer Engineering

Senior Design Project II

PATHFINDER

Analysis & Design Report

YASIN ORTA

Supervisor: ZEYNEP FILIZ EREN

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Pathfinder

# Introduction

The thriving circumstances of life offers us a lot options when it comes to finding a suitable vacation place. In the face of many options, sometimes we become confused to choose an option. Pathfinder will help us to reduce this confusion as well as provide a place which has every city in the country and detailed information for those cities so that people can access most of the details required for any city easily.

Be it for the summer season for motorbike riders who wish quick trips or for people who wish to get in their car and go to new places or people who just wish to learn the details of a city, pathfinder offers guidance to all. Pathfinder presents necessary information to all users for finding suitable places or for researching a city by offering them a detailed list that consists of descriptions, google map navigation links and up to date images of places.

# Motivation

The motivation for this project comes from the fact that in the face of great number of options, people get confused and have a hard time deciding, this project aims to provide some specific information on places that can be traveled, by doing this it aims to reduce excessive options.

The project also offers a single place where all the necessary information about cities is gathered. Instead of searching from places to place to learn about a city or find a vacation place or similar reasons, pathfinder will offer detailed information on cities on a single place.

# Similar Existing Applications

[enuygun.com](https://www.enuygun.com/)

[wouldbewanderer.com](https://wouldbewanderer.com/)

[turna.com](https://www.turna.com/)

The above websites focus on mostly travel methods and other services, while Pathfinder focuses solely on details of cities and places that can be traveled to in these cities.

# Proposed System

## Overview

LOGIN: The User needs to provide username and password to log in to the system and to get access to the data.

DATA: System loads information from database about cities, provinces, details, etc.

ADMIN: User with admin role, can add, update or delete information on the server.

API: Backend of the server, processes user inputs, returns data from database.

A diagram of a computer network

Description automatically generated with medium confidenceUSER: User of the system, unless has admin role, can only preview data. Needs to login to access the system.

## Functional Requirements

REGISTER: User fills in a form and frontend send it to API which in turn saves it to database.

RESPONSE: Processed user inputs from API, data from database, etc.A diagram of a system

Description automatically generated

A diagram of a diagram

Description automatically generated

ADD: Admin operation that can be used to add a city, province or detail, etc. by sending request to the API.

UPDATE: Admin operation that can be used to update current values in the database by sending request to the API.

DELETE: Admin operation that can be used to delete data from database such as user, city, wrong or outdated information by sending request to the API.

## User Interface Design

## Technologies and Tools

* Angular
* ASP.NET Core
* Visual Paradigm
* Angular libraries
* Swiperjs

# Future Work

* Artificial intelligence can be integrated to the system to offer cities that are close to the user’s location.
* Google map can be integrated to the system so that when user clicks google map link it also shows directions from the user’s location.
* Review system can be added to the city details as currently it does not grant users without admin privilege to do any operation aside from reading and finding locations.
* Server can be used on mobile as well as a web page, but to improve performance it needs to be ported for mobile.
* Currently I only planned it for the cities of Turkey, but it can be used for other countries as well.
* Unlike other similar websites, the main purpose of this website is to provide information and reduce search time but travel related services such as ticket buying etc. can be implemented.

# References

<https://online.visual-paradigm.com/app/diagrams/#diagram:proj=0&type=UseCaseDiagram&width=11&height=8.5&unit=inch>

<https://www.turna.com/>

<https://wouldbewanderer.com/>

<https://www.enuygun.com/>

<https://angular.dev/>