

Mobile Application and Website to guide Tourists

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1) Aim of the project

The aim of our project “Glorious Bygone” is to develop a mobile application which mainly targets to guide tourists while they are traveling. This application supports Android, iOS and Windows phones and tablets. When users want to travel any places, he/she can log into the application and can search for the relevant route/routes and time taken to reach the destination. While travelling the user gets pop up notifications about the nearby places to visit. In addition to the application we have been planned to develop the particular website by using the latest technologies.

2) Objectives

- Study about the mobile device operating systems (Android, iPhone OS, Windows).
- Study about frameworks such as Laravel PHP Framework.
- Study about designing applications.
- Develop a method to connect Google map with mobile application.
- Create a database (NoSQL) with application like Eclipse, Android Studio.
- Study about GPS technology & applying it to our project.
- Develop the relevant website.
- Design user interfaces to find & display data according to user requirements.
- Integration of all parts.
- System testing.
- Preparation of final documentation.
- Submit mobile application to application stores.
- Check for bugs after delivering it to the customers and debug.
- Update the mobile application and web application time to time.

3) Main modules/components of the project and basic functionality of each module

Following are the main modules of the project.

- I. User Log In and Sign Up Module
First the user can access to the mobile application by creating an account or via Facebook.
- II. Search for Locations Module
“Plan my Trip” feature allows the user to enter the starting point and the destination the user prefer to visit and the application displays the relevant route/routes by retrieving data from Google Maps API. It further gives rounded figure of time the user might get to reach the relevant destination according to the mode of transportation the user enter. This is done through Google maps API.
- III. Database Module
A database is maintained to store details of the users and all the information of the mobile application and web application that are delivered to the customer are stored in the database.
- IV. Notification Module
While travelling the user gets pop-up notifications of nearby places so that the user will not miss interesting places.
Eg: If a traveler is sight-seeing around Anuradhapura the user gets a pop up notification “ Ruwanweli Maha Seya is 1km ahead.”
- V. Web Application Module
A web application is also maintained parallel to the mobile application. Here the user can get a description on the places they are going to visit. We have planned to develop the relevant website by using Laravel PHP framework.
- VI. Narrator Feature Module
While driving, it is not advisable to check the phone frequently for the path. By using “narrator” option, the user is guided through verbal instructions.
- VII. Weather Data Provider
User can obtain weather condition on desired locations. So that the tourists can get ready for the relevant climate without their journey getting disturbed.
- VIII. Hotel Reservation

Tourists find it very difficult to find hotels especially during favorable seasons. So using this application tourists can find out nearby hotels and check whether there is room facilities by using the mobile application.

IX. Retrieve data from Google Places

User is allowed to check for nearby hotels, hospitals, supermarkets, pharmacies, ATM machines, police stations etc. by retrieving data from Google Places API. So the user can save time and effort of finding for places.

4) User scenarios of the project

There are 3 users of the system. They are tourist, business customer and administrator.

Customer:-

- There are 2 types of tourists; registered and not registered. Not registered customers are not facilitated from certain activities such as adding comments, making posts etc. while the registered customers are offered with wide range of facilities.
- The tourist can create an account by providing his/her details such as name, date of birth, email address, country, profession etc. Then the tourist can enter the starting point and the destination by using "Plan My Trip" feature. Here the tourist can get a view of the route from the start to end. Furthermore the tourist can enter whether he/she is travelling by foot or car or bicycle or public transportation. Then it provides the rounded figure of time it will get to reach the destination.
- Furthermore when the tourist is travelling he/she get pop-up notifications of nearby historical places. So the user will not miss any important place. The tourist is allowed to add comments on our web page about their experience in visiting those places.
- The tourists are allowed to view the comments of the other users, so that other users get a chance of deciding whether to visit the relevant place or not, according to the information that the other users have entered.
- By using "Around me" feature the tourist can get the details of the places such as ATM machines, hospital, restaurant, supermarkets etc. Here the user has to enter the type of place and distance in meters. Then the application search for the list of places and provide the details of the relevant place.

Eg: While travelling certain emergencies may arise. Sometimes injuries may occur during the journey. So tourists may have to reach the immediate hospital or

pharmacy. Sometimes they might meet with an accident or another emergency. So they will need to contact nearby police station.

- The tourist is allowed to check for hotel reservations via the mobile application. This is really useful during the seasonal period especially for foreign tourists.
- Since it is not advisable to check the phone frequently for the path while driving, by using “narrator” option, the user is guided through verbal instructions. This is to ensure the safety of the user.
- By using “climate” option the tourist can get the climate of the relevant place. So that the tourist can get decisions based on the temperature.
- The tourist have access to the mobile application via multiple platforms like android, apple and windows.
- Tourist is allowed to complain on any bugs or other problem to the administrator.

Administrator:

- Administrator is allowed to add and change the description given for the cultural places. Furthermore the administrator has access to the user details.
- The administrator is notified of the comments that the users have entered and the administrator has the authority to change or delete any useless comments which will affect to any religion, race, ethnic group, country, person etc.
- Administrator can add other administrators to the system
- Administrator can add or change hotel details as said by the business customers.
- Administrator can send emails or messages to the user about problems and useful information for the users.

Business Customers:

- Business Customers are given a different view of the system. Here there are no registered and non-registered business customers. Each business customer should have an account to update the system. After getting logged into the user system, they are allowed to add or modify the details of the new offers, their facilities, rates etc.

- Business customers have not given access to user details. Suppose the user needs to notify the user on offers and other details via an email or message. Then they has to notify the administrator and administrator will sent the relevant details. This is to ensure the privacy of the users.
- Business customer can complain to administrator in bugs and other problems.