

T128 APPLICATION DEVELOPMENT AND EMERGING
TECHNOLOGIES

TOURIST APP

MAJOR OUTPUT DOCUMENTATION

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Introduction

Project Overview

A user-friendly interface displaying various tourist spots with descriptions, photos, and ratings. Interactive maps for navigation and directions to each destination. Weather API that will allow tourist to know the current weather.

Objectives

- Provide tourists and locals with a convenient platform to explore, discover, and plan their trips to Malaybalay.
- Application addresses the need for easily accessible and up-to-date information about the city's attractions.

Scope

The project includes the development of a mobile application with features such functional mobile application with intuitive user interface. Database of Malaybalay tourist spots and related information. The application will focus solely on tourist spots within Malaybalay and nearby areas. Initial release will include a limited number of features, with potential for future expansion.

Target Audience

The primary audience includes individuals and tourists who want to explore the different tourist spots in Malaybalay City.



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Project Proposal

Background

The marketing literature indicates that enhancing tourist satisfaction should be the primary function of a destination management organization. Therefore, measuring tourist satisfaction is a prerequisite for the development of a strategy leading to a destination's enhanced attractiveness and its competitive positioning (Nasir et al., 2020).

Problem Statement

There are so many tourists going to Malaybalay City who don't know the location of the tourist spot they want to visit.

Goals and Deliverables

Goals:

- Develop a mobile application that guide the tourist to locate the tourist spot.
- Encourage tourist to visit the tourist spot of Malaybalay City.

Deliverables:

- A fully functional mobile application.
- User guides and documentation.



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Timeline

Phase	Week 1	Week 2	Week 3
Planning			
Design			
Development			
Testing			
Deployment			

System Architecture

System Components

1. Mobile Application (Frontend)

- **Platform:** Android
- **Framework:** Android Studio
- **Language:** Java
- **Purpose:** Provides a user interface for tourist to interact with the system.

2. Backend Server

- **Platform:** MongoDB Atlas
- **Language:** JavaScript (Node.js)
- **Purpose:** Hosts the API endpoints and handles authentication

3. Database

- **Platform:** MongoDB Atlas
- **Purpose:** Stores user information, and authentication.

4. Authentication Service

- **Platform:** Authentication



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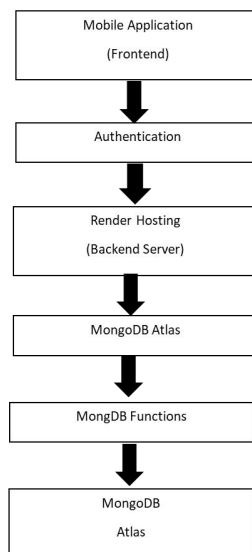
- **Purpose:** Enable secure login and logout processes and manage user authentication.

5. Hosting Service

- **Platform:** Render Hosting.
- **Purpose:** supports connecting to databases in MongoDB Atlas and hosting the backend server.

Data Flow Diagram

Below is a simplified Data Flow Diagram illustrating the main interactions within the Tourist App system:



Technology Stack

1. Frontend:

- **Platform:** Android
- **Language:** Java
- **IDE:** Android Studio

2. Backend:



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- **Platform:** MongoDB Functions
- **Language:** JavaScript (Node.js)

3. Database:

- **Platform:** MongoDB Atlas

4. Authentication:

- **Service:** Authentication

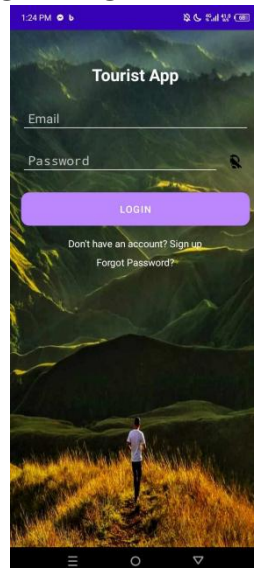
5. Hosting:

- **Service:** MongoDB Atlas

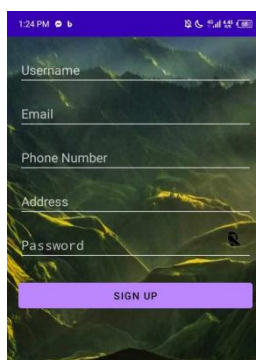
Design

Wireframes

1. Login Page:



2. Sign Up Page:



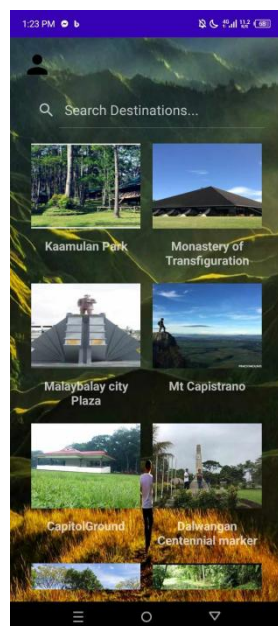


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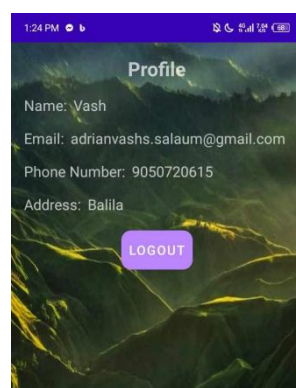
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3. Home Page:



4. Profile Page:



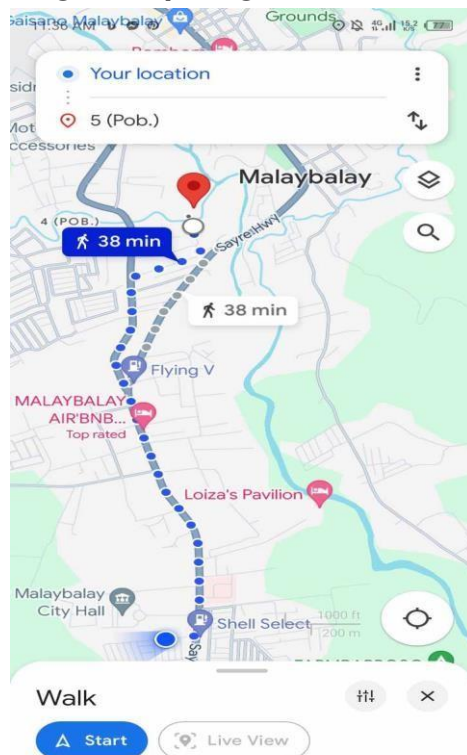


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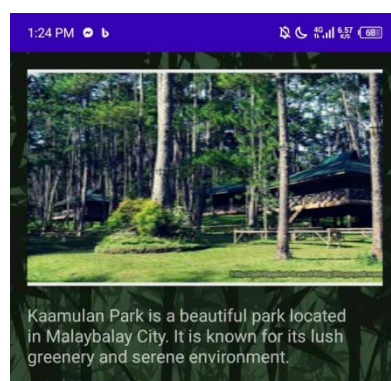
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5. Google Map Page:



6. Tourist Description Page:





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7. Recover Password Page:

A mobile app UI mockup for a "Recover Password" page. The screen has a teal background. At the top, there's a status bar with the time "1:24 PM" and various icons. Below the status bar, the text "Email Address" is displayed above a white input field. Underneath the input field is a purple button with the text "RECOVER PASSWORD" in white. At the bottom of the screen, there's a black navigation bar with three white icons: a hamburger menu, a circle, and a downward arrow.

UI/UX Design

The UI/UX design focuses on creating a user-friendly and aesthetically pleasing experience for users. Key design principles include:



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1. Consistency:

- Precisely use of colors, fonts, and button styles throughout the application.

2. Accessibility:

- This includes appropriate contrast ratios, and user-friendly navigation.

3. Responsiveness:

- Design the app to be responsive and adaptable to different screen sizes and orientations.

Conclusion

Project Recap

The Tourist App project aimed to develop a mobile application that facilitates tourist spots by guiding tourists into the location of the designated area. The project involved:

- Designing and developing an Android application using Java and Android Studio.
- Implementing a secure authentication system.
- Integrating MongoDB Atlas to manage and synchronize application data in real-time.
- Hosting the backend services using Render Hosting.

Lessons Learned

1. Use of Render host Application:



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- Ensuring application operates smoothly and efficiently requires taking many important measures when using Render to host applications. Relying on its scalability and simplicity, render can be applied to a multitude of tasks, ranging from basic webpages to intricate APIs.

2. User-Centered Design:

- Throughout the design process, design that gives end users' wants and preferences.

3. Authentication:

- Implementing secure authentication mechanisms and proper data encryption for protecting user data.

Acknowledgments

We would like to thank everyone who made a contribution to the Tourist App project:

- **Development Team:** For their dedication and hard work in building the application.
- **Design Team:** For producing fascinating and user-friendly designs.
- **Project Managers:** For organizing the work and guarantee its timely completion.



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Documentation

User Manual

System Requirements

- Operating System: Android 5.0 and above
- Internet Connection: Stable internet connection required.
- Installation

1. Visit this website Tourist App (touristapp-five.vercel.app).
2. Click on the "Download" button.
3. Once you have downloaded the APK, you can proceed with the installation.

User Guide Sign

Up and Login

1. Sign Up:

- Open the Tourist app.
- Click on "Sign Up".
- Fill in the required details:
Username, Email, PhoneNumber, Address and Password.

2. Login:

- Open the Tourist app.
- Enter your registered email and password

Technical Documentation Architecture

- Platform: Android Studio
- Language: Java



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- Database: MongoDB Atlas
- APIs: Google Map API and Weather API

Database Schema

Users Collection

Field	Type
User ID	String
Name	String
Address	String
Phone number	String
Email	String
Password	String

API Endpoints User Endpoints:

- POST /signup: Register a new user.
- POST /login: Authenticate a user.
- PUT /comments: Comment for users.

REFERENCES

Nasir, M.N.M., Mohamad, M., Ghani, N.I.A., & Afthanorhan, A. (2020). *Testing mediation roles of place attachment and tourist satisfaction on destination attractiveness and destination loyalty relationship using phantom approach. Management Science Letters*, 10(2), 443-454.
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