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Smart Travel Guide: A Smart Way

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Abstract: *The key objective of this paper is to examine the needs of visitors visiting to India and proposed an Android application solution, which includes some fundamental advice for visitors to tourist areas. In this paper, an online mobile application is created based on the needs of tourists, which can assist them while they are visiting tourist attractions. The paper also provides the various features, development process, and outcome of the App and uses of our android application named “Smart Travel Guide”. The proposed app provides many new features along the existing features of state of art apps. This novel Smart App provides the better user-friendly result compared to existing travel guide Apps.*

Keywords: *Android App, Smart App, Travelers, Travel Guide, Tourists, Visitors*

I. INTRODUCTION

Millions of tourists from other nations travel to India because it is a beautiful country with historical sites. There are several reasons why foreigners travel to this nation. The main objective is tourism. In 2011, Lonely Planet ranked the nation as the best value destination. Many reasons for visiting our nation includes official, business, historical and natural wonders, and educational objectives. However, as foreigners living in India, they encounter some difficulties such as difficulty learning the local language, finding transportation and other kinds of information.

Nowadays people have been moved so much into the modern technology that we really want an intelligent living environment along with intelligent objects which contain powerful infrastructure with the most desired features. Thus, android mobile applications have become very popular among the smart phone users. The mobile application and the web server are the two key elements around which the system is built. GPS technology is utilized to transmit location data to the mobile device from the web server through the mobile application. Through the creation of an Android application, created an online solution to address some of the needs of tourists.

Remaining part of this paper is organized as follows: Section II covers the existing work of the domain; proposed system and system architecture are discussed in section III and IV respectively; section V gives the pseudo code of the work; Section VI briefs the Snapshots and Results; Conclusion is at section VII; at the end, reference is placed at section VII.

II. EXISTING WORKS

In 2012 [1], an architecture of mobile tourist guide system for Android Mobile Phones that is able to provide tourism information to the mobile users conveniently is proposed. This system takes advantage of light-weighted mashup technology that can combine more than one data sources to create value-added services, while overcomes the limitations of mobile devices.

An M-Travelling App is developed in 2012 [2], which presents four case studies carried out in four cities for one tourist, using a total of 26 mobile applications. Analyzing the data collected in the case studies is possible to highlight some important features and some problems in these applications[2].

Alexander et. al., in [3], presents category classification of mobile travel applications accessible at the moment for tourists in application stores for most popular mobile operation systems (Android and iOS). The most interesting category is “Travel Guides” that combines “Information Resources” and “Location-Based Services” category. Here, the application “Tourist assistant - TAIS” that is related to “Travel Guides” category and recommends the tourist attractions around. Information about attractions is extracted from different internet sources [3].

A Smart Travel Guide App is presented [4], which seeks to solve that problem by generating feature-rich texts, pictures, videos, and any other guidance-related details requested by the users so they can explore tourist’s destinations better.

A tourists app is developed by comparing the features from other existing such apps, kanaka divya et. al., proposed an android tourism app which will include all those functionalities which are best is the studied app. Along with that, they have added some new features in it [5].

As a thorough literature review, in the existing travel guide apps, the information delivery is not very effective. There was no prediction of the ideal locations at cheap costs, unavailable network, not simple to use or user-friendly. Taking into account traveller needs and the popularity of Android devices and apps, we came up with the idea of creating a mobile app for tourists and newcomers in Tourist, one of India's most popular tourist destinations. Android is our platform of choice because it is open source and is created and distributed by Google.

There may be certain improvements to our app's features that could be made to make it more user-friendly, effective, and efficient based on the present constraints of our project. Search Nearby: This feature enables users to look up nearby businesses including hotels, restaurants, and bookshops. Real-time translation services will be used to make conversations in restaurants, transportation, and hotels interactive in real time. GPS Location Tracker: This feature will make the app more effective and organized by automatically tracking the user's location rather than displaying it on the map. More Exact Route Information: The city can provide the user with more precise route information for adjacent locations.

III. PROPOSED SYSTEM

The proposed App includes the three important models for distinct activities, which are as follows.

A. User Module

In user module, user can create an account in application and can access the information about the places or latest update.

B. Admin Module

In admin module, admin can access all the information that accessed by the user and can make changes, update the application anytime for user friendly and can access the feedback of users.

C. Database Module

Database module that contain all the data accessed by the user for registers and feedback etc. database will lead to updating of information in user account.

IV. SYSTEM ARCHITECTURE

Architecture focuses on looking at a system as a combination of many different components, and how they interact with each other to produce the desired result. It involves the process of defining a collection of hardware and software components and their interfaces to establish the framework for the development of an android application. Figure 1 depicts the System Architecture, which has mainly three parts to defined.

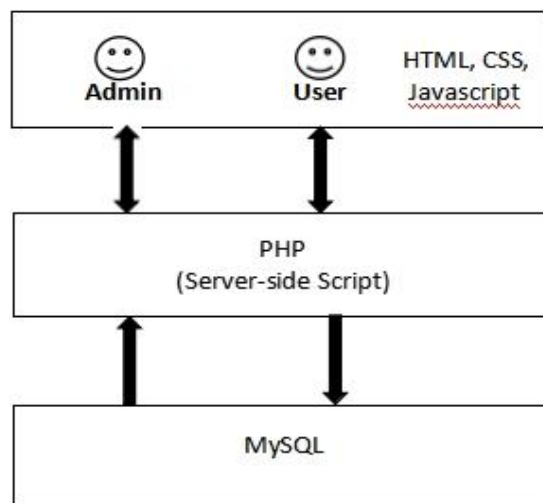


Figure 1. System Architecture

A. Front End Layer

The front end that uses to develop HTML, JAVA script, CSS technologies. The application that helps to make more effective and perfect. Front end has 2 main actors i.e, Admin and User



B. Middle Layer

In our project to interact between the actors and the database is done by the middle layer is used. The PHP is used to interact between the user and the database. So that the data is stored effectively in the database and helps them to easy to fetch and display from the database.

C. Database Layer

The MYSQL database is used to store the data into database. The effective analysis is done to create the database design and to store the data. Every action related from the front end are accessed from the database by the PHP.

V. PSEUDOCODE OF THE WORK

The pseudo code of the proposed work is given as follows

A. Register Page

Form entry (); Establish the connection;

Get username;

 Get Email

 Get Password

If valid

 Then create a session and prompt “registered successfully”;

Else

 Display appropriate error message;

End.

B. Login Page

Select Email_Id, password from the User where Email_Id=? And Password=?

If Email_Id== NULL or Password=NULL Display error message

Else

If Email_Id == Admin

 Show the Admin Page

If Email_Id == Service provider

 Show the Service Provider Page

If Email_Id == User

 Show the User Page

If Email_Id == place

 Show the place Page

C. Upload Guide Information

Get Objectives

 Get Input Image

 Get guide id

 Get about info

Query=Insert into tableExecutequery(query);

 Data inserted Successfully

Message: Admin Has to Add guide details

Else

 Please Check the form

D. Admin

- Select * from User;
 - Display list of all registered user based on email id
 - View Users
 - Delete User;

E. User

- User success Login
- Select * from places
 - Display place info
 - View all the Places and images details
 - Get direction
 - Search nearby place
 - View response
- Select * from service;
 - Display list of all register services
 - Search nearby service
 - Send request for service
 - View response

VI. SNAPSHOTS AND RESULTS

The proposed work has many GUIs for Admin and Users as well. In this section, due to space constraints in the paper, only the Admin Dashboard and User Dashboard has been presented. Figure 2 and Figure 3 shows the Admin and User Dashboard respectively.

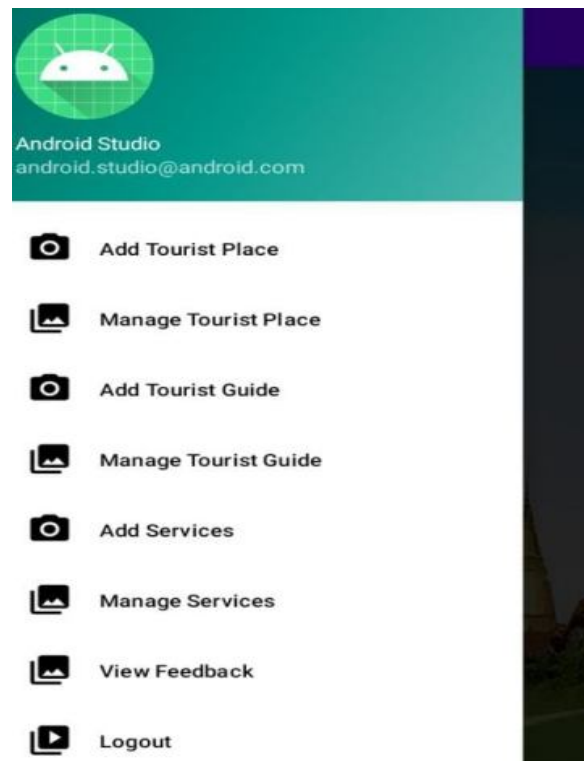


Figure 2. Admin Dashboard

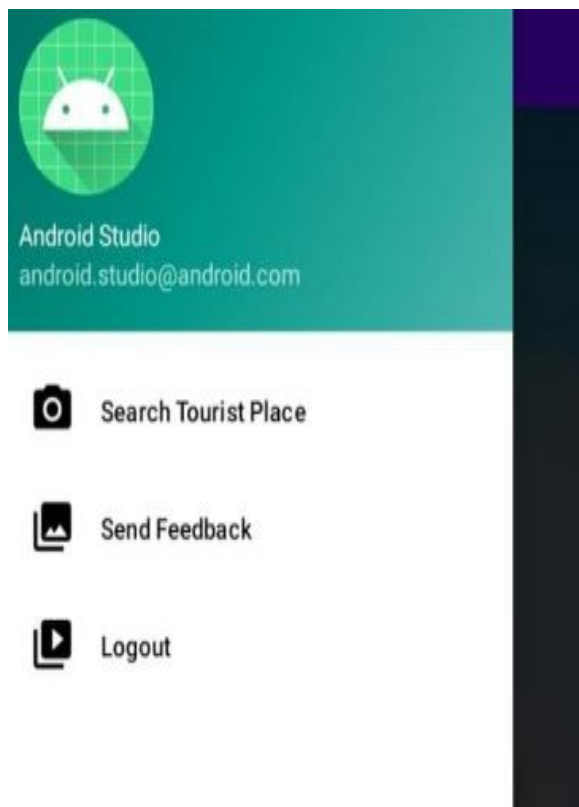


Figure 3. User Dashboard

For every research, there needs to be a results and discussion with positive negative remarks. Following tables from Table 1 to 3 explain the various tests carried out on the proposed work.

TABLE I
LOGIN PAGE RESULTS

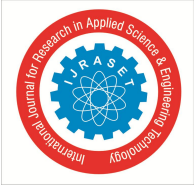
| Test # | Description | Expected Result | Observed Result |
|--------|--|--|-----------------|
| 1 | If the Login Id/password is not entered | Error Message “Enter Valid Login Id /Enter Password” to be displayed | Successful |
| 2 | If the login Id/Password or both are incorrect | Error Message “Invalid Login Credentials” | Successful |
| 3 | Enter profile information for sign up | Data should store in database | Successful |

TABLE II
TEST CASES WITH POSITIVE SCENARIOS

| Test # | Positive Scenario | Required Input | Expected Output | Actual Output | Test Result |
|--------|--|-----------------------------|--|---------------------------------|-------------|
| 1 | Add place profile information | Enter details | Should display the message place added success-ful message | Displays the post made | Pass |
| 2 | View place by user | Should display the details | Should display the details | As Expected | Pass |
| 3 | Search Guide Information | Select Guide details button | Should display Guide information details | As expected | Pass |
| 4 | View nearby service information | Display service Information | Shows the service details | As expected | Pass |
| 5 | Send feedback | Send feedback to admin | Enter details and send the feedback | Feedback sent | Pass |
| 6 | View feedback | Admin can view the feedback | View feedback | Display feedback | Pass |
| 7 | Admin can view the registered user details | View registered users | View user information | Display user information | Pass |
| 8 | Session Expiry | Logout from the site | Session should expire by erasing previous actions of users | Session expires from logged out | Pass |

TABLE III
TEST CASES WITH NEGATIVE SCENARIOS

| Test # | Negative Scenario | Required Input | Expected Output | Actual Output | Test Result |
|--------|--|---------------------------------------|--------------------------------|-------------------------------------|-------------|
| 1 | Verify login Page | Enter a Invalid username and password | Should display error message | Display error message | Pass |
| 2 | Verify Register Page | Enter existing username | Should not register | Cannot register with existing users | Pass |
| 3 | Fill the profile information | Skip some field in profile form | Display validation information | Display error message | Pass |
| 4 | Search tourist place | Skip region details | Display validation information | Display validation information | Pass |
| 5 | Send Request information by skip input field | Make blank updates | Should Not update | Display no updates | Pass |



VII.CONCLUSION

In this paper, an effort has been placed to highlight the existing work, system architecture, proposed work, pseudo code of the work and finally snapshots and results. This Android application includes traveller needs and the current trend toward the use of android devices. The majority of the needs that traveller frequently have can be met by the application and the user-friendliness of the app has been preserved. For Indians, who are new to the city of Karnataka, the app may be useful. This application provides platform for Tourist Guide. This helps tourists to benefited with the features as mentioned in the earlier sections above. There may be certain improvements to this app's features that could be made to make it more user-friendly, effective and efficient based on the present constraints of our project.

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