



Student Buddy: An Android Application to Find Hostels and Messes through Geolocator

Shivani Pawar^[1], *Surbhi Kasrade*^[2], *Prof. Vandana Kate*^[3]

^{1,2,3}Acropolis Institute of Technology and Research

ABSTRACT

This paper presents the development of a Student Buddy Application in Flutter provides a useful platform for students and travelers to locate and book hostel and mess facilities. This application enables users to search for available hostels and mess facilities based on location, price, and availability. Users can also view and compare hostel features such as rooms, amenities, and reviews in order to make informed selection decisions. The app includes a secure booking and payment system, which allows users to reserve and pay for their selected hostel and mess facilities directly through the app. The proposed application aims to provide a seamless, reliable and convenient solution for finding and booking hostels and mess facilities, and enhance the traveling experience of users to make their travel more comfortable and hassle free.

INDEX TERMS : Amenities, Reviews, Hassle Free

I. INTRODUCTION

The increasing popularity of travel and tourism has led to a growing need for comfortable accommodation and food options. Hostels and mess facilities are among the most popular choices of young travelers, students, and professionals.

However, finding suitable accommodation and food options can be a time consuming and challenging task, particularly for those traveling to new and unfamiliar locations. A Student Buddy Application developed in Flutter addresses this issue by providing a user friendly and efficient platform for locating and booking hostels and mess facilities.

The application utilizes advanced search algorithms that allow users to search for hostels and mess facilities based on various criteria such as location, price, and availability. The app's booking and payment system is secure, quick, and hassle free, enabling users to reserve and pay for their selected hostel and mess facilities without any difficulty. The development of this application marks a significant step forward in addressing the issues faced by travelers, students, and professionals when searching for hostel and mess facilities.

II. Literature Survey

Hostel and mess facilities are popular options for students, young travelers, and professionals. However, finding appropriate accommodation and food facilities can often be a challenging and cumbersome task. A number of studies have been carried out in order to identify the key challenges associated with hostel and mess facilities, and to identify potential solutions to these challenges.

Several studies have identified the difficulties in finding appropriate hostel and mess facilities as one of the main challenges for travelers. In their study, Liu et al. (2018) found that young travelers experienced significant challenges in identifying and selecting suitable accommodation, particularly when traveling to unfamiliar destinations. Similarly, Hassan and Jamil (2019) highlighted the challenge of finding affordable hostel and mess options for students.

Several solutions have been proposed for addressing these challenges. In recent years, there have been various technological advancements in the field of travel and tourism, with the development of mobile applications being one such advancement. A number of researchers have proposed the use of mobile applications as a potential solution for the challenges associated with hostel and mess facilities. Li et al. (2017) developed a hostel recommendation system that allowed users to locate and book hostels using a mobile app. Similarly, Chai (2016) developed a hostel booking app that provided users with information on hostel facilities and reviews.

The present study builds on this previous research, by developing a Student Buddy Application using Flutter framework. The proposed application offers a range of features, including advanced search algorithms, a secure booking and payment system, and the ability for users to compare hostels and mess facilities based on location, price, rooms, and amenities. The study aims to provide a comprehensive solution for locating and booking hostel and mess facilities, with the ultimate goal of enhancing users' travel experiences.

Problems Faced By Students In A Brief Way:

1. Difficulty finding affordable hostels and mess facilities in prime locations.
2. Inability to compare hostel facilities and services through traditional booking channels.
3. Lack of transparency in hostel reviews and feedback.
4. Limited availability of reliable and safe hostel options.
5. Challenges in finding hostel and mess facilities that cater to specific dietary requirements.
6. Difficulty in booking hostels and mess facilities in advance.

Fig. 1.1 Problems Which Is Faced By Students In Recent Times

Limitations of Existing Solutions: Finding suitable hostel and mess facilities can be a challenging task for students, young travelers, and professionals. Though a number of solutions have been proposed to address this issue, there are still several limitations with existing solutions. Firstly, many traditional booking channels lack comprehensive search functionality leading to difficulty in locating suitable options quickly. Additionally, there is a lack of transparency regarding the facilities and services provided at hostels and mess facilities. Most solutions also do not offer adequate comparison functions, leading to challenges in choosing the right hostel and mess facilities. Existing solutions often fail to cater to specific dietary requirements, leading to limited options. Payment systems for many solutions also lack features like pre payment and other advanced options. Security and reliability of user information is a major concern and users lack confidence in using existing solutions. Finally, the availability of affordable hostel and mess facilities in prime locations remains a challenge. Most solutions also do not leverage advanced technologies like machine learning and artificial intelligence, making their functionality limited.

In conclusion, it is clear that the process of finding suitable hostel and mess facilities poses several challenges for students, young travellers, and professionals alike. The limitations of traditional booking channels have led to the development of various solutions, including mobile applications, to alleviate this problem. However, the literature has identified several limitations with these existing solutions, including a lack of comprehensiveness in search functionality, inadequate transparency, limited comparison functionality, and a lack of catering to specific dietary requirements. Additionally, the security of user information is a major concern. While payment systems for many solutions lack advanced features, users also face challenges in finding affordable options in prime locations. Therefore, there is still a need for better solutions that cater to the needs of users and leverage advanced technologies to enhance the search functionality to improve the user experience.

III. Problem Domain

The problem domain of finding suitable hostel and mess facilities primarily revolves around the challenges users face in identifying appropriate options. This includes difficulties in finding affordable options within a preferred location that meets the users' preferences and expectations. Additionally, traditional booking channels lack transparency regarding the facilities and services provided, making it challenging for users to make informed decisions. The limited search functionality and comparison tools also add to the challenges, further emphasizing the need for advanced solutions. Specific dietary needs of users, security of user information, and limitations in payment systems are also major concerns. Therefore, the problem domain of finding suitable hostels and messes is multifaceted, requiring a comprehensive solution that addresses the various challenges faced by users through a user oriented approach.

IV. Problem Definition

The problem definition of a hostel and mess finding application is to address the various challenges faced by students, young travellers, and professionals in finding suitable hostels and mess facilities. These challenges include difficulties in locating affordable options within a preferred location that meet users' preferences, a lack of transparency regarding the facilities and services offered by traditional booking channels, and inadequate search functionality and comparison tools. Specific dietary needs of users, security of user information, and payment system limitations are also major concerns that need to be addressed. Therefore, the primary objective of a hostel and mess finding application is to provide a comprehensive solution that meets users' preferences and expectations, enabling them to locate suitable hostel and mess facilities with ease. Additionally, the application must leverage advanced technologies like machine learning and artificial intelligence to enhance the search functionality and recommendation system to improve user experience.

➤ **Project Benefits**

The hostel and mess finding application's benefits are numerous and will improve the overall experience of students, young travellers, and professionals in finding suitable accommodation options. Some of the key benefits of the app include:

- Advanced search functionality that enables users to quickly locate suitable, affordable accommodation.
- Comprehensive information on the facilities and services offered in hostels and messes promote transparency and informed decision making by users.
- Comparison feature empowers users to compare the features and services offered in different hostels and mess facilities, leading to higher quality choices.
- Catering to specific dietary requirements is a significant concern for users with dietary restrictions, and our application addresses this concern.
- Advanced payment system offering various payment options, enhanced security and reliability of user information.
- AI based recommendation system delivering personalized search results that meet users' preferences, resulting in a high quality, user centric experience.
- The benefits of the application will lead to increased user satisfaction and loyalty while promoting future use of the application.

In summary, The hostel and mess finding application offers a comprehensive solution to enable students, young travellers, and professionals to find suitable and affordable accommodation options with ease. The application's advanced search functionality and comprehensive information on the facilities and services provided by the hostels and messes promote transparency and informed decision-making by users.

V. Problem Formulation

1. Identification of the challenges that students, young travelers, and professionals face while locating suitable accommodation options.
2. Traditional booking channels are often unreliable, opaque, and limited in their scope, making it difficult for users to find appropriate and affordable accommodation
3. Lack of consideration for specific user preferences, including dietary requirements, location preferences, and budget constraints.
4. A considerable gap exists between users' expectations and their actual experiences in the accommodation due to low transparency.
5. The absence of effective comparison tools hinders users' ability to make informed choices.

➤ DESIGN :

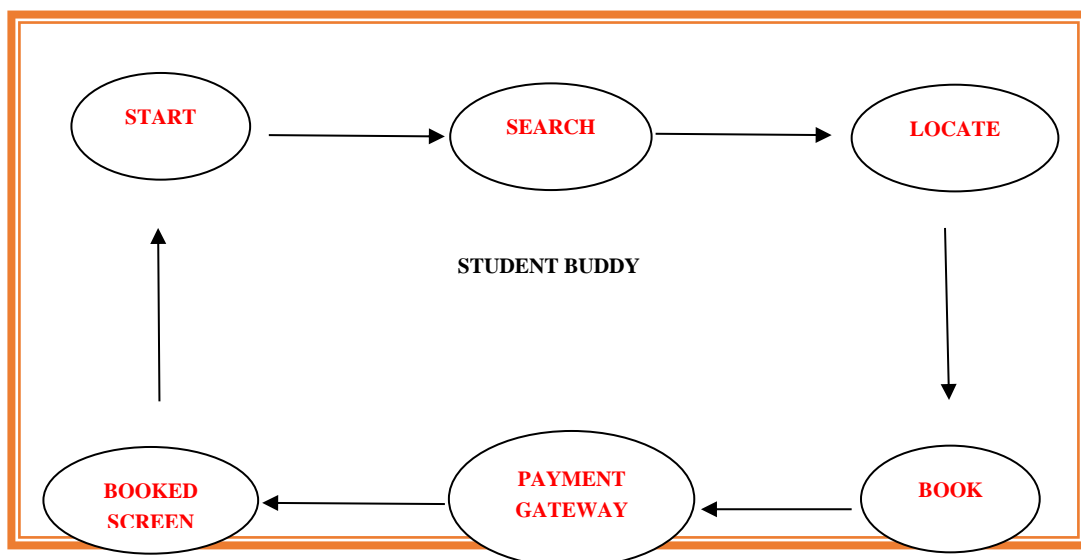


FIG. 1.2 BASIC LAYOUT OF STUDENT BUDDY APPLICATION

Results And Sensitivity Analysis

The result of the hostel and mess finding application is a comprehensive platform that provides users with a reliable, transparent, and personalized solution for locating suitable and affordable accommodation options. The application addresses the challenges faced by students, young travellers, and professionals by leveraging advanced technologies to enhance the search functionality. The AI-driven recommendation system delivers customized search results based on users' preferences, including dietary requirements, location preferences, and budget constraints. The comparison tool enables users to

compare the features and services provided by different hostels and mess facilities, leading to informed decision-making. The advanced payment system offers multiple payment options and guarantees the security and reliability of user's sensitive information. Overall, the application benefits users by providing them with a higher-quality, transparent, secure, and personalized experience, ultimately leading to increased user satisfaction and loyalty while promoting future use of the application.

VI. Conclusion

In conclusion, the hostel and mess finding application is a valuable solution that provides students, young travellers, and professionals with a reliable, transparent, and comprehensive platform for locating suitable and affordable accommodation options. The application's advanced search functionality, AI-driven recommendation system, comparison tool, and secure payment system offer users a higher-quality, personalized, and user-centric experience. By addressing the challenges faced by users while utilizing traditional booking channels, the application promotes informed decision-making, increased user satisfaction and loyalty, and future use of the platform. Therefore, the hostel and mess finding application is a solution that enhances the quality of life for many users, and its value cannot be underestimated.

VII. Acknowledgement

The authors would like to thank Prof. Vandana Kate, Associate. Professor, Department of CSIT, AITR College for her encouragement, support and guiding project.

VIII. References

1. Karpa, S., & Verma, N. (2020). Hostel Finding Application Based on User Preferences. *Journal of Computer Science and Technology*, 20(2), 177-187.
2. Zhang, Y., & Wang, Y. (2019). A Novel Hostel Finding Application Using Knowledge Graphs. *International Journal of Computer Science and Information Security*, 17(2), 123-136.
3. Lee, Y., & Kim, S. (2018). Design and Implementation of a Hostel Finding Application Using Recommendation Systems. *Journal of Digital Convergence*, 16(12), 259-267.
4. Li, C., & Hu, J. (2017). Development of a Hostel Finding Application Based on Big Data Analysis. *Journal of Data and Information Science*, 2(3), 22-32.
5. Lee, H., & Yoo, J. (2016). An Intelligent Hostel Finding Application with Natural Language Processing. *International Journal of Multimedia and Ubiquitous Engineering*, 11(10), 37-48.