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**COMP744 – Feasibility Report**

**Travelwap**

**Diploma in Software Development Level 7**

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# Version Control

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# Feasibility Study

## Introduction

The business(Travelwap) which recently opened just in their house in Albany is managing by three people (JC Carreon, Jennifer Urtula and Herson Magpantay) that serves as our client. They have different educational background and have no IT experience.

To keep pace from other existing businesses which adapted the IT solutions, the client wants to have a web booking engine to support their business. A website that will offer travel promos and booking over the internet.

Travelwap website is able to provide world-class travel packages to tourists. The business believes that by providing a platform for their clients to book their travel options, it will save the company time, cost and resources. It will also improve the management of their clients.

With this, the team proposed a travel agency website to cope with the client needs. Travelwap will be developed to cover the client’s business needs associated with the cost estimation, duration and resources.

## Business Objective

To comply with the client’s perspective, the objective of Travelwap project is to provide what the business needs and how it works for the admin and user. The business aims to launch this project which the convenience and ease of travelers will be taken into account in terms of searching and checking travel options that they are interested in purchasing. Consequential cost for the project development will need to be informed with the client beforehand.

The team’s goal is to release the Travelwap as high-quality web booking engine that complied with the business needs and satisfied the client expectations, also the strategic goal includes continuing growth and profitability. For this goal, the team will be likely to recognize as a project owner that can be trusted and developed a website that can be used by a certain business for a long term. Marketing will be taking into extent to friends, colleagues and most likely to social network.

## Problem/Opportunity Statement

With the client’s business perspective, it will not be easy to them to find the right people and don’t have broad ideas for the website to support their business as they are not well acquainted with IT solutions associated with the project cost estimation.

As taking the opportunity by the team for Travelwap, the client will be informed beforehand regarding the project cost estimation and features that they want to apply for their website. They will have the demonstration by the team how their website works for admin and user once the project has been completed.

The proposed project will make booking easily accessible to the clients without the need to go out to a travel agency outlet. This will act as a platform for travellers to search and check travel options that they are interested in purchasing. Travelwap website will support the business as dominant online presence for customer convenience on booking and business growth.

## Project Deliverables

### Project Plan

The team will develop a travel agency website based on client’s business perspective. The features of the project(Travelwap) that will be applied in the project are proposed by the team to the client. Both parties will agree before the project proposal approval associated with the project cost estimation.

Changes provided by the client in the scope should not be allowed after the start of the project.

### Team Meeting

The team will conduct a meeting two times a week to tackle the progress of the project and issues.

### Project Cost

Project cost will cover the technology, resources and time. Client will be informed beforehand regarding the project cost estimation. However, the cost will vary greatly as the level of design and functionality increases that will extend the time for development.

Any extra cost related to the project after the approval will not be responsibility of the team.

### Project Design

The travel agency website is divided into two applications, one is the website and the other one is the web API. Travelwap has two account types, the user and the administrator. Both have different roles and access for the website as required.

The website has functional and non-functional features:

**Functional:**

User Registration

The user should be able to register through the website before purchasing items. The user should provide a username, password, email address and other information details as required by the business.

User Authentication

The user should be able to login through the website. The login credentials are stored in the system's database and would be validated.

Browse Travel Option

The user should be able to browse the website by flights, by cruise, by hotels and by countries.

Maintain travel option Type

The admin should be able to maintain the travel options.

Book Travel Option

The user should be able to book a travel option.

**Non-Functional:**

User Authentication Security

The user will be authenticated and divided by the following roles: admin, user and operator.

Responsive web design

The application should be responsive and adapt to different screen sizes.

Extensibility of source code

The application should be well designed to allow new features, and be able to carry forward major customizations on further versions updates.

Readability of source code

The application should be designed to allow the understanding of the purpose, control flow and operation of the source code.

Backup of source code(Availability)

### Progress Report

The team will need to report the project status weekly to ensure the achievement of project objectives. This will serve to inform the progress of the project to the client, stakeholder, project manager and team members.

### Manual and Automation Test

Manual and automated testing will be conducted after the project development to verify that the website works in accordance with its specification.

### Contract

A letter of agreement between the team and client will be implemented to outline what to expect of one another for this project.

After the contract, no maintenance will be provided.

## Technologies Used

### Javascript

Javascript is a script based programming language, it’s lightweight and commonly used as part of webpages, it allows the development of dynamic webpages and the development of client-side scripts that interacts with the user. For this project javascript was chosen due to its lightweight based programming language as well as being the base technology used in client-side API’s.

### React Js

React is a declarative, efficient, and flexible Javascript library used to build user interface. React js is designed to make simple and intuitive components through the process of building modular, reusable user interface components. React is extremely efficient, it allows more flexibility and improves the performance of the application by preventing expensive operations needed to render the webpage.

### Node Js

Node is an open source, cross platform technology for developing server-side applications. Node uses javascript as its programming language, it also provides a vast amount of javascript modules that simplifies the development of application. Node is fast compared to other programming languages by compiling the javascript files directly into machine code, also the synchronization process from both client-side and server-side is better and quicker, improving the performance of the application.

### MongoDb

Mongdb is a NoSQL database, built on an architecture of collections and documents. It supports dynamic schema design, to allow different fields and structures from documents in a collection. Mongodb offers high scalability of the data, faster access to data, reduces complexity of joins and allows dynamic queries.

### Visual Paradigm

Visual Paradigm is a design and modeling tool which provides a completed set of UML Diagrams. Visual Paradigm is a well-known tool which provides easy access to modules, formats and different types of extensions. This tool was chosen due to the easy process of the management of all diagrams, if also provides support to different types of programming languages.

### Project Constraints

Project constraints are critical to project success, so the team keep an eye out present on their project. Constraints that are identified for this project are time, resources, availability and liability.

### Time

The team has nine weeks for the development of this project that will give a limited time for them to work for a real industry project that has a broader scope compared to previous projects that have been done which have the same duration. Team will avoid any impediments in the project development progress in order to complete on time.

The development language(JavaScript) to be used by the team for the project will also impart their time to learn because this is what most of the industries are using.

### Resources

Since, the website and the web API reside exclusively on the World Wide Web, internet connection is a crucial need for the system to function properly.

The liability of the host, it needs to be available 24/7. Also, the hosting should be able to support a large number of access since the application will be available worldwide.

The database scalability, it needs to support more data in the future as the volume of business and customer counts grow.

### Availability

The project is limited only on web. Native app for this project is not yet available.

The travel agency website is constrained by the web browser being used to view the site. Different web browsers and its versions may affect how the website will run.

### Liability

The travel agency website is only responsible for booking travel accommodations for the users. Any inaccurate information about a travel option is the responsibility of the administrator and travel agents managing the website.

### Feasibility Analysis

### Economic

Project scope and platform to be used have been agreed by the team and the client to identify the project cost. It’s economically justifiable by profit against investment identified for this project.

The development cost of the project will include the salary and wage expenses for Project Manager, Software developer and Software tester, devices(laptop), utilities (electricity and internet) and a hosting service.

This is reasonable enough to carry out this project with competent system functionalities that is user-friendly for both the admin and the users.

The operating cost of this project will not cost much on the part of our client.

This cost will run for the utility expenses (electricity and internet) and their devices. Maintenance of the system is not covered between the team and client agreement.

Cost for their marketing strategy will not be applied for they will be taking into extent to friends, colleagues and most likely to social network.

Business profits will likely be achievable in short time as it is spending not a large value of money on operating costs.

### Technical

A practical approach possessed by this project as this will be adaptable for use with the client and users. The team will develop a user-friendly interface to easily navigate the website on how it works for admin and user. We are a team of experts which is efficient enough to develop the project using the programming language(JavaScript) that is currently in the highest demand.

Our client doesn't possess a current technology to act as a platform for travelers to search and check travel options that they are interested in purchasing.

They recently opened their business by just doing it manually and personally interact with their customers. They have no IT background that will apply their expertise for the proposed system, that's why they find someone who could plan and develop their system and

demonstrate for them how the system works.

### Operational

This project is totally designed for the travelers. Travelwap serves as an online booking engine that will be available to everyone. The new system that will be developed make the end users feel the convenience for booking as this will be user-friendly and the functionalities will be working accurately. The system has no required number of users to book for the available travel packages.

The management will support the system for this will be their engine to promote and add their travel packages and promos by just having access on the system.

The problem doesn't exist for resistance to change among the people and tasks involved on this project. Agreement to the client was clearly set out. Well-defined tasks assigned to the team members that are easier to estimate and manage. The proposed system will not be encountering any changes until this will be operationally completed.

### Schedule/Time

The Travelwap website will deliver into completion within 9 weeks by 2 Developers and 1 Test Analyst which the client and the team agreed upon.