MY CITY INFORMATION MOBILE APPLICATION

A PROJECT REPORT

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Under the guidance of,

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in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER ENGINEERING
[Artificial Intelligence and Machine Learning]

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY

BENGALURU

JANUARY 2024

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING & INFORMATION SCIENCE

CERTIFICATE

This is to certify that the Project report “My City Information Mobile Application ” being submitted by “Nithish Goutham , Muneer Basha , Chandra Shekar ” bearing roll number(s) “20201CEI0060 , 20201CEI0046, 20201CEI0062 ” in partial fulfilment of requirement for the award of degree of Bachelor of Technology in Computer Engineering[Artificial Intelligence and Machine Learning] is a Bonafide work carried out under my supervision.

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DECLARATION

We here declare that the work, which is being presented in the project report entitled "MY CITY INFORMATION MOBLIE APP" in partial fulfillment 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 **SUPERVIOR MOHAMED SHAKIR,ASST.PROFESSOR**, School of Computer Science and Engineering, 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

The "My City Information Mobile Application" is a comprehensive and user-friendly mobile platform designed to provide residents and visitors with valuable information about a city. The application aims to enhance the overall urban experience by offering a wide range of features and services that cater to various needs and interests. Key Features: City Guide: The application serves as a digital city guide, offering detailed information about popular landmarks, historical sites, cultural attractions, and entertainment venues. Users can explore curated lists of must-visit places, along with relevant details such as opening hours, ticket prices, and directions. Events and Activities: Stay updated on local events, festivals, and activities happening in the city. The app provides a comprehensive calendar, allowing users to plan their schedules and discover exciting opportunities for entertainment and social engagement. Local Services Directory: A directory of essential services within
the city, including hospitals, police stations, emergency contacts, and other public services.
Users can quickly locate and access important services in times of need. The
"My City
Information Mobile Application" strives to create a centralized platform that empowers
users with valuable insights into their city, fostering community engagement, and enhancing the overall quality of urban living. Through its diverse features, the 5 applications aim to serve as an indispensable tool for residents and tourists alike, contributing to a more connected and informed city experience.

Keywords— Mobile Application, City Information, Hotels, Bus Stations, Tourist Guide Application

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CHAPTER-1
INTRODUCTION

1.1Motivation

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Boost tourism by offering visitors a comprehensive guide to the city, including tourist attractions, historical sites, restaurants, and cultural events.Facilitate a positive visitor experience by providing real-time information on transportation, accommodations, and local services. Promoting Local BusinessesSupport local businesses by featuring them on your application, helping them reach a wider audience.Provide a platform for businesses to share promotions, events, and other relevant information with the local community Safety and Emergency PreparednessEnhance public safety by providing real-time alerts, emergency information, and evacuation routes during crises.Offer a platform for residents to report and receive updates on safety concerns, fostering a safer community.

1.2Problem Statement

The problem statement for My City Information Mobile Application is to develop a Mobile app to provide all generic public information of selected city of India. Information can be about city main attraction hotels hospitals emergency contact no Scholl and college police stations public representatives govt officials old age home local train information bus timetable information nearest police station based on geo location

1.3Project Introduction

The City Guide is essential whenever we are visiting a particular city. It gives us valuable information about the city and saves time. Our project laid an android based platform for the city guide and can search every place in the city without taking the help of any personal guide. You can search a city for its prominent places of the city user, and can get social and political information of the city, city culture, security, entertainment, Business, etc. The main aim of this project services provided to the users who have registered in the site. The services regarding city

political, historical, conventional places, business and companies' detail. Our project title is 'My CITY Info', an android-based product used to store the details of a particular city and helps all the users who just visit our android application. This site also provides all the services like business- related information and marketing details. The android app contains complete information about

cities like places to be visited, site Business environment, information about city. This android app can be used by any person who has general knowledge about the internet. All the users will be first considered anonymous users later if he needs any service then he will be treated as a registered user. Scope: The scope of the My CITY Info is to give the information about the city to the user.

All activities directly Related to the purpose are in scope. The other activities not directly related to the purposes are out of scope, such SMART CITY hardware and concern issues.

System analysis is a project management technique and a phase of system development life cycle that divides complex projects into smaller, more easily managed segments or phases. Segmenting projects allows managers to verify the successful completion of project phases before allocating resources to subsequent phases. The purpose of the systems analysis phase is to understand the requirement and build a logical model of the new system. During the next phases, data modeling, process modeling, and object modeling, android develop a logical model of business process that the system must support.

The product called as systems requirements document describes management and user requirements, alternative plans and costs, and analyzes your recommendation. System engineering and analysis encompasses requirement gathering at the system level with a

small amount of top-level design and analysis. This process of analyzing and gathering requirements is known as software requirement specification (SRS). The requirement gathering process intensified and focused specifically on software. The preliminary investigation, feasibility study and the detailed investigation allows the system to comprehend the full scope of this project. Soon after testing, implementation of the developed system is followed by training

CHAPTER-2
LITERATURE SURVEY

2.1 Related Work

2.1.1 Author: Mirela Voicu

- Date: 2022
- Topic: "On a City Guide App Model"
- Advantages: The sharing economy is forcing the travel industry to adapt and evolve similarly to how the retailing industry adapted to online shopping.
- Disadvantages: The limitation of this study regards the respondents' age, location, and habits hanging these items, the results could be little bit different. Summary: in this research we proposed a model about the touristic information that should be included when we create the CGA.

2.1.2 Author: Aniket Pati

- Date: 2019
- Topic: "My City Guide Mobile Application"
- Advantages: It supports almost 90% of smart phoness .
- Disadvantages: Sometimes it requires internet connection while connecting to internet services.
- Summary: In this paper, we propose the design and implementation of a mobile application called My City Interface, for traffic control, emphasizing its suitability for various applications.

2.1.3 Author: Vineet Singh

- Date: 2015
- Title: "Web and Mobile based Tourist Travel Guide System for Fiji's Tourism Industry" Advantages: Tourists at a new place always faces problem finding the location of different facilities such as shop, hospitals, hotels, restaurants and bus stations.

- Disadvantages: He major problem faced by tourist travelling to Fiji is availability of technology at a centralized application that will assist them to plan their tri
- Summary: The research project was to develop a centralized tourist guide system for tourist travelling to Fiji. The system had all necessary information and provided different features.

2.1.4 Author: Ms.Mynavathi.R

- Date: 2019
- Topic: "An Android Based Application for My City App".
- Advantages: Full access to OS features such as push notifications means a large number of options are open for directly promoting services and events.
- Disadvantages: Difficulty to create High cost to create and make them available to people Need for updates and support.
- Summary: In this paper, we presented the design and implementation of a mobile application called My City App.

2.1.5 Author: Manjeet Singh

- Date: 2019
- Topic: "Research Paper on Android Smart City Traveller".
- Advantages: The application allows Travellers to specify their interests and types of places they want to visit.
- Disadvantages: It cannot Integration with social media platforms like Facebook or Instagram and can allow users to share their travel experiences with friends and family.
- Summary: The system fetches theuser's current location using GPS and then uses the Foursquare API to get information about the available locations and their rankings.

2.1.6 Author: Lidija Lalicic

- Date: 2017
- Topic: "Mobile Computing Travel Platform".
- Advantages: Make all Your Bookings Easily under One Roof A Platform that offers Most Attractive Rebates Best in Class Customized and Improved Services.

- Disadvantages: Mobile computing can lead to a dependence on technology, making it difficult to disconnect and enjoy life without constant digital distraction .
- Summary: The survey was designed based on eight main sections with related questions to i) socio-demographic information, ii) members' behaviour in the mobile computing travel platform

2.1.7 Author: Richard

- Date: 2020
- Topic: "The Road toward Smart Cities".
- Advantages: A Smart City is one that places people at the center of development, incorporates Information and Communication Technologies into urban management. Disadvantages: He increases in federal funding and strong partnerships between city governments and private sector technology companies will further consolidate the reality of smart cities in the upcoming years.
- Summary: Several implications of this study can be directed to implementers and developers of smart city apps within local governments.

CHAPTER-3
RESEARCH GAPS OF EXISTING METHODS

3.1 Existing System

In As of last update in January 2022, various city information mobile applications and tourist guides mobile applications exist, each with its features and functionalities. Such as Maps and Navigation:
Integration with maps for easy navigation and location-based services, helping users find nearby attractions, restaurants, hotels, and other points of interest.

Attraction Information:
Detailed information about tourist attractions, historical sites, landmarks, museums, and other places of interest, including descriptions, opening hours, ticket prices, and user reviews.

Travel Itinerary Planning:
Tools for users to plan and organize their travel itinerary, including suggested routes, timelines, and the ability to customize plans based on personal preferences.

Offline Access:
Some applications offer offline access to maps, information, and guides, useful for tourists in areas with limited internet connectivity.

Augmented Reality (AR):
Integration of AR features for enhanced experiences, such as virtual tours, historical reconstructions, or information overlays when viewing real-world locations through a device's camera.

Local Events and Activities:
Information on local events, festivals, and activities happening during the user's visit, helping them make the most of their time.

Restaurant and Dining Recommendations:
Suggestions and reviews for local restaurants, cafes, and eateries, often categorized by cuisine type and price range.

Language Translation:
Integration of language translation features to help tourists communicate with locals in a foreign language.

Weather Updates:
Real-time weather information for the destination, helping tourists plan their activities accordingly.

User Reviews and Ratings:
User-generated reviews and ratings for attractions, accommodations, and other services, providing valuable insights for other travelers.

Local Transportation Information:
Details on local transportation options, including public transit routes, taxi services, and car rental information.

Safety Tips and Emergency Information:
Information on local emergency services, healthcare facilities, and safety tips for tourists.

Social Integration:
Integration with social media platforms for sharing travel experiences, photos, and

recommendations with friends and followers.

Offline Travel Guides:
Some apps offer downloadable travel guides for specific destinations, providing comprehensive information that users can access offline.

3.2 Gaps in the system

Limited Geographic Coverage:
Some applications may have limited coverage, focusing on popular tourist destinations while neglecting smaller or less-known areas within the city.

Outdated Information:
The app might suffer from outdated information, including business closures, changes in public transportation routes, or outdated event details.

Lack of User Engagement:
Low user engagement may indicate a gap in features that encourage users to actively participate, share experiences, or contribute content.

Ineffective Navigation:
Navigation features may not be user-friendly or might lack integration with real-time data, leading to difficulties for users in finding their way around the city.

Insufficient Language Support:
Limited language support could hinder the app's usability for international tourists or residents who speak languages not adequately covered by the application.
Poor Accessibility:
Issues related to accessibility for users with disabilities might be overlooked, limiting the app's inclusivity.

Inadequate Offline Functionality:
If the app heavily relies on an internet connection, users may face challenges in accessing information when offline, particularly in areas with poor connectivity.

Incomplete Business Listings:
A lack of comprehensive and up-to-date business listings might impact users' ability to find relevant services, restaurants, and shops.

Limited Customization:
If the app lacks features allowing users to customize their experience based on personal preferences or interests, it may not fully meet individual needs.

Ineffective Emergency Communication:
Gaps in emergency communication features could hinder the app's ability to provide timely and accurate information during critical situations.

Neglect of Local Culture:
Some applications may not adequately highlight and celebrate the local culture and heritage of the city, missing an opportunity to enhance the user experience.
Data Privacy Concerns:
Insufficient attention to data privacy and security might discourage users from fully engaging with the app, especially if they have concerns about the protection of their personal information.

Limited Integration with Local Services:
Lack of integration with local services or partnerships with businesses and organizations may limit the app's ability to provide a comprehensive user experience.
Inadequate Support and Updates:
Users may face gaps in customer support or the absence of regular updates, leading to unresolved issues and a lack of new features.

CHAPTER-4
PROPOSED METHODOLOGY

In the existing methods to create Mobile app to provide all generic public information of selected city of India. Information can be about city main attraction hotels hospitals emergency contact no Scholl and college police stations public representatives govt officials old age home local train information bus timetable information nearest police station based on geo location is very difficult such as geo location implementations application support versions accuracy data to overcome these accuracy issues, we go for the proposed system.

4.1 Technology Selection:

Choose the appropriate technology stack for the application, considering factors such as platform compatibility (iOS, Android), database management, and integration with external APIs or services.

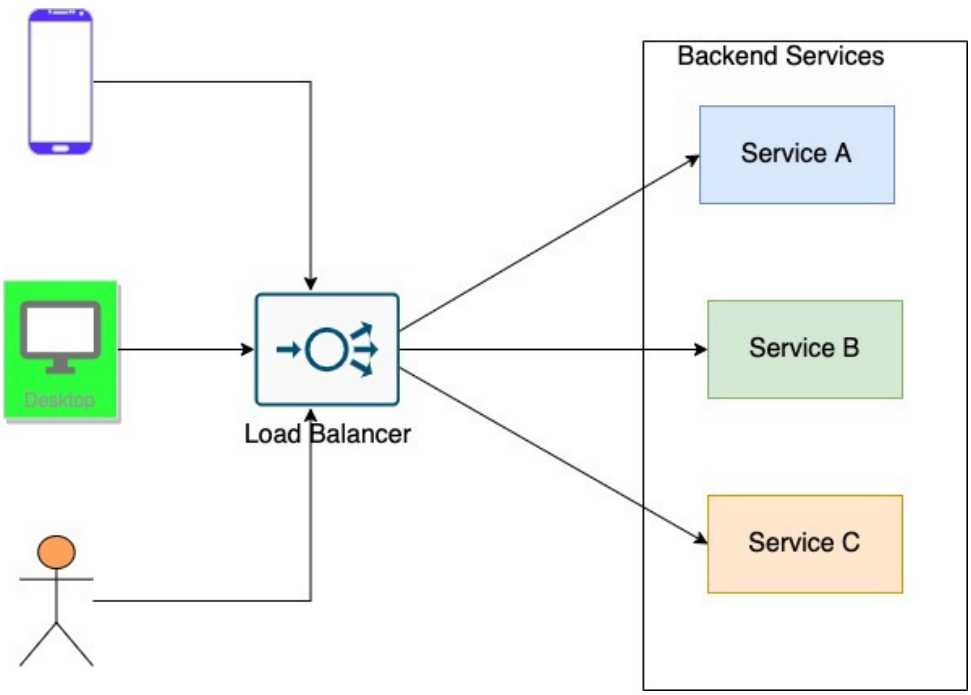


Figure 4.1. Technology selection integration with external Api

4.1.1 Data Security and Privacy

Prioritize data security and privacy. Implement robust security measures to protect user information and comply with relevant data protection regulations.

Figure 4.1 Data privacy

4.1.2 Competitor Analysis:

Analyze existing city information or tourist guide applications to identify strengths, weaknesses, opportunities, and threats. Learn from successful features and avoid common pitfalls.

figure4.2. competitive analysis

4.1.3 Feature Identification:

Based on the needs assessment and user personas, identify key features required in the application. This may include maps, event calendars, business directories, emergency services, and more.

4.1.4 User-Centric Design:

Implement a user-centric design approach, ensuring that the application's interface is intuitive, aesthetically pleasing, and easy to navigate. Consider usability testing to refine the design based on user feedback.

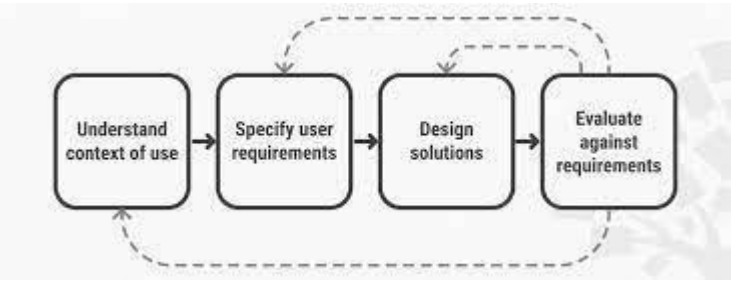


Figure4.3 user centric design

4.1.5 Testing and Quality Assurance:

Conduct thorough testing, including functional, usability, and security testing, to identify and resolve any issues before the application is released to the public.

4.1.6 Definition Proposed definition

preparation of request for proposed applications. Feasibility assessment: evaluation of feasibility and cost benefit of proposed system. Information requirement analysis: determination of information needed. Design Conceptual design: User-oriented design of application development. Physical system design: Detailed design of flows and processes in applications processing system and preparation of program specification.

Development coding and testing of computer programs. Procedure development: design of procedures and preparation of user instructions. Installation and operation Conversion: final system test and conversion. Operation and maintenance: Month to month operation and maintenance Post

audit Evaluation of development process, application system and results of use at the completion of each phase, formal approval sign-off is required from the users as well as from the manager of the project development

FEASIBILITY STUDY

A feasibility study is a high-level capsule version of the entire System analysis and Design Process. The study begins by classifying the problem definition. Feasibility is to determine if it's worth doing.

Technical Feasibility

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on outline design of system requirements in terms of input, processes, output, fields, programs and procedures

4.1.7 Feature Identification:

Identify key features based on gathered requirements, including City attractions with details and ratings Hote land Hospitals and emergency contact numbers Schools and colleges information Police stations with contact details public representatives and government official old age homes and welfare organizations Local train information Local train information Bus timetables Geo-location-based services

4.1.8 Integration with Real-Time Data

Integrate with relevant data sources for real-time information, especially for features like bus schedules and train information.

4.1.9 Offline Functionality

Develop offline capabilities to ensure users can access critical information even without an internet connection.

4.1.10. Localization and Personalization

Implement localization for multiple languages and personalization features to allow users to customize their experience.

4.1.11. Community Engagement

Include features for community engagement, such as forums, user reviews, and social media integration.

4.1.12. Accessibility Considerations

Ensure the app is accessible to users with disabilities, following accessibility standards.

4.2.1 Continuous Improvement and Updates

Plan for regular updates based on user feedback, technological advancements, and changes in the city's infrastructure or services.

4.2.2.Marketing and Promotion

Develop a marketing strategy to promote the app, collaborating with local authorities and using various channels.

4.2.3 User Training and Support

Provide user training materials and support resources to ensure users can effectively use the app.

4.2.4 Monitoring and Analytics

Implement analytics tools to monitor user interactions, gather insights, and make data-driven

CHAPTER-5
OBJECTIVES

5.1 Facilitate Access to Essential Information

Provide a centralized platform for users to easily access essential information about the city, including attractions, emergency services, healthcare facilities, educational institutions, public representatives, and more.

5.1.1 Enhance User Experience

Design an intuitive and user-friendly interface that ensures a positive experience for residents and visitors navigating through the app to find relevant information.

5.1.2. Improve City Navigation

Include maps and navigation features to help users find their way around the city, locate points of interest, and plan routes efficiently.

5.1.3. Promote Local Businesses and Services

Showcase local businesses, hotels, restaurants, and services, contributing to the economic growth of the city and enhancing the overall experience for residents and tourists.

5.1.4 Encourage Community Engagement

Foster a sense of community by incorporating features that allow users to engage with each other, share experiences, and participate in discussions about local events and issues.

5.1.5. Ensure Safety and Emergency Preparedness

Provide up-to-date information on emergency services, hospitals, police stations, and safety tips to enhance overall safety and emergency preparedness for residents and visitors.

5.1.6. Support Tourism and Cultural Awareness

Promote tourism by highlighting local attractions, cultural events, and historical sites, contributing to the city's reputation and encouraging cultural awareness among residents and visitors.

5.1.7 Facilitate Educational Information

Offer comprehensive information about educational institutions, schools, and colleges, supporting residents in making informed decisions about their education.

5.1.8 Geo-Location-Based Services

Implement geo-location features to provide personalized and location-specific information, making the app more relevant and useful for users based on their current location

CHAPTER-6

SYSTEM DESIGN & IMPLEMENTATION

6.1 System Design

Design is the first step in the development phase for any techniques and principles for defining a device, a process or system in sufficient detail to permit its physical realization.

Once the software requirements are analyzed and specified, the software design involves

three

technical activities - design, coding, implementation and testing required to build and verify the software. Design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system.

Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

6.2 Output Design

User Interface (UI) Design

- Develop a visually appealing design that aligns with the city's branding, using colors, fonts, and imagery that evoke a sense of locality.

Consistent Layout

- Maintain a consistent layout across screens to provide a seamless and predictable user experience.

Responsive Design

- Ensure the design is responsive, adapting to different screen sizes and orientations for a consistent experience on various devices.

Menu Structure

- Organize information logically within menus or categories, keeping the navigation structure simple and user-friendly.

Search Functionality

- Implement a search feature that allows users to quickly find specific information within the app.

Buttons and Calls-to-Action

- Design visually distinct buttons and calls-to-action to guide users through the app's functionalities.

Gesture-Based Interactions

- Incorporate intuitive gestures for common actions, such as swiping, tapping, or pinching for zooming in maps.

Feedback Mechanisms

- Provide visual and auditory feedback to users when they perform actions, ensuring they are aware of the app's response.

Prioritize Information

- Highlight critical information such as emergency contacts, important events, or safety tips, ensuring it stands out prominently.

Geo-Location Integration

- Integrate maps and geo-location features to visually represent the locations of attractions, services, and emergency facilities.

Accessible Design

- Follow accessibility guidelines, ensuring the app is usable by individuals with disabilities. This includes considerations for screen readers, color contrast, and text size.

Multilingual Support

- Provide support for multiple languages to cater to a diverse user base.

Theme Customization

- Allow users to customize the app's theme or appearance based on personal preferences.

Onboarding Tutorials

- Create onboarding tutorials or walkthroughs to introduce new users to the app's features and functionalities.

Personalized Onboarding

- Personalize the onboarding experience based on user preferences or demographics.

Graphs and Charts

- Use graphs or charts to visualize data, such as trends in events, popularity of attractions, or user engagement.

Interactive Maps

• Implement interactive maps that allow users to explore the city and discover points of interest.

UML Diagrams

Actor: A coherent set of roles that users of use cases play when interacting with the use cases.

Figure 6.2 Actor

Use case

A description of sequence of actions, including variants, that a system performs that yields an observable result of value of an actor.

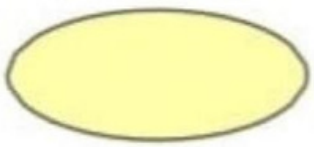


figure 6.3 use case

UML stands for Unified Modeling Language. UML is a language for specifying, visualizing and documenting the system. This is the step while developing any product after analysis. The goal from this is to produce a model of the entities involved in the project which later need to be built. The representation of the

entities that are to be used in the product being developed need to be designed.

There are various kinds of methods in software design:

They are as follows:

- Use case Diagram
- Sequence Diagram
- Collaboration Diagram
- Activity Diagram
- State chat Diagram

Use case Diagrams

Use case diagrams model behavior within a system and helps the developers understand of what the user require. The stick man represents what's called an actor.

Use case diagram can be useful for getting an overall view of the system and clarifying that can do and more importantly what they can't do.

Use case diagram consists of use cases and actors and shows the interaction between the use case and actors.

- The purpose is to show the interactions between the use case and actor.
- To represent the system requirements from user's perspective.
- An actor could be the end-user of the system or an external system.

Use case Diagram

A Use case is a description of set of sequence of actions. Graphically it is rendered as an ellipse with solid line including only its name. Use case diagram is a behavioral diagram that shows a set of use cases and actors and their relationship. It is an association between the use cases and actors. An actor represents a real- world object. Primary Actor – Sender, Secondary Actor Receiver.

ADMIN

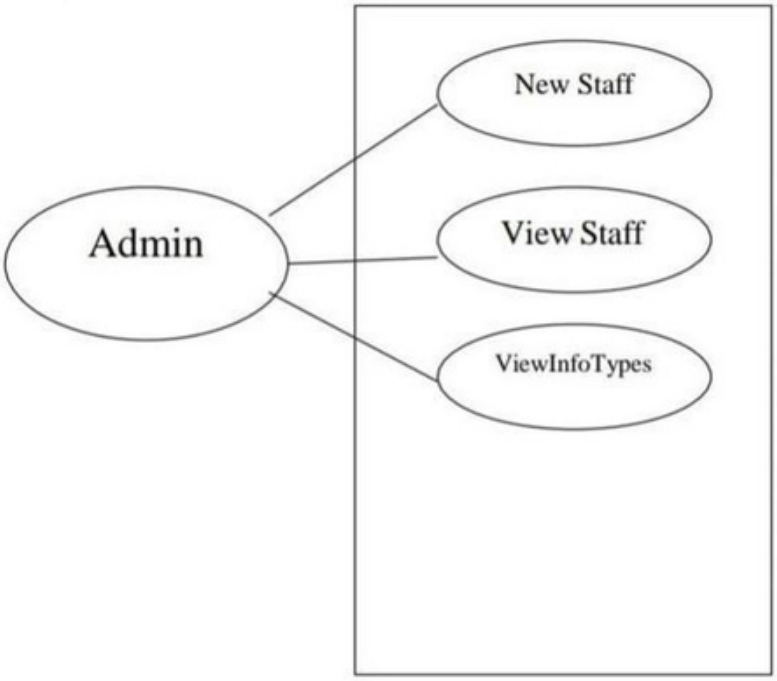


Figure 6.4

User

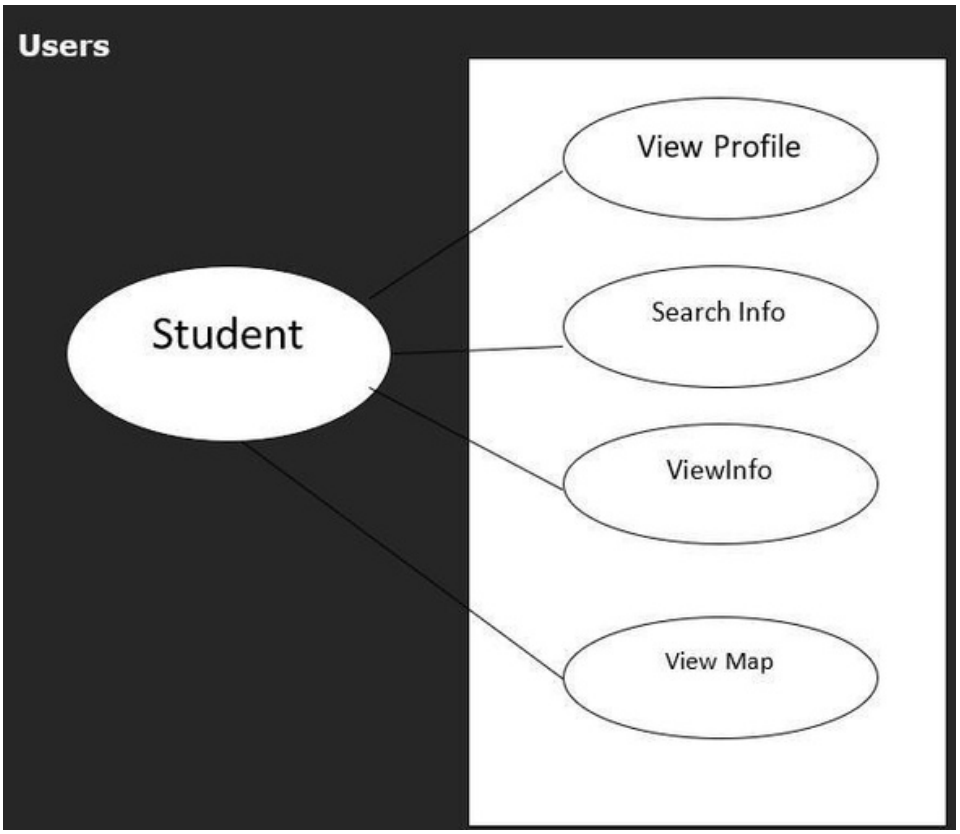


Figure 6.5 User

6.3 DATA FLOW DIAGRAMS

The DFD takes an input-process-output view of a system i.e. data objects flow into the software, are transformed by processing elements, and resultant data objects flow out of the software.

Data objects represented by labeled arrows and transformation are represented by circles

also

called bubbles. DFD is presented hierarchically, i.e. the first data flow model represents the system. Subsequent DFD refine the context diagram (level 0 DFD), providing increasing details with each subsequent level.

The DFD enables the software engineer to develop models of the information domain & functional domain at the same time. As the DFD is refined into greater levels of details, the analyst performs an implicit functional decomposition of the system. At the same time, the DFD refinement results in a corresponding refinement of the data as it moves through the processes that embody the applications.

A context-level DFD for the system the primary external entities produce information for use by the system and consume information generated by the system. The labeled arrow represents

data objects or object hierarchy.

Figure 6.3 DFD levels

RLUES OF DFD

- Fix the scope of the system by means of context diagrams.
- Organize the DFD so that the main sequence of the actions
- Reads left to right and top to bottom.
- Identify all inputs and outputs.
- Identify and label each process internal to the system with Rounded circles.
- A process is required for all the data transformation and Transfers. Therefore, never connect a data store to a data Source or the destinations or another data store with just a Data flow arrow.

- Do not indicate hardware and ignore control information.

- Make sure the names of the processes accurately convey everything the process is done.

ER DIAGRAM

The Entity-Relationship (ER) model was originally proposed by Peter in 1976 as a way to unify the network and relational database views. Simply stated the ER model is a conceptual data model that views the real world as entities and relationships. A basic component of the model is the Entity-Relationship diagram which is used to visually represent data objects. Since Chen wrote his paper the model has been extended and today it is commonly used for database design For the database designer, the utility of the ER model is:

- It maps well to the relational model. The constructs used in the ER model can easily be transformed into relational tables.
- It is simple and easy to understand with a minimum of training. Therefore, the model
- can be used by the database designer to communicate the design to the end user.

  In addition, the model can be used as a design plan by the database developer to
  implement a data model in specific database management software.

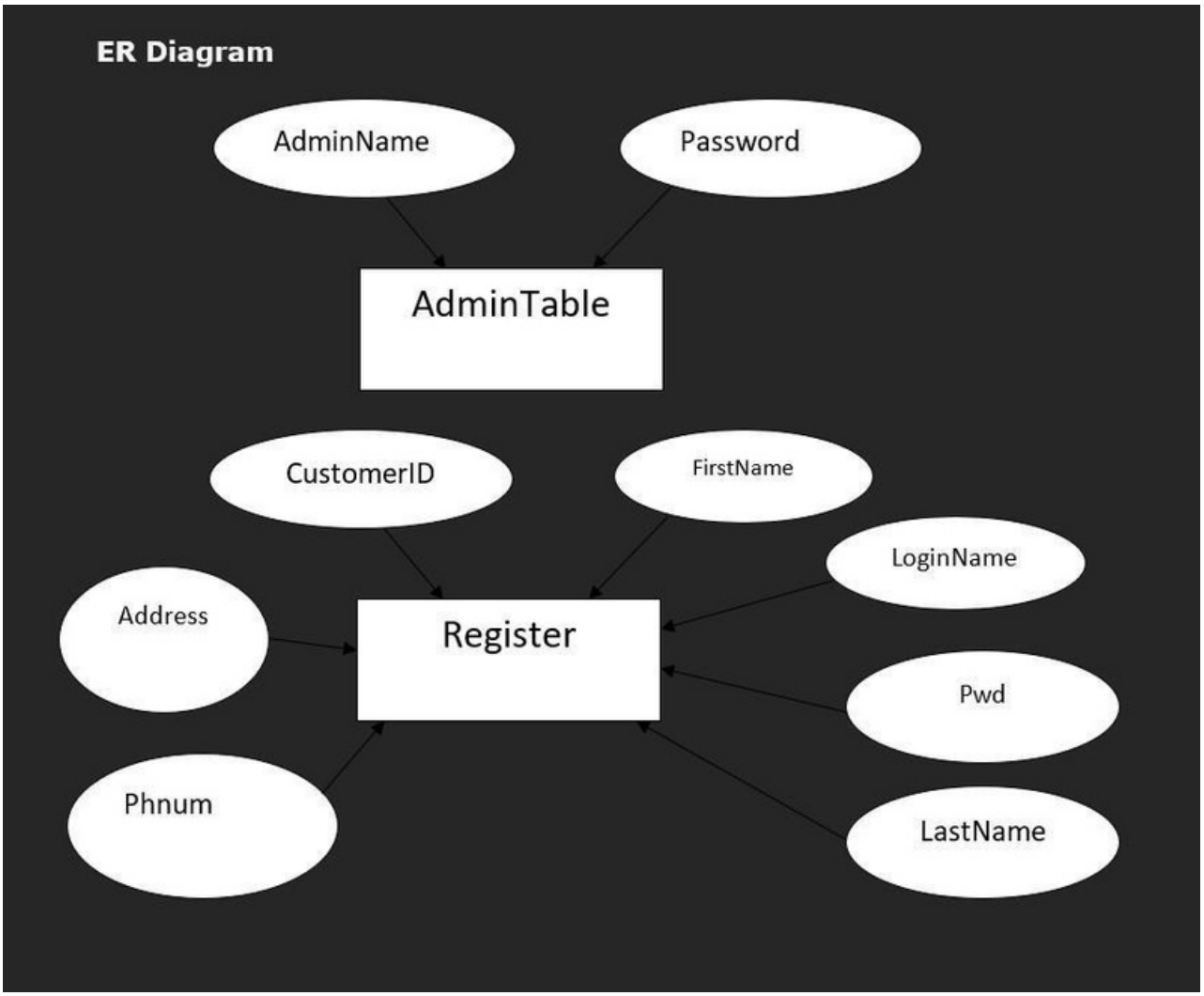


Figure 6.4 Er Digram

Connectivity and Cardinality

The basic types of connectivity for relations are: one-to-one, one-to-many, and many-to-many. A *one-to-one* (1:1) relationship is when at most one instance of a entity A is associated with one instance of entity B. For example, "employees in the company are each assigned their own office. For each employee there exists a unique office and for each office there exists a unique employee.

A *one-to-many* relationships is when for one instance of entity A, there are zero, one, or many instances of entity B, but for one instance of entity B, there is only one instance of entity A. An example of a 1:N relationships is a department has many employees

Each employee is assigned to one department

A *many-to-many* (M:N) relationship, sometimes called non-specific, is when for one instance of entity A, there are zero, one, or many instances of entity B and for one instance of entity B there are zero, one, or many instances of entity A. The connectivity of a relationship describes the mapping of associated

ER Notation

There is no standard for representing data objects in ER diagrams. Each modeling methodology uses its own notation. The original notation used by Chen is widely used in academics texts and journals but rarely seen in either CASE tools or publications by non-academics. Today, there are a number of notations used; among the more common are Bachman, crow's foot, and IDEFIX.

All notational styles represent entities as rectangular boxes and relationships as lines connecting boxes. Each style uses a special set of symbols to represent the cardinality of a connection. The notation used in this document is from Martin. The symbols used for the basic ER constructs are:

• Entities are represented by labelled rectangles. The label is the name of the entity. Entity names should be singular nouns.

• Relationships are represented by a solid line connecting two entities. The name of the relationship is written above the line. Relationship names should be verbs

• Attributes, when included, are listed inside the entity rectangle. Attributes which are identifiers are underlined. Attribute names should be singular nouns.

• Cardinality of many is represented by a line ending in a crow's foot. If the crow's foot is omitted, the cardinality is one.

• Existence is represented by placing a circle or a perpendicular bar on the line. Mandatory existence is shown by the bar (looks like a 1) next to the entity for an instance is required. Optional existence is shown by placing a circle next to the entity

that is optional

Data Tables

Admin Table

Field	Type
AdminName	Varchar(20)
Password	Varchar(20)

Table 6.3.1

NewUser

Field	Type	Null
UserId	int(11)	NO
FirstName	varchar(50)	YES
LastName	varchar(50)	YES
PhoneNum	varchar(50)	YES
EmailID	varchar(50)	YES
Uname	varchar(50)	YES
Pwd	varchar(50)	YES

Table 6.3.2

NewInfo

Field	Type	Null
InfoId	int(11)	NO
InfoName	varchar(50)	YES
InfoType	int(11)	YES

Description	varchar(50)	YES
WebLink	varchar(50)	YES

Table 6.3.3

6.4 Implementation

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification.

It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the change over and an evaluation of change over methods a part from planning. Two major tasks of preparing the implementation are education and training of the users and testing of the system.

The more complex the system being implemented, the more involved will be the systems analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition is carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

6.5 TESTING AND IMPLEMENTATION

6.5. SYSTEM TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the

functionality of components, sub-assemblies, assemblies and/or a finished product It is the process of exercising software with the intent of ensuring that the

The software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of tests. Each test type addresses a specific testing requirement.

TYPES OF TESTS

6.5.1 Unit testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application. it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific Flightiness process, application, and/or system configuration. Unit tests ensure that each unique path of a Flightiness process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

6.5.2 Integration testing

Integration tests are designed to test integrated software components to determine if they run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is aimed at exposing the problems arising from the combination of components.

6.5.3 Functional test

N Functional tests provide systematic demonstrations that functions tested are available as specified by the Flightiness and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

Valid Input	: identified classes of valid input must be accepted.
Invalid Input	: identified classes of invalid input must be rejected.
Functions	: identified functions must be exercised.
Output	: identified classes of application outputs must be exercised.

Systems/Procedures: interfacing systems or procedures must be invoked.the organisation

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Flightiness process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

6.5.4. System Test

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

6.5.5 White Box Testing

White Box Testing is a testing in which in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is purpose. It is used to test areas that cannot be reached from a black box level.

5.2.6 Black Box Testing

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or

requirements document, such as specification or requirements document.

5.2.7 Unit Testing

Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit testing to be conducted as two distinct phases. Test strategy and approach Field testing will be performed manually, and functional tests will be written in detail. Test objectives All field entries must work properly. Pages must be activated from the identified link.The entry screen, messages and responses must not be delayed. Features to be tested Verify that the entries are of the correct Form duplicate entries should be allowedAll links should take the user to the correct page. Integration Testing

Software integration testing is the incremental integration testing of two or more integrated software components on a single platform to produce interface defects.

CHAPTER-7

TIMELINE FOR EXECUTION OF PROJECT (GANTT CHART)

	Sept 09-Sept 13	Nov 6 -Nov 10	Nov 27 -Nov 30	Dec 26 - Dec 30	Jan 8 - Jan 12
Review 0	Title Finalization Literature Survey Finalizing objectives Deciding the methodology				
Review 1		Research and design			
Review 2			Coding,Collecting dataset& Image processing		
Review 3				Here add Training the model and Applying Algorithm	
Review 4					Live Demonstration of the project

Table 7.1. Gantt Chart

CHAPTER-8
OUTCOMES

Improved Accessibility

- Residents and visitors will have easy access to a centralized platform for all essential information about the city, enhancing overall accessibility.

Enhanced Tourism Experience

- Tourists can plan their visits more effectively by exploring detailed information about attractions, accommodations, and transportation options. Emergency Preparedness: Residents and visitors will be better prepared for emergencies with quick access to emergency contact numbers, healthcare facilities, and police stations.

Efficient Public Services

- Citizens can easily connect with public representatives and government officials, fostering better communication and efficient public services.

Increased Safety and Security

- The app's geo-location features can help users quickly locate nearby police stations, enhancing the overall safety and security of the community.

Educational Resources

- Students and parents can access information about educational institutions, courses, and admission procedures, facilitating informed decisions about education.
- Convenient Transportation Planning Commuters can plan their journeys more efficiently with real-time information on local train schedules, bus timetables, and the nearest transportation options. Support for the Elderly: The elderly population can find

suitable old age homes or senior care centers with ease, improving their overall well-being and support.

Community Engagement

- The app can foster a sense of community engagement by providing a platform for user feedback, ratings, and reviews, encouraging interaction among residents and visitors.

Tourism Promotion

- By showcasing the city's attractions and amenities, the app can contribute to tourism promotion, attracting more visitors and boosting the local economy. Language Inclusivity: Multilingual support ensures that a diverse range of users, including tourists and residents from different linguistic backgrounds, can effectively use the app.

Offline Accessibility

- The ability to download information for offline use ensures that users can access critical information even in areas with limited or no internet connectivity.

Positive User Experience

- A user-friendly interface enhances the overall experience, making it easy for users to navigate, find information, and accomplish tasks within the app.

Data-Driven Decision-Making

- The app can provide valuable insights into user preferences, feedback, and trends, enabling data-driven decision-making for future enhancements.

Community Empowerment

- By providing comprehensive information, the app empowers the community with knowledge, encouraging active participation and a sense of ownership.

CHAPTER 9

RESULTS AND DISCUSSIONS

Users will have a one-stop platform for accessing a wide range of essential information about
the city, streamlining the process of gathering details from multiple sources.

Improved Tourism Experience

- Tourists will benefit from detailed information about main attractions, hotels, and transportation options, leading to a more enjoyable and organized visit.

Enhanced Emergency Response

• Quick access to emergency contact numbers, hospitals, and police stations will result in improved emergency response times and better overall community safety.

Educational Resource for Students and Parents

- Students and parents can make informed decisions about education with access to details about schools, colleges, and courses offered in the city.

Effective Communication with Public Representatives

• Residents can easily connect with public representatives and government officials, fostering better communication and community engagement.

Increased Safety through Geo-Location Services

- The app's geo-location features will assist users in finding the nearest police station, promoting personal safety and reducing response times in case of emergencies.

RESULT

TestCase Number	Testing Scenario	Expected result	Result
	Registration Testing		
TC – 01	Clicking submit without entering details.	Alert "Please fill all Details	Pass
TC – 02	Clicking submit without entering username	Alert "Please fill all Username	Pass
TC – 03	Clicking submit without entering password	Alert "Please fill all password	Pass
TC – 04	Clicking submit without entering Email ID	Alert "Please fill all id	Pass
TC – 05	Clicking submit without entering phone number	Alert "Please fill all Numbers	Pass
TC – 06	Clicking submit entering confirm password data which is not matching	Alert "Please fill all confirm password	Pass
	Login Testing		
TC – 07	Clicking submit without entering login details	Alert "Please enter UserName	Pass
TC – 08	Clicking submit without entering password	Alert "Please enter password	Pass
TC – 09	Clicking submit without entering Username	Alert "Please enter the UserName	Pass

TC – 10	Clicking submit entering wrong Username	Alert "Invalid User"	Pass
TC – 11	Clicking submit entering wrong password	Alert "Invalid User"	Pass
TC – 12	Clicking submit entering wrong Username and password	Alert "Invalid User"	Pass

Table 9.1

RESULT IMAGES

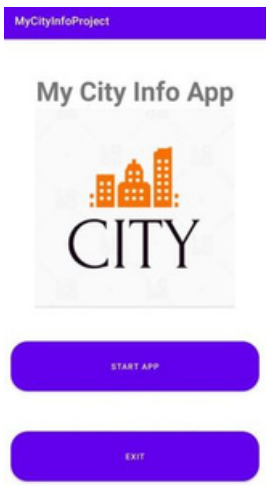


figure 9.1

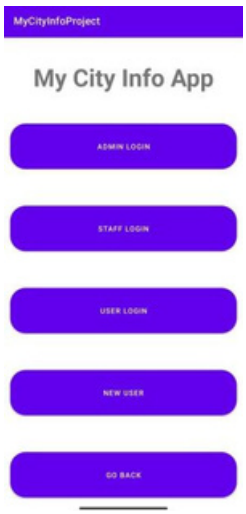


figure 9.2

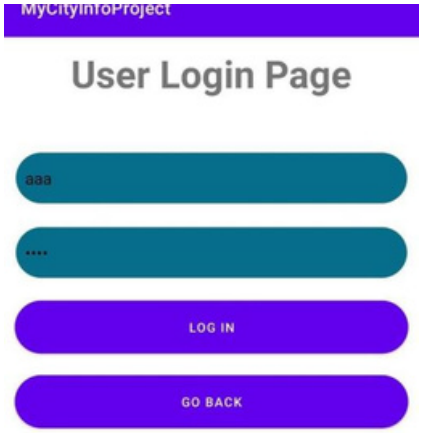


figure 9.3

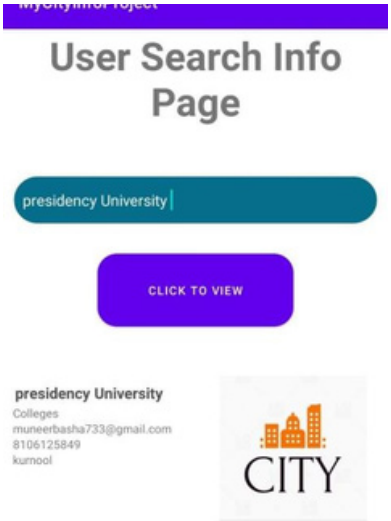


Figure 9.4

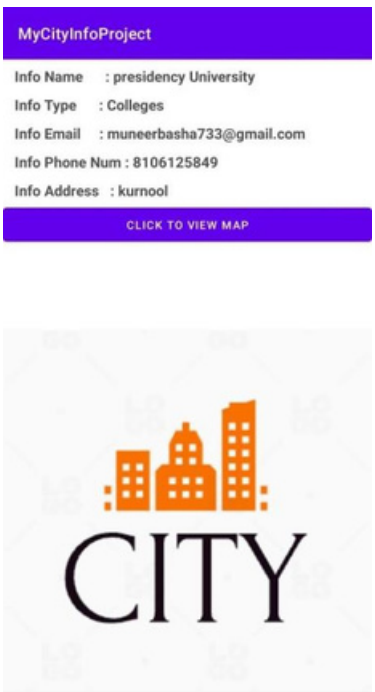
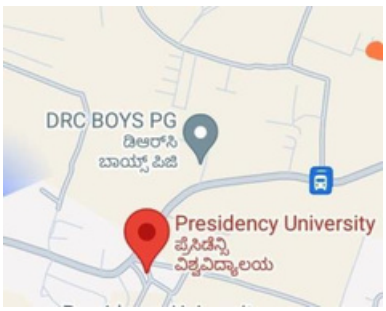


figure 9.5

figure 9.6



CHAPTER -10

CONCLUSION

Residents and visitors gain easy access to a diverse array of information, eliminating the need to navigate multiple sources for essential city-related details. Enhanced Tourism Experience: Tourists benefit from a well-organized repository of information on attractions, accommodations, and transportation, contributing to a more enjoyable and informed travel experience. Community Safety and Emergency Preparedness: The app facilitates quick access to emergency contact numbers, healthcare facilities, and nearby police stations, improving overall safety and emergency response in the city. Educational Empowerment: Students and parents can make informed decisions about education with access to detailed information about schools, colleges, and courses offered in the city.

communication and promoting community involvement in local governance. Support for

Vulnerable Populations: The elderly population benefits from easier access to information about old age homes and senior care centers, enhancing their support systems. Promotion of Local Businesses: Local businesses, including hotels and restaurants, gain increased visibility, attracting more customers and contributing to the

economic growth of the city. Efficient Transportation Planning: Commuters can plan

their journeys effectively with real-time information on local train schedules, bus timetables, and the nearest transportation options. Community Empowerment and Engagement: The app fosters a sense of community empowerment, Positive User Experiences: Residents and visitors are likely to have positive interactions with the app, enhancing user satisfaction and adoption.

User-Friendly Interface:

Ensure that the application has an intuitive and user-friendly interface to enhance the

overall user experience. Implement a clean design, easy navigation, and a responsive

layout for users of all ages and technological proficiency. Comprehensive City Information: Offer a wide range of information about the city, covering aspects.

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Coding:

MainActivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

<ScrollView
android:layout_width="match_parent"
android:layout_height="match_parent">

<LinearLayout
android:layout_width="match_parent"
android:layout_height="800dp"
android:orientation="vertical">
<TextView
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_centerHorizontal="true"
android:layout_gravity="center_horizontal"
android:layout_marginTop="50dp"
android:text="My City Info App"
android:textSize="40dp"
android:gravity="center"
android:textStyle="bold"
/>

<ImageView
android:id="@+id/imageView"
android:layout_width="match_parent"
android:layout_height="300dp"
app:srcCompat="@drawable/mycityinfo" />

<Button
android:id="@+id/startappbtn"
android:layout_width="match_parent"
android:layout_height="75dp"
android:layout_marginStart="10dp"
android:layout_marginLeft="50dp"
android:layout_marginTop="50dp"
android:layout_marginEnd="10dp"
android:layout_marginBottom="10dp"
android:background="@drawable/shapesignup"
android:shadowColor="@android:color/transparent"
android:text="Start App"
android:textColor="@color/white" />

<Button
```

```
 android:id="@+id/exitbtn"
android:layout_width="match_parent"
android:layout_height="75dp"
android:layout_marginStart="10dp"
                        android:layout_marginLeft="50dp"
android:layout_marginTop="50dp"
android:layout_marginEnd="10dp"
android:layout_marginBottom="10dp"
android:background="@drawable/shapesignup"
                         android:shadowColor="@android:color/transparent"
android:text="Exit"
android:textColor="@color/white" />


</LinearLayout>
</ScrollView>
</RelativeLayout>
```

MainActivity.java

```
package com.example.mycityinfoapp;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
private Button startappbtn,exitBtn;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
                startappbtn=(Button)findViewById(R.id.startappbtn);
exitBtn = (Button) findViewById(R.id.exitbtn);
                    startappbtn.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
                                Intent intent = new Intent(getApplicationContext(),
MainAppActivity.class);
startActivity(intent);
}
});
exitBtn.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
MainActivity.this.finish();
System.exit(0);
```

```
  }
});
}
}
```

APPENDIX - B

Screen Shots

MainPage

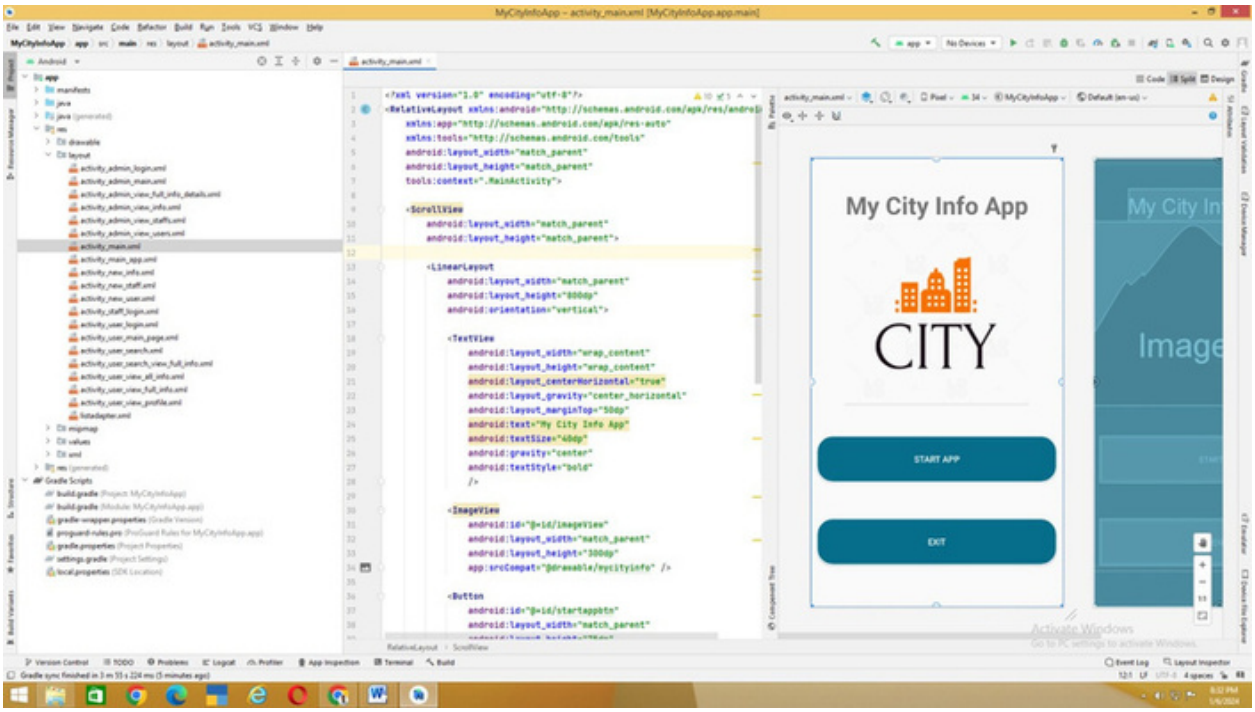

Figure 10.0

AdminLoginPage

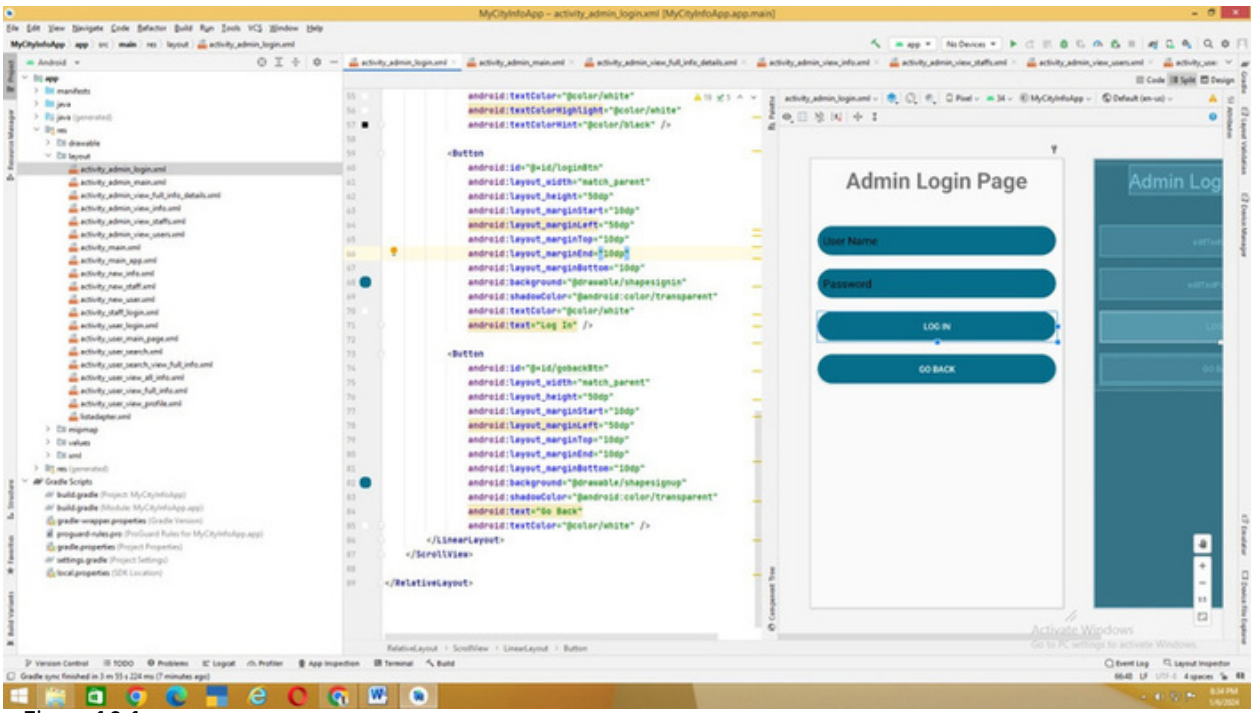

Figure 10.1

AdminMainPage

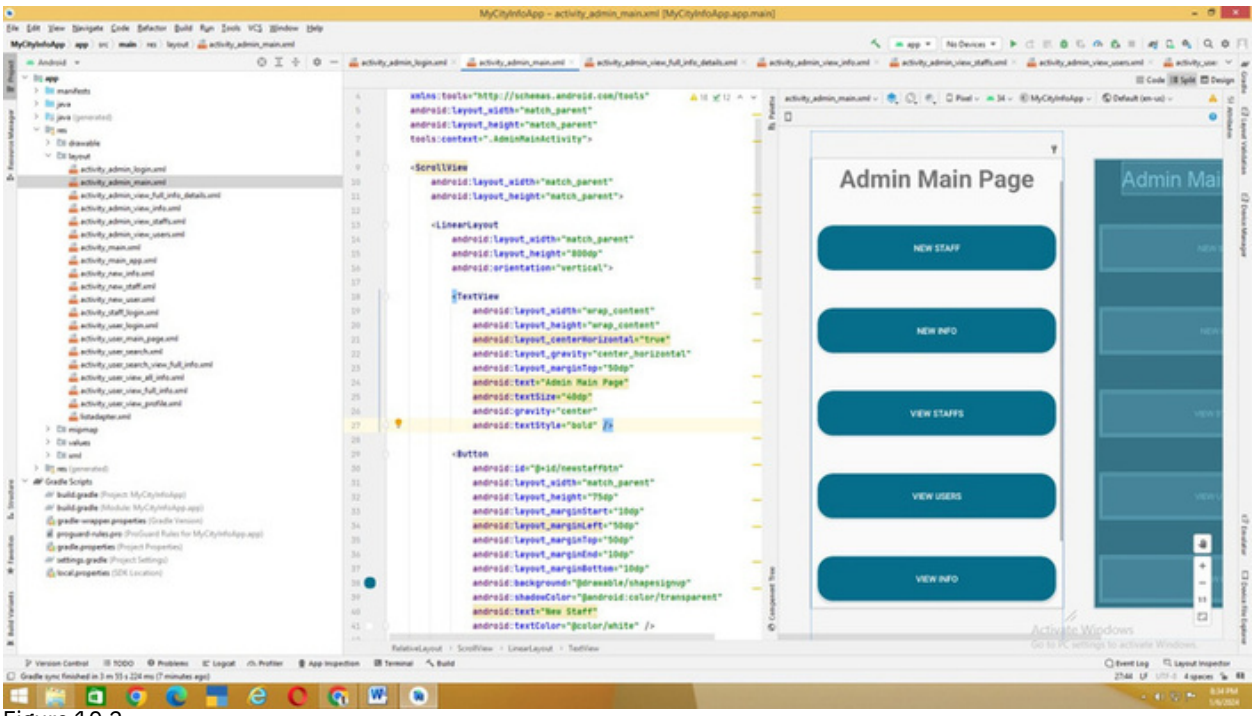

Figure 10.2

AdminViewFullInfoPage

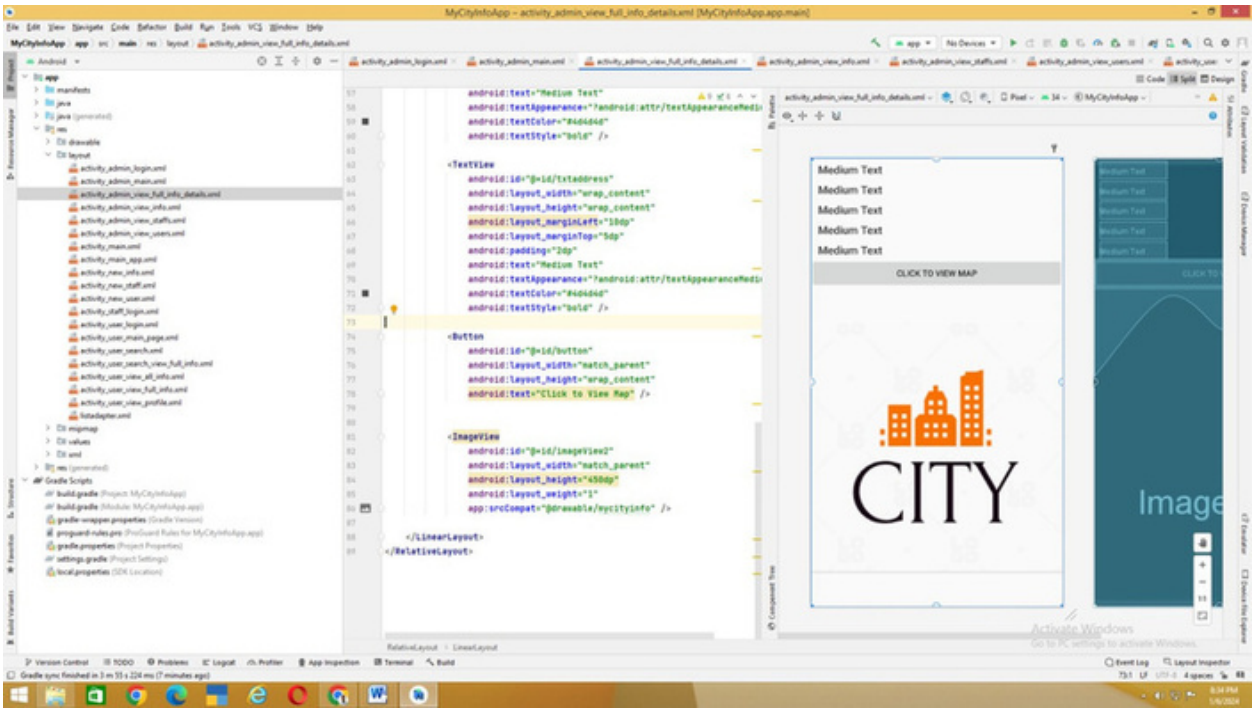

Figure 10.3

AdminViewInformationPage

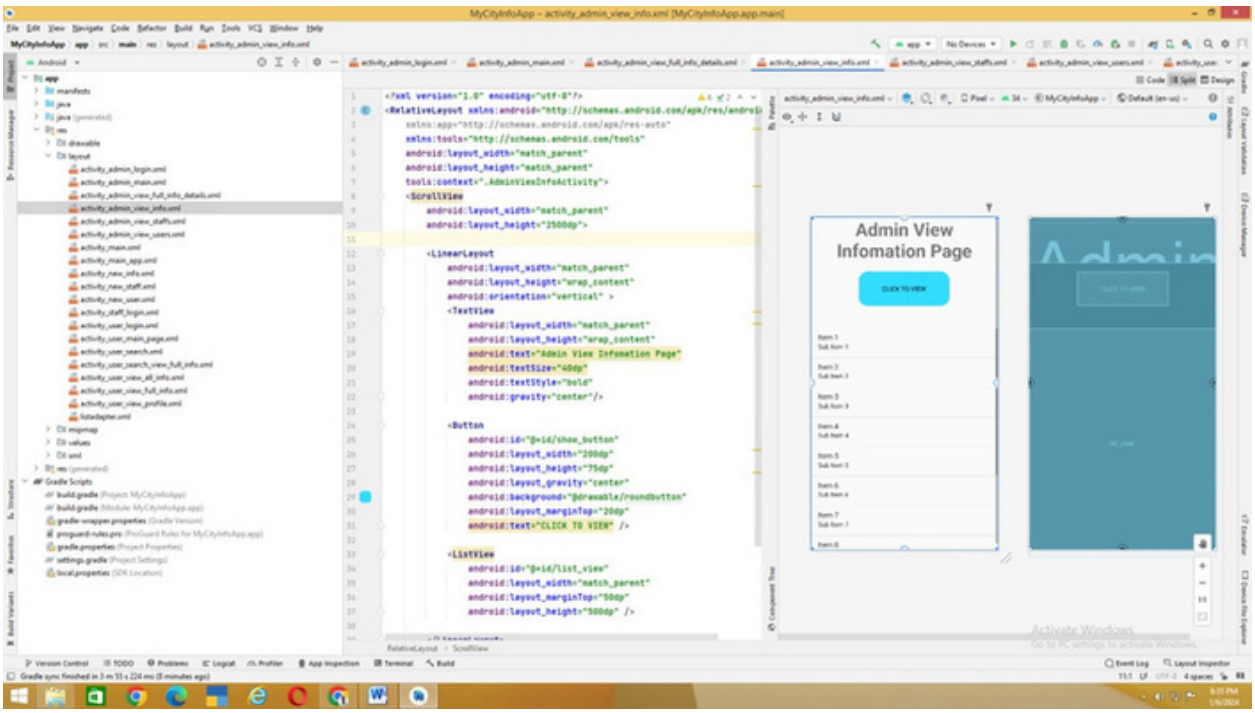

Figure 10.4

AdminViewUsersPage

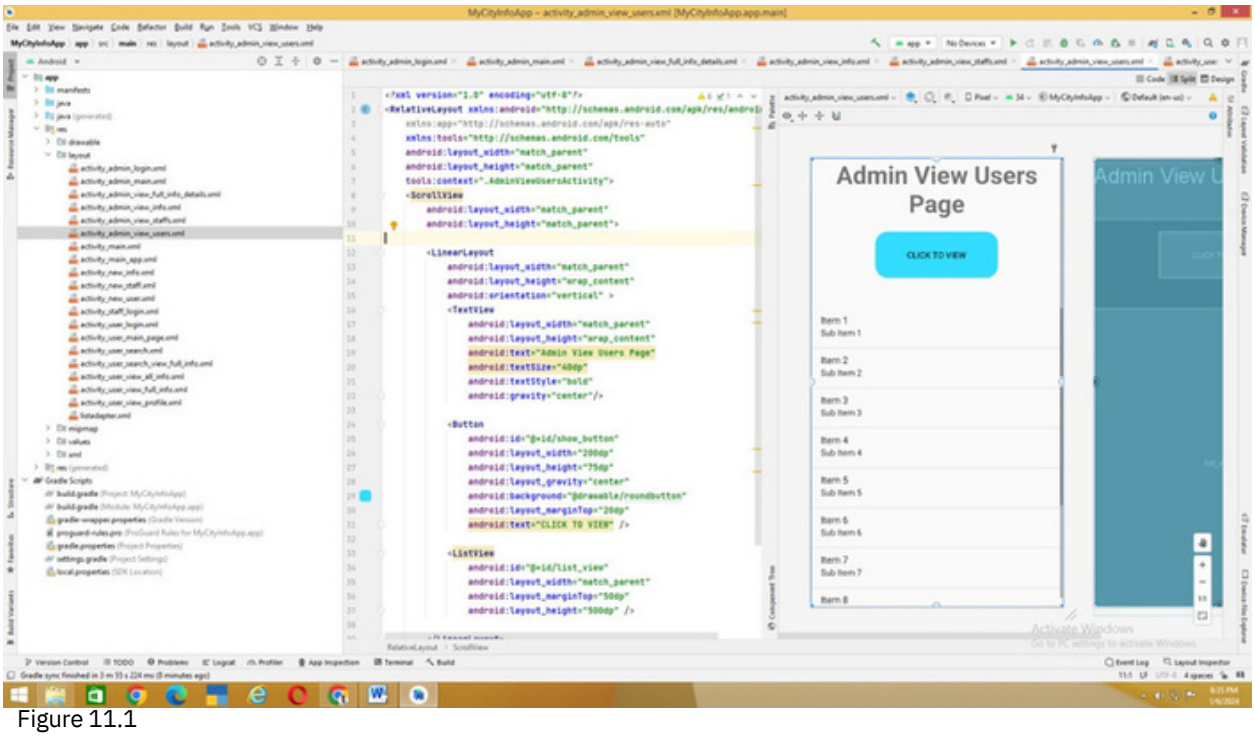

Figure 11.1

NewInformationPage

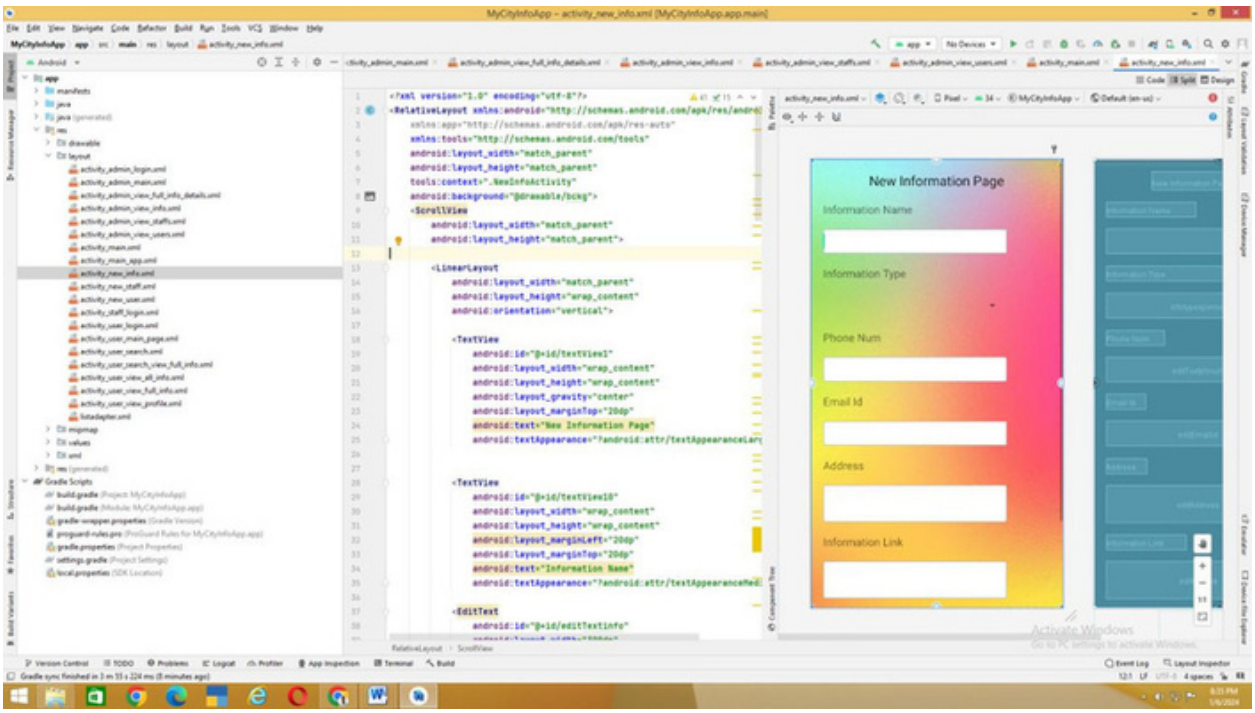

Figure 11.2

NewUserPage

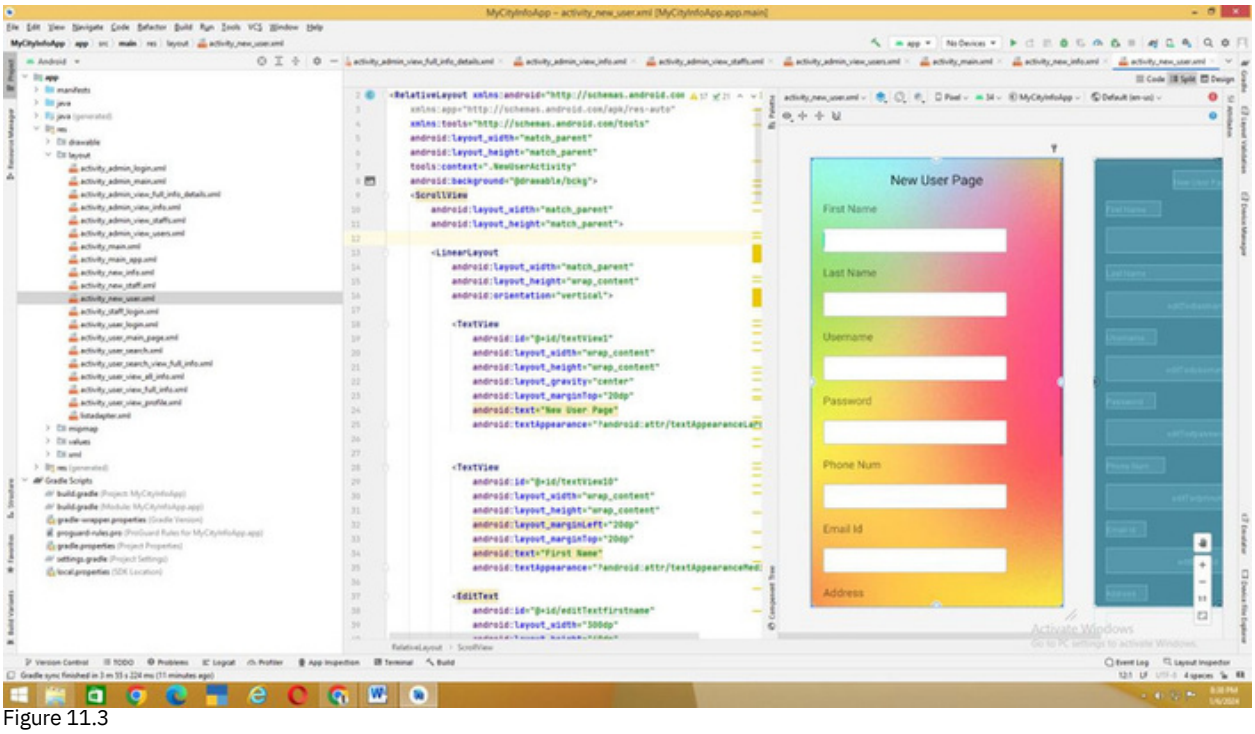

Figure 11.3

UserLoginPage

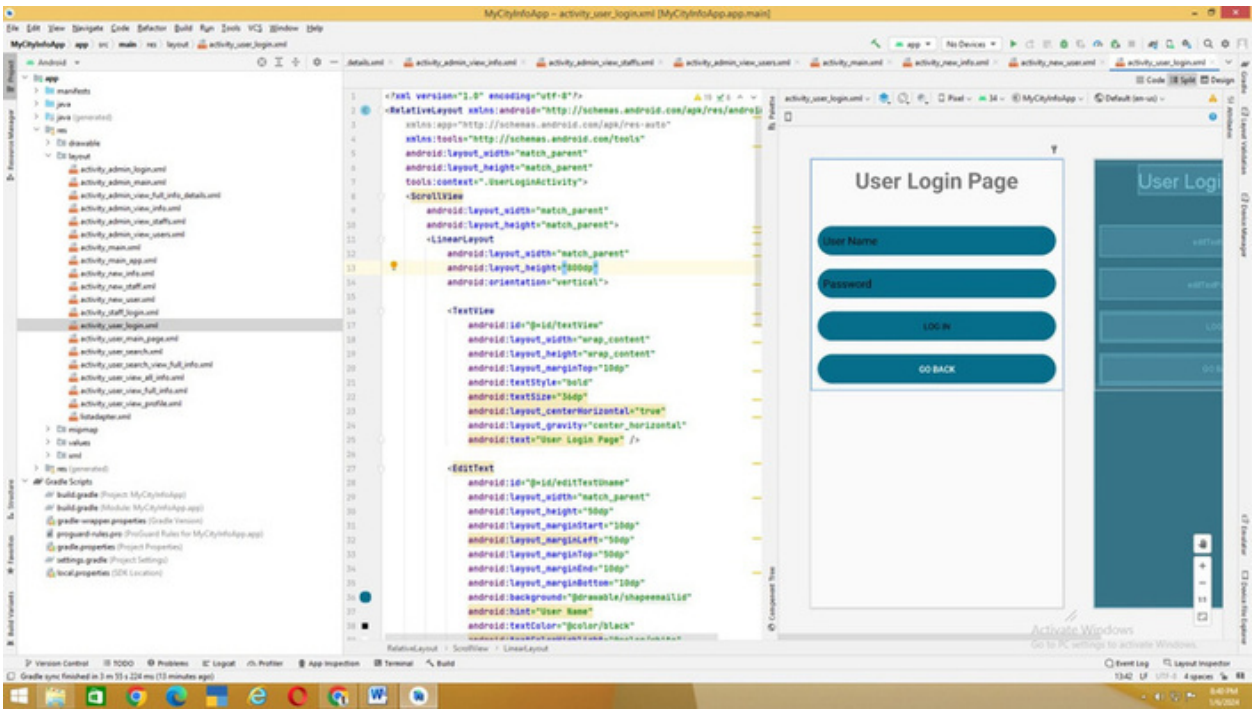

Figure 11.4

UserMainPage

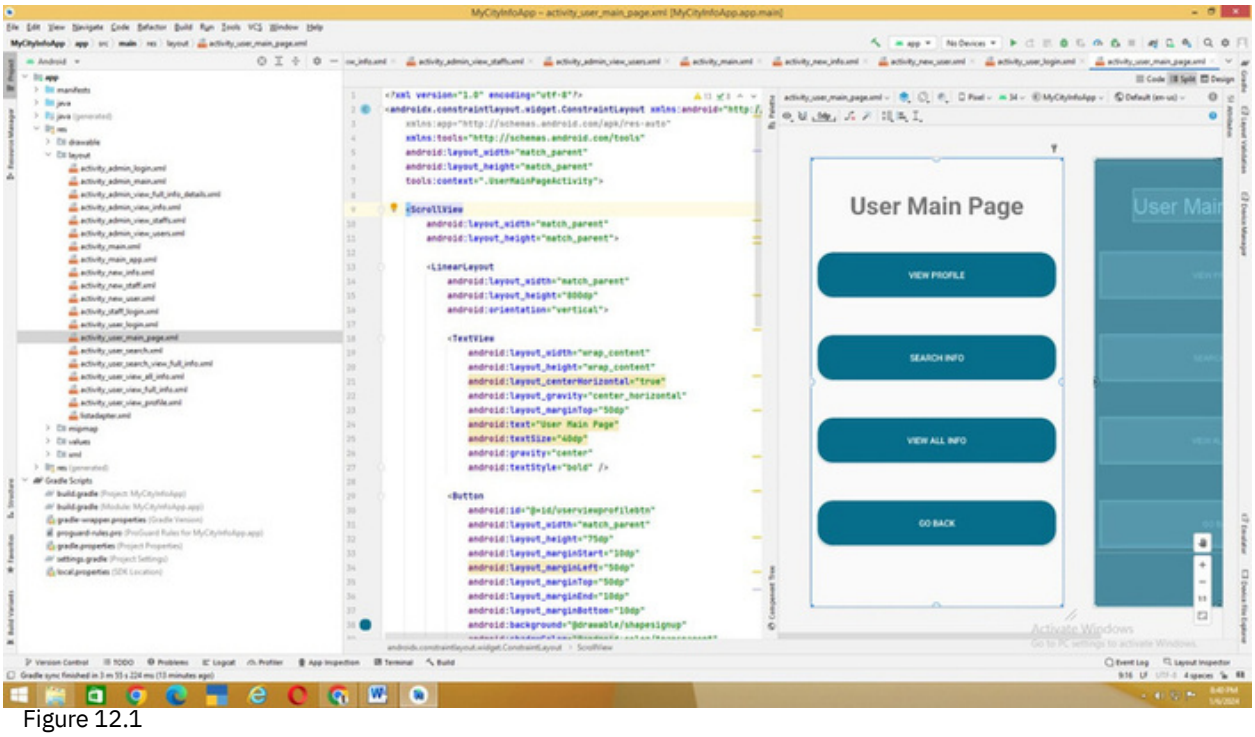

Figure 12.1

UserSearchInfoPage

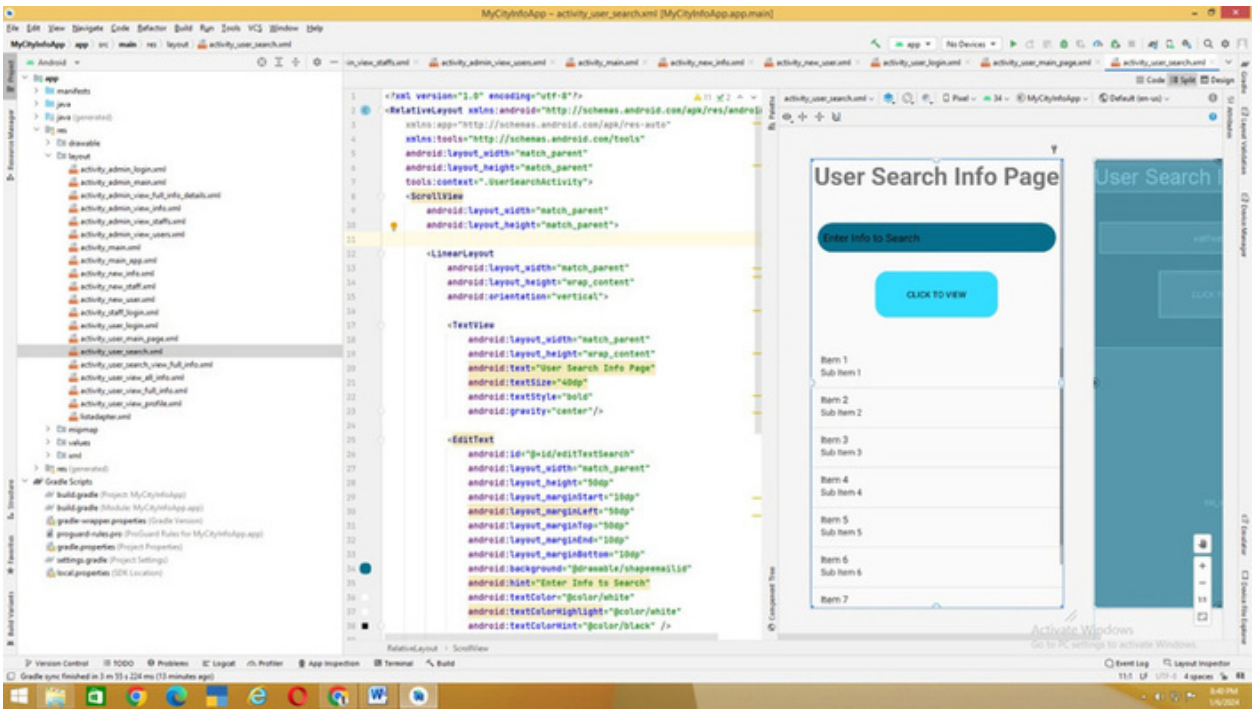

Figure 12.2

UserSearchFullInfoPage

Your paragraph text

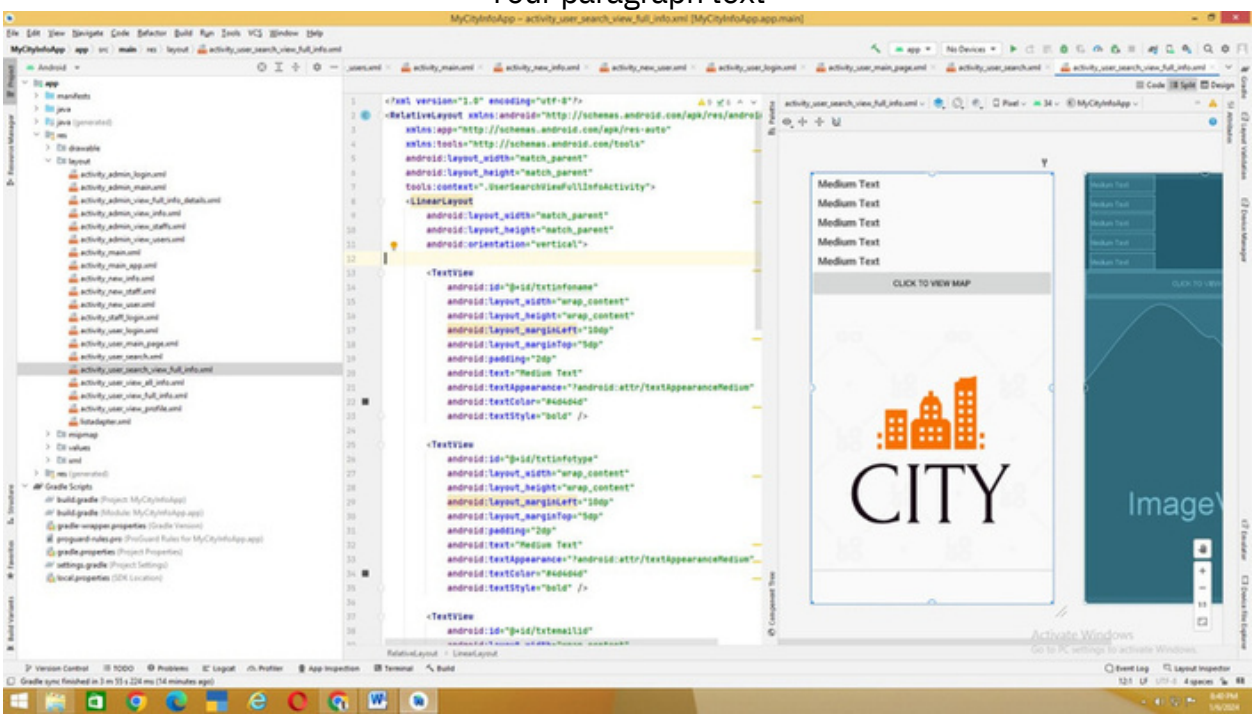

Figure 12.3

UserViewAllInfoPage

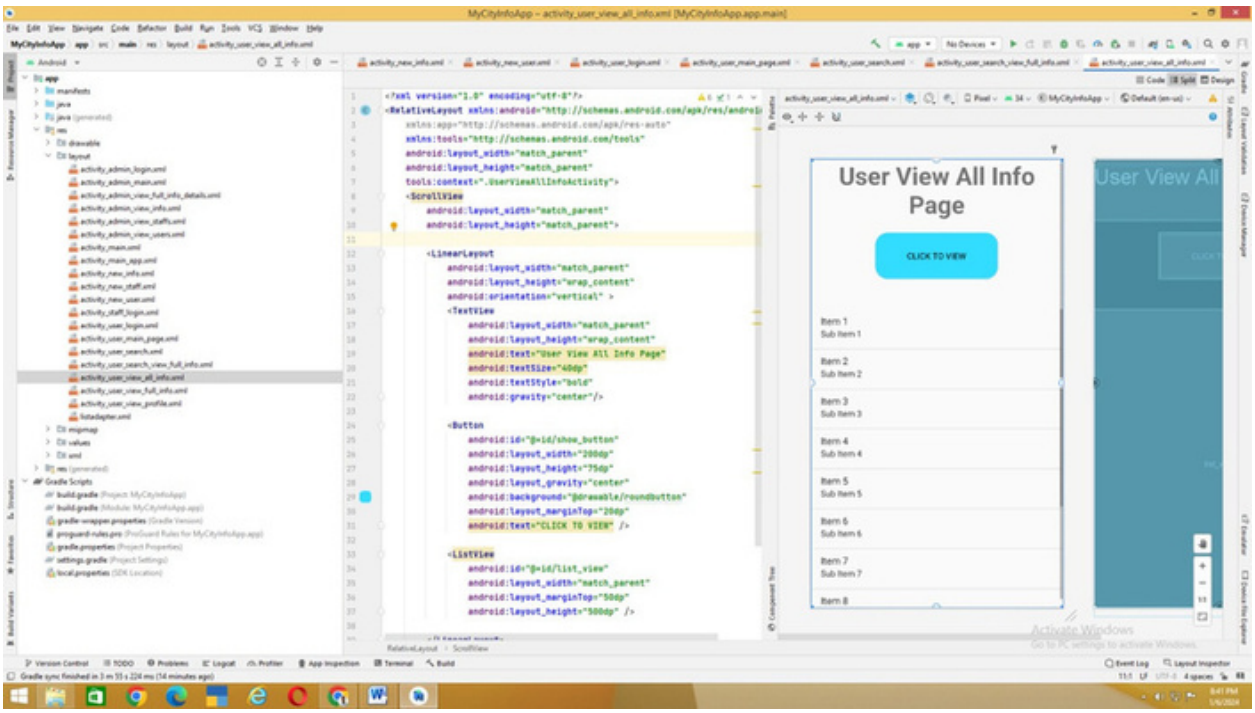

Figure 12.4

APPENDIX - C

ENCLOSURES