

Project Proposal

Level 3

Online Bus Booking and Tracking System for SLTB Central Bus Station - Colombo

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Bachelor of Information Technology (External)

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1. Introduction

I insist to do an online bus booking system as my 3rd year project because Sri Lanka's transportation has so many interrogations. It doesn't have any time schedules or proper services. Normally SLTB bus services have manual bus booking system. Therefore it is not possible to do a bus booking at any time of the day (24 hours). Usually when we are booking our tickets, we need to go to the Central Bus Station in Colombo. So it is a waste of time and money. Most of the time after we booked our tickets if there is road traffic; we won't be getting informed about the traffic. Due to traffic or breakdown of the bus we should stand until the particular bus come. These kinds of delays and problems really affect our value of time throughout our daily routines, work, and emergencies. The lack of time may cause many problems. Here I am suggesting web based online booking and tracking system to address and overcome all the above problems. In this system you can complete a booking at any time of the day (24 hours). And the passengers can book their tickets with free of charge for booking from the place where they are. The passengers will be informed whenever there is a breakdown and they can track the location of the bus. I am using web based technology (PHP[1], HTML, CSS, jQuery[2], Apache[3]), android technology[4] and SMS gateway to develop the system. This is the most reliable and efficient solution for bus booking services. I am sure the introduction of this system will be a great solution for all those demands.

2. Background and Motivation

In SLTB bus services there are luxury buses. I have always travelled so many places therefore I have felt all the inconvenience in travelling. When I was in Trincomalee, I wanted to go urgently to my home at Kurunegala. But I was working therefore I couldn't go to bus station to book my ticket. Consequently, I asked an excuse from manager and reserved my seat ticket. After that I was off at my work and I was standing at bus stand from 6 to 7'o clock. It was a tragedy. And I got home at 11.00 pm. It really made me to think why I should stand there for 1 hour without knowing the exact time the bus would arrive and how could I reserve a seat for such a long distance journey from the place where I am. I have seen most of the people facing these problems. So it motivated me to choose a project such as online bus booking. Online bus booking is really efficient and reliable because people are busy through their work therefore they can't waste their time by going to the place where they book bus tickets. So online booking is suitable for all of them to get into the bus from the place where they are. If you're already reserve your seats and tickets you will be mentally relieved. You can even select your seat as your wish. Mostly women really need safety and comfort. They could even travel during night without fear. You don't need to wait standing at the bus stand for long time at day or night. Patients and handicaps could travel safely. And we don't need to be tensed when bus will arrive to our place because the android system will help us by giving alert to us. You can even checkout the location status through internet. Online system will make regulations. Pursuit of online bookings will begin to make people feel safety and comfort. It was difficult for commuters to travel to distant places without break into at one or two destinations. But now our system will produce a verdict for above problems. But the main reason I intent to select this project was making time schedules and night time services. I can truly argue that online bus services will make a revolution.

3. Problem in Brief

Tragedy of travelling – solution with online booking

If I would briefly explain about the problem domain I am going to address, I would say that there aren't any time schedules, proper services and night time services in bus transportation. Therefore online bus booking services will make travelers comfortable and efficient with their money and time.

4. Aim & Objectives

Aim:

The aim of this project is to give reliable and efficient services to passengers by developing bus booking and tracking system with the use of web based and android technology.

Objectives:

- Researching and reviewing passenger's needs (easy, anywhere and anytime booking etc...).
- Researching and reviewing the manual bus booking system (SLTB).
- Generating the system as passengers could access it with least requirements to satisfy them. (Mobile phone or any device to access internet is enough).
- Developing the system with user friendly interface and easy procedures to attract passengers.
- Using easy payment methods (Ez cash etc).
- Implementing solutions through system and making it more effective such as developing system to book bus ticket whenever or wherever passengers are.
- Improving the growth of SLTB by using modern technology (web based and android) in luxury bus service. Therefore it would make changes in SLTB services.
- Study of using web technologies (PHP [1], HTML, CSS, Ajax, jQuery [2] and MySQL) and android [4] that develop the system.
- Changing the Manual booking system into an automated web based system.
- Reinforce a variety of skills including concentration, problem solving effort, creativity to fulfill the vision.
- Evaluation of the proposed system.
- Preparation of final documentation.

5. Proposed Solution

Web Based and Android Systems for Online Bus Booking. As proposed solution I am generating an online bus booking system for improvise current situation of bus transportation services. So first of all I have to mention that we are trying to save time and money through our system. Online booking is designing through a web system using

PHP, HTML, CSS, Ajax and jQuery etc...We just need to pay attention through solution according to below details.

Input	Output	Process	users
Passengers details, Available Seat, Payment details	Confirmed message, Travel details, see the location of the bus in Map	Passengers info is stored in database, book available seat and stored Latitude and Longitude in database	Passengers

Table 1: Nature of solution

All the users can produce their details and reserve tickets with their seats. In this system there are alternative methods to pay such as Easy cash [5], PayPal. At the time you have been confirmed your ticket you will get a message with an identical number. The most affective thing is you can book any time of the day (24 hours) of the journey. The vital thing is you will get an alert when bus starts its journey therefore you can be ready for the bus. Here I am using PHP, and other web based system to develop the system, Android system is used to send the exact location point of the bus with longitude and latitude map to the web services. We can check the locator through internet or android phone. Driver/conductor could check passenger's details through the system. They would take actions according to the situation through system. I can assure this system will make people feel comfortable with their journey. Nowadays most of the people are using internet to their daily uses. So through online booking they would make their journey easy. From younger to elder ones all of them can use online booking from their place. If suddenly there was a break down, the management system would send you an emergency alert. Management system would take quick action according to the situation. This online booking system has all the effective systems that every passenger needed. I believe this effective and efficient system will be a great solution.

The following list simply categorizes the features of the system:-

- Choosing the destination.
- Choosing the available bus.
- Choosing available seat.
- Paying payment.
- Receiving confirmed message.
- Receiving alert message when bus leaves.
- Checking location indicator.
- If there is a breakdown receiving alert messages.

These are the main features of the system. And I have all the resources to make this system a success.

6. Resource Requirement

		Hard Ware	Soft Ware	Other
Client	Passenger	Computer, Mobile Phone	Web Browser	Internet access
	Driver	Android Device (Minimum: 832 MHz, 290 MB RAM, 20 MB SD Card Space)	Android OS	
	Admin (SLTB)	Computer	Web Browser,	
Server		3.06 GHz or faster processor, of 2 RAM space, 5 GB disk space	Apache Sarver[3], My Sql Database	
Developer		Computer(3.06 GHz or faster processor, of 2 RAM space) Android Device (Minimum: 832 MHz, 290 MB RAM)	Windows OS, My Sql, PHP, Apache Sarver[3], Android SDK, Java	

Table 2: Resource

References

Web References:

- [1] 2001-2013 The PHP Group “PHP” Internet: <http://php.net/downloads.php>, [Accessed 20 - 08 - 2013].
- [2] The jQuery Foundation ”Downloading jQuery ” Internet: <http://jquery.com/download/>, [Accessed 26 - 08 - 2013].
- [3] 2012 the Apache Software Foundation. “Apache” Internet: <http://httpd.apache.org/download.cgi>, [Accessed 20 - 08 - 2013].
- [4] 2013 Google “android app” Internet: <https://play.google.com/store/apps/details?id=com.zonewalker.acar&hl=en>, [Accessed 28 - 08 - 2013].
- [5] *Dialog Axiata PLC* ” Ez cash” Internet: <http://www.dialog.lk/personal/mobile/ez-cash/>, [Accessed 5 - 09 - 2013].

Appendix – Plan of Action

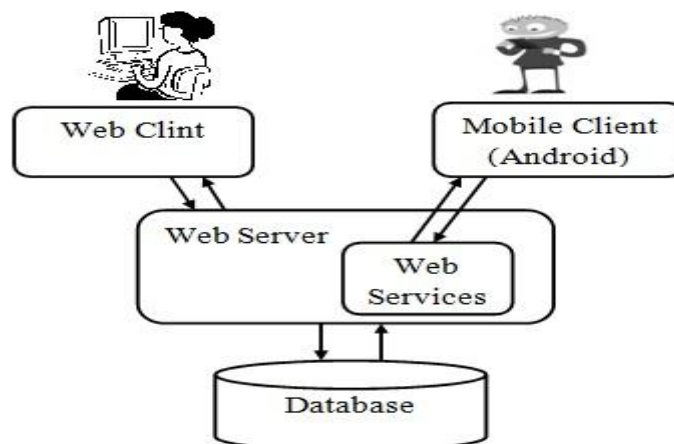


Figure 1: Top Level Architecture of the Proposed System

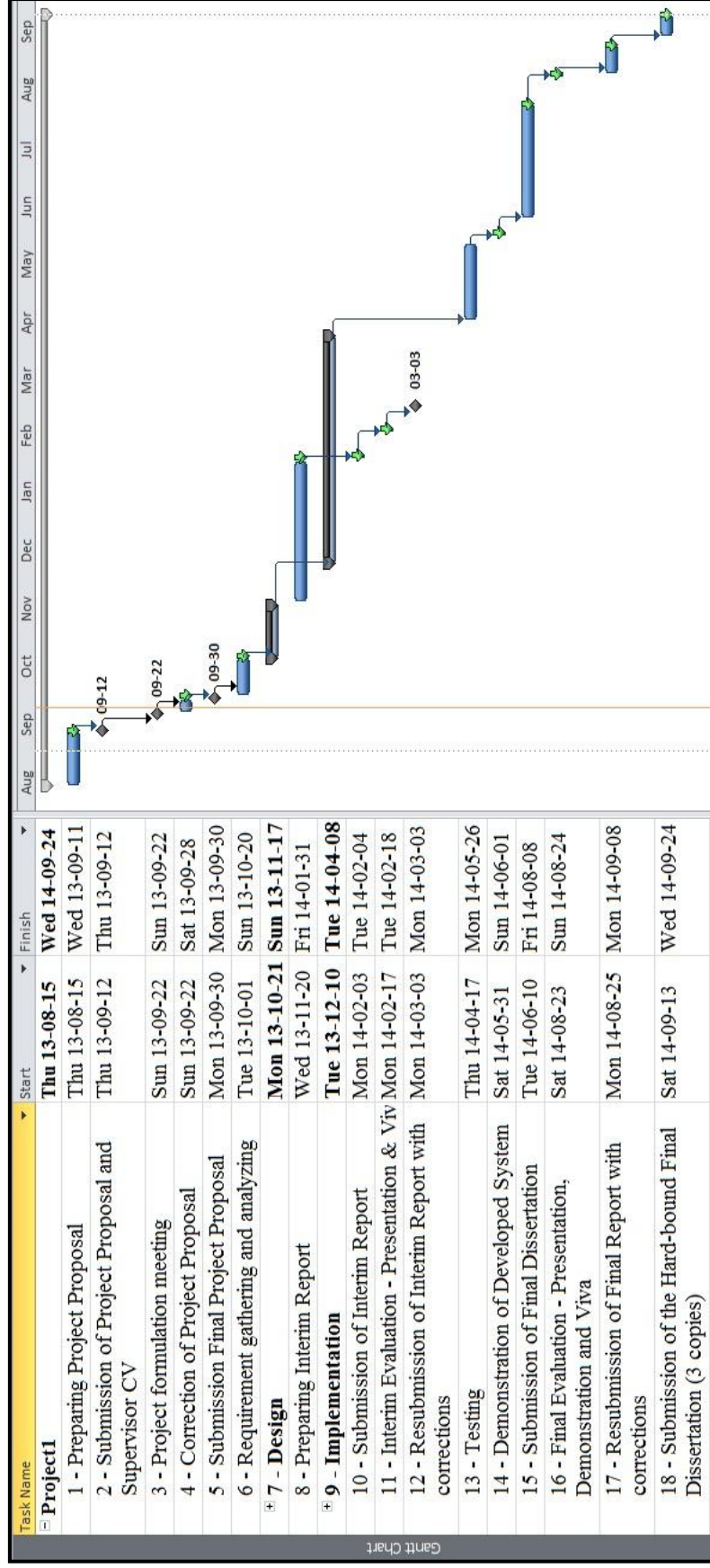


Figure 2: Plan of Action