California University of Pennsylvania

CSC 490: Senior Project

# Travel Tool

Requirements Document

Rudolph Hanzes

Kaleb Piper

Gregory Bittinger

Robert Minerd

## Instructor Comment/Evaluation:

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# Abstract

The idea of the Travel Tool is that it will make everything much easier when deciding how someone wants to travel and also help them decide where they would like to stay, way of travel, and helping them budget the trip. Giving the current location of the user, destination of travel, and your budget, the Travel Tool will help by providing a range of options for the user. It can be overwhelming sometimes when deciding where to stay and how you want to travel but with Travel Tool, we set out to make that much easier for everyone. The Travel Tool will be available as a web application and also a mobile application so that you can have access anywhere you go. This document will help to outline the requirements needed to create the software that is being made. Every detail of the project will be explained in the document such as specifications, workflow, team details, and product background.

# Introduction

## Background/Overview

Many people travel to many different locations, whether it be a vacation, work related, or visiting a family member. Sometimes it can be stressful to find affordable travel options such as plane tickets and hotel rooms. People tend to just book something they see first because they do not want to struggle to find something they can afford. With the Travel Tool, it will make it much easier for people figure out all the details of their trip in one place with a budget they would like to spend. The idea of this was thought of because it will make everything much easier for the user to figure out everything in one place rather trying to use a different application to figure how they would like to travel and stay. Traveling is something everyone does whether it be close or far, Travel Tool can help to make it much easier. It will be available to use at home on a web application or on a mobile device as a mobile application for easy access for everyone. The idea of this is to assure that everyone can have easy access to the software and they can use it however and wherever they would like.

## Objective of Project

The main objective of our project is to create a tool that everyone can use to make their travel planning much easier. The idea is for the user to enter their current location, destination of travel and the budget of which they would like to spend on the entire trip. The tool would then give them a range of options to help them decide how they would like to travel or where they would like to stay. We will be designing a web application and mobile application for everyone to use. The application will grab information from other sources to give the user as many options as possible while planning their trip. The point of this is to make all the planning available in one

place for the user. Anyone who chooses to use our application will not only save money, but you will also save time. The Travel Tool will assure that planning a trip will be much easier for anyone who chooses to use our application.

**Team Details/Dynamics**

To assure that we are successful while creating this application, working as a team is very important. We have all worked together at least once over the past three years and we will all contribute to the success of our project. We will work efficiently together while trying to get everything done the way we want it. We will be communicating through out the semester using text messaging or Discord to exchange out work and progress.

The roles of our group members are shown below:

| **Team Member Name** | **Team Roles** |
|---|---|
| Rudolph Hanzes | Analysis and Design |
| Kaleb Piper | Presentation |
| Gregory Bittinger | Specs |
| Robert Minerd | Implementation |

# Application Domain

### Project Context

The main domain of this project is going to be personal use for people who travel a lot or any one who going to travel. Travel Tool can be very useful, especially for people who have to travel for work or just travel a lot in general. It can help them save time and money before going on their travels. It could even help for a vacation or trip that has many people going such as a school trip or a family vacation.

# Initial Business Model

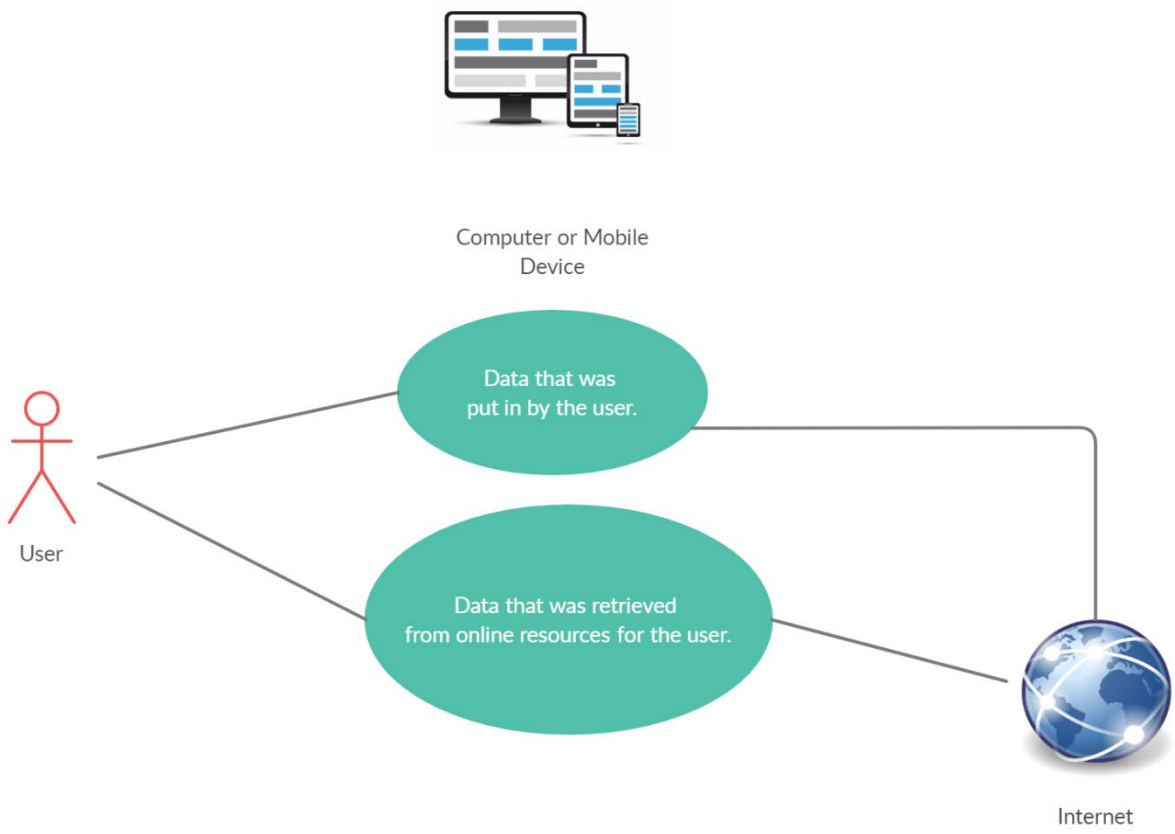
### Operating Environment

This project is specifically based on helping people save money and time before a trip or vacation. It is mostly for personal use for whoever needs to plan a trip for themselves or for a whole group of people. Users will have access to this application through a web application or a mobile application. There will be no requirements to use the application besides having access to a home computer or a mobile device. To format and create our web application, HTML will be used while much of it will be written in Java and JavaScript. To help develop the web application, Android studio will be used. Most code will be developed in visual studios also.

**Description of Data Source**

The main source of data that will be used by the application will be scraped from a number of traveling websites or hotel booking websites. Another source of data that will be used will simply be the data that the user inputs. The application depends on the user putting in data that will then be taken and it will find the best results possible for the data that was inputted.

**Use Case Diagram**




**Description:** The user will input the data that is requested for their trip, the data will then be scraped and used to find the data from multiple online resources. It will then send back the information that was retrieved to the user.

# Initial Requirements

**Functional**

Travel tool will require the user to input data into the application that the application will use to give them the data they want back. Everything will be clearly labeled as to where the user would need to be each section of information such as current location, destination, or specified budget. The application will then start a search using the data that was inputted by the user.

The results that will be displayed will have everything that was requested by the user neatly displayed on the screen. Users will then be able to choose which option they think fits their needs the best and they can then proceed to start planning their trip. Travel Tool will not be able to do the booking for the user but it will give them the best option possible to what they specified in the data given. After everything is complete and the user is done deciding they can leave feedback that will help to improve on the application and help us know what needs fixed or what works well for the user.

The application will be formatted similarly on both the web application and the mobile application so that everything transfers nicely if the user happens to use both. This is very important as it will ensure that people do not get frustrated with the application or that is does not seem too confusing to use. The format will be simple to look at and even easier to use.

**Nonfunctional**

The nonfunctional requirements will be that user will receive data from the application after the user inputs their data that the application will use to give the data that requested back. Our goal will be to give the information needed back as quick as possible to the user. Certain things are out of our control such as the user's connection to a slower or faster network speed, but we are going to do our best to retrieve the data as quick as possible for the user. Retrieving the data as quick as possible will be one of the many challenges we approach during our project.

**Documentation**

Documentation will be used throughout the process of working on our project to better explain our goals and specifics of the project. Documentation will also help the user to better understand how our project works and how to use it. Each document we work on this class will help to further our ideas and understandings of what we want to do with the project.

The chart below will display the documentation that will be made for our project:

| Document | Description |
|---|---|
| Proposal | Initial idea of the project |
| Requirements Document | This document will give what we want our project to achieve and do. |
| Specification Document | Gets more into the specifics of our project. |
| Design Document | Describes how the document will be made |
| Project Log | This will keep track of the contributions made by each team member and the progress we have made. |

# Testing / Revisions

This document was proofread by everyone in the group as we all worked on it together. Nearly every part was written by a different group as we wanted to ensure that every group member that no one had to do the work alone. Having every group member work on this as a team will help so that everyone will keep up to date on what is going on with the project. The paper was primarily worked on by sending the paper back and forth on a discord server where can exchange information for the project. There were no major revisions done to the document besides minor changes done by every group member throughout the development of it. Occasionally, the group would meet in a discord chat server to discuss ideas and changes to our project.

# Appendix A: Technical Glossary

**Web Application –** An application that exists on the World Wide Web and must be accessed through the internet by a user.

**Mobile Application -** An application that must be accessed on either an Android device or an iOS device.

**HTML –** Hypertext Markup Language, a standard markup language for creating web pages.

**Java –** An object-oriented, high level programming language.

**JavaScript –** An object-oriented commonly used to create interactive effects within web pages.

**Network Speed –** Network bandwidth is the amount of data that can be transferred per second, determines how fast someone can receive the information requested.

**Scraped –** Process in which data is extracted from a website that is requested.

**Android Studio -** the official integrated development environment for Google's Android operating system.

**Visual Studio -** used to develop computer programs, as well as websites, web apps, web services and mobile apps.

# Appendix B: Team Details

The requirements document was worked on by the following group member.

**Robert Minerd –** Robert Minerd was the leader for this section of the project as he helped to start the document and got everyone working on it together. He helped to write many sections of the document and revise much of it.

**Kaleb Piper –** Kaleb Piper was responsible for helping to write the sections and come up with more idea's specifics for the project. Kaleb also helped to revise much of the document throughout the development of the paper.

**Greg Bittinger –** Greg Bittinger was responsible for the basic outline of the document and helped to set up all the sections. Greg also helped with general revisions and editing.

**Rudolph Hanzes –** Rudolph Hanzes helped with much of the document such as writing parts of the sections and helped with general revising of the document.

# Appendix C: Workflow Authentication

I, Robert Minerd, can attest that I have performed the tasks that were documented in the Team Details Appendix.

Signature: _____Robert Minerd_____

Date: ____10/19/20_____

I, Kaleb Piper, can attest that I have performed the tasks that were documented in the Team Details Appendix.

Signature: _____Kaleb Piper_____

Date: _____10/19/20_____

I, Greg Bittinger, can attest that I have performed the tasks that were documented in the Team Details Appendix.

Signature: _____Greg Bittinger_____

Date: _____10/19/20_____

I, Rudolph Hanzes, can attest that I have performed the tasks that were documented in the Team Details Appendix.

Signature: _____Rudolph Hanzes_____

Date: ____10/19/20_____

*** Writing center was booked when the document was finished, so we were not able to have them check for errors. ***