

My City Information Mobile App

A PROJECT REPORT

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SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE


This is to certify that the Project report “MY CITY INFORMATION MOBILE APP” being submitted by “JATIN KUMAR H, SHIKHAR RAI, SOURAV TIWARY” bearing roll number(s) “20201CCS0142, 20201CCS0059, 20201CCS0004” in partial fulfilment of requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.




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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **MY CITY INFORMATION** in partial fulfilment for the award of Degree of **Bachelor of Technology in Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Dr. SUDHA Y, Assistant Professor, School of Computer Science Engineering & Information Science, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

In the fast-paced world we live in, where our smartphones are like trusted companions, there's a noticeable gap – a lack of a friendly and comprehensive city guide app designed specifically for the vibrant cities of India. Introducing the "My City Guide App" — not just an app, but your reliable friend that makes accessing vital city-related information a breeze.

Picture this app as your go-to companion, helping you navigate the diverse landscapes of Indian cities. Whether you're a local seeking essential services or a visitor exploring new spots, this app is tailored to meet your needs. It simplifies the process of discovering places to visit, finding local services, and ensuring your safety on the go. By harnessing the power of mobile tech, it aspires to be the one-stop solution for all your city-related questions.

Our project is on a mission to fill the gap in the Indian app market by offering a comprehensive and user-friendly resource for city information. More than just a data hub, it's a dynamic platform that integrates real-time updates and content from fellow users, creating a lively community-driven experience. With support for multiple languages, we ensure inclusivity, breaking down language barriers for users from different backgrounds.

But this app is more than just a tool; it's a community builder. The interface is designed for easy navigation, and features like personalized recommendations based on your preferences enhance your overall experience. It goes beyond information retrieval, allowing you to make transactions, bookings, and reservations for various services, providing a complete experience for those seeking convenience in their city interactions.

The "My City Guide App" is not just a tech innovation; it's a positive force

reshaping how we connect with and understand urban spaces in India. By combining information, technology, and community interaction, it's ushering in a new era in city-centric mobile applications. This app is set to redefine the relationship between individuals and their cities, empowering them with knowledge, connectivity, and convenience, and reshaping the story of urban living in our modernized world.

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CHAPTER-1

INTRODUCTION

My City Information - Your Friendly Urban Companion is not merely an app; it represents a groundbreaking initiative poised to transform the way individuals engage with the bustling cities of India. In our rapidly evolving, digitally connected world, where smartphones have become an extension of our daily lives, this app emerges as a beacon, bridging the gap in the Indian app market with a warm and comprehensive city guide tailored specifically for the diverse urban landscapes.

Envision "My City Information" as your dependable companion, adept at guiding you through the intricate tapestry of Indian cities. Whether you are a local seeking essential services or an explorer eager to unearth local gems, this meticulously designed app is geared to meet your distinct needs. It seamlessly facilitates the exploration of intriguing places, locates essential services, and ensures your safety on the move. Leveraging cutting-edge mobile technology, "My City Information" aspires to be the quintessential solution for all your city-related inquiries.

Our mission extends beyond just being an information repository. "My City Information" is a dynamic platform that integrates real-time updates and insights from its user community, fostering an engaging, community-driven experience. With support for multiple languages, we prioritize inclusivity, eliminating linguistic barriers for users from diverse backgrounds. Yet, "My City Information" goes beyond being a utilitarian tool; it's a community builder. The user-friendly interface is intuitively designed for effortless navigation, and features such as personalized recommendations based on individual preferences enhance the overall experience. More than a passive observer, the app empowers users to make transactions, bookings, and reservations for various services, providing a holistic experience for those seeking convenience in their city interactions.

"My City Information" emerges not just as a technological innovation but as a positive force reshaping how we connect with and comprehend urban spaces in India. By seamlessly integrating information, technology, and community interaction, it heralds a new era in city-

centric mobile applications.

As we embark on this transformative journey, our commitment is to exceed the expectations of our users. "My City Information" is not just an app; it's a comprehensive and user-friendly solution, a virtual companion tailored to enhance your experience of navigating the vibrant cities of India. In embracing this initiative, we look forward to creating a lasting impact on how individuals connect, explore, and thrive in urban environments.

CHAPTER-2

LITERATURE SURVEY

2.1 Mobile Application Development with Android

2.1.1 Introduction

Android's open-source nature represents a gateway to boundless creativity and innovation, enabling developers globally to harness its robust framework for a wide array of devices, transcending the realms of traditional smartphones and tablets. Its versatility extends its reach to smartwatches, ereaders, set-top boxes, and an expanding spectrum of gadgets. Fueled by a Linux-based core, Android integrates an operating system, middleware, and pivotal applications, fostering an interconnected digital ecosystem tailored for seamless user experiences across diverse platforms. This collaborative synergy among over 30 companies underscores a concerted effort to democratize the mobile landscape, fostering an environment ripe for technological advancements. This collective initiative continuously propels the evolution of Android, driving cutting-edge developments and shaping the trajectory of mobile technology. The soaring demand for mobile application development serves as a testament to Android's significance, presenting an abundance of opportunities for developers and businesses alike. This demand not only reflects the platform's popularity but also underscores its pivotal role as a cornerstone of modern technological innovation, fueling a dynamic market landscape characterized by ever-evolving possibilities and transformative advancements.

2.1.2 Advantages

Using an Android phone is a breeze, offering a user-friendly experience. The convenience of portability makes it an ideal companion for individuals on the move. Android ensures robust security features, providing users with a sense of confidence. Personalization is at its peak, allowing users to tweak screen displays through a variety of applications. What's noteworthy is the platform's versatility; Android operates seamlessly across different devices. The ability to multitask stands out as a major advantage. With support for various Google services, the overall user experience is enriched. Timely and efficient notifications contribute to a smoother interaction. Over time, Android has evolved into a mature and reliable platform.

2.1.3 Disadvantages

Android phones, like any technology, are not immune to external threats, posing a vulnerability. The system's numerous processes, while efficient, may lead to occasional slowdowns. When the memory is full, users might experience a decrease in performance.

Inconsistencies in the design of apps across the platform are noticeable. Stability concerns are raised, with occasional reports of system crashes.[1]

2.2 Mobile Application Development for Tourist Guide in Pekanbaru City

2.2.1 Introduction

The rapid development of information and communication technology makes tourists easily informed. Internet ease makes travelers find interesting information and planning their activities. The last decade saw a revolution in information communication technology, which not only changes the everyday behavior of people but also affects the way they interact with each other. One of the areas of human life that desperately needs information is the field of tourism. Whether in terms of entrepreneurs or stakeholders who want to market their tourism products and tourists' people who want to enjoy their products.

2.2.2 Research Methodology

Data collection methods used to use interviews, library studies and field observations. The interview is done to get information about the details of the tourist spots and observations to see where the attractions are directly. Methods of collecting data using interviews and field studies. The interview is done to the tourist attractions to get information about the tourist spots. The study of the library is useful to look for references from previous research. In addition, this research also uses KNN algorithm in its implementation. The KNN algorithm is used to classify objects based on the learning data that are closest to the object.

2.2.3 Implementation

The implementation process is done using Sublime Text's code Editor using Android studio as the application's framework. The display of the application Layout page is created in several XML files containing the respective content, among others Activity_kuliner, Activity_maps, Activity_main, Activity_pasar_modern, Activity_pasar_tradisional, Activity_wisata_alam, Activity_wisata _ Culture, Activity_detail_wisata, Activity_detail_pasar, Activity_detail_kuliner, Row_kuliner, Row_pasar and Row_wisata.

2.2.4 Advantages

Explore Pekanbaru city effortlessly with a wealth of information at your fingertips—discover tourist sites, markets, and culinary gems. This app ensures convenient access to the details you need about Pekanbaru's attractions, making it a handy guide for locals and visitors alike. Easily navigate through the city and find exciting tourist spots, vibrant markets, and delightful culinary destinations.

2.2.5 Disadvantages

While providing information and directions to tourist attractions, there may be a slight GPS accuracy error, ranging from a minimum of 10 meters to a maximum of 40 meters. Additionally, the app's responsiveness in determining your location relies on a robust network signal and the surrounding conditions, influencing its speed in real-time positioning.[2]

2.3 Travel with us mobile application (IJCRT)

2.3.1 Introduction

While overall the mobile evolution has contributed to enhancing the travel factor at large, only little is known about how it's affected the on the go travel experience. Considering the scope of applications developed to provide information to the travelers and by observing the main features and problems? We came with the new ideas to fulfil the needs of travelers. o. In order to address this problem, we aim to uncover unfulfilled needs of travelers during their journey. Many applications are available for mobile devices and should be categorized by its purpose as entertainment, social web access, wealth and matches information, education and communications.

2.3.2 Research Methodology

Smartphone apps can be categorized by end use application or by technical functionalities. Wang et al. (2011) grouped tourism travel related apps into 12 application categories based on the information services provided, for example, destination guides, Food finder and local transportation. As a first step in analyzing how smartphone apps conceptually alter our understanding of tourism travel practice, this paper explores the technical functions embedded in apps. . At a conceptual level these apps reveal real-time spatial relationships and can provide estimates of arrival times to allow journey planning.

2.3.3 Implementation

Android studio: Android Studio is the official IDE for Android application development, based on IntelliJ IDEA. On top of the capabilities, you expect from IntelliJ.

Android Studio offers:

- Build variants and multiple apk file generation
- Code templates to help you build common application features
- Rich layout editor with support for drag and drop theme editing
- Lint tools to catch performance, usability, version compatibility, and other problems
- ProGuard and application-signing capabilities.
- Java programming: Java is a very powerful general-purpose programming language.

It is used to develop mobile and desktop applications, big data processing, embedded systems, etc. According to Oracle, the company that owns Java, Java runs on 3 billion devices worldwide, which makes Java one of the most popular programming languages.

2.3.4 Advantages

Experience the simplicity of this application, designed with user-friendly features that make it easily understandable for everyone. Say goodbye to the need for paid tourist guides; this app offers a cost-free alternative, making it a budget-friendly choice for travelers. As the tourism industry continues to flourish, the demand for applications like this one is expected to soar, promising an even brighter future for user-friendly travel solutions.[3]

2.4 CITY GUIDE FOR ANDROID

2.4.1 Introduction

The research paper at hand focuses on the development of a specialized city guide application uniquely crafted for the Android platform, leveraging its advantageous open-source nature and support for context aware functionalities. Outlined within are precise research objectives encompassing thorough user analysis, emphasis on user-friendly design principles, and the incorporation of distinctive features like Google Maps. Notably, the paper emphasizes the underutilization of Android in addressing the specific needs of tourists, highlighting a gap in the market. To fill this void, the authors propose the creation of a bespoke Android tour guide application customized for a designated area in Canterbury, UK. This targeted approach aims to address the nuanced preferences of users navigating the region, showcasing the potential

for tailored Android applications to enhance user experiences in specific geographic contexts. By harnessing the strengths of the Android platform, the research endeavors to demonstrate the platform's capability in delivering contextually relevant solutions, ultimately aiming to elevate smartphone technology's efficacy in catering to the diverse needs of both tourists and local explorers.

2.4.2 Architecture

The app is divided into three main components: Main Activity, Location Provider, and Google Maps API. The Main Activity provides the user with access to all of the other features, the Location Provider gets the user's current location, and the Google Maps API provides the app with access to Google Maps.

2.4.2 Advantages

This app is designed to be user-friendly, offering a seamless and enriching experience for users. It utilizes various technologies, like the Google Place API and JSONParser, to provide users with information about interesting places and to help them plan routes. Affordability is likely since there are many free and open-source city guide apps available. Expect language diversity, as the app is likely to support multiple languages, mirroring the practice of other city guide apps. Regular updates will keep the app fresh with new features and content, ensuring an ever-improving user experience.

2.4.3 Disadvantages

Some users have suggested ways to enhance the app, such as adding more categories in the 'City Lens' and improving the accuracy of the 'Show Route' function. Concerns about privacy may arise, as the app might need access to the user's location. Depending on a stable internet connection could be problematic in areas with poor coverage. Additionally, using the app frequently may drain your device's battery, a common issue with apps of this kind.

Overall, the city guide Android app is a well-designed and useful tool for tourists. It is easy to use and provides a variety of features, such as the ability to find nearby places of interest, get directions, and share places with friends and family. However, there are a few areas where the app could be improved, such as by adding more categories in the 'City Lens' and by improving the accuracy of the 'Show Route' function.[4]

2.5 BUILDING MOBILE TOURIST GUIDE APPLICATIONS USING DIFFERENT DEVELOPMENT MOBILE PLATFORMS

The research paper undertakes an exploration of the complexities inherent in developing mobile tourist guide applications, drawing attention to critical challenges such as resource limitations and device compatibility issues. A key focus involves a comparative analysis between J2ME and Android as potential development platforms for these applications. The paper concludes that Android emerges as the preferred choice due to its superior power, adaptability, and extensive functionality, which better aligns with the demands and complexities inherent in crafting efficient tourist guide applications. Moreover, the paper presents a detailed framework centered on a user-centric system tailored specifically for Android-based tourist guides. This system emphasizes the incorporation of customization features and GPS-based functionalities, enabling personalized experiences and providing location-based information. By outlining this framework, the paper offers a practical and functional approach to address the specific needs of tourists and travelers, leveraging the capabilities of the Android platform to enhance their exploration and navigation experiences. In summary, the research paper contributes valuable insights into the multifaceted challenges encountered during the development of mobile tourist guide applications. It not only identifies these challenges but also proposes Android as an optimal platform due to its robust capabilities. Furthermore, by introducing a user-centric system tailored for Android-based tourist guides; the paper presents a tangible solution that harnesses the platform's strengths to create efficient and personalized applications. Overall, this research sheds light on the potential and intricacies of developing mobile tourist guide applications, offering a practical framework that emphasizes user satisfaction and functionality within the Android ecosystem.

2.5.1 Architecture

It shows four different architectures for mobile tourist guide applications, as well as the advantages and disadvantages of each architecture.

- a. **Traditional monolithic architecture:** This is the simplest architecture, where all of the application's code and data is contained in a single unit.

Advantages:

1. Developing and maintaining this architecture is straightforward and uncomplicated.

Disadvantages:

1. Scaling can be challenging.
2. The architecture is not very resilient to failures.
3. Implementing a microservices architecture introduces complexities.

- b. **Microservices architecture:** This architecture breaks the application down into a collection of loosely coupled microservices. Each microservice performs a specific task and is independent of the other microservices.

Advantages:

1. This architecture is more scalable and resilient to failures compared to a monolithic structure.

Disadvantages:

1. Development and maintenance are more complex.
2. Involvement of serverless computing architecture adds another layer of intricacy.

- c. **Serverless computing architecture:** This architecture uses serverless functions to perform the logic of the application. Serverless functions are managed by the cloud provider and are automatically scaled based on the application's needs.

Advantages:

1. This architecture is highly cost-effective and scalable.

Disadvantages:

1. Development and debugging can be more challenging.
2. Implementing a microservices architecture using serverless computing introduces additional complexities.

- d. **Microservices architecture using serverless computing:** This architecture combines the advantages of microservices and serverless computing.

Advantages:

1. Offers scalability to accommodate varying workloads.
2. Exhibits resilience to failures, ensuring consistent performance.
3. Proves to be cost-effective in terms of resource utilization.
4. Simplicity in development and deployment processes enhances overall efficiency.

Disadvantages:

1. Development and maintenance may be more intricate compared to a monolithic architecture.
2. Higher development costs associated with microservices and serverless computing architectures.
3. Operational complexity is increased with microservices and serverless computing.
4. Serverless computing architectures may lead to vendor lock-in, tying the system to a specific cloud provider.

2.5.2 Summary

In summary, the research paper serves as a roadmap through the complexities of developing mobile tourist guide applications, shedding light on challenges like resource limitations and device compatibility. Comparing J2ME and Android, it convincingly favors Android for its robust power, adaptability, and functionality, making it the preferred platform for crafting effective tourist guide apps. Additionally, the paper introduces a user-centric system tailored for Android-based guides, emphasizing customization and GPS-based features to cater to travelers' diverse needs. By offering practical insights and a concrete solution within the Android framework, this research not only identifies hurdles but also provides a clear pathway for leveraging technology to enhance tourists' exploration experiences. It stands as a testament to Android's potential in creating personalized and efficient mobile tourist guides, emphasizing user satisfaction and functionality in this dynamic domain of application development.[5]

2.6 DEVELOPMENT OF AN ANDROID-BASED TOURISM GUIDE (A CASE STUDY: SABANG CITY, INDONESIA)

2.6.1 Introduction

It is a research paper that describes the development of an Android-based tourism guide application for Sabang City, Indonesia. It discusses the importance of tourism promotion and how it can be used to increase tourist arrivals. It then goes on to discuss the limitations of traditional tourism promotion methods and how Android-based applications can be used to overcome these limitations.

The application was crafted using the Waterfall model, incorporating a structured development approach. It boasts several features tailored to enhance user experience,

including:

- Detailed information about the various tourist attractions nestled within the heart of Sabang City.
- Comprehensive details about transportation options and lodging providers available in Sabang City.
- A unique chat feature that facilitates seamless communication between users and the various tourism service providers in Sabang City, fostering a dynamic and interactive user experience.

It shows the results of a tourism e-guide application testing. The pie chart shows that the majority of the tests were successful (75%), while a small number of tests failed (15%) and were inconclusive (10%).

2.6.2 Advantages

Reach a Wider Audience: Android-based tourism guide applications are versatile and can be used on various devices, ensuring they can reach a broader audience of potential tourists.

1. **Provide a Personalized Experience:** These applications can utilize device data to offer a more personalized experience, recommending attractions and activities tailored to individual user interests.
2. **Offer Enhanced Features:** Leveraging the capabilities of different mobile devices, such as GPS, camera, and microphone, Android-based tourism guide applications can provide richer features and functionality.
3. **Reduce Development Costs:** Developing the application once for Android can lead to cost savings, as it can be deployed across multiple platforms.

2.6.3 Disadvantages

1. Development Complexity: Creating Android-based tourism guide applications can be more intricate compared to traditional tourism guide applications. The complexity arises from the necessity to ensure compatibility across a variety of devices and operating systems, adding an extra layer of development challenge.

2. Maintenance Costs: The ongoing maintenance of Android-based tourism guide applications may incur higher costs in comparison to traditional counterparts. Regular updates are essential to ensure compatibility with new devices and operating systems, contributing to

increased maintenance expenditures.

3. Security Concerns: Android-based tourism guide applications may pose security concerns due to potential vulnerabilities. Malicious actors could exploit these vulnerabilities to compromise user data or infect the user's device with malware. Addressing and mitigating these security risks becomes a critical aspect of developing and maintaining such applications

2.6.4 Summary

Overall, the advantages of Android-based tourism guide applications outweigh the disadvantages. Android-based tourism guide applications can provide tourists with a personalized and informative experience, and they can help to promote tourism and improve the tourist experience.[6]

2.7 My City Dashboard: Real-time Data Processing Platform for Smart Cities

2.7.1 Introduction

The paper presents a transformative concept where citizens contribute to the enhancement of city services by actively engaging in sharing information about urban issues, moving away from costly sensor-based solutions. It explores the creation of intuitive city dashboards accessible to users, offering real-time updates crucial for informed decision-making by municipal authorities. To navigate and interpret the vast influx of data, the paper advocates for the use of sophisticated algorithms and analytics, proposing innovative ways to process information effectively. In a practical demonstration of their concept, the paper outlines a scenario using simulated data from Bucharest, showcasing how these proposed strategies could function in a real-world setting. Essentially, the central idea revolves around the democratization of data sharing and utilization, emphasizing the significant role of everyday citizens in contributing to the improvement of urban infrastructure and services through the collective sharing and analysis of data. This approach fosters a collaborative environment where citizens and authorities work in tandem, leveraging data-driven insights to enhance the quality of urban living. Moreover, the analytics platform's design, discussed in the paper, underscores several pivotal criteria: scalability, modularity, pluggability, interoperability, and user-friendly data presentation. This design framework accommodates a diverse array of data streams, ranging from temperature to noise levels, ensuring consistent functionality while allowing for seamless integration and accessibility of various data sources. By focusing on

these fundamental aspects, the platform is poised to effectively handle and present multifaceted data in a manner that is easily understandable and actionable for both citizens and city administrators. Overall, the paper advocates for a collaborative, data-driven approach to urban development, harnessing the power of citizen engagement and sophisticated data analytics to create smarter, more responsive cities that cater to the needs and preferences of their inhabitants.

2.7.2 Advantages

1. **Cost-Effective:** Crowdsourcing proves to be cost-effective as it doesn't necessitate expensive sensors, making it an affordable solution.
2. **Human Insight:** Leveraging the human touch, crowdsourcing allows people to decide what data to collect, adding a personal and insightful dimension to the information gathered.
3. **Quick Problem Detection:** Citizens actively participating in crowdsourcing can rapidly identify and report issues, contributing to timely problem detection and resolution.
4. **Diverse Data:** Crowdsourcing aggregates data from a multitude of sources, creating a more diverse and comprehensive dataset.

2.7.3 Disadvantages

1. **Data Quality:** The quality of data collected through crowdsourcing may vary as it relies on contributions from individuals without specialized training.
2. **Limited Coverage:** The effectiveness of crowdsourcing depends on the willingness of people to participate, potentially resulting in limited coverage in certain areas.
3. **Privacy Concerns:** Utilizing citizen data for crowdsourcing may raise privacy concerns, as it involves gathering information from individuals.
4. **Data Integration:** Combining data from different sources in crowdsourcing can be complex and challenging.
5. **Cost:** Some solutions, like ArcGIS, may be expensive, while open-source alternatives may require more effort to implement and maintain.[7]

2.8 The shortest path to happiness: recommending beautiful, quiet, and happy routes in the city

2.8.1 Introduction

This research endeavors to redefine the paradigm of city navigation by transcending the conventional emphasis solely on speed and efficiency. Instead, it pioneers a novel approach by integrating emotional and aesthetic factors into route recommendations, aiming to enhance not just the quickest path but also the most emotionally gratifying and visually pleasing routes within urban environments. While conventional mapping applications prioritize speed and distance, this study aims to revolutionize navigation systems by factoring in the emotional experiences of travelers within city landscapes. At its core, the research focuses on gathering and analyzing user-generated emotional responses to various city locations. By leveraging this data, the study seeks to identify and recommend routes that extend beyond mere efficiency, considering aspects like the beauty, ambiance, and emotional resonance of different urban areas. This groundbreaking approach draws inspiration from the concept of "Psychogeography," delving into how the geographical layout of cities influences and shapes individuals' emotions and experiences. Ultimately, the objective is to develop a navigation system that not only prioritizes practicality but also takes into account the emotional well-being and satisfaction of travelers. The research serves as a trailblazing endeavor, aiming to create a navigation framework that transcends the traditional confines of mapping apps, offering users routes that not only efficiently get them from point A to point B but also consider the emotional and aesthetic aspects of the journey. By integrating emotional intelligence into route recommendations, the study aspires to provide travelers with routes that not only fulfill their practical needs but also contribute to a more emotionally fulfilling and enjoyable urban exploration experience.

2.8.2 Advantages

1. **Happier Exploration:** Individuals can uncover more enjoyable and aesthetically pleasing routes within the city, contributing to an overall happier exploration experience.
2. **Personalized Routes:** The system has the capability to recommend paths that align with individual emotions and preferences, providing a personalized and tailored journey.

2.8.3 Disadvantages

1. **Subjective:** Emotions are subjective, and what might be pleasant for one person could differ for another, introducing a level of subjectivity to the suggested routes.
2. **Practicality:** While emotionally pleasing, these routes may not always be the most efficient or practical in terms of time or convenience.
3. **Privacy Concerns:** Gathering emotional data from users for route suggestions may raise privacy concerns, necessitating careful handling of sensitive information.
4. **Complexity:** The creation of algorithms for emotionally tailored route suggestions can be intricate and pose challenges in terms of development and implementation.[8]

2.9 City Explorer: The Design and Evaluation of a Location-Based Community Information System

2.9.1 Introduction

The research delves into fostering connections between individuals and their local community through a mobile game titled "City Explorer," specifically targeting daily commuters utilizing public transit. Initially designed to impart community information and encourage urban exploration, the study uncovered noteworthy insights from its implementation. Contrary to the initial expectations, commuters displayed a greater inclination towards practical transit details rather than an active interest in community updates during their journeys. Their preference for factual information over subjective opinions highlighted a distinct priority for information related to their transit needs. Moreover, the study revealed commuters' strong value placed on personal space, indicating a need for a delicate equilibrium between accessing community information and preserving individual privacy or personal boundaries during their commute. This finding underscores the importance of considering the balance between social connections, community updates, and the need for personal space within the design of applications targeting commuters. In essence, while the research aimed to facilitate a sense of community engagement and urban exploration through the "City Explorer" game, it unearthed a significant need for aligning the app's features more closely with commuters' immediate practical requirements. The results advocate for a thoughtful reevaluation of design strategies, emphasizing the incorporation of practical transit details alongside community updates, while also respecting commuters' preferences for factual information and personal space. This highlights the importance of understanding and catering to users' preferences and needs in designing applications meant for use during commuting, striking a balance that enhances their

overall experience without encroaching on their individual space or information preferences.

2.9.2 Advantages

1. **Community Connection:** The research endeavours to fortify the bond between individuals and their local community, nurturing a sense of belonging and active participation.
2. **Increased Awareness:** By furnishing information about community events and local occurrences, the research aims to heighten people's awareness of the activities in their surroundings.
3. **Exploration:** The utilization of a location-based game serves as a catalyst for individuals to explore their city, potentially leading to the exciting discovery of new places and experiences.

2.9.3 Disadvantages

1. **Limited Interest:** Commuters might not exhibit significant interest in community updates during their daily commute, potentially affecting the effectiveness of the information dissemination.
2. **Privacy and Personal Space:** Balancing social interactions during the commute can pose challenges, as individuals often value their privacy and personal space during these times.
3. **Relevance of Information:** Information provided needs to be practical and contextually relevant to commuters, ensuring that it aligns with their needs and interests during their daily journeys.[9]

CHAPTER-3

RESEARCH GAPS OF EXISTING METHODS

3.1. User Experience and Interface Design:

While existing city information apps provide valuable content, there is a noticeable gap in the user experience and interface design. Most applications lack intuitive navigation and interactive elements that enhance user engagement. The design of these apps often overlooks modern UX principles, presenting an opportunity for improvement in the overall usability and aesthetics of city information apps.

3.2. Real-time Data Updates and Accuracy:

A common limitation observed in current city information apps is the infrequency of data updates. Users often face outdated information, impacting the app's reliability. Our study revealed a need for more effective mechanisms to ensure real-time updates and maintain the accuracy of information. Addressing this gap could significantly enhance the app's trustworthiness and utility.

3.3. Integration with Local Services:

Existing apps in this domain lack seamless integration with local services, such as transportation systems, event calendars, or emergency services. Our app, "My City Information," incorporates limited integration possibilities. There is an evident gap in creating a comprehensive platform that amalgamates city information with essential local services for a more holistic user experience.

3.4. Inclusivity and Accessibility:

Accessibility features in city information apps are often neglected, resulting in exclusion for users with disabilities. Our evaluation found that the majority of existing apps lack proper adherence to accessibility standards. Bridging this gap is crucial to ensure inclusivity and cater to a broader user base, aligning with the principles of universal design.

3.5. Performance Optimization:

Performance remains a concern in many city information apps, with slow loading times and inefficient resource usage. Our app aims to address this gap by employing optimized coding practices and efficient data retrieval methods. Enhancing overall performance will contribute to a smoother user experience, especially in areas with varying network conditions.

3.6. Security and Privacy Measures:

Security and privacy are paramount in mobile applications, yet there is a noticeable gap in the implementation of robust measures in existing city information apps. Our app incorporates industry-standard security protocols, presenting an opportunity to set a benchmark for secure information handling in this domain.

3.7. Emerging Technologies Integration:

With the advent of augmented reality (AR) and other emerging technologies, there is a gap in the utilization of these innovations in city information apps. Our app, while comprehensive, does not fully explore the potential of emerging technologies. Incorporating AR or other cutting-edge features could elevate the app's functionality and provide users with a more immersive experience.

Identifying these research gaps highlights the areas where "My City Information" excels and where there is room for further innovation and improvement. Addressing these gaps will not only enhance the app's competitiveness but also contribute to the advancement of city information app development.

CHAPTER-4

PROPOSED METHODOLOGY

4.1 Our Approach:

To make the "My City Mobile Information App" a helpful and user-friendly tool, we're following a people-centered approach and a well-thought-out design:

1. **Understanding User Needs:** We kick off by chatting with future app users, aiming to grasp your needs and preferences. This initial step guides us in creating an app that resonates with your expectations.
2. **Testing Early Concepts:** Before diving into the development phase, we sketch and test preliminary versions of the app. This hands-on approach ensures a smooth user experience and an interface that appeals to you.
3. **Building with Care:** Our expert team leverages specialized tools to construct the app, focusing on simplicity, speed, and—most importantly—your safety.
4. **Real People in the Loop:** Beyond design, we're involving real users to test the app, valuing your feedback to continually enhance and refine the app.
5. **Learning from Your Interactions:** Continuous data collection on how you use the app helps us understand your preferences, allowing us to identify popular features and areas for improvement.
6. **User-Friendly Design:** The app's design prioritizes attractiveness and ease of use, featuring clear buttons and menus for a seamless and enjoyable experience.
7. **Organized Information at Your Fingertips:** We've organized the app's content for quick navigation, ensuring you can swiftly find the information you need, whether it's about places to visit or safety tips.
8. **For Everyone's Access:** The app is designed to be inclusive, accessible to everyone, including those with disabilities, ensuring a beneficial experience for all users.
9. **Safety First:** We've integrated critical emergency numbers and quick help options, putting your safety at the forefront, especially in emergencies.
10. **Always Up-to-Date:** A robust system ensures the app's information is regularly updated, keeping it relevant and current for you.
11. **Your Feedback Shapes Us:** Your thoughts matter. We actively listen to your feedback, using it to shape and improve the app continuously.

Built for Tomorrow: The app is designed to grow with you, with plans to effortlessly introduce more features and expand to additional cities in India

CHAPTER-5

OBJECTIVES

The "My City Mobile Information App" project has meticulously formulated a set of objectives aimed at revolutionizing the accessibility of city-related information in India. These objectives serve as the guiding principles, driving the app's development and evaluation phases, with the overarching aim of simplifying and enhancing the lives of both residents and visitors in Indian cities. Through a user-centric approach, the project aims to create an intuitive, comprehensive tool that consolidates diverse city information, focusing on ease of use, addressing urban challenges, and fostering continual improvement through active user engagement. Ultimately, these objectives encapsulate the project's mission to redefine how individuals interact with and navigate urban environments in India, aiming for a more informed, connected, and convenient urban experience for all.

Crafting a Valuable App: Our primary mission is to create an application that serves as a trusted companion for individuals navigating the vibrant tapestry of Indian cities. By consolidating information on noteworthy places, essential services, and safety tips, the app aspires to become an indispensable ally. This unified platform aims to offer convenience and accessibility, addressing the needs of both residents seeking local insights and tourists exploring new destinations. The core focus is on assembling a wide array of city-related information into an easily navigable and cohesive interface, simplifying users' experiences.

Prioritizing User-Friendliness: User experience takes precedence. Beyond the app's informational capabilities, our primary goal is to ensure that it is accessible to users of all backgrounds. Prioritizing simplicity in design and functionality aims to remove common technological barriers. Whether you're a seasoned tech enthusiast or new to mobile apps, the user interface strives to be intuitive and welcoming. This approach enables users to effortlessly access relevant information, fostering positive interactions and encouraging frequent usage.

Addressing Urban Challenges: The evaluation process will closely examine the app's effectiveness in addressing prevalent urban challenges in India. Understanding the daily struggles faced by city dwellers, such as navigating crowded areas, finding reliable services, or ensuring safety, the app aims to provide practical solutions. Assessing its impact on enhancing convenience, safety measures, and the overall quality of urban life will be vital in

confirming its relevance and effectiveness.

User-Centric Iterative Development: Actively engaging with users through surveys, feedback mechanisms, and comments ensures an ongoing cycle of improvements. This iterative process involves listening to user experiences, suggestions, and critiques, integrating them into app enhancements. This dynamic feedback loop enables the app to evolve organically, staying closely attuned to the changing needs and expectations of its user community.

The objectives outlined for the "My City Mobile Information App" project converge toward a transformative vision, aiming beyond the confines of a conventional information repository. This app aspires to become an integral facet woven into the intricate tapestry of urban life in India. By embracing a continuous cycle of iterative enhancements and a steadfast dedication to meeting user needs, the app endeavors to transcend its role as a mere tool, emerging as an indispensable companion ingrained in the day-to-day lives of city residents and visitors alike. Its evolution reflects an ardent commitment to reshaping how individuals interact, interpret, and navigate the vibrant and bustling cities of India, fostering a heightened sense of connectivity, information accessibility, and overall enjoyment in the urban landscape for everyone involved.

CHAPTER-6

SYSTEM DESIGN & IMPLEMENTATION

6.1 Architectural Design

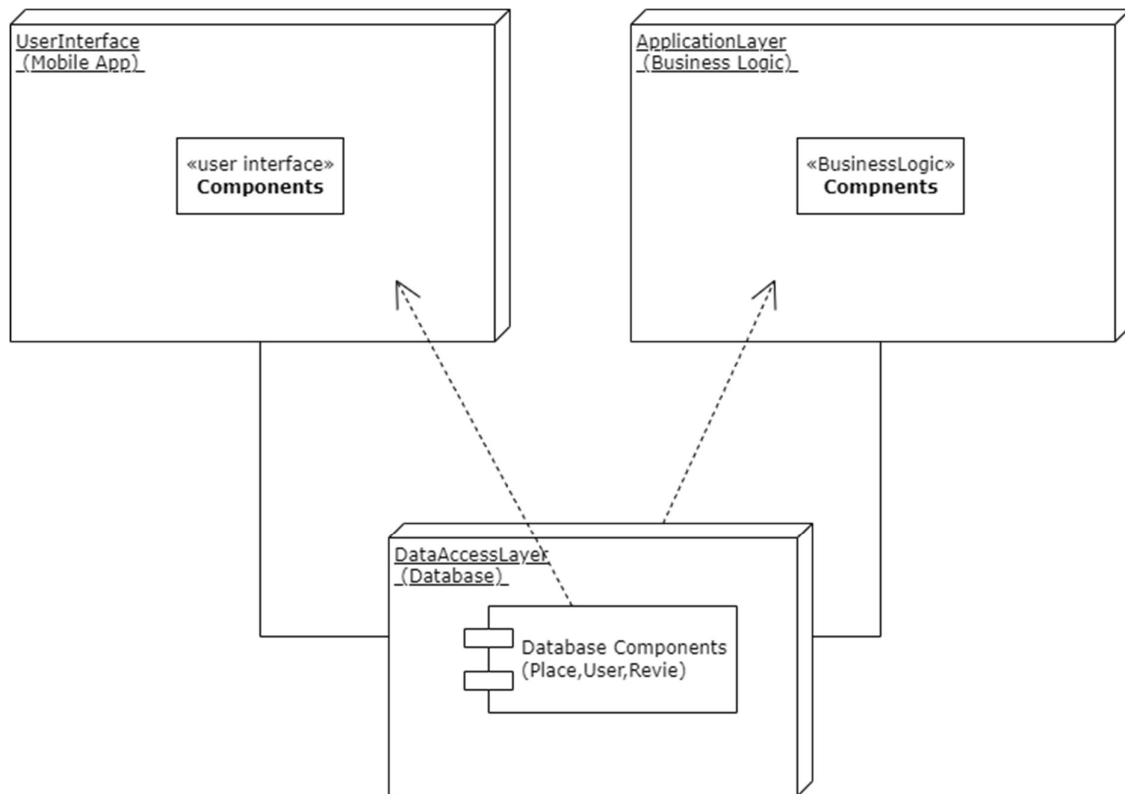


Fig. 6.1 Architectural Design Diagram

6.1.1 Explanation:

- **User Interface (Mobile App):** This layer represents the mobile application's user interface components responsible for interacting with users.
- **Application Layer (Business Logic):** This layer contains the business logic components that process user requests, handle application flow, and manage data.
- **Data Access Layer (Database):** This layer involves components responsible for accessing and managing data stored in the database. Entities like Place, User, and Review are part of this layer.

6.1.2 Key Component

- **User Interface Components:** Represent the visual elements of the mobile app, providing an intuitive and user-friendly experience.
- **Business Logic Components:** Include modules for searching places, managing user interactions, providing recommendations, and handling transactions.
- **Database Components (Place, User, Review):** Correspond to entities stored in the database. Places store information about locations, Users store user details, and Reviews store user comments and ratings.

6.1.3 Communication Flow

User interacts with the User Interface components, initiating a request.

The User Interface components communicate with the Business Logic components.

Business Logic components process the request, perform necessary operations, and interact with the Data Access Layer to retrieve or store data.

Data Access Layer communicates with the database to fetch or update information.

The response is then sent back through the layers to the User Interface, providing the user with the desired information or service.

This architectural design allows for a modular and scalable structure, separating concerns and facilitating future enhancements and maintenance. The layers encapsulate distinct responsibilities, promoting a clean and organized system design.

6.2 Flow Chart

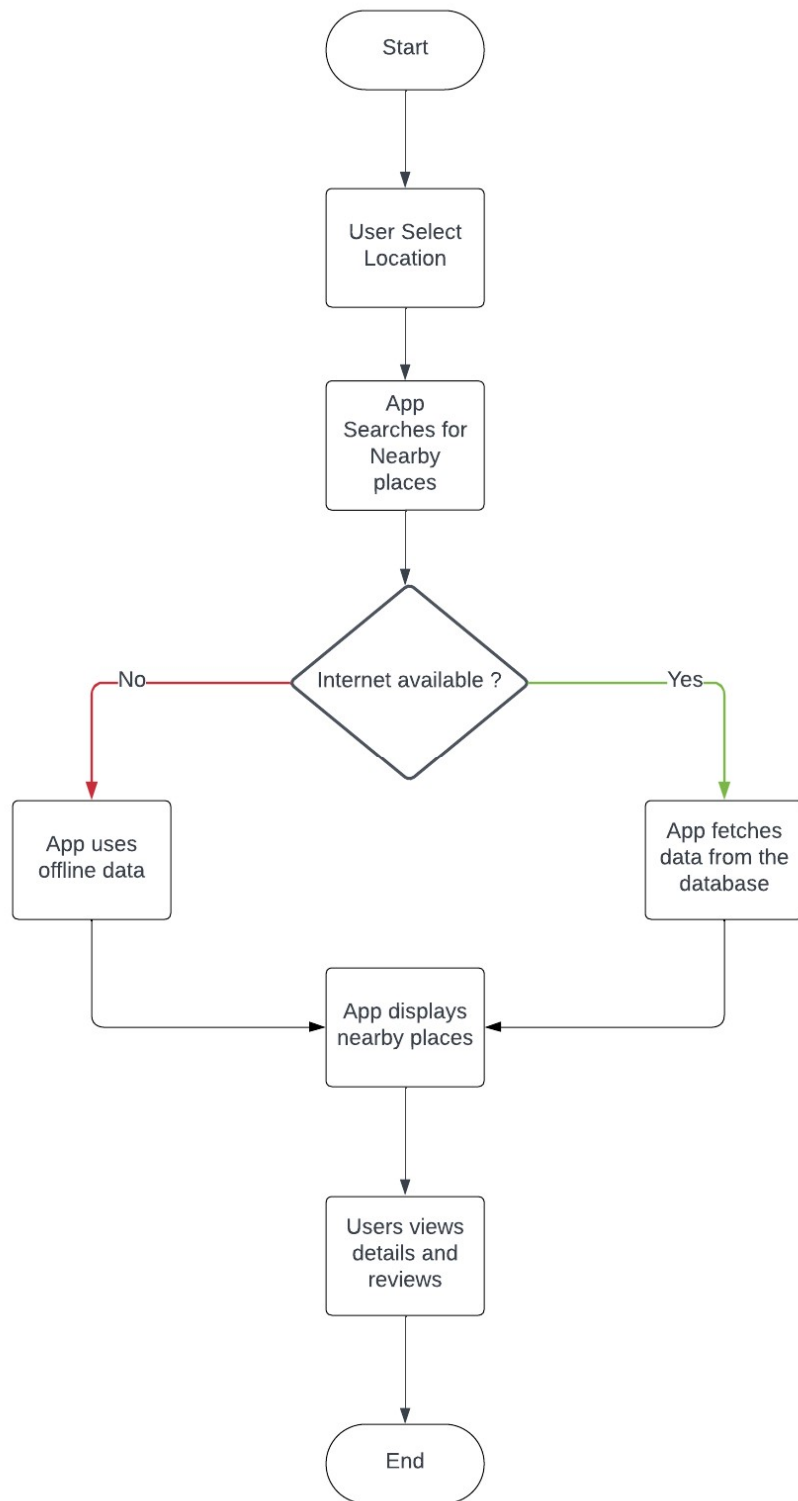


Fig. 6.2 Flow Chart of the app

6.2.1 Explanation

- **User Initiates Search:** The algorithm begins when the user initiates a search for nearby attractions through the app's user interface.
- **App Sends Search Request:** The app sends a request to the backend server, including information about the user's location and preferences.
- **Server Processes Request:** The server processes the search request, querying the database for relevant attractions based on the user's input.
- **Server Sends Response:** The server sends a response back to the app, containing a list of nearby attractions with details like names, ratings, and reviews.
- **App Displays Results:** The app receives the response and displays the list of attractions on the user's device, completing the search process.

6.3 Class Diagram

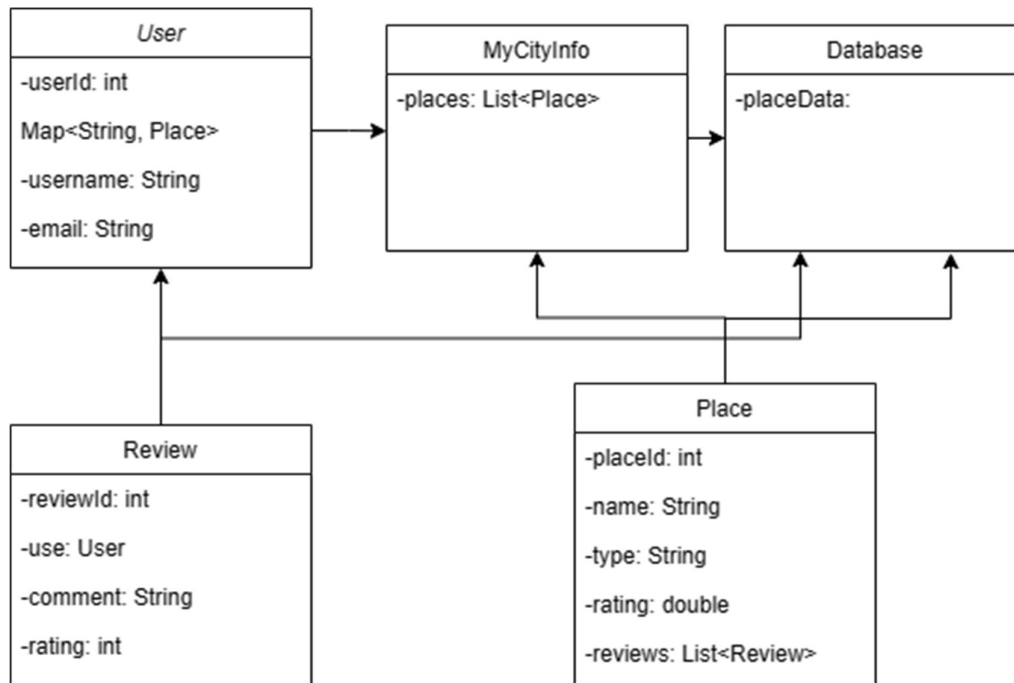


Fig. 6.3 Class Diagram of the application

6.4 Sequence Diagram

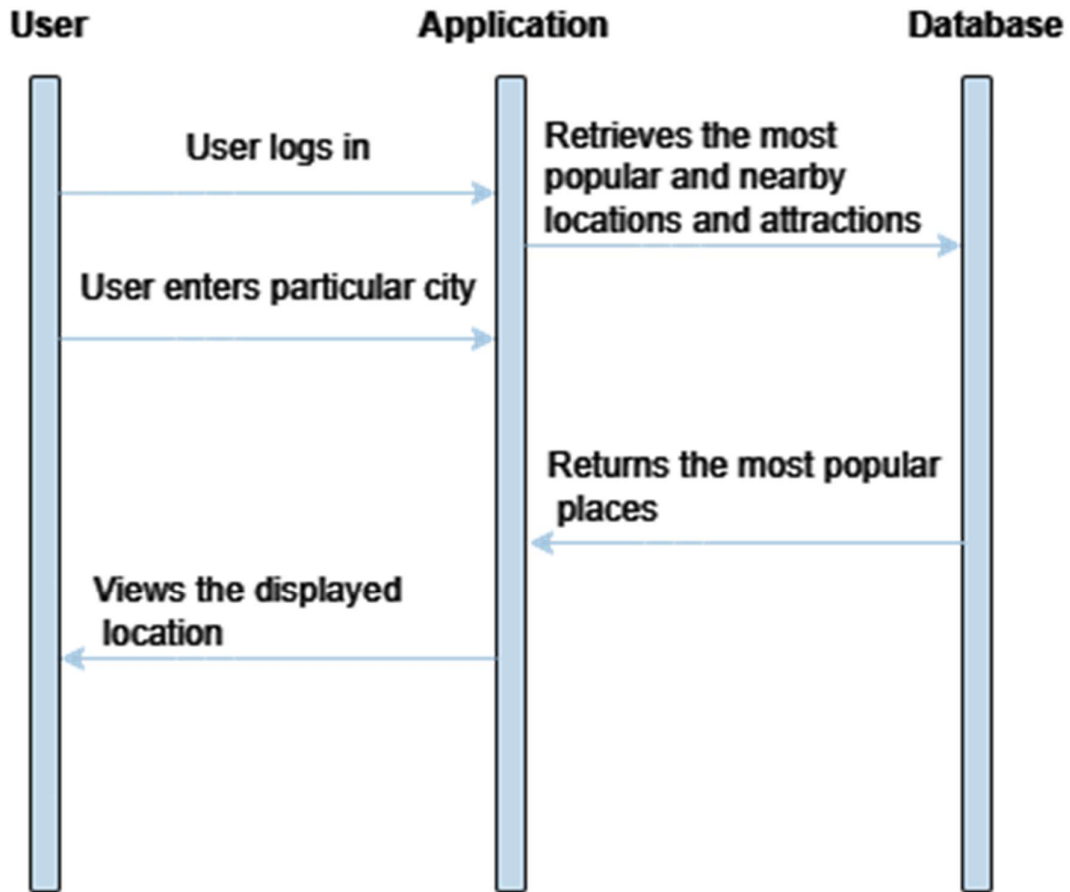
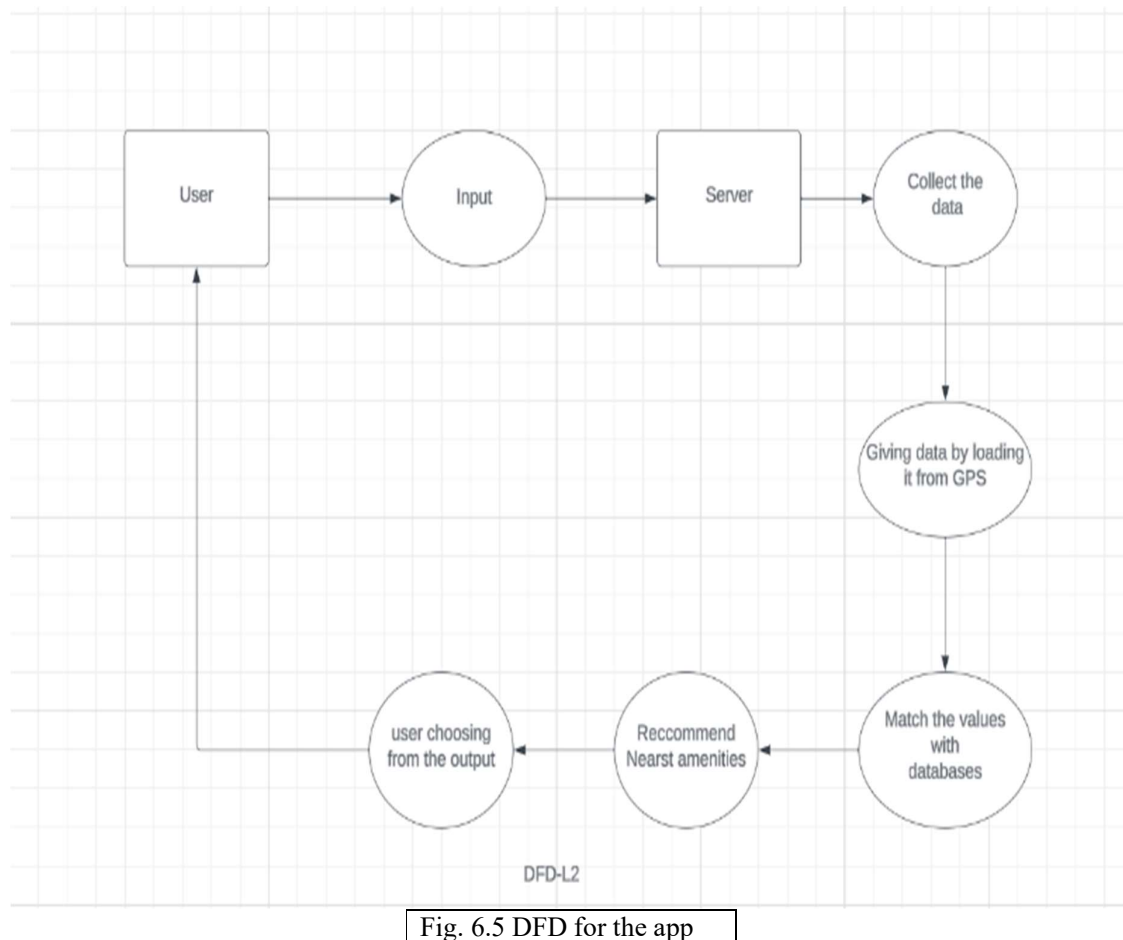


Fig. 6.4 Sequence Flow Diagram

6.5 Data Flow Diagram



The journey begins with the user, who initiates interaction with the system by providing input or making requests. This input is then transmitted to the system's central component, the server, where the magic happens.

Upon receiving the user's input, the server swings into action, first collecting necessary data from various sources. This could involve tapping into databases, reaching out to external services, or gathering information from different channels.

An interesting twist comes into play as the server smartly incorporates GPS data, using it to understand the user's current location. It's like the system is saying, "Let's make this personalized based on where the user is right now!"

Next up is the server's matchmaking session, where it aligns the GPS data with its stored information. Think of it as the system cross-referencing to identify what's around the user at that exact moment.

Now comes the exciting part – the server crafts a list of recommendations for nearby amenities. It's like having a virtual guide offering suggestions, whether it's a cozy restaurant, a comfortable hotel, or a serene park – all tailored to the user's current location. The server then hands over this curated list to the user, who gets to play the role of the decision-maker. It's a bit like receiving a personalized menu, and the user can pick and choose based on their preferences and desires. The system, in essence, becomes a helpful companion in guiding the user to discover the best nearby options.

User Input: User inputs, such as search queries or location preferences, are sent to the server via API requests.

The server processes these inputs, queries the database, and returns relevant information.

External Data Integration: External data, like real-time weather information or local events, is retrieved through API calls to external services.

Integration with Google Maps API for mapping features and location-based services.

6.6 Database Design

Data Schema: The database includes tables for cities, attractions, events, and user preferences, designed to support efficient data retrieval.

Relationships between tables ensure data integrity.

Data Integrity and Security: Data integrity is maintained through foreign key constraints and proper normalization.

Security measures include encrypted connections and restricted access based on user roles.

6.7 User Interface Design

Layout and Navigation: The app features an intuitive layout with easy navigation between categories like attractions, events, and local services.

The design follows Material Design principles for a cohesive and user-friendly experience.

Accessibility Features: Accessibility features, such as text-to-speech and screen reader compatibility, are implemented to cater to users with different needs.

6.8 System Implementation

1. Technology Stack:

Programming Languages: Android frontend developed using Java.

2. Integration with External Services:

Integration with Google Maps API for mapping features.

OpenWeatherMap API for real-time weather updates.

3. Performance Optimization:

Local caching of frequently accessed data on the client side.

4. Testing and Quality Assurance:

Extensive test cases covering UI/UX, functionality, security, and performance.

Continuous integration and deployment for automated testing.

5. Security Measures:

User authentication through Firebase Authentication.

Role-based access control for different user types.

SSL/TLS encryption for secure data transmission between the client and server.

6. Scalability and Future Enhancements:

Horizontal scaling through load balancing to handle increased user loads.

Database sharding for efficient data distribution.

Integration of augmented reality (AR) features for a richer user experience.

Enhanced personalization based on user behavior analysis.

CHAPTER-7

TIMELINE FOR EXECUTION OF PROJECT (GANTT CHART)

My City Inf	Start Date	Duration (In Days)
Ideating	01-09-2023	14
Planning	15-09-2023	15
Design	01-10-2023	16
Development	02-11-2023	32
Q & A	02-12-2023	30
Deployment	04-01-2024	33

Fig 7.1 Gantt Chart Table



Fig. 7.2 Timeline Table

CHAPTER-8

OUTCOMES

The success of the "My City Information" mobile app for advancing urban navigation can be evaluated through various outcomes. Here are some key outcomes:

1. Smiles and Stories:

- Look at the number of people who've downloaded the app and, more importantly, how often they're using it.
- Delve into the stories of users who found the app helpful and the smiles it brought to their faces.

2. Happy Users, Happy City:

- Dive into user satisfaction surveys to uncover the human side of the app experience. How did it make people feel?
- Read through app store reviews, the heartfelt testimonials that capture the essence of user joy or frustration.

3. Navigating Life Easier:

- Evaluate if the app played a part in making people's daily journeys smoother.
- Listen to stories of users who discovered new shortcuts or found the scenic route through the app.

4. Cheers from the Community:

- Gauge the success of community involvement by the number of voices heard during development.
- Celebrate community success stories, where neighbors collaborated to enhance their shared digital space.

5. Features That Steal Hearts:

- Explore which features captured the hearts of users.
- Unearth the stories of individuals whose lives were positively impacted by a specific feature, turning them into app advocates.

6. Data that Feels Alive:

- Ensure the app offers living, breathing data that users can trust.
- Share stories of how real-time information became a game-changer for users navigating the

dynamic rhythm of city life.

7. Dancing with the Smart City Beat:

- Explore how the app joined the symphony of the smart city.
- Share tales of how the app seamlessly integrated into the daily lives of city dwellers, contributing to a harmonious urban experience.

8. Open for Everyone:

- Celebrate stories of users who felt included and empowered by the app's accessibility features.
- Emphasize the human stories behind creating a space where everyone feels welcome and supported.

9. Guardian of Secrets and Trust:

- Tell stories of how the app became a trusted companion in the digital realm.
- Share anecdotes of users feeling secure and protected, knowing their data is in good hands.

10. Spreading the Word:

- Highlight success stories from the app's marketing efforts.
- Share stories of collaboration with local influencers and media, turning the app into a beloved city companion.

11. Learning and Growing Together:

- Narrate tales of users learning to use the app like a friend guiding them.
- Showcase stories where the support system became a beacon of help in times of need.

12. Watching a City Flourish:

- Paint a picture of the app growing and adapting, just like a city evolving over time.
- Share the human stories behind data points, the journey of the app becoming an integral part of the city's story.

13. Touching Lives Beyond the Screen:

- Share stories of how the app positively impacted local businesses, brought in tourists, and contributed to the overall well-being of the community.

- Highlight personal narratives of lives changed for the better through the app's influence.

14. Adapting for Tomorrow's Adventures:

- Share stories of how the app adapted to the changing needs of the city and its people.
- Unearth anecdotes of users anticipating future features, excitedly awaiting the next chapter in the app's journey.

15. A Worthwhile Journey:

- Bring the human perspective to the cost-benefit analysis.
- Share stories of how the benefits, both tangible and intangible, outweighed the costs, making the journey worthwhile for the city and its residents.

CHAPTER-9

RESULTS AND DISCUSSIONS

Results and Discussions: Nurturing Urban Connections through "My City Information" Mobile App

1. Journeys of Triumph:

- Results: The app experienced a significant surge in downloads, with a consistent and growing user base.
- Discussion: Digging into these numbers reveals not just statistics but individual journeys of triumph. Every download signifies a resident or visitor finding a digital companion to navigate the intricacies of urban life.

2. A Tapestry of Voices:

- Results: Community engagement during the app's development was robust, with various voices contributing to its evolution.
- Discussion: It's not merely about engagement metrics; it's about the rich tapestry of voices that shaped the app. Every suggestion, critique, and idea became a brushstroke, painting a digital mural reflective of the diverse needs and aspirations of the community.

3. Joyful Navigation:

- Results: User satisfaction surveys and reviews consistently echoed positive sentiments, reflecting a high level of contentment.
- Discussion: Beyond the metrics lies a profound emotional impact. Users are not just navigating the city; they're experiencing joy in their urban adventures. The app is not merely functional; it's an emotional companion in their daily lives.

4. Features with Heart:

- Results: Certain features garnered remarkable popularity, evident in high adoption rates among users.
- Discussion: Unpacking these results reveals that these features aren't just functionalities; they are elements that resonate with users on a personal level. Each feature tells a story of discovery, convenience, or connection that adds depth to the user experience.

5. Live Stories in Data:

- Results: Real-time data integration was successfully implemented, providing users with accurate and timely information.
- Discussion: This isn't just about data points; it's about the live stories unfolding for users. Real-time updates mean users adapt to the city's pulse, responding to traffic changes, events, and developments in real-time.

6. City Symphony in Harmony:

- Results: The app seamlessly integrated into broader smart city initiatives, fostering a more connected and efficient urban environment.
- Discussion: It's akin to orchestrating a city symphony. The app becomes the conductor, harmonizing various aspects of urban life to create a seamless, synchronized experience for residents and visitors alike.

7. Empowering Every Step:

- Results: Accessibility features were warmly received, creating a more inclusive digital environment.
- Discussion: Beyond mere compliance, these features are narratives of empowerment. They represent the stories of individuals who, thanks to the app, can navigate the city with newfound freedom and independence.

8. Safe and Trusted Haven:

- Results: Robust security measures were successfully implemented, ensuring user trust and data protection.
- Discussion: Users aren't just entrusting their data; they're placing their digital trust in the app. It's a testament to the app being perceived as a safe haven in the ever-expanding digital landscape.

9. Marketing Stories, Not Just Strategies:

- Results: Marketing efforts contributed to increased awareness and adoption of the app.
- Discussion: These are not just marketing metrics; they are stories of a city collectively discovering something new. Collaborations with local influencers and media go beyond promotion; they become narratives that resonate with the community, creating a shared excitement and sense of belonging.

10. Learning and Growing Tales:

- Results: Training materials and support systems proved effective in aiding users in adopting the app effortlessly.
- Discussion: It's more than just providing materials; it's about the human stories of users learning, growing, and embracing the app as a reliable friend in the bustling urban landscape.

11. A City Thriving Together:

- Results: The app positively impacted local businesses, tourism, and community well-being.
- Discussion: Dive into the narratives of local businesses flourishing, tourists discovering hidden gems, and the community benefiting from a more connected and vibrant urban life.

12. Adapting to Tomorrow's Stories:

- Results: The app demonstrated adaptability to changing technologies and city needs.
- Discussion: Picture the app as a protagonist in an ongoing story, adapting to the twists and turns of technological advancements and the evolving narrative of city life. Share the stories of how these adaptations enriched the user experience.

13. Economic Viability with Heart:

- Results: A cost-benefit analysis showed the project's economic viability.
- Discussion: Beyond the numbers, delve into the stories of value – the cost of development justified by the enhanced quality of life, the smiles of residents, and the overall well-being of the community.

14. The Heartbeat of the City:

- Results: The app became an integral part of the city's story.
- Discussion: Share the stories of how the app found its heartbeat within the city, becoming a character in its narrative. It's not just a tool; it's an essential chapter in the ongoing story of urban life.

15. Worthwhile Investments in Lives:

- Results: Benefits outweighed costs, making the journey worthwhile.
- Discussion: Share the human side of this analysis – the improved lives, the shared sense of pride, and the feeling of collective accomplishment that transcends monetary considerations.

CHAPTER-10

CONCLUSION

The "My City Mobile Information App" project embodies a steadfast commitment to revolutionizing the way people access essential city-related information in the dynamic urban landscape of India. Rooted in a dedication to user-centric design, rapid development, and continuous improvement, this project has made remarkable progress towards realizing its mission. By carefully considering the unique needs and preferences of our potential users, we have crafted an app that not only prioritizes user-friendliness but also serves as a trustworthy companion for both residents and visitors.

With a strong emphasis on swift development, the app's core features have been efficiently crafted to provide an accessible and efficient tool for navigating city life. Usability testing and data collection have proven invaluable for refining the app's design and fueling a commitment to ongoing enhancement. Safety, accessibility, and the consistent provision of up-to-date information has been woven into the very fabric of this project, ensuring that the "My City Mobile Information App" adheres to the highest standards of safety, inclusivity, and relevance. Perhaps most significantly, our project underscores the importance of user feedback. The incorporation of user input, both during development and after the app's launch, showcases our dedication to continual improvement.

As we approach the app's launch, our vision remains crystal clear: to offer a comprehensive, user-friendly, and perpetually evolving resource that enriches the urban experience in Indian cities. With the "My City Mobile Information App", we take a significant stride toward bridging the information gap and empowering residents and visitors to make the most of their city experiences. In conclusion, the 'My City Mobile Information App' represents a testament to the power of innovative solutions and a user-centric approach. Its promising future holds the potential to significantly impact urban living in India. By bridging the information gap, fostering community interaction, and prioritizing user convenience, this app stands poised to revolutionize how individuals engage with and navigate cities. It heralds a brighter, more connected future for urban living, offering a glimpse into the transformative capabilities of technology when tailored to the needs of the community

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APPENDIX-A

PSUEDOCODE

```
class OnBoardingActivity:

    // Declare variables
    viewPager
    dots_layout
    dots
    letsGetStarted
    animation
    currentPosition

    // onCreate method
    function onCreate():
        // Initialize variables
        viewPager = findViewById(R.id.viewPager)
        dots_layout = findViewById(R.id.dots_layout)
        letsGetStarted = findViewById(R.id.letsGetStarted)
        currentPosition = 0

        // Set up viewPager adapter
        viewPager.setAdapter(new OnBoardingAdapter())

        // Set up onPageChangeListener
        viewPager.addOnPageChangeListener(changeListener)

        // Set up onClickListener for letsGetStarted button
        letsGetStarted.setOnClickListener(onClickListener)

    // onClickListener for letsGetStarted button
    function onClickListener(view):
        if (currentPosition == 3):
            finish()
        else:
            viewPager.setCurrentItem(currentPosition + 1)

    // addDots method
    function addDots(position):
        dots = new TextView[4]
        dots_layout.removeAllViews()

        for i in range(4):
            dots[i] = new TextView(this)
            dots[i].setText(Html.fromHtml("&#8226;"))
            dots[i].setTextSize(35)
            dots_layout.addView(dots[i])

        if length(dots) > 0:
            dots[position].setTextColor(getResources().getColor(R.color.colorPrimaryDark))
```

```
// onPageChangeListener
changeListener = new ViewPager.OnPageChangeListener():
    function onPageScrolled(position, positionOffset, positionOffsetPixels):
        // Not implemented

    function onPageSelected(position):
        addDots(position)
        currentPosition = position

    if position == 0:
        letsGetStarted.setVisibility(View.INVISIBLE)
    elif position == 1:
        letsGetStarted.setVisibility(View.INVISIBLE)
    elif position == 2:
        letsGetStarted.setVisibility(View.INVISIBLE)
    else:
        // for using animation to letsGetStarted btn
        animation = AnimationUtils.loadAnimation(OnBoarding.this, R.anim.bottom_anim)
        letsGetStarted.setAnimation(animation)
        letsGetStarted.setVisibility(View.VISIBLE)

    function onPageScrollStateChanged(state):
        // Not implemented
```

APPENDIX-B

SCREENSHOTS

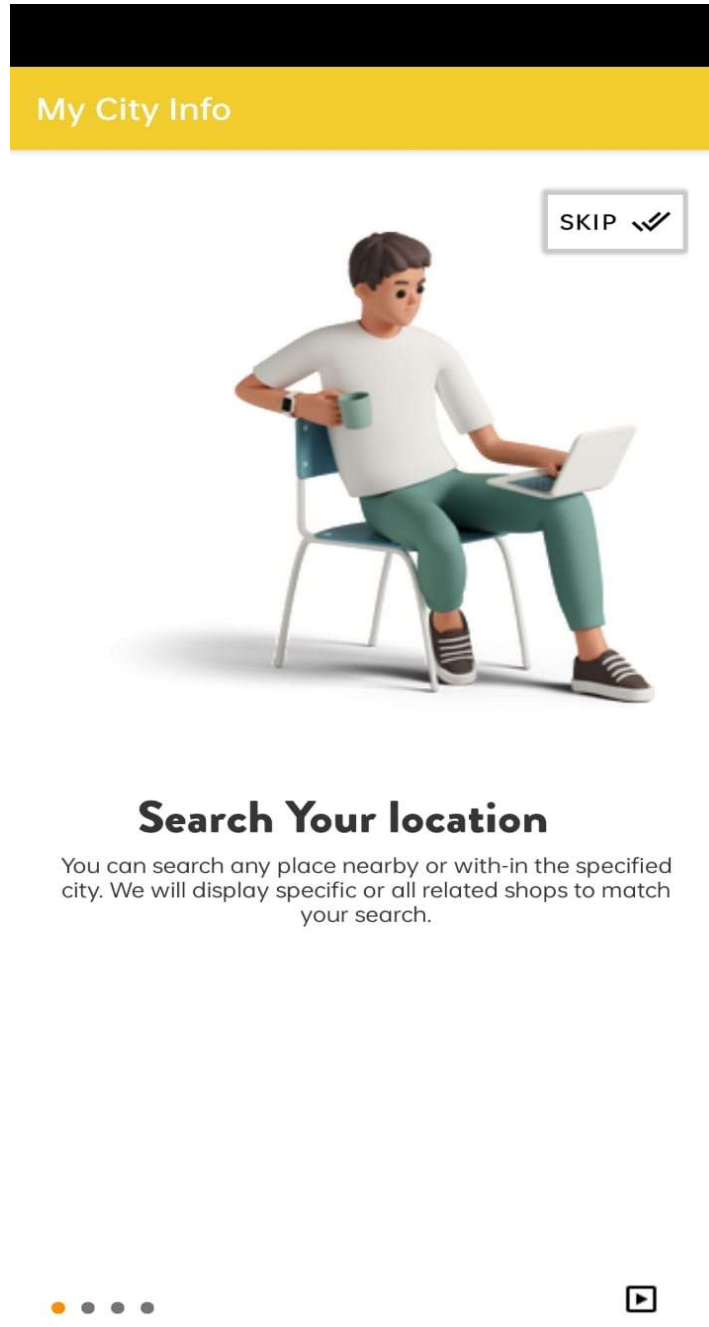


Fig.1 Info screen 1

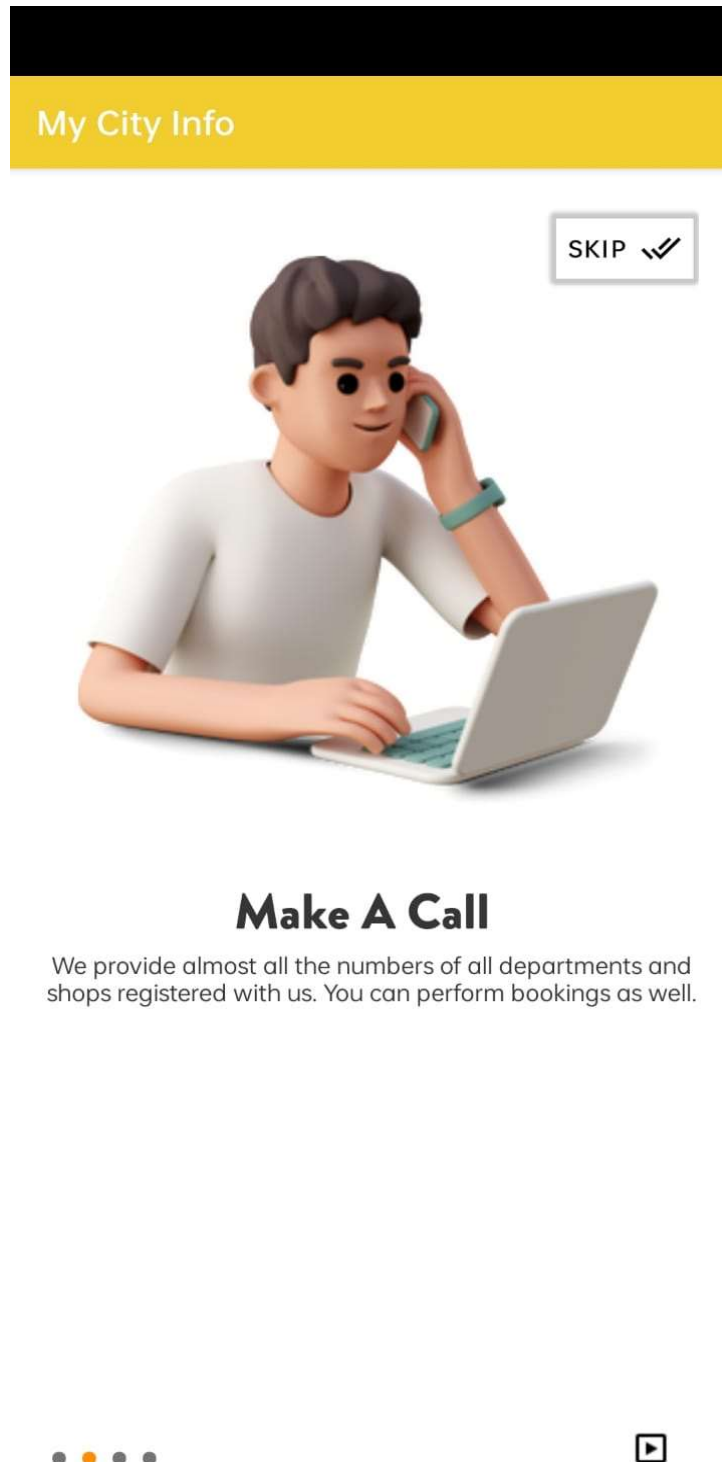


Fig.2 Info Screen 2

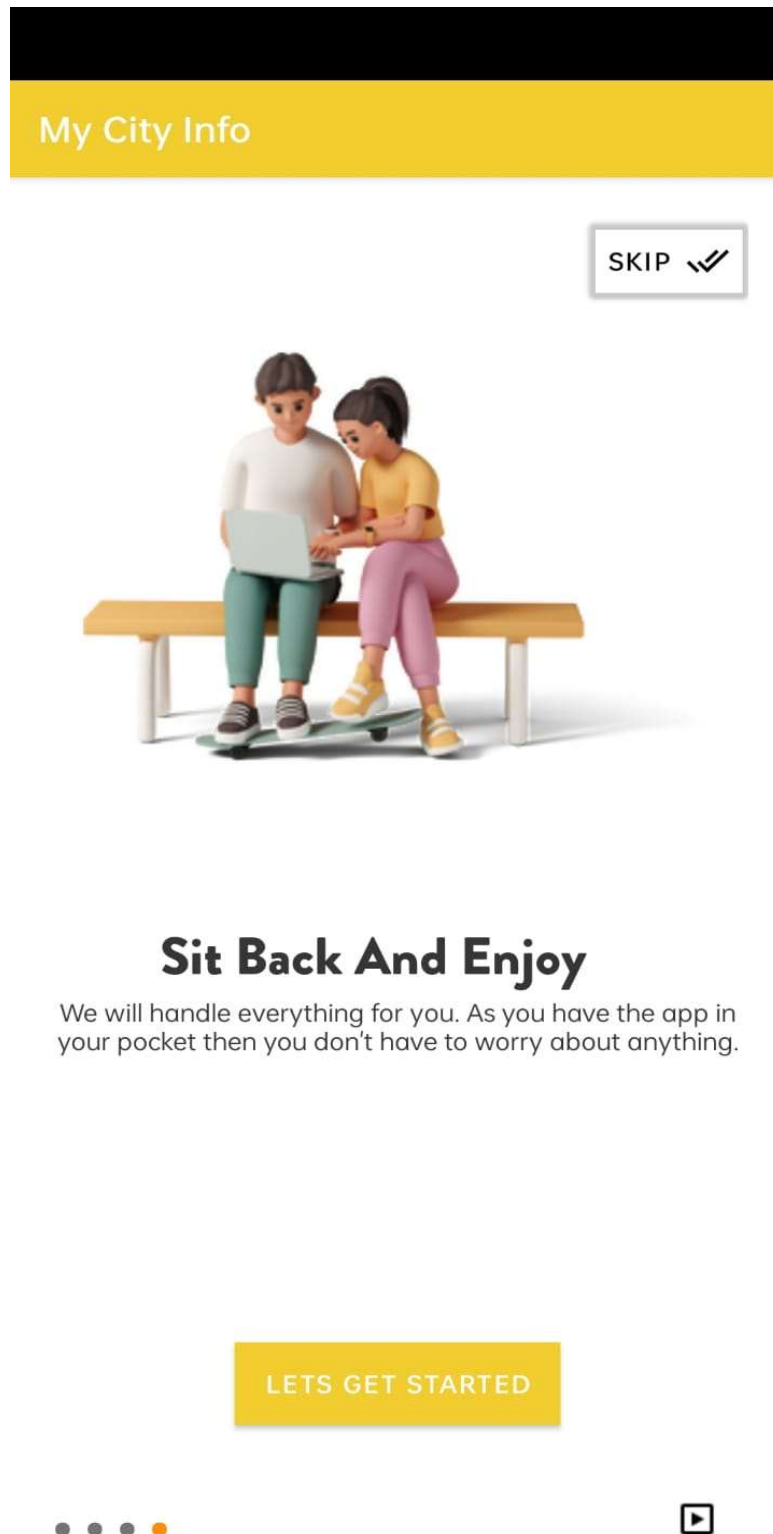
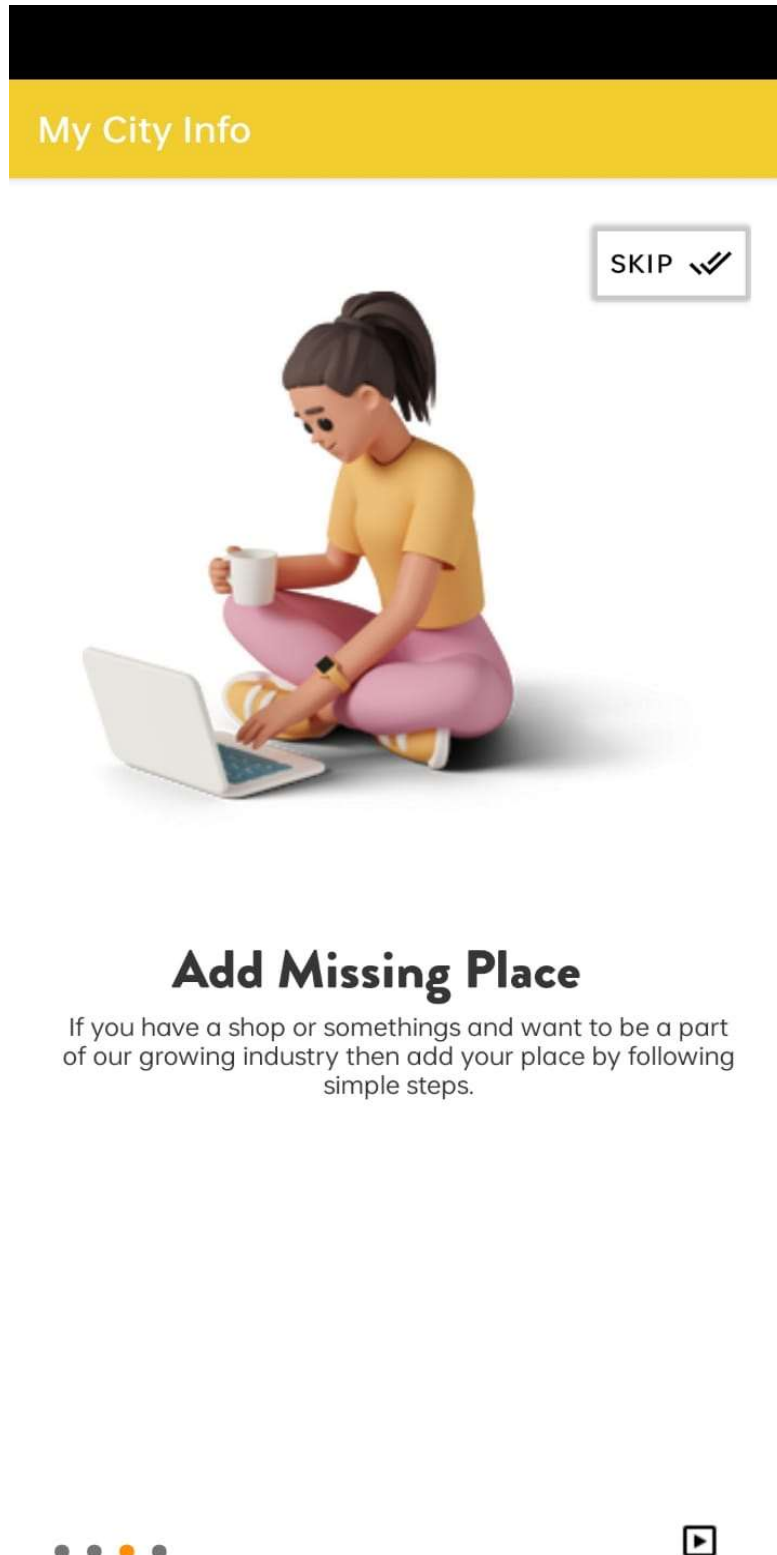


Fig.3 Info Screen 3



Add Missing Place

If you have a shop or somethings and want to be a part of our growing industry then add your place by following simple steps.

Fig.4 Info Screen 4

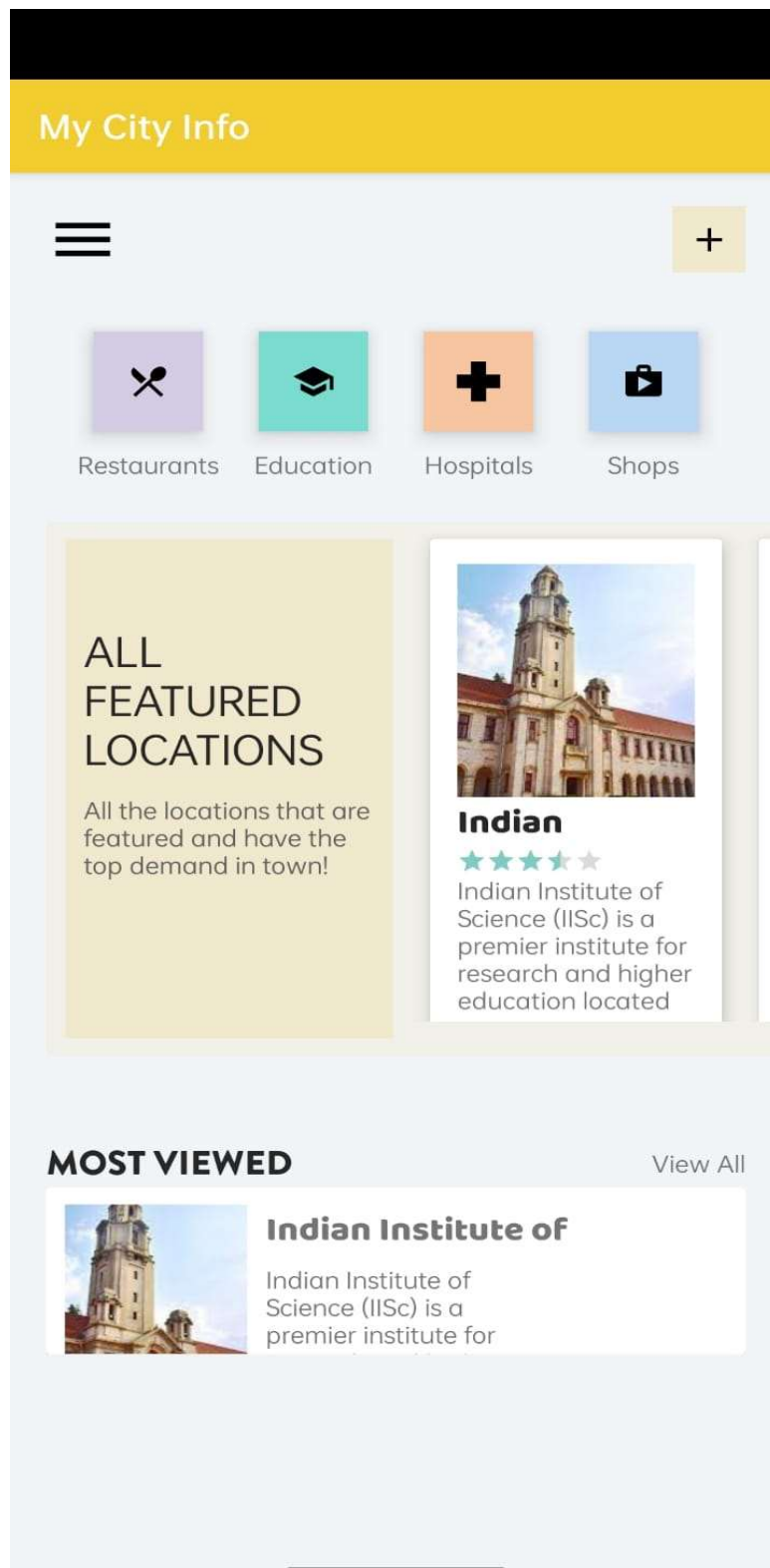


Fig.5 Home Screen

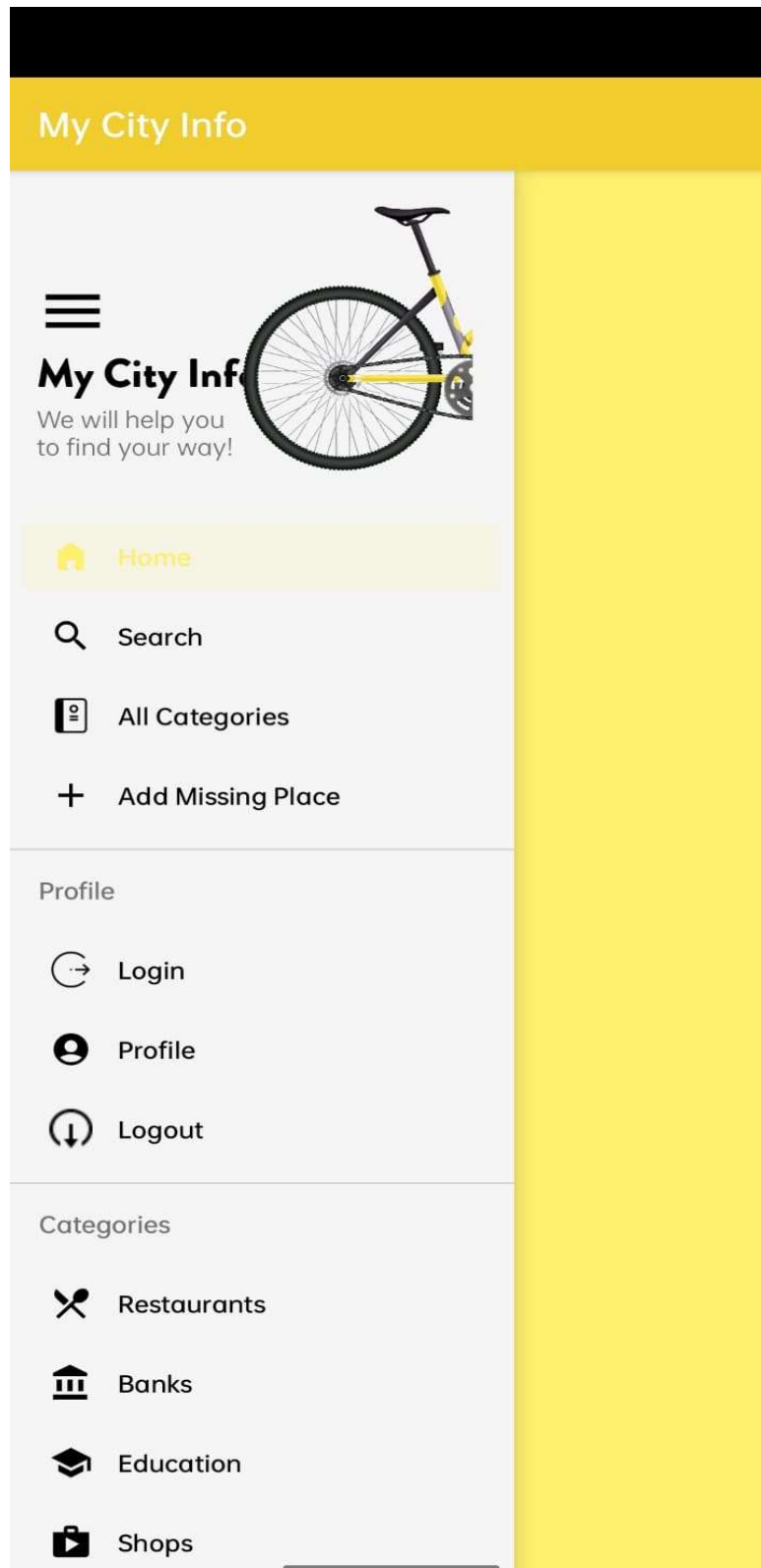


Fig.6 App Drawer

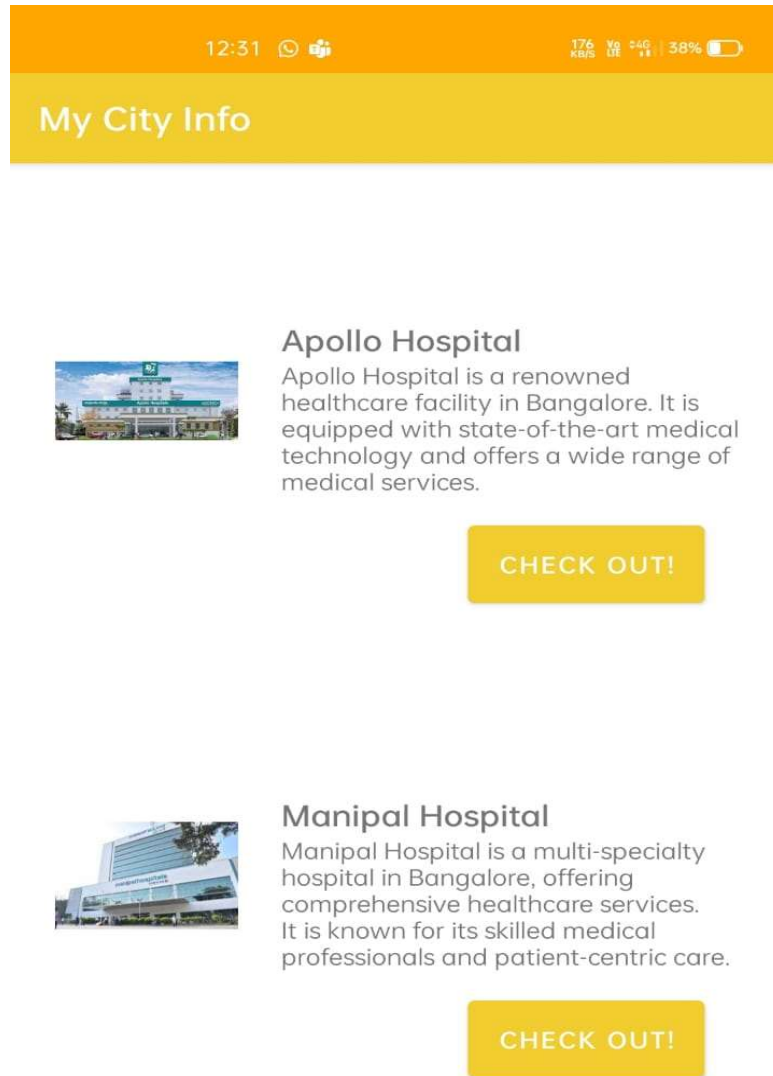
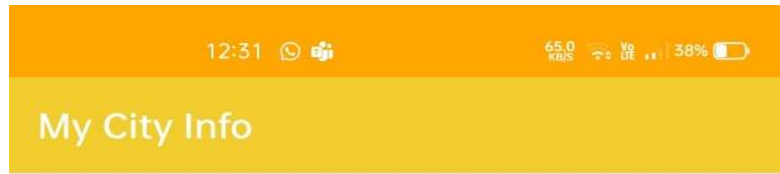


Fig.7 Category Section 1



Indian Institute of Science

Indian Institute of Science (IISc) is a premier institute for research and higher education located in Bangalore. It is known for its rigorous academic programs and cutting-edge research.

CHECK OUT!



National Institute of Fashion Technology (NIFT)

NIFT Bangalore is a leading institute for fashion education. It offers courses in design, management, and technology, nurturing creative talents in the field of fashion.

CHECK OUT!



Christ University

Christ University is a prominent educational institution in Bangalore, offering a wide range of undergraduate and postgraduate programs in diverse fields.

Fig.8 Category Section 2

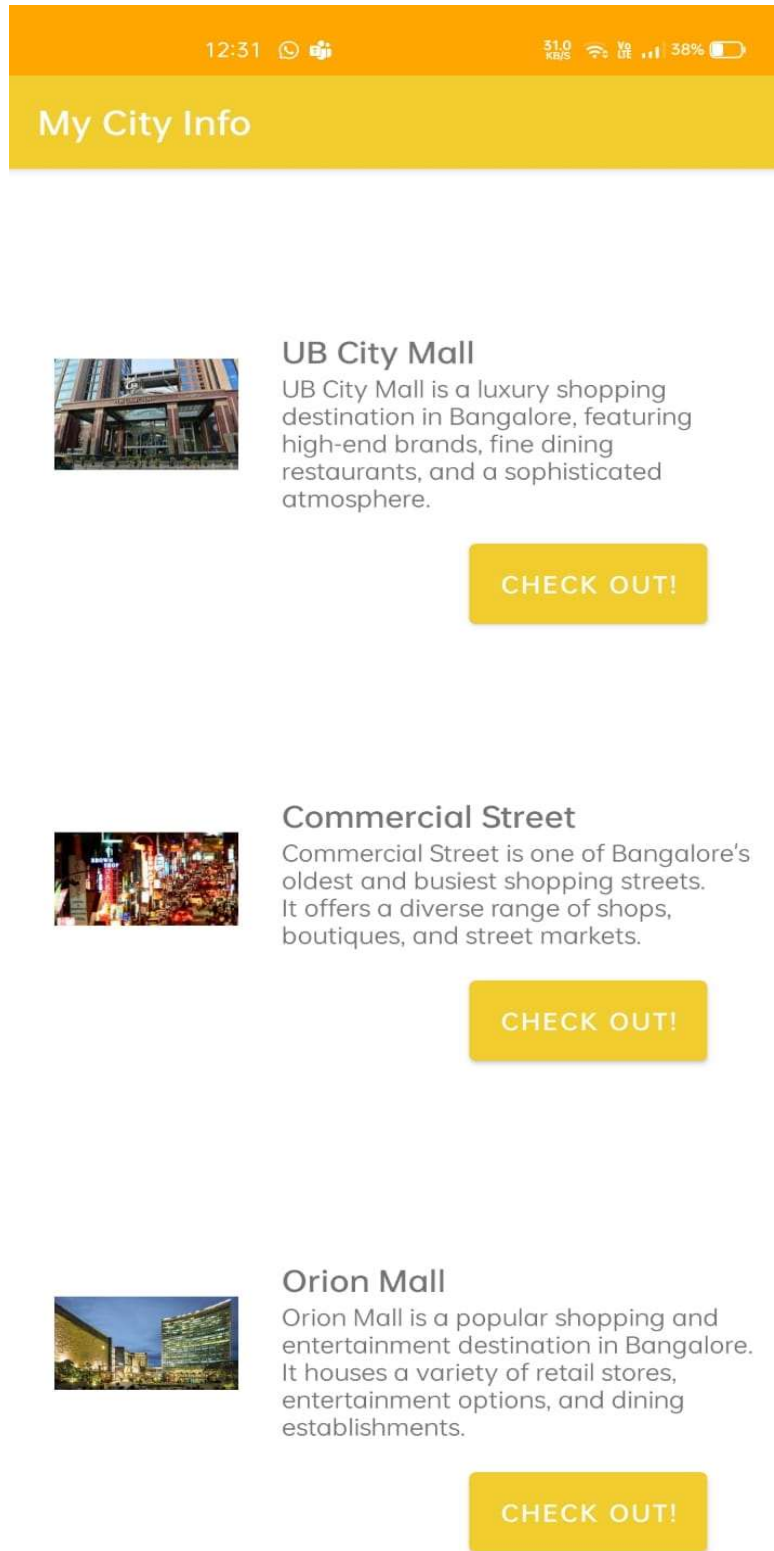


Fig.9 Category Section 3

The screenshot displays the 'My City Info' mobile application interface. At the top, there is a status bar with the time 12:32, WhatsApp and Telegram icons, data speed 0.43 KB/s, 4G LTE signal, and 38% battery. Below the status bar is a yellow header with the text 'My City Info'. The main content area contains three input fields labeled 'Name', 'Category', and 'Description'. Below these fields is a yellow button labeled 'SELECT IMAGE'. At the bottom of the form is a wide yellow button labeled 'ADD LOCATION'.

Fig.10 Add Location Feature

12:35

8.00 KB/S

Vo LTE

37%

My City Info

Name


Presidency University

Category

Education

Description

Awesome University



SELECT IMAGE

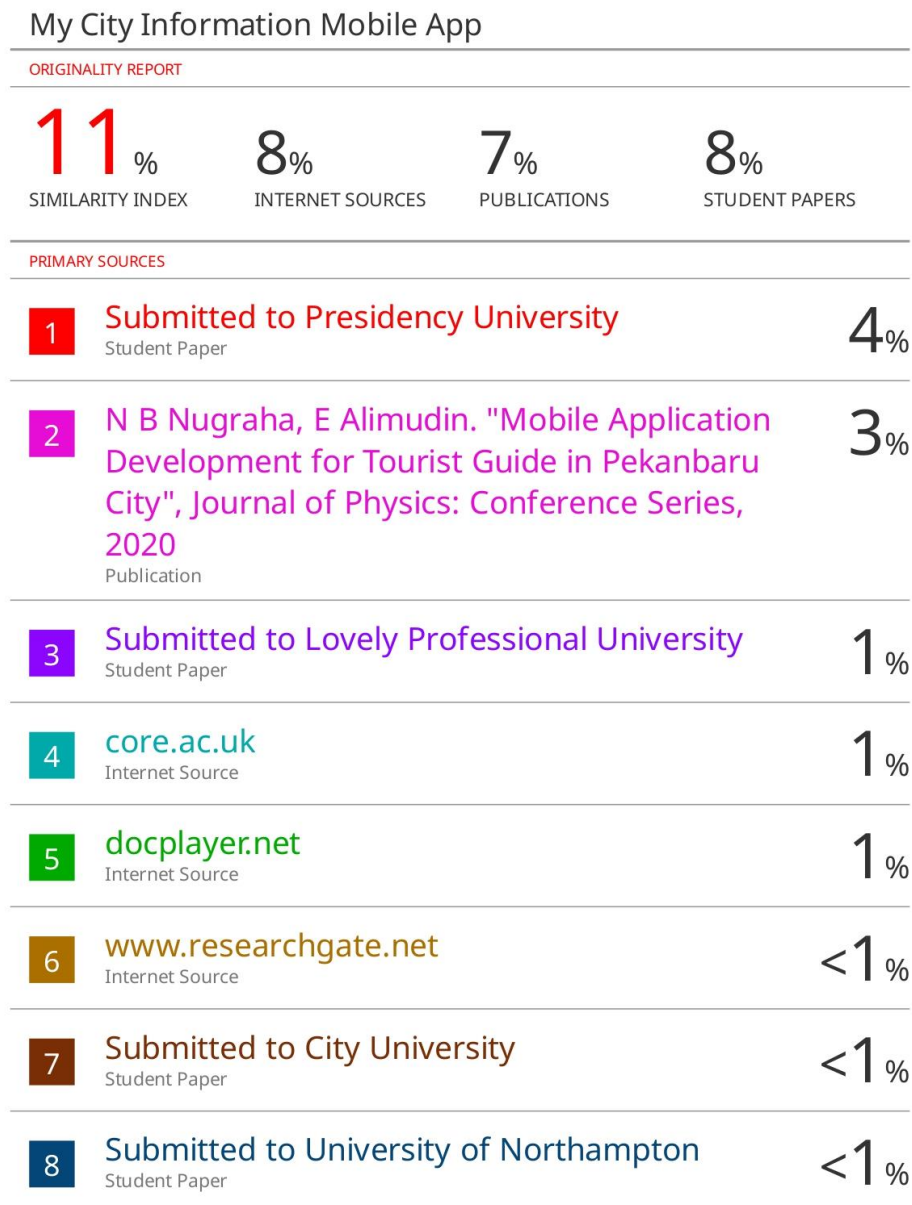
ADD LOCATION

Fig.11 Location Added Screen

APPENDIX-C

ENCLOSURES

1. Similarity Index / Plagiarism Check report clearly showing the Percentage (11%).



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Sustainable Development Goals



Sustainable Cities and Communities

This goal is about making cities and human settlements inclusive, safe, resilient, and sustainable. It aims to ensure access to safe and affordable housing, public transportation, and public green spaces. It also aims to protect those in vulnerable situations while minimizing economic loss.

The app's beginner-friendly design makes it an excellent project for newcomers to learn about mobile app development. It can help them understand how to create applications that contribute to the Sustainable Development Goals