## SMARTER TRAVEL: WEB BASED APPLICATION

By

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This Report Presented in Partial Fulfillment of the Requirement of the Degree of Bachelor of Science in Computer Science and Engineering

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# DAFFODIL INTERNATIONAL UNIVERSITY DHAKA, BANGLADESH DECE

# APPROVAL

This Project/internship titled "Smarter Travel", submitted by Name: Md Kiron Yamin ID No: 143-15-4251, Name: Fazle Rabbi ID No: 152-15-5945 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06/12/2019.



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We hereby declare that, this project has been done by us under the supervision of Mr. Abdus Sattar, Assistant Professor of CSE Department, Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## **ABSTRACT**

With the progress of time and information technology, it has become more experienced to use web apps for discovering things. This project "Smarter Travel "is a web apps developed for the better maintain of the person those who are like to travel. There are lots of tourist come to visit the darling child of nature, Bangladesh. By the help of this web app tourist and those who are like to travel can easily informed by register an account completely free for this web apps. This web app have to give there details information about most beautiful location of the area where they want to travels. This app also inform the tourist about the distance from the capital Dhaka, also inform about vehicles list, approximate cost of vehicles, and the weather condition for next five days. Tourist and travelers will be easily get the precise information they need. This project is developed by recent giant technology like Python, jQuery, and as we work on python so we use some library function to do our work more dynamic Matlab, MongoDb, Pandas, Numpy are using function. Beautiful soup helps to include data from cloud, pandas and numpy use to data processing Matlab use further filtering Ajax, use to process html in this project. With this apps, we hope the tourist and travelers will be much benefitted and find what they want very easily. Our website also provide a short note writing option which known by To Do List.. As our web site is public so we use few database which is work on SQLite for the login and to do list option. Here we try to remove the finding the bus list from Dhaka to any other location by the web scraping technology and we hope this web site will helpful for general people for there traveling purpose.

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#### INTRODUCTION

#### 1.1 Introduction

Language fails to describe the beauty of Bangladesh. Its gose on that the darling child of nature. Every year tourist want to visit our country even though many of foreign tourist choose there fast option to visit Bangladesh but there is a lack of information about where they should go, how they reached there, where they find there vehicles, what the distance from Dhaka what the cost of the travels, and what the weather condition. We want to give them an online solution. By using our web apps a tourist find all those information are available in hear

#### 1.2 Motivation

Now a days we lead our life with various dynamic work. Only travels can refresh our mind and also recharge for achieve the next challenges. There are lots of travelers and foreign travels in our country. But they can not choose there suitable location. That's why we design such a web apps that they can easily find the suitable tourist spot and also achieve about details information by this web apps. By this web apps thy can also compare the location distance weather and cost. They can find there necessary information what they want in one platform.

#### 1.3 Objectives

- Find the tourist spot information.
- General compare among the suitable spot.
- No need to search for information
- User can save there valuable time.
- Users can note there important information.
- Also inform the user latest weather forecast.

#### 1.4 Expected outcome

This web site is design for the tourist and travelers. So its contain a lots of features for a tourist. Generally a tourist can find the bus list where he or she would travels. And also he compare with two location with its bus list distance approximate time to arrival

and approximate cost of travels. A travelers notes his important speech on our website. And also inform the weather forecast next five days. We try to make our web site more user friendly and dynamic.

Here we discuss about all the design of our project like front-end design, back-end **1.5 Report Layout** 

#### **Chapter 1: Introduction**

In this section we have discuss about the objective, motivation and expected outcome of our project. Next follows the report layout.

## **Chapter 2: Background**

Here we also discuss about the state of our project, related work, similarity the other candidate system and the challenges of the project.

#### **Chapter 3: Requirement specification**

Here we discuss about the functional requirement and non-functional requirement which was used in our project.

#### **Chapter 4: Design Specification**

design, Interaction design, UX and the implementation of our requirement

#### **Chapter 5: Implementation and Testing**

Here we discuss about the database and its implementation, front-end design and interactions, test result of that project.

#### **Chapter 6: Conclusion and Future Scope**

Future development is discussed in this section which is more important to make government commitment to the vision "DIGITAL BANGLADESH"

#### BACKGROUND

#### 2.1 Introduction

Background is the word that contains a lots of meaning but in hare it how much it user friendly. So we have to concentration about background to finish this project properly. Its need to analysis the articles, and learn progressively for interrelated work and investigate and research. Its also an important applicable and connected part of our work. Definitely it should have user friendly and we try to do it our level best.

#### 2.2 Related Work

Compare and related work are important part for every dynamic work. Its introduce problem new ideas user needs. Unfortunately we can not find our related work there some travels agency through there web apps some thing like ours. Some examples are, Dublin tours [1], silver eagle charters.com [2].



Figure 2.2.1: Toursdublin.com



Figure 2.2.2: silvereagle.com

## 2.3 Comparative Studies

Some website provide information about most visited palace in Bangladesh, basically the web site focus on the travels agency so there is a commercial issue in those website. But this is a web site that we design is totally tourist helpful sight. By this web site tourist can find exact information about there travels location, there vehicles list and cost also informed about the weather of the location where they want to visit. Generally tourist web site provide a few information perspective there company profit so there is a lots of add agency in those web site but our web site is totally add free. It's a matter of sorrow that we don't have any security and safe platform in this project. Admin can

controlled and add feature by its own process. But our future plan to develop our project more secure and more dynamic, and we should include the necessary privacy in our project.

#### 2.4 Scope of problem

Nothing can achieve without facing problems. Problems is part and parcel in every creative work. So definitely we face lots of problems. In this project we face some major and some minor problem. By working hard and find the solution we can achieve proper system that we want. In here we show few problems that we face to ready our project:

- Basic needs of tourist search in web site.
- To collect different types of database.
- Added different types of categories.
- New technology web scraping.
- GUI and user friendly adjustment.

#### 2.5 Challenges

To providing our service for foreign and natives travelers we accept some challenges. Our challenges are:

- UI design and feature.
- User friendly interface.
- Try to make sure proper security.
- Enrich related data information and update information about weather.

## REQUIREMENT SPECIFICATION

#### 3.1 Business Process Modeling

Making a streaming structure outline is called the Business process modeling (BMP). Bmp create a form of models that show the information with appropriate stream with top to bottom. BPM plays an important role for every project. Basically the Fundamental building ventures have a business formula show. Definitely the business procedure introduce adaptability current and interconnection between client and engineer.

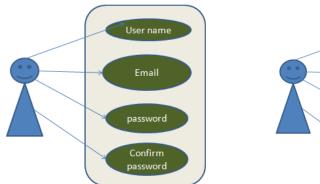
There are lots of spot element in our journey. All the tourist information data set and also vehicle list are include in this project. Suppose, client wants to explore different steps and area and achieve for this reason the including data for every one.

#### 3.2 Requirement Collection and Analysis

Obviously a good instruction and direction are important to make a project smooth. So clear direction is prerequisites. That's why its important to construct a friendly cooperation with requirement clients. We declaration that we made such type of project that we had done. We try to divide our project work with different task and categories. And we talk some travelers to make our project more realistic. We try to make our project that we had declared in our title defence.

#### 3.3 Use Case Modeling and Description

Simple representation process user to use the process and interaction with the system that shoes relationship between user and different use case. In our project we need to show the use case diagram section. In our web site, users (tourist, foreigner) and the admin would like to actress to the platform will give all the basic information which is process data for special to get them.



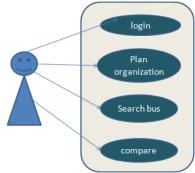


Figure 3.3.1: Use case diagram-login

Figure 3.3.2: Use case diagram- register

## **Use Case Description:**

Use case 01:Visit our web application traffic tour.

Primary Actor: Clients.

**Precondition:** Net connection

**Entry Condition:** Enter the web site link

Event Flow: get on an assortment of the site

**Exit Condition:** To press the back arrow to go back.

Use case 02: For find the location of Bangladesh about bus list

**Primary Actor:** Clients

**Precondition:** Net connection, to search bus details

**Entry Condition:** Press the search option.

**Event Flow:** 

Use case 03: The weather forecast.

**Precondition:** press on the search button to see the weather.

Exit Condition: To press the back arrow to go back

Use Case 04: Plan organizer

**Primary Actor:** Clients

Precondition: Net connection

Entry Condition: write your plan to the organizer and click the plus (+) button

**Event Flow:** To post your data plan

Exit Condition: Click cross button to remove

Use Case 05: Compare trip

**Primary Actor:** Clients

Precondition: Net connection

Entry Condition: write the two places that you want to compare. Then click the

compare.

Event Flow: user see the list of bus between to place also cost, time, distance

**Exit Condition:** To press the back arrow to go back.

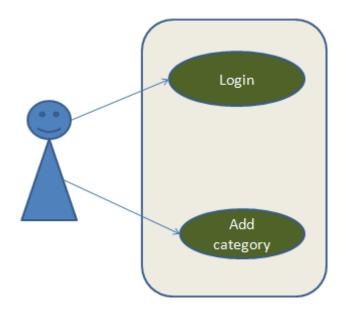


Figure 3.3.3: Use case diagram – Admin

Use case 01: Sign In

**Primary Actor:** Administrator

**Precondition:** Net connection, for implement the users name and password.

**Entry Condition:** Press the log in button.

**Event Flow:** Administrator should input the user name email and password properly to enter the site.

Exit Condition: Press log out option.

#### 3.4 Logical Data Model

Entity relationship diagram (ERD) represent an affairs of the body sets stored in the database. Entity denotes the element of the data. Generally, ER diagrams show the logical part of the database. A person can understood by the EDR what is the procedure and what kind of work we want to do in our project. And how it would be connect with database by which relationship it offers. Its an over view of a project with entity relationship diagram. Its try to show the deep working principal of the database as much as possible. Here we show our ERD diagram which shows by different color to understood easily.

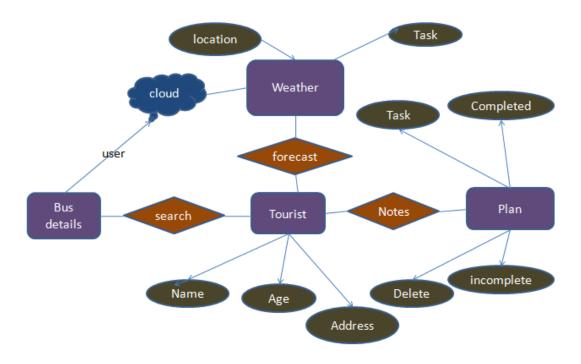


Figure 3.3.4: ER diagram

#### 3.5 Design Requirements

For every project front end and back end plays an important role. The combination of frontend and backend design ran the project perfectly. In this project we try to represent our project user friendly and authentic so here some notes and screen short of our project.

**User Friendly:** In this project we try to explain our project function and feature are easy to use for all types of user. Clients and travelers can easily operate of our web site no need to help some other people if he or she can read English. Generally a user can access at any device.

- A user can find the bus list where he or she want to travels.
- Users can find the distance and approximate travel cost from Dhaka to anywhere in Bangladesh.
- A travellers can find the weather of that location where he want to visit.
- Our weather forecast option show the next 5 day weather of that location.
- We add an interesting single page apps and its so easy that all user can use.
- My To do option helps the user to add notes and important topic.
- A user can add and also remove his notes in single page but database will save for different data for different users.
- For admin panel all of the data are stored.
- Admin only comprise new places from the front end of the website.
- Admin only erase add content maintains database and manage all the site what ever he want if its ethical so no complain of the user.

## **DESIGN SPECIFICATION**

Plan fortitude of a outline indicates how much precision method will go for a particular outline and how the advancements are being over and done with. A arrangement strength of mind is step by step statement give a records and information about the conceived of a project to set criteria the designers should meet. An exploitation is express for the configuration or article must be exclusively prepare to deal with an issue. The supplementary zone I will give the front end and back end arrangement for our site along with the instruments.

## 4.1 Front-end Design

Front-end of our website Smarter Travel is design by the HTML. We focus and target to make our project client friendly and we try to add most common feature in our web site. The clients want a dynamic website to do there activities and we also focus for that and we create an one page application for the client, by this things we can easily add the to do activities.



Figure 4.1.1: Home page



Bangladesh, a nation in the Indian sub-continent, with a population of 166 million people, has two significant religious sites World Heritage Sites. Two tourist destinations, the Ruins of the Buddhist Vihara at Paharpur and the Historic Mosque City o Bangladesh. The Sundarbans is designated as a natural World Heritage Site in the country.

## **Historic Mosque City Of Bagerhat**

The Mosque City in Bargehat is located where the River Brahmaputra and Gangel meet. It was inscribed as a World Heritage Khan Jahan in the 15th century and was built using bricks. Forbes categorizes the city as one out of the fifteen lost cities of structures include 360 mosques, mausoleums, roads, bridges and other public buildings constructed from baked bricks. Ho Khan. Bagerhat Museum located next to sixty pillar mosque contains pottery and ornamental bricks. The wall in the westerr at the center of religion for Muslims.

## Ruins Of The Buddhist Vihara At Paharpur

This World Heritage Sites, inscribed in 1985 by UNESCO, is located in the southwest of the country and was built by Dharm base, are sixty stone sculptures that testify to the belief system of Hinduism and it is the largest Buddhist monastery constructed with ornamental terracotta, influenced by Hinduism, Jainism, and Buddhism art. The area is under the governme archaeology deals with the management and conservation aspects. The ruins play a significant cultural role since the statue of the local people. The design was influenced by cultures as far as Indonesia.

## Sundarbans: The Abode Of The Royal Bengal Tigers

The Sundarbans is a mangrove forest, which is approximately 140,000 hectares on the delta of Ganges and Meghna rivers i site by UNESCO. It has unique features such as mudflats and tidal waterways. The Sundarban is located to the southwest of mangrove flora and fauna on both land and water. It has around 260 different species of birds. Bengal Tiger: the only family

Figure 4.1.2: Home page

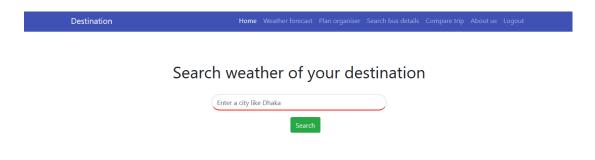


Figure 4.1.3: weather forecast

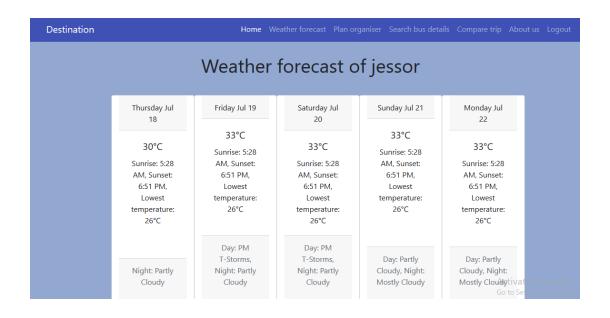


Figure 4.1.4: weather forecast

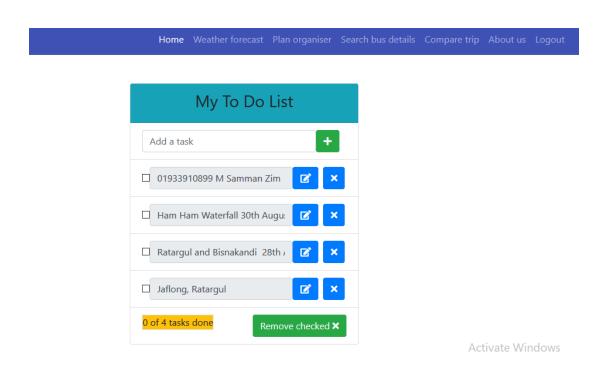


Figure 4.1.5: Plan Organizer "A" user.

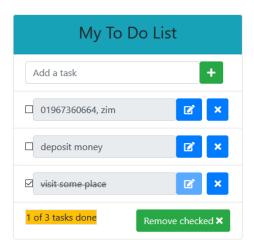


Figure 4.1.6: Plan Organizer "B" user.



# Search wherever you wanna go

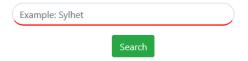


Figure 4.1.7: Search Bus.

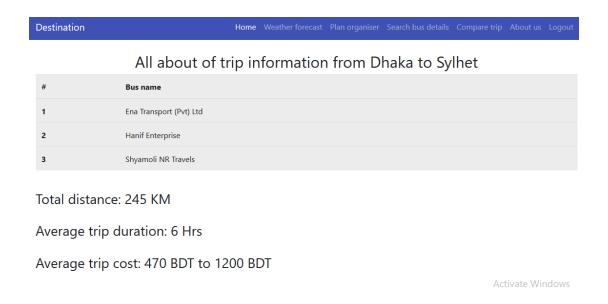


Figure 4.1.8: Search Bus details

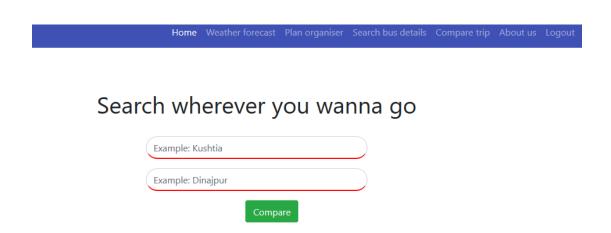


Figure 4.1.9: Compare Trip.

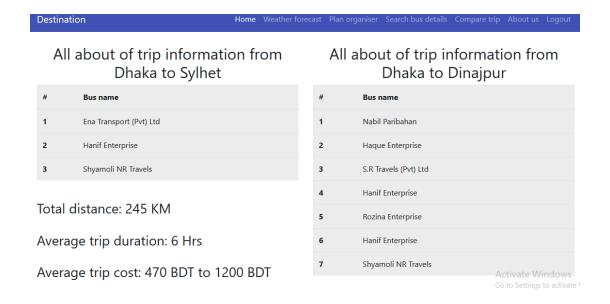


Figure 4.1.10: Compare Trip

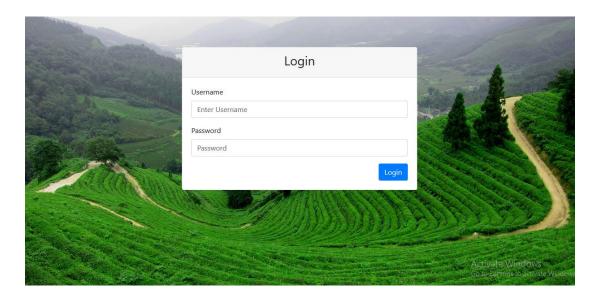


Figure 4.1.11: Login



Figure 4.1.12: Admin page

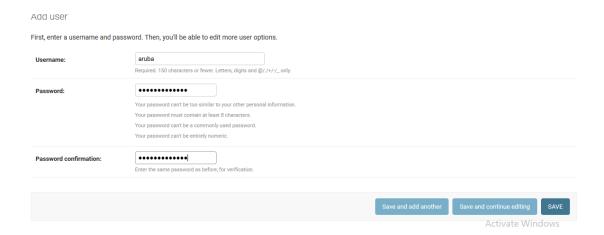


Figure 4.1.13: Admin page registration

## 4.2 Back-end Design

Backend part is the most important part of all dynamic project. As we use web scrapping technology so there are some database include our project and which is based on sql lit. Basically we use it for include and contains database to provide the actual and authentic information for log in and admin levels to provide information. We also use an one page application by jQuery which helps to save our TO DO option its also a part of database. Here we try to show some database example

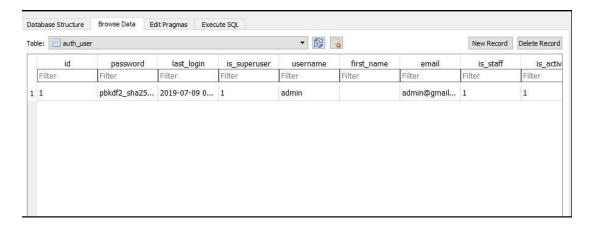


Figure 4.2.1: Database

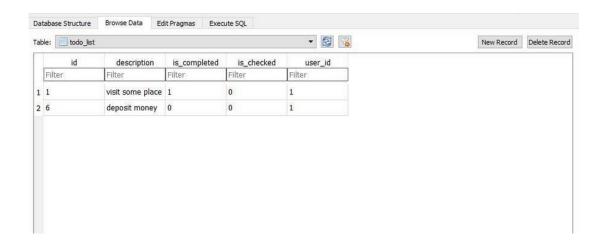


Figure 4.2.2: Database

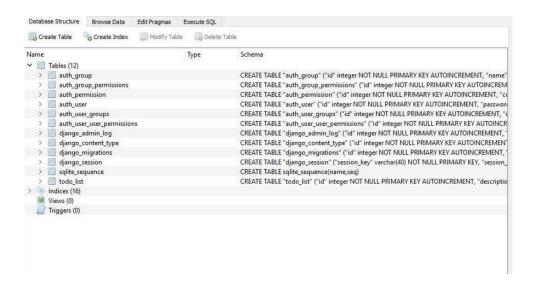


Figure 4.1.10: Database.

## IMPLEMENTATION AND TESTING

#### **5.1 Implementation of Database**

We implement web scrapping technology by this technology we can literally scrap and gather data off of website for the bus list. By this process we search bus list which is travels from Dhaka and implements for this option. We also use cloud data for weather forecast, and we also use an ne page application which use for a short note to reminders and activities its also work by jQuery. For the login page we use most popular sqlite database. And all of those option is working well by its own database processing system.

## 5.2 Implementation of Front-end Design

**Login page for admin:** Admin pages offers to add a new user by fill up a form by using user name and password and also include the email. By clicking save option the information would be save in database which helps to control individual user and its database.

#### **5.3 Implementation of Interactions**

For making the website gradually spontaneous, receptive UI has been utilized. We become mindful for particular statements that call to behavior for better mass user as a substitute of satisfied figures. The authorities can login permission for the added feature and access database.

#### **5.4 Testing Implementation**

In this we try to test our requirement project which is developed by us and by testing this project we can understand what is wrong and what types of problems we should recovered.

Framework testing: Process of testing a synchronized framework to verify the meets indicated. It helps us for the identify bugs and problems of our web site. It also helps to predict the feedback from the user or client how they accept the website if there is

problems then we can solve it an also realized that "Smarter Travel" is it user friendly web site or not.

Table 5.4.1: Test case evaluation

Sl.	Test Case	Input	Expected Outcome	Obtained Outcome	Pass/Fail	Testing Date
1	Login	Login by another admin	Properly Login	Properly Login	pass	03-07- 2019
2	Search location	Type data for Input	Bus list information come successfull y	New bus list information come successfull y	pass	03-07- 2019
3	Interface	Try to develop our project with android device	Maximum device supported	Maximum device supported	pass	03-07- 2019
5	Data Store and Load	By sql lite we try to data stored and loaded	Positively data stored	Positively data stored	Pass	03-07- 2019

6	ANR (Applicat ion not respondi ng)	Application is responding on various device	Few percentage will not supported	Few percentage will not supported	Pass	03-07- 2019
7	Admin Logout	Press logout option	Perfectly log out	Perfectly log out	Pass	03-07- 2019

## **5.5 Test Results and Reports**

After testing our project we are very confident that our project should help the tourist properly and also satisfied that this testing gives us a professional feelings which makes us more confident and dynamic. The testing report are favourably and its declared the project as we expected.

There are different sorts of testing:

- Functionality
- Deterioration
- Protection
- Presentation
- Localization
- Scalability
- Usability
- UI Interaction

## **CONCLUSION AND FUTURE SCOPE**

#### **6.1 Discussion and Conclusion**

Such a fantastic journey for us to prepare the web site and implemental aspects of it. Definitely we enjoy the reason of developing something that would be help people those who like to travel. Dedication, determination and power of positive thing have make us successful to make this application. We try to make our website handly free for all types of travelers . We hope that we achieve a grate feedback from user In-Sa-Allah.

Grate thanks full to the almighty Allah to bless us with the determination to complete the project. And a great full thanks from the soft corner from our heart for our honorable supervisor who help us in various platform to done our project successful.

#### **6.2 Scope for Further Developments**

We try to make our website more effective and professional in next season. We also develop our security part and also new features. Here we discuss our future follows:

- Tarn into the android platform
- Booking system are will include
- More secure database use
- Adding new user friendly features
- Adding maps and location tracking system

## **REFERENCES**

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- [2]. Concept: Use-Case Model, Eclipse Public License v1.0 which accompanies this distribution. OpenUP Copyright. Last accessed: March 2019.
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