

IMPLEMENTATION OF PUBLIC TRANSPORT SYSTEM WITH JOURNEY PLANNER

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Abstract: Public transport system is an electronic system to provide real-time information for the passengers to display the arrival and departure timings of the buses. This will let the passengers when their bus will arrive and plan their journey accordingly, for planning a journey the public transport system provides the user to find the suggested journey's to commute between the source and the destination. The application should list the bus route number, fare details, distance and also allow the user to view the same in a map-view. Alternatively, the user can also key-in the bus route number to find relevant details of the source and destination. We have designed an incident capture systems that would display the details of all the bus services that would within a particular route by calculating the time taken by the buses that are about to arrive, route number, ETA in minutes, destination of the bus route and the direction when the user keys-in the bus stop name and also Public Transport System provides the passenger to fine the accurate time it would take for a bus to reach the stop, that the user would board to reach their desired destination.

Keywords: Eclipse Neon2, GPS, HTML CSS, MySQL, Strong authentication, Vehicle tracking algorithm.

INTRODUCTION

The process of building systems has always been complex with system becoming larger, the costs and complexities get multiplied. So the need for better methods for developing systems is widely recognized to be effective and the applied model should meet a few basic requirements.

- The model should be structured and cover the entire system development process from feasibility study to programming, testing and implementation.
- The model should utilize established methods and techniques like database designs,

normalizations and structured programming techniques.

- The model should consist of building blocks, which define tasks, results and interfaces.
- The model should separate the logical system from the physical system.
- Documentation should be a direct result of the development work and should be concise, precise and as non-redundant as possible.

Based on the above requirements of the system model, system study has been made. Various methodologies have been applied for system study, evolving design documents, data modeling, input screen design and report design.

1.1 EXISTING SYSTEM

In Existing System Due to non-availability of prior information about the buses arrival schedule, people have to wait longer on bus stops especially in morning when they have to reach the offices in time. The buses are overloaded for most of the times which often results in some kind of fault occurrence in buses and people get late further.

DISADVANTAGES OF EXISTING SYSTEM:

- The existing system only offers static data about the vessel in anchorage points and berths.
- It does not offer real time information.
- No module for public transportation is provided in the existing system.
- The existing system does not offer efficient methods for the exact timings of arrival of buses.
- Estimation Time of Arrival module (ETA) is not present.

1.2 PROBLEM DEFINITION AND DESCRIPTION

Public Transport System (PTS) is an electronic system to provide real-time information for the passengers to display the arrival and departure times of the buses. This will let the passengers know when their bus would arrive and to plan their journey accordingly, for planning a journey the public transport system provides the users to find the suggested journey's to commute between the source and destination. This application should list the bus-route number, fare details, distance and also allow the user to view the same in a map-view. Alternatively, the user can also key-in the bus route number to find relevant details of the source and destination. We have designed an incident capture systems that would display the details of all the bus services that would reach within a particular route by calculating the time taken by the buses that are about to arrive, route number, ETA in minutes, Destination of the bus route, and the direction when the user keys-in the bus stop name, and also public transport system provides the passenger to find the accurate time it would take for a bus to reach the stop, that the user would board to reach their desired destination.

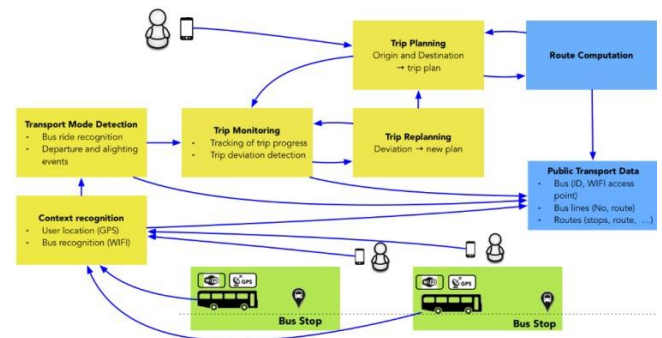
PROPOSED SYSTEM

The proposed system, public transport system (PTS) overcomes the drawbacks of the present system. In PTS the journey planner module helps the commuters by providing travel safely, comfortably and quickly, as well as keep the whole transportation network running efficiently. PTS aims to provide more accurate and effective recommendations to commuters. The PTS helps the general Public to save more time waiting for a bus and also, to plan their means of travel. PTS display the all information of the buses that would reach within next 60 minutes so that user can plan their journey accordingly.

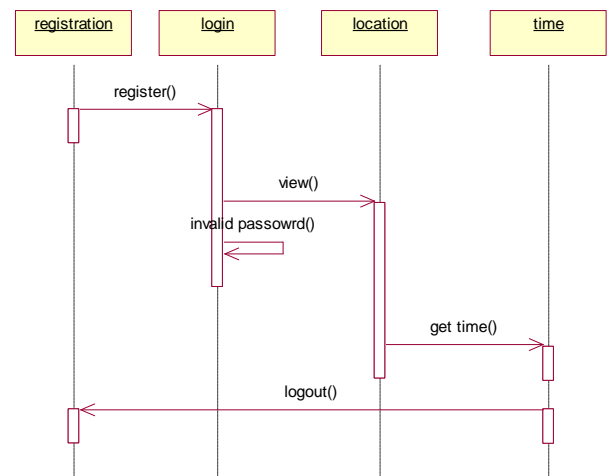
ADVANTAGES:

- It provides dynamic updates of the real time information.
- PTS provides the modules for journey planner and Estimation Time of Arrival which helps the public to make decisions about their journey.
- User can easily search their alternative routes with feasible time.

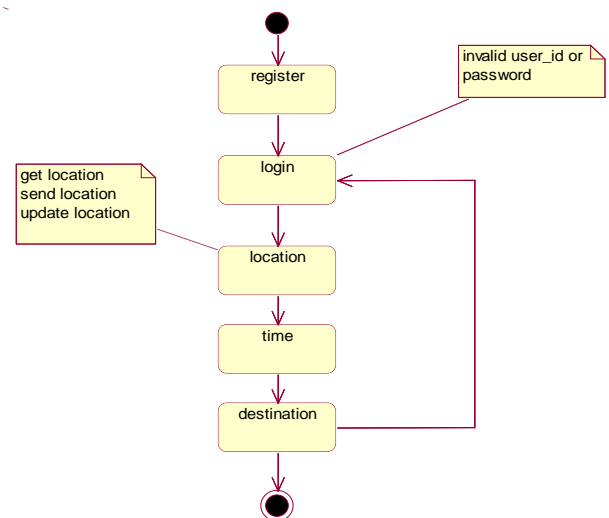
2.1 ARCHITECTURE DIAGRAM



2.2 SEQUENCE DIAGRAM



2.3 ACTIVITY DIAGRAM



2.4 SYSTEM IMPLEMENTATION

A software application in general is implemented after navigating the complete life cycle method of a project. Various life cycle processes such as requirement analysis, design phase, verification, testing and finally followed by the implementation phase result in a successful project management. System implementation is an important stage of theoretical design is turned into practical system.

2.5 IMPLEMENTATION PROCEDURE

Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective. The implementation stage involves careful planning, investigation of the existing system and its constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

Each program is tested individually at the time of development using the data and has verified that this program linked together in the way specified in the programs specification, the computer system and its environment is tested to the satisfaction of the user. The system that has been developed is accepted and proved to be satisfactory for the user and so the system is going to be implemented very soon. A simple operating procedure is included so that the user can understand the different functions clearly and quickly. The final stage is to document the entire system which provides components and the operating procedures of the system.

2.6 MODULAR DESCRIPTION

LIST OF MODULES:

- SECURITY APPLICATION
- JOURNEY PLANNER
- ESTIMATE TIME OF ARRIVAL

SECURITY APPLICATION

Application security-encryption and decryption.

JOURNEY PLANNER

Journey Planner for a passenger information system to find the suggested journeys to commute between the source and destination.

ESTIMATE TIME OF ARRIVAL

For a passenger information system to find the near accurate time it would take a time for a bus to reach the stop that user would board to reach their desired destination.

RESULTS

Normally in a public transport system, the authority communicates to vessels through radio which is time consuming and also a little old technique to be followed, but in our portal, communication can be done in a digitalized manner. This project gives an ample opportunity to design, code, test and implement the application. This also helped in learning more about HTML, CSS, MySQL, JavaScript, Servlets and Personal Web Server.

CONCLUSION

In this project, we discussed about system architecture and its work flow, we provide details about complete transaction by using Google map, user friendly application and provide feasible routes and locations with shortest path distance. In journey planner we provide request to server and then server response to journey planner get route numbers and then we check alternative routes as well as shortest path we can estimate the distance by using ETA concept.

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