Abstract

Tourism is a vital industry that significantly contributes to the economy of many countries. In our current day, social media became a main source of information for travelers seeking recommendations and reviews about various destinations. However, the current social media platforms often lack dedicated spaces that focus solely on promoting tourism. The purpose of this report is to address the development of a social media app along with an admin panel webpage. The primary objective behind this project is to provide a tourism-oriented platform that fosters user engagement within the travel and blogging community. This app will go beyond standard social media features, allowing users to share travel experiences, interact with other travelers and tourism-related pages, and discover new destinations.

The problem countered by this project is the scarcity of social media platforms that promote tourism which creates a struggle for travelers to find communities that shares their interests and offers valuable insights. Additionally, the existing platforms lack authenticity, unbiased opinions. These platforms market and sponsor content that neglect negative aspects of a location, which portrays an idealized picture of the place. Hence, leading to unrealistic expectations and potential disappointment.

This project aims to address these issues by developing a social media platform specifically designed to promote tourism. The platform will focus on providing travelers with a place to share, chat, discover authentic reviews and information about various destinations. By offering a community of genuine travel enthusiasts and bloggers, the platform will serve as a reliable source for people to explore new places confidently. Alongside with the platform, the accompanying admin panel will serve as a way of filtering and moderating content to keep the app’s space safe, positive, and to enforce the application’s policies.

The app while incorporating standard social media platform features such as likes, comments, and chats, offers some unique features like posting your own experience, moments in the form of an album and it goes by the name ‘activity’. An activity is either a user’s documentation to a certain place (or an event in it) regardless of him owning the place or not, or a capturing of his experience and moments in this place. An Activity is made up of a bunch of media with detailed descriptions, is it basically the pillar of the application where everything from descriptions, critiques, and information is done. Activities similar to posts, can be liked and commented on, also they can be bookmarked.

Furthermore, activities are categorized by their home cities and types each into a city and an activityType respectively. This approach makes the app more organized, the search easier, and the usage friendly.

This project promises quite well results. The app provided users with a well tourist-oriented community that shares true unhindered opinions and offer valuable insights about destinations.

In conclusion, this project faces the void in tourism, blogging, and travelling that the other platforms don’t take put in their considerations. The project’s approach delivers a community that ensures valuable interactions where unbiased, unsponsored endorsements and insights, descriptions, information for famous destinations are given.

General Introduction

The importance of this project is reflected by the lack of social media platforms that shed light on tourism and exploration directly and fairly. This lack escalates the need to a community where travelers among users can interact with each other, post their honest opinions on different locations, and exchange information. This project ensures all of the above problems are solved by supplying an application that has the same anatomy and backbone of modern social media platforms with some extra perks. Along with an admin panel that is responsible for monitoring and moderating the content for a friendly, positive, and policy abiding environment.

The development process for this project follows a systematic and structured approach. It begins with requirement gathering which is identifying the key features and functionalities of the social media platform and the admin panel side by side with the preferences and necessities of potential users. Then the development phase starts. It involves the creation of a user-friendly interface implementing all the functionalities. Then, the project is tested heavily and sent to users to obtain feedback to allow more improvement. Finally, the project ends with an evaluation of the results, effects, and recommendations for more improvement and better versions to come.

**Summary of Chapters Included in the Report:**

**1-System Planning:** Chapter 1 outlines the project’s aims, objectives, scope, subsystems, and development environment. It sets the stage for the subsequent chapters, providing the essential groundwork for the successful creation and deployment of the app.

**2-Related Work:** Chapter 2 reviews existing social media platforms, emphasizing their similarities and differences relative to our project. This chapter provides the context and inspiration for our project, laying the groundwork for understanding its position within the broader social media landscape.

**3-Requirements Analysis:** Chapter 3, "Requirements Analysis," focuses on identifying and evaluating the key requirements for the social media app. This process is crucial for guiding the design and development of a high-quality system. Through methods such as research and observation, we obtain valuable insights into the project's needs and complexities. The chapter also features visual tools like use case diagrams, class diagrams, and DFDs to facilitate requirements validation and communication. By prioritizing requirements analysis, we ensure our solution aligns with the client's vision and objectives, laying the groundwork for successful system design and development.

**4-System Design**: Chapter 4 explores the system design phase of the project. It describes the process of defining the system's architecture, components, modules, interfaces, and data structures to fulfill the specified requirements. The chapter also presents an overview of the data dictionary, detailing the database structure, including field names, data types, descriptions, keys, and references.

Furthermore, the chapter presents the Entity-Relationship (ER) diagram for both the website and the mobile app. These diagrams illustrate the flow of data and depict the relationships between the various tables in the system. The ER diagrams highlight the connections, such as one-to-one, one-to-many, and many-to-many relationships, which are determined based on specific project requirements.

The chapter concludes by showcasing the ER diagrams for the website and the mobile app, providing a visual representation of the data structure and table relationships.

In summary, Chapter 4 provides an in-depth understanding of the system design process, detailing the data dictionary, ER diagrams for the website and mobile app, and the project's overall architecture.

**5- Implementation**: Chapter 5 centers on the project's implementation, discussing the tools, techniques, and languages employed for both website and mobile app development. It highlights the significance of choosing the right tools to ensure a seamless user experience.

**6**- **Testing and Results:** Chapter 6 of this project focuses on Testing and Results, detailing User Tests conducted for both the website and mobile app. The User Test for the website examines performance across tested pages, while the mobile app's User Test evaluates user interaction and navigation through its features and screens. Additionally, the Admin Test assesses the functionality of the website's admin panel pages. This chapter provides valuable insights into the functionality, usability, and user experience of both platforms, offering opportunities for further refinements as necessary.

**Chapter: 1 System Planning**

**1.1 Introduction**

This chapter serves as an introduction to the project's aims, objectives, and scope. It provides an overview of the project's modules.

**1.2 Project Aims and Objectives**

Mashwerna, a social media app aims to add a platform where users can interact, get authentic reviews for destinations far from sponsored and paid content. The main objectives of the project are to promote tourism, provide a platform for users to share their travel experiences, reviews, and recommendations.

**1.2.1 Aim: Promoting Reading Habits and Community Engagement**

The primary aim of the project is to promote a safe, authentic community for tourists, bloggers, enthusiasts… encompassed with standard social media features. By providing an online platform for them to connect, share recommendations, and chat.

**1.2.2 Objectives:**

**1.2.2.1 Developing a Website and Mobile App for Mashwerna**

To achieve the project's goals, a website and a mobile app will be developed. These platforms will serve as a platform where users can interact, post, inquire from each other.

**1.2.2.2 User-Friendly Interface**

The mobile app features a user-friendly interface that allows users to easily browse through the platform. They will be able to search for activities, cities, view their details, follow users, comment and like activities and posts, create their own, bookmark activities, and chat.

**1.2.2.3 Admin Panel for Content Management and User Moderation**

To ensure smooth operation and user safety, an admin panel will be implemented. This panel will empower administrators to monitor and moderate user content, enforce policies, guidelines, and maintain a positive and inclusive environment for all users.

**1.3 Project Scope:**

The project is a means to develop an online platform where users can interact, get authentic reviews for destinations far from sponsored and paid content. The platform consists of the following modules:

**1.3.1 User Subsystem:**

**-Guests: Guests can only browse through the app with no other action.**

- **Guest Registratio**n: A guest can create an account and become a user.

- Users can chat with, follow other members.

- Users can create, update, delete their own activities, and comment, like, bookmark activities.

- Activity owners can delete comments on their activities.

- Users can manage their account settings, update their profiles, and control their personal information.

**1.3.2 Admin Subsystem:**

- Activity and Post Management: Admins can view all activities of users and delete inappropriate ones.

-City Management: Admins can search, view, create, edit, and delete cities.

- Activitytypes Management: Admins can search, view, create, edit, and delete activitytypes.

- Comment Management: Admins can view all comments on activities, delete all inappropriate comments.

- User Management: Admins can search users, promote/demote them, and delete users based on their behavior or violation of rules.

**1.4 Development Environment**

**1.4.1 Introduction: Programming Languages, Database, and Software**

In this section, we will introduce the programming languages, database, and software used to develop the Mashwerna platform. These technologies play an important role in building both the website and mobile app, ensuring their functionality and performance.

**1.4.2 Programming Languages**

The project utilizes different programming languages for the website and mobile app development. Let's explore each of them:

**1.4.2.1 Website - Frontend: React.js**

For the website's frontend development, React.js is used as the primary programming language. React.js is a popular JavaScript library that allows for the creation of interactive and dynamic user interfaces. It provides a component-based approach and a virtual DOM for efficient rendering, resulting in a smooth user experience.

**1.4.2.2 Mobile App - Frontend: Flutter**

Flutter is chosen as the framework for the mobile application frontend development. Developed by Google, Flutter's cross-platform capabilities allow developers to write code once and deploy it on both Android and iOS platforms using the Dart programming language. Its fast development cycle with hot reload enhances productivity by enabling instant feedback on UI changes. Flutter's extensive widget library ensures a native look and feel across devices, supporting smooth animations and transitions essential for delivering a responsive and visually appealing user experience. Its reactive framework architecture and strong community support further contribute to building a robust and modern mobile application efficiently for the project.

**1.4.2.3 Backend: Laravel**

Laravel is employed as the backend framework for the app and website. Laravel is a powerful server-side PHP framework designed to simplify web development with clean, expressive syntax. Its comprehensive set of tools and features, including robust authentication, efficient API handling, and seamless database interaction, make it an ideal choice for managing server-side operations. Laravel's modular architecture and built-in functionalities ensure the application is secure, scalable, and easy to maintain, significantly benefiting the project's overall efficiency and effectiveness.

**1.4.3 Database**

To fetch and store data, phpMyAdmin is used. phpMyAdmin is the go-to database management tool for PHP-based backend systems. It provides a user-friendly web interface to administer MySQL databases, seamlessly integrating with PHP for efficient data handling and dynamic content generation in web applications.

**1.4.4 Software**

**1.4.4.1 Visual Studio Code**

For the website and app development, Visual Studio Code is utilized as the software platform. It is a lightweight and flexible code editor renowned for its extensive features such as syntax highlighting, code debugging, integration with version control systems, and a diverse set of tools for both frontend and backend development.

**1.5 Summary**

This chapter provides an overview of the project's scope, objectives, and aims, as well as an in-depth description of the development environment, encompassing the chosen programming language, database, and methodology utilized.

**Chapter 2: Related Work**

**2.1 Introduction**

To understand the context of our app, this chapter dives into existing projects that embrace features, solutions, and aspects similar to our project.

**2.2 Similar Platforms**

**2.2.1 Commonalities with Our Platform**

There are several existing platforms that embrace similarities with Mashwerna. Among them, the most known are TripAdvisor, Yelp, and Lonely Planet. These platforms provide spaces for users to share recommendations and engage in discussions about destinations. They offer user reviews, ratings, and recommendations for travel destinations, restaurants, etc...

**2.2.3 Differences from Our Platform**

These platforms certainly have some social media elements. However, the dose of social media they offer is so small that it fails to capture the essence of true social interaction. They implement features like comments, forums, media adding, but they don't fully use the dynamic and interactive aspects of social media. These features are mainly used for descriptive purposes and fail to convey any feelings or moments, hence removing the whole social media experience.

**2.2.3 Why does Mashwerna Prevail**

While these platforms focus on providing comprehensive travel information, they often lack in the aspect of community engagement and can be influenced by advertisements and sponsored contents which affects the authenticity and visibility of user reviews. Additionally, they don’t offer the social media experience that Mashwerna provides, where users can interact in a more dynamic and personal way through features such as direct messaging, experience sharing. This social media integration stimulates a deeper connection among users, encouraging a richer exchange of travel experiences.

**2.3 Summary**

In this chapter, we reviewed various travel platforms and social networks for travelers. Although these platforms share some functionalities with our app, Mashwerna still proves different and shows that its differences are what makes it unique. The distinctive and engaging experience for users.

Mashwerna adds travel reviews, social networking, and interactive features into a single platform. Users can connect with other travel enthusiasts, explore recommended destinations, and share their experiences.

These interactions and updates, contributed by our community, offer fresh insights and inspiration for travel plans, making the travel experience more enriching.

**Chapter 3: Requirements Analysis**

**3.1 Introduction**

This chapter will outline the system requirements and present its diagrams, including Use Case Diagrams and Data Flow Diagrams (DFD) at levels 0 and 1.

**3.2 Requirements Gathering**

Requirements gathering is essential in any project. It plays a crucial role in system specification and design by laying the features and characteristics of the system that will be developed.

In our analysis process for the Mashwerna platform, we used specific techniques to gather information. These techniques helped us understand the unique needs of our platform. The techniques we employed are:

**3.2.1 Research**

Research has been an essential part in the process. We explored various sources, including different social media platforms, tourism-oriented websites and apps, to gather information. By analyzing established platforms like Yelp and Instagram, we retrieved valuable data about their features, functionalities, and user interactions clarifying the specific requirements for developing our platform.

**3.2.2 Observation**

Observation also, is a crucial part of the process. We monitored user interactions and activities, both in person and within online communities. By participating in discussions and observing user behavior, we gained valuable insights into user needs, preferences, and engagement. This approach helped us understand the dynamics of interactions, the importance of user participation, and the features that foster a vibrant community.

**-** **Mobile App Overview:**

The social media app offers a seamless user experience. Users can start as guests or register for an account through a simple process requiring a profile picture, username, and a password, guests are restricted to view anything in the app and to search. When they register and become fully-fledged users, they can use additional features such as following, posting, commenting, chatting …

Additionally, users also gain extra privileges like updating their profile information, including their password, and full control over their activities. They can delete, edit, and moderate comments over them.

**-Website Overview:**

**The website is dedicated for admins to moderate and revise content that is being posted. With the help of the website, admins can search and delete users, activities, activities’ comments. Also, admins create/manage the categories that activities rely on (cities, activity types) meaning they have full access over them.**

**3.3 Use Case Diagrams**

A use case diagram visually depicts interactions among system elements, helping to identify and organize system requirements. This section presents the use case diagrams for both the website and mobile application of our project.

**3.3.1 Website: Use Case Diagrams**

**3.3.1.1 Overview Users Use Case Diagram**

Figure 1: Website User Use Case Diagram

**3.3.1.2 Overview Administrator Use Case Diagram**

The Magic Book Club

C

Figure 2: Website Admin Use Case Diagram

**3.3.2 Mobile App: Use Case Diagram**

Figure 3: Mobile App Use Case Diagram

**3.4 Data Flow Diagrams (DFD)**

A data flow diagram (DFD) visually represents how data moves through a system, focusing on the flow of information, inputs, outputs, and storage locations.

**3.4.1 Context Diagram (DFD level-0)**

The Context Diagram represents the system as a single high-level process and displays its relationships with external entities.

**3.4.1.1 Website: Context Diagram (DFD level-0)**

Figure 8: Website Context Diagram (DFD Level-0)

**3.4.1.2 Mobile App: Context Diagram (DFD level-0)**

Figure 9 Mobile App Context Diagram (DFD Level-0)

**3.4.2 DFD Level 1 Diagram**

Level 1 DFD gives an overview of the full system in more details.

**3.4.2.1 Website: DFD Level 1 Diagram**

Figure 10: Website DFD Level 1 Diagram (part 1)

**3.4.2.2 Mobile App: DFD Level 1 Diagram**

Figure 12: Mobile App DFD Level 1 Diagram

**3.5 Summary**

This chapter outlined the project requirements and presented use case, and DFD diagrams. Gathering detailed requirements is essential for producing a high-quality system, making the process of requirements analysis crucial.