**Feasibility Study**

**TourMate**

**A Project to connect tourists with tour service providers**

**17-02-2017**

P.Y.M. Jayawardana

140265D

**Table of Contents**

1. Introduction

1 Overview of the Project

1.2 Objectives of the Project

1.3 The Need for the Project

1.4 Overview of Existing Systems and Technologies

1.5 Scope of the Project

1.6 Deliverables

2. Feasibility Study

2.1 Financial Feasibility

2.2 Technical Feasibility

2.3 Resource and Time Feasibility

2.4 Risk Feasibility

2.5 Social/Legal Feasibility

3. Considerations

4. References

1. Introduction
   1. Overview of the Project  
      **TourMate** is a project to create a unified platform for tour service providers (tour-providers and tour-guides) to publish their services, and for tourists to discover and request services from them. *TourMate* brings unprecedented convenience to tourists when planning family vacations, etc. They can search for tour service providers by ratings and relevance, read reviews by previous tourists, and make reservations online. Simultaneously, *TourMate* enables tour service providers to be discovered and reviewed by tourists, handle active reservations, and get in touch with more tourists than possible otherwise.
   2. Objectives of the Project

* Design and Implement a web-based application for TourMate, usable by both tour service providers and tourists.
* Provide an interface for tour service providers to register and publish services, and to receive bookings from tourists.
* Provide an interface for tourists to register, search for tour services, and book services via payment.
  1. The Need for the Project

At present, there are various booking sites like www.tripadvisor.com and www.booking.com that are widely used by tourists and locals alike, to reserve accommodation when travelling. However, there is no convenient system to discover nearby tour services and local guides, and to reserve transport services for their tours, and the existing services like toursbylocals.com are only focused on connecting tourists with guides.

Most providers even do not have their own website. Even if they have one, tourists should specifically get to know these providers by referrals or online searching.

* 1. Overview of Existing Systems and Technologies
* **Toursbylocals.com** [1]  
  Started in 2008, toursbylocals.com has served around 600,000 tour services worldwide. It allows local guides to make money by serving tours, and also for tourists to search for and request tours from them. It has around 2,000 guides serving in around 150 countries. Tourists can make payments to guides to reserve a tour with them.

The system will use the following techniques/tools/resources/approaches

* Meteor JS Framework v1.4.x [2]
* Node.js v7.5.x [3]
* MongoDB v3.2.x [4]
* MySQL v5.7.x
* Git 2.10.x
  1. Scope of the Project

**There are three main types of users of this system**

1. Tour Providers – companies providing vehicles for customers with or without drivers, for tours
2. Tour Guides - people who know certain areas of the country and assist tourists on their travel
3. Tourists - People who wish to obtain services from the above service providers

**Functionality of Tour Providers and Tour Guides**

* Register with TourMate and publish their offered services
* Get notified of service requests by customers via in-app notifications

**Functionality of Tourists**

* Register with TourMate and search for desired tour services
* Request services from tour providers and/or tour guides
* Pay an advance via online payment to confirm request of services
* Write reviews and rate the experience with tour providers / tour guides
* Cancel service request with the consent of both parties

1.6 Deliverables

* A web-based software system for tour service providers to publish their services, and for customers to register and discover services suited to their needs.
* Separate interfaces for tourists and tour service providers.

2. Feasibility Study

* 1. Financial Feasibility

Tourism is a very mature industry with tourists and tour service providers located worldwide. Hence there are many potential customers for the proposed project.

All libraries and tools used for application development are free, hence no expenses are expected during development stage. Only development effort is accounted, hence the software is affordable to implement.

**Economic Feasibility**

Tour service providers can expect more potential customers through TourMate, and also gain an opportunity to promote their business. This benefit outweighs any handling fees and subscription fees charged from them.

Developers can gain revenue by charging a handling fee for the transactions made by tourists via TourMate, and through subscription fees for tour service providers. Hence a steady ROI can be expected from TourMate once deployed.

* 1. Technical Feasibility

The platforms and frameworks used for this project are new, hence extra time is needed to accommodate the learning curve. However, many tutorials and documentations were found that would simplify the learning process.

Meteor framework [2], while relatively new, is a full-stack framework for web application development. It has many discussions in stackoverflow.com which can help in most problems faced during development. Additional time could be allocated to familiarize with these technologies.

* 1. Resource and Time Feasibility

A webserver supporting Meteor is required to host TourMate at the end of system development. Currently identified options are Meteor’s own webservers [5], and Heroku [6]. Both provide free and commercial web hosting; hence resource requirements are feasible. Development can be done on localhost and on free hosting services.

Meteor Framework eases the process of development considerably, hence reducing the time needed for implementation of TourMate. Therefore, the project can be incorporated within the time constraints.

* 1. Risk Feasibility

Risk of exceeding the time constraints - Managing time among each work, and following a project schedule can help to achieve the target deadline. Allocating time initially for researching reusable components for the project can help mitigate this risk further, by reducing required development time.

Risk of losing / corrupting project data - Maintaining regular backups (preferably cloud), and using Git as a version control system helps to mitigate the risk.

Risk of unanticipated situations – Upon unavoidable occurrences such as falling ill, the deadlines for tasks can be altered and extra work need to be done to compensate for lost time. A schedule with extra time allocated for each task would be feasible.

* 1. Social/Legal Feasibility

At present, the society trends towards searching and using online services instead of traditional means. Hence there is a vast market for TourMate.

TourMate does not cross any Social or Legal barrier in terms of its core functionality. The only information shown about Tour Service Providers are the public information entered by themselves. Personal data of tourists and tour service providers will not be disclosed to public without consent.

The system shall not violate ethics under any circumstances, to avoid legal disputes. Processes such as cancelling reservations is hence decided to only be allowed with the consent of both parties. Given the above conditions, TourMate is socially and legally feasible.

3. Considerations

**Performance**

Reservations made should be atomic, and take not more than 1s for processing (Excluding network overhead). Updates to reservations should be synchronized across all users viewing the same content in real-time to avoid confusions

**Security**

Users should be able to register with an email and password, or directly sign in via Facebook or Google. Passwords should be stored securely using encryption.

**Ease of use**

A Help Section should be made available within the application for users to query their problems while using the application. UI should be made minimalistic with related activities grouped together.

4. References

|  |  |
| --- | --- |
| [1] | ToursByLocals, “ToursByLocals - Private Tours By Local Guides,” [Online]. Available: https://www.toursbylocals.com. [Accessed 07 02 2017]. |
| [2] | Meteor Development Group Inc., “Build Apps with JavaScript | Meteor,” [Online]. Available: https://www.meteor.com. [Accessed 16 02 2017]. |
| [3] | Node.js Foundation, “Node.js,” [Online]. Available: https://nodejs.org/en/. [Accessed 17 02 2017]. |
| [4] | MongoDB, Inc., “MongoDB for GIANT Ideas | MongoDB,” [Online]. Available: https://www.mongodb.com. [Accessed 17 02 2017]. |
| [5] | Meteor Development Group Inc., “Deployment and Monitoring | Meteor Guide,” [Online]. Available: https://guide.meteor.com/deployment.html. [Accessed 16 02 2017]. |
| [6] | Salesforce.com, “Cloud Application Platform | Heroku,” [Online]. Available: https://www.heroku.com/home. [Accessed 16 02 2017]. |