ISSN: 2278 – 1323
International Journal of Advanced Research in Computer Engineering & Technology (IJARCET)
Volume 5, Issue 3, March 2016

A Web Application for Pune Transportation System using Client-Server Technology

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***Abstract*— Web technology is the rapid growing technology available for all the users or customers in today's market .At the most basic level, humans move and interact with each other by walking, but transportation geography typically studies more complex and regional and global systems of transportation. So we pondered about collaborating above two prospects together for user convenience. Pune-Guider is one type of web application which shows elaborated information about all transportation mediums available in Pune city for proper convenient travelling. This application apprises time-table, distance, routes and fares of buses, trains to go from one place to another place within Pune city. The extra information provided from this application is about available theaters, emergency number (e.g. ambulance, blood bank, fire brigade) and picnic spot .Pune-Guider make us available the nearby station based on phone geo-location and time based availability of all transportation medium. This application reduces human efforts and it provides most reliable, secured, credential and updated information with traffic management regarding transportation.**

***Index Terms*— Web-portal, Client-Server Architecture, Online Web Services , Social Network ,Pune-guider.**

I. INTRODUCTION

There are many transportation mediums available in Pune City , but not all the passengers have all the information about the transportation mediums. All the information namely means number of transportation mediums available route from source to destination, fares of transportation mediums, time taken by the medium to reach the destination, and add-ons like available theatres and picnic spots in Pune itself. The Proposed System focuses on simplifying the day to day life challenges/problems faced by the travelers of Pune city. With the help of this system one can easily travel from one place to another.

The given system deals with overcoming the problem related with communication skill of users. For e.g. Many people do not have the proper knowledge of English language. Hence graphical user interface (GUI) of this application is made in such a way that this application can be used by anyone as it is more user friendly than any other applications .The system is an web application that gives necessary information about all the transportation mediums available in Pune. This information overcomes the problems faced in the previously built application "Pune Bus Guide". The platform chosen for this kind of system is Windows, reason being Windows

Operating as each and every person does not have the Android smart phone and it gives ease of access for all the users. The system is a web application that gives the user information about travelling system in Pune. The main goal of the system is to construct efficient transportation system. Some goals are listed below:

1. Manage all available transportation medium online.
2. To make convenient transportation system guider that
   can be used by everyone.
3. To give a helping hand for Digital India Mission.
4. Activities like updating, modification, deletion of route, cost should be easier.

The Objectives of this Proposed System is: Transfer data smoothly to all the users involved and handle the data in centralized way.

Reduces the time taken by the traveler in finding the way to reach the destination instead of enquiring other passengers. Proves beneficial to the users who don't know local language.

II. RELATED WORK

1. Our application has been implemented in Mumbai, named "M-Indicator – Mumbai" have drawbacks like: It displays matter which is the same as what is online. Its latest updates have given issues on every Android mobile supporting even the most recent device version. The "A to B" module of buses has given problems. Whenever an option for the source to destination is selected, the field still remains blank, i.e. no bus routes are displayed.
2. There is already Pune PMT system website available which shows the bus routes in Pune but it is not user friendly and also the information available is not updated.

Manuscript received March, 2016.

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3. These examples clearly state that only information was available for Bus Transportation System and not all transportation mediums. Also there are various drawbacks stated. There is no application created for Pune City which shows all information about various transportation system . The earlier tools were developed with only restricted constraints. This system deals with overcoming all the problems faced the earlier applications and providing a bug-free, user friendly application. It also shows various add-ons like available theatres and picnic spots for outsiders.
4. The application developed in Bengaluru named "Bangalore BMTC Info" has drawbacks like: The application is never in an updated condition. The application has fed in wrong routes on several buses and given no updates to fix them. After the minimization and restoration of the application, it cannot search anything. This application crashes almost always. The application is not user friendly with a complicated User Interface (UI).
5. The application developed in Chennai named "Chennai Bus Route" has the following drawbacks: The application works fine, but the bus timings have not been mentioned. Not all bus stops are updated. The application does not display maps.

III. PROPOSED SYSTEM

The application is a user friendly one, that anyone can access for free of cost. The basic idea for this project was to guide the travelers with the routes, all the possible stops that come on their way to the destination and moreover and show the estimate remaining time required to reach. The aim is to overcome all the drawbacks faced in all the previous applications and generate fast and accurate results.

The proposed system consists of module as follows: The module gives information about the available Routes from source to destination as well as other information like time-table, fares etc. in this Client Server Technology is used.

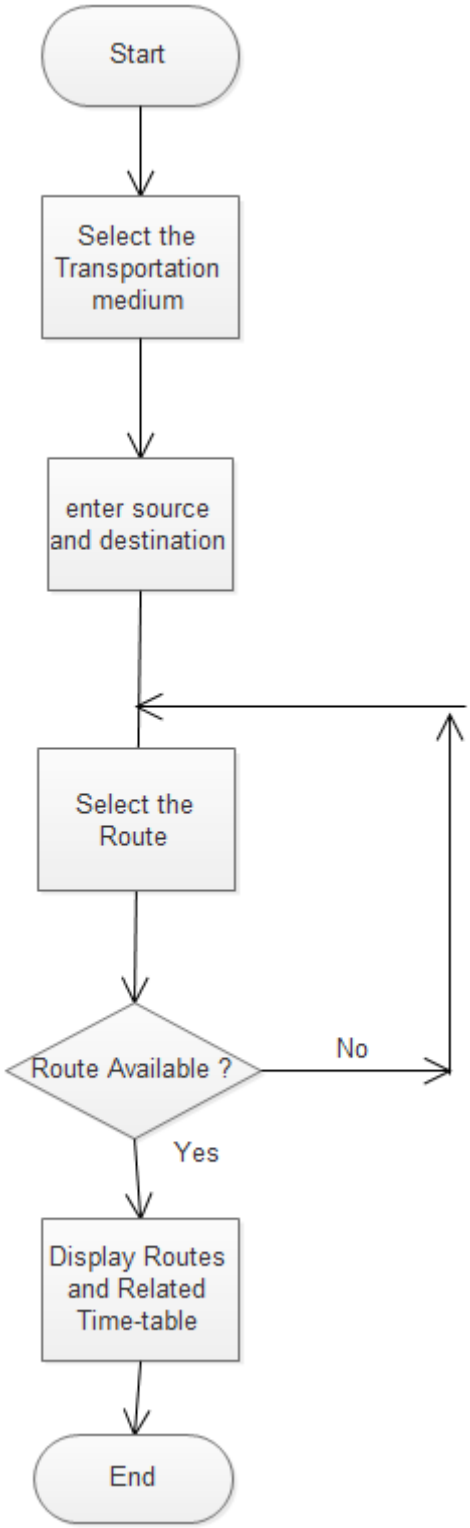

Fig. 1 Flowchart for Module

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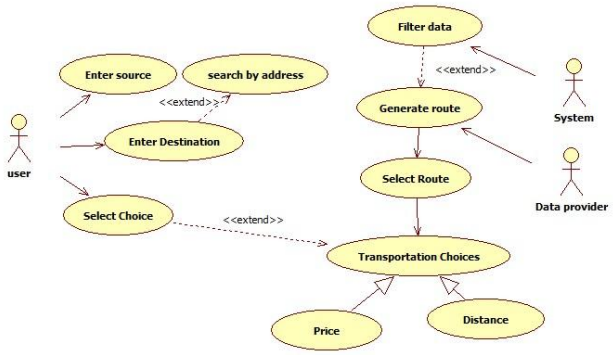
IV. DEVELOPMENT ENVIRONMENT

A. Functionalities of the system

Below are the functionalities provided by the system:

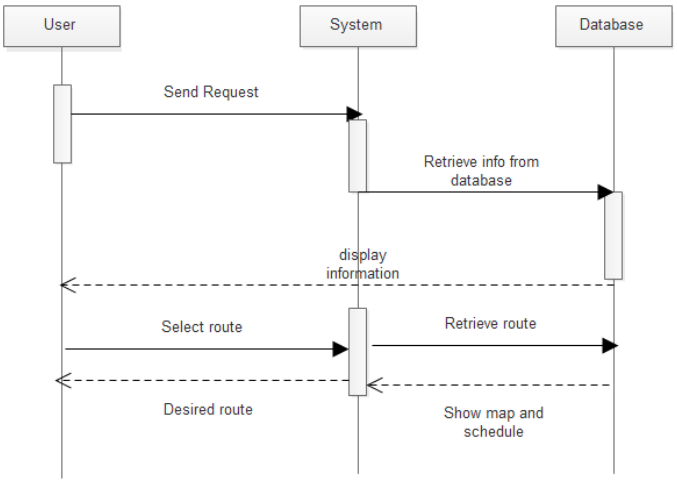
- Route Information
- Bus Information
- Stop Information
- Map Generation
- Location Tracking

B. Software model related to Pune-guider



Use-case diagram of Pune Guider

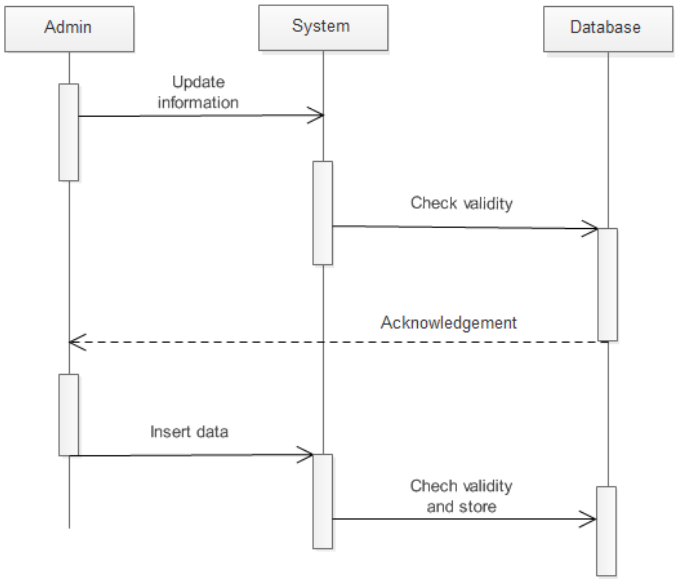
Description of Use-case diagram:
Actor: User Precondition:
1. The user wants to know the route to reach the destination. Flow of event:Start when users enter the source and destination address.
2. System filter the data and generate the routes in context of destination address.
3. System gives different choice based on routes.
4. User select the efficient routes.
5. System gives the different attributes such as cost, Distance of selected route.



Sequence diagram in system context

A sequence diagram is an essential component used in process related to analysis, design and documentation related to Pune-Guider project. It is also called as timing diagram or event diagram as it gives detail view and demonstration of working of Pune-guider in context of user and system .

Here, object interaction usually begins at the top of the diagram and end at bottom.



Sequence diagram in system context

C. Platform support

- Windows vista, Windows 7, Windows 8, Windows 8.1, Windows 10.
- IDE: Eclipse , MySQL IDE, Apache Server, Tomcat Server
- HTML, XML, JSP, SQL, PLSQL

D. Database

The databases created in this application are created in MySQL. User passes a query to access the database. All the rows in the database that match this query are passed as a type of pointer(cursor) and then displayed to the user. The application maintains an Adapter class that handles calls that are made to the database. The databases play an integral part of the system as all the bus information, stop information as well as routes are all stored in these databases.

E. System Requirements

a) SOFTWARE REQUIREMENTS:
   1. Java 1.6 onwards
   2. MySQL 1.3 Onwards
   3. IE 5 onwards or Mozilla or Google chrome

b) HARDWARE REQUIREMENTS:
   1.8 GB HDD(Hard disk drive)
   2. Pentium 4 or higher version processor

F. Client-Server Technology

The proposed system is based on the client-server technology, which consists of a client side part as well as a server side part. The limitations of both the parts have been considered during the development of the project. The traveler would enter his source and destination name in the application. The application would forward a request to the server with the name of this destination, the server would look up for the place into the database and this piece of

information would then be passed on to the client.

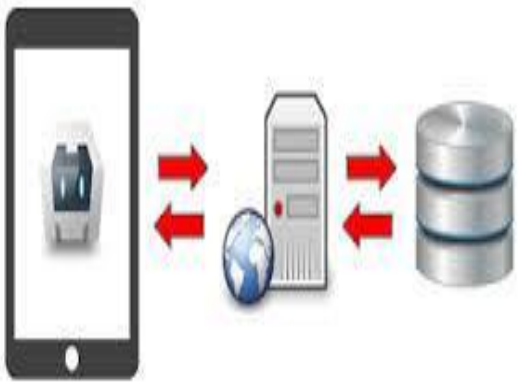


Fig 2. Client-Server Technology in Android

V. CONCLUSION AND FUTURE SCOPE

The conclusions of this study suggest that knowledge of specific domain improves the results. This Project can be implemented on Android platform also. Different attributes have been added to the project which will prove to be advantageous to the system. The requirements and specifications have been listed above. This project is implemented as a Web Application and the SQL domain.. The application will prove beneficial for every bus traveler, or even tourists. Not just buses, but this application will be useful for every person travelling by any means of transport. The add-ons will prove beneficial for the tourists to search the near by theatres as well as picnic spots.

REFERENCES

[1] Optimization of Public Transport Demand: http://www.ijsrp.org/research_paper_jul2012/jsrp-july-2012-81.pdf

[2] Traffic safety and city public transport system http://tripp.iitd.ernet.in/publications/paper/safety/JPT13-4_khrola.pdf

[3] Evaluation of public transport systems: http://tripp.iitd.ernet.in/publications/paper/planning/mukti_metro_kharagpur_05.pdf

[4] Developing sustainable public transport: http://www.diva-portal.org/smash/get/diva2:408692/FULLTEXT01.pdf

[5] Partnership to Improve Access and Quality of Public Transport: http://www.ucl.ac.uk/dpu-projects/drivers_urb_change/urb_infrastructure/pdf_transport/Sevanatha_transport.pdf

[6] The Business Case for Investment in Public Transportation http://www.apta.com/resources/statistics/Documents/Caseforbusiness.pdf

[7] Security Awareness for Public Bus Transportation : http://transweb.sjsu.edu/PDFs/research/2978-israeli-bus-public-transportation-attacks.pdf