# Background, Problem statement & Proposed Solution

Name of the System: Travelers Point *Getting you there*

## Introduction

A travelling itinerary helps travelers/tourists to plan their trip ahead of time. It helps them to manage their time and expenses that are involved with travelling. This is essential when making bookings for accommodation, helps them to confine their costs by knowing exactly how much they are going to spend on a journey. Also helps them keep a journal of their past experiences, gain knowledge from other people who may have visited the area, obtain suggestions from other people on the areas of interest in the location they are planning on visiting. See reviews of the level of satisfaction from past visitors. Must see attractions and places to avoid.

The social media aspect of the travelling itinerary allows travelers or visitors to connect to each other. The travelers can become traveler buddies and share the travelling costs in order to save costs. There a different kinds of travelers, group travelling allows for these travelers to make real life friends with their traveling buddies. Travelers can also gain different insights on travelling from each other.

Tour guides can get in touch with people planning a trip to their area, these tour guides can then offer their services to potential travelers in a form of a bid. The travelers can compare benefits and prices that suits their needs or demographic characteristics such as place of origin, social status, age, gender. The tour guides can use these features to tailor the service packages to the travelers.

The information that is obtained about the traveler’s planned trip can be used to make suggestions about the areas that the user might visit during the trip. The travelers may also get notifications/reminders on their planned trips ahead of time in case they might forget them. The places that travelers might want to visit can also be given a safety score in terms of the perceived amount of crime and the level of security offered to the residences of the neighborhood.

## Industry background

The tourism industry allows people to travel (usually for a short period of time) to other locations either casually, or for the purposes of seeing the areas of attractions, experiencing different cultures, environment or the delicacies. The tourism industry consists of a tourist/traveler, a travel agent, transportation, accommodation, food and cuisines.

A tourist/traveler is a person who visits an area or an environment that they don’t usually do not live in for a short period of time.

A travel agent is an individual or business who sells products that are involved in travelling to a tourist. The travel agent may also offer suggestions to a traveler about the activities that they can partake in.

Travelers use transportation to get from one location to another, moving from the area where they stay to the travel destination involves the use of transportation services. Movement between travel destination’s areas of attractions may also involve transportation services.

Food and cuisines involves the refreshments that are provided to travelers or tourists in the entire duration of their trip. These refreshments that are particular or unique to an area are referred as a cuisines, most travelers have an interest in trying out new things that they are not used to, and local cuisines may be one of them.

## Current Systems

travefy.com

## Problem Statement

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## Proposed Solution

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# Requirements Extraction

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## Functional Requirements

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## Non-functional Requirements

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# Identification and Prioritization of Use cases

# Feasibility and Risk Study

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## System Feasibility

System feasibility study is a process used to determine a system is worth implementing, it involves describing a system and stating how the system is intended to support the business objectives.

The users (travelers) require a system that allows them to plan their trip by obtaining an itinerary from a local guide based a list of chosen activities and their personal preferences. Activities include hiking, running, and scenic attractions. An itinerary will also consist of weather information, recommended routes, and estimated travel times. Based on the itinerary, travelers can choose from list of quotes of benefits and costs from travel agencies, the package that suites them. The ability to choose from a list of travel agents’ bids will enable the travelers to save costs. A traveler can use this information to budget for their trip and to have an estimate of how long their trip will take.

* 1. The objective of this project is to
* Allow travelers to plan their trips ahead of time.
* Allow travelers to create a list of activities to be performed during their travel.
* Allow travelers to create an itinerary from the list of their activities.
* Enable travelers to get recommendations of activities or an itinerary from a local guide based on their profile.
* Allow travel agents to view a list of itineraries posted by travelers.
* Enable travelers to choose from a bid of travel agents based on their itinerary.
* Connect travelers with each other for:
  + Group traveling to share costs and enhance their trip experiences.
  + Obtain reviews and ratings of places from each other.
  + Allow travelers to share their experiences with friends and families.
  1. Overview of current systems and technologies

Currently there are systems that have implemented an itinerary system for travelers to plan their trips. These current systems are not integrated with other systems that users to group travel, allow users to choose from the list of travel bids from travel agents. The main goal or objective of our system is to save travelers costs, connect travelers so that they can share their trip experiences, and obtain suggestions of activities and/or itinerary according to their profile and from friends and local tour guides. The core of the system combine all these features (or subsystems) into an integrated system.

Tourists will benefit because they have a single place where they can perform all these activities and benefits for local tour guides is that they will be able to see the posts by tourists and be able to negotiate prices with local tourism providers, and to make a competitive bid.

Technologies involved in the itinerary systems are:

* Front end web development technologies: HTML, CSS, JavaScript, PHP, ASP .NET
* Backend web development technologies: PHP, Java Server Pages, ASP .NET, MySql
* Mobile development technologies: Java, Swift, Kotlin
* Diagram Modeling tools: Visio, Lucid charts, UMLet
* Web development environments (IDE): Visual Studio Code, Visual Studio, PHP Storm, Eclipse
* Mobile development environments: Android studio
* Version control systems: Git, Github

Deliverables

* A database service that will be used to store and manipulate user data to meet the system’s goals.
* A website, a user friendly website that will be the main interface that the users will interact with.
* A mobile application, a convenient application for the users that takes advantages of features that are unique to mobile devices for its features. Mobile features such as location awareness using the device’s built in GPS.

## Technical Feasibility

Since our itinerary system is a web based application, our team is fairly familiar with web based technologies. We each have at least one year experience with working with a web based application. We should be able to handle the technical difficulties that we may face while working on our web based application. We will improve our knowledge of mobile application technology by attending mobile development workshops. The amount of code associated with building a web based system can be significant, the number of lines of code can be in the region of between 10 000 to 20 000 line of code. We will need to apply the database design principles such as the choice of tables, normalization, and optimization of queries when modeling our database. Good software engineering principles require that we follow a software engineering process (communication, planning, modeling, construction and deployment) for each of our deliverables. We will use an iterative and with the waterfall model approach towards building the alpha, beta and then the production system. A version control system will be used to track and manage changes we make to our system, our team members are comfortable with using Git and Github.

## Economic Feasibility

In terms of financial feasibilities, the costs involved include hosting the website and database service. The system needs to be maintained in the form of addition of new features, removal of features that no longer meet the objective of the system, and bug fixes. The revenue generation modes will be through commission from the profits travel agencies and advertisements. For programming a laptop or desktop PC is required, and we also need to purchase the license for the Visual Studio Development environment.

The costs associated with the development of the project can easily be met, we only need to cover costs for hosting the website and the database service. Costs associated with addition of new features and maintenance will be covered by our revenue generation sources.

## Operational Feasibility

Users, their scope and value added by the system to each user

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| --- | --- | --- |
| **User** | **Scope** | **Value added to user** |
| Tourist | * Sign up * Sign in * View Activities * View itinerary * Choose an itinerary * Select a local tour guide * Make and accept friend requests * Share an itinerary with local tour guides, friends and family * Create a travel group * Review and rate a place or activity | * Discover hard to find places. * Share travel costs with other tourists. * View neighborhood safety scores. * User friendly interface |
| Local Tour Guide | * Sign up * Sign in * Apply for being a tour guide * Suggest activities to tourists * Create an itinerary * View itinerary requests * Bid for an itinerary request * Add a neighborhood safety score | * Showcase their local area to international tourists * Financial incentives, get paid on an hourly rate for guiding tourists * The local tour guides are involved in adding itinerary and activities * User friendly interface |
| Validator/Administrator | * Sign up * Sign in * Accept or decline a local tour guide request * Accept or decline an itinerary request * Notify local tour guides about an itinerary request * Approve a neighborhood safety score | Adds value to the system by:   * Ensuring that the system is secure by verifying local tour guides applications. * Verifying itinerary requests from tourists. * Assigning tourists to tour guides * Resolving problems encounters by other users of the system. |

By analyzing the scope of the system, we determined it allows for the project to be completed in The scope of the current system allows for enough time for the project to be completed in 8 months (34 weeks). The first part of our system will consist of 4 deadlines, each deadline will be used as a milestone to keep track of the current progress of our system. Our project completion estimation takes into consideration a possibility that we miss our deadlines so that we can have enough time to recover.

Our system will require the users to adapt to a new system that integrates itinerary and travel cost sharing. The current systems are allows users to plan their trips, the problem is that there are still significant costs incurred, by travelers by allowing travelers to connect with each other and be able to form a travel group allows for them to share the costs, thus allowing for more cost savings. Users of the systems can also save costs when they choose from a list of bids from travel agents, current systems do not have this feature.

Since this will be a new system and that the existing systems have a large numbers of travelers and travel agents, there might be a resistance from the users of current systems to switch to our new system. We will spend a great amount of time in making our site more user friendly than the current systems. Search engine optimization strategy will be used so that our site appears near the top the search engine search results for an itinerary and group travel systems.

The system has measures in place to evaluate the applications of travel agents to ensure that it only accepts applications that meet our set standards. We will ensure that our customer help facilities are more accessible to our users.

References

Software Engineering, 10th edition, Supplementary material for my software engineering textbook

* Retrieved February 28, 2020, from <https://iansommerville.com/software-engineering-book/web/feasibility-study/>

Incentives

Value added to each of the user

Local guides and tourists

Discovering places you could not with google

Discovering new places