Kingdom of Saudi Arabia
Majmaah University
Ministry of Higher Education
College of Science Al Zulfi

المملكة العربية السعودية
وزارة التعليم
جامعة المجمعة
كلية العلوم بالزلفى
قسم علوم الحاسب والمعلومات

Riyadh A Guide

Student Affairs System
For College of science Al Zulfi
Department of Computer Science and Information

Graduation Project

Submitted in partial fulfillment of the requirements for the award of
Bachelor degree of the Majmaah University
(Semester 1, 2018-19)

Submitted by:
Naif Mohammed al shehri 332111466

Under the supervision of:
Dr. Mafawez alharbi

Abstract

Al Riyadh is both a modern metropolis, historical and cultural city. When someone visit AL Riyadh city for the first time, he will spend a lot of time for exploring the city for any services he wants such as: hotels, hospitals, governmental institutions, and tourist attractions. So, this is a proposal for the solution of this problem that will be a mobile application that provide some facilities for anyone in Al Riyadh city especially the visitors. The idea of the project is to provide a Mobile Application that will provide some facilities for anyone in Al Riyadh city especially the visitors. It provided an effortless way to reach the important places in the city. Using this mobile application will make it easy to use the application anywhere with any restrictions of your location. This project provide a system that will save time and effort for anyone who will visit AL Riyadh city for the first time to explore any service. It provided an effortless way to reach the important places in the city easily and in a friendly way. The application provide a lot of services: (1) List hospitals and governmental in the city, (2) Show the important tourist attractions in the city. (3) List all information about the hotels such as location, star ranking, prices and offers.

Acknowledgement

First, I want to thank Allah who helps me get all requires resource for completing this project. Then, I want to thank my supervisor for all his contributions of time, ideas, and funding to make my project. His encouragement, supervision and support enabled me to make a good project. I am grateful to my friends for giving me extremely valuable feedback on my work. I wish to extend my deepest gratitude to my parents who have always unconditionally supported me and cared me in all my pursuits. Without their care and love, and above all, patience, from my mother and father, I could not have completed my project.

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MAJMAAH UNIVERSITY,
COLLEGE OF SCIENCE AL ZULFI,
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION

(CERTIFICATE BY STUDENT)

This is to certify that the project titled **"Riyadh A Guide"** submitted by me (**Naif Mohammed al shehri - 332111466**) under the supervision of **Dr. Mafawez alharbi** for award of Bachelor degree of the Majmaah University carried out during the Semester 1, 2018-19 embodies my original work.

Signature in full: ----------

Name in block letters:

Student ID:

Date:

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Chapter 1

Introduction

1.1 Kingdom of Saudi Arabia (KSA)

KSA is a Middle Eastern country that occupies most of the Arabian peninsula and has coastlines on the Persian Gulf and Red Sea. Neighboring countries include Jordan to the northwest, Iraq and Kuwait to the northeast, Bahrain and Qatar to the east, the United Arab Emirates to the southeast, and Oman and Yemen to the south as shown in Figure (1.1).

Saudi Arabia contains the holy Muslim cities of Mecca and Medina, to which all physically and financially able Muslims are required to make a pilgrimage at least once if possibleand where non-Muslims are forbidden from entering.

Figure 1. Location of SAUDI ARABIA

1.2 why Al Riyadh

The city of Riyadh is both a modern metropolis and a historical and cultural treasure. Its characteristics are diverse, that range from the shimmering golden sand dunes, to modern shopping malls, distinctive heritage and cultural sites to urban construction panaches. Such diversity makes Riyadh city the core of life and vitality in the Kingdom.

Figure 2. Al Riyadh City

There are many historical and attraction sites in Al Riyadh city, like:

- Masmak Fortress (Qasr al-Masmak), The heart of old Riyadh, this was the fortress stormed by King Abdul Aziz and his men in their daring reconquest of Riyadh in 1902. Renovated in 2008 to an inch of its life, the mud brick structure now looks like it was built yesterday, but the museum inside does a pretty good job of recounting the story of the raid and has some fascinating photos of old Riyadh as well.

Figure 3. Masmak Fortress

- Qasr Al-Murabba, Riyadh's second old mud-brick palace, built by King Abdul Aziz after he conquered Masmak Fortress and figured he should build something harder to conquer.

Figure 4. Qasr Al Murabba

- National Museum, the top sight in Riyadh, this museum (opened in 1999) is done up with the latest technology and is very accessible to visitors, with almost everything available in English. There are so many video presentations and mini-theatres that you could probably spend an entire day here doing virtual tours and watching re-enactments of the Prophet Mohammed's battle of Medina.

Figure 5. National Museum

- Also, there are many other important places such as, As-Sufaat (Deira Square), Kingdom Centre (Al Mamlaka), Wadi Hanifa, Al-Dir'iyyah).

- As shown in Figure (1.6), Al Riyadh city was the third Arabian city and 42nd internationally that had been visited in 2014 with (4.1) million visitors.

Figure 6. Statistics of Al Riyadh visitors

1.3 problem Definition

When someone visit AL Riyadh city for the first time, he will spend a lot of time for exploring the city for any services he wants such as: hotels, hospitals, governmental institutions, and tourist attractions.

Concerning hotels, if the visitor needs to book a room in any hotel, he wants to see a list of all hotels around him anywhere and all information about them, such as location, star ranking, prices, and offers.

Also, any visitor needs to know the legal papers to stay in the city, he wants to reach the governmental institutions in an effortless way.

1.4 Project objectives

This project will provide a system that will save time and effort for anyone who will visit AL Riyadh city for the first time to explore any service. It will provide an effortless way to reach the important places in the city.

1.5 Project Description

The idea of the project is to provide a Mobile Application that will provide some facilities for anyone in Al Riyadh city especially the visitors.

Figure 1.7. Mobile App

This mobile application will provide a lot of services:

(1) Display the near-by important places around the person using it.
(2) List all hospitals and governmental institutions in the city.
(3) Show the important tourist attractions in the city.
(4) List all information about the hotels such as location, star ranking, prices and offers.

1.6 Benefits of using this Mobile Application for users.

- Using this mobile application will make it easy to use the application anywhere with any restrictions of your location.
- Also, it will display near-by important places automatically depending on GPS service in the mobile.
- It will save much time and effort for users to reach any destination.

1.7 Benefits of using this Mobile Application for the community

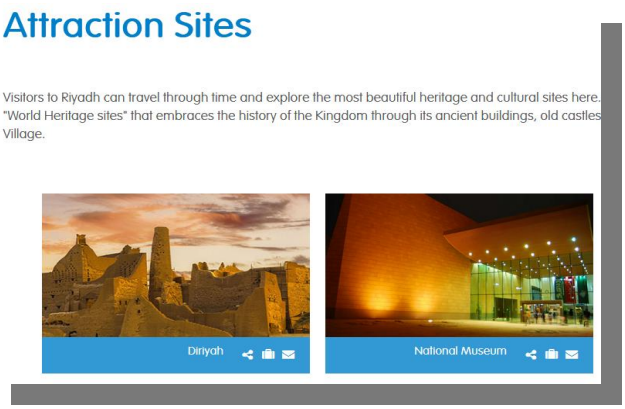
- This application will increase the number of visitors of the city due to the facilities it provided.
- It will increase the national income of the city.

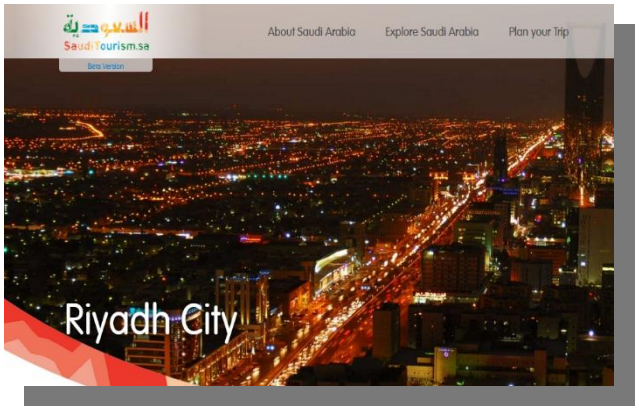
1.8Existing solutions (Literature Review)

There are some attempts that applied to address the problems that face visitors to Al Riyadh city, from which:

(1) Saudi Tourism website*(http://sauditourism.sa)*

This website provides information about the tourist attractions in Saudi Arabia inside Al Riyadh city and other cities.





Advantages:

Figure 7. Saudi Tourism website

- It provides all information about tourist attractions such as museums, historical sights.
- It facilitates searching for hotels, car hiring, and tourist offers.

Disadvantages:

- It can be accessed just by the website not a mobile application.
- It doesn't provide information about hospitals or governmental institutions.
- It doesn't provide near-by service.

(2) Al Riyadh Travel website *(http://www.alriyadhtravel.com)*

This website serves only Al Riyadh city. It provides information about flights, hotels, tourist offers.

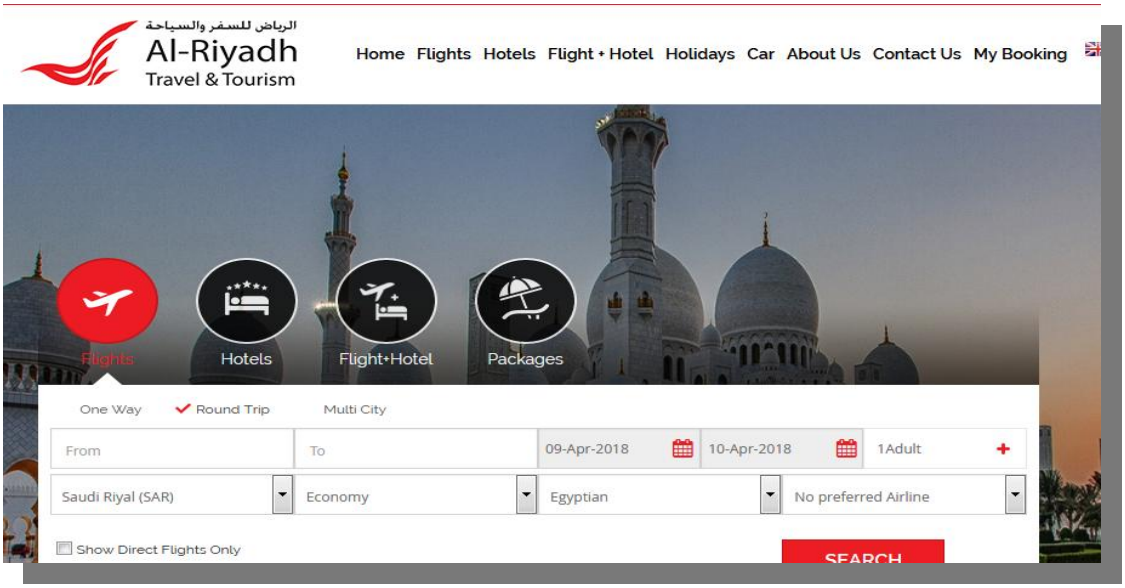


Figure 8. Al Riyadh Travel website

Advantages:

- It focuses on hotels and flight booking.
- It provides offers for hotels and car hiring.

Disadvantages:

- It doesn't provide information about governmental institutions in the city.
- It doesn't provide information about tourist attractions in the city.
- It can be accessed just by the website not a mobile application.
- It doesn't provide Map service to reach places.
- It doesn't provide near-by service to reach important places around you.

(3) Al Riyadh City website *(http://www.arriyadh.com)*

This website serves only Al Riyadh city. It provides detailed information about tourism, sports, E-Government, restaurants, shopping, and education.

Figure 9. Al Riyadh City website

Advantages:

- It provides detailed information about the city than the others.
- It provides updated news about Al Riyadh city.

Disadvantages:

- It can be accessed just by the website not a mobile application.
- It doesn’t provide near-by service for users.

1.9 Feasibility Study

The feasibility study is defined as the practical extent to which a project can be performed successfully.To evaluate feasibility, a feasibility study isperformed, which determines whether the solution considered to accomplish the requirements is practical and workable in the software.

Information such as resource availability, cost estimation for softwaredevelopment, benefits of the software to the organization after it is developed and cost to be incurred on its maintenance are considered during the feasibility study.

Here, we will discuss the Feasibility report of the project which includes:

- Technical Feasibility

  To be able to use the system, we only need a smart phone with Android operating system. The smart phone should be connected to the internet to be able to use GPS and Google Maps and to explore any destination we want.

- SocialFeasibility

The application will be available to anyone. To make the system easy to use, it will be provided with a help button to clear how to deal with it. Also, we can provide some training for users who cannot use the application.

- Market Research

The market research indicates that this application will be very beneficial to any person in Al Riyadh city, especially the visitors of the city who need to explore any place or stay in the city for a time.

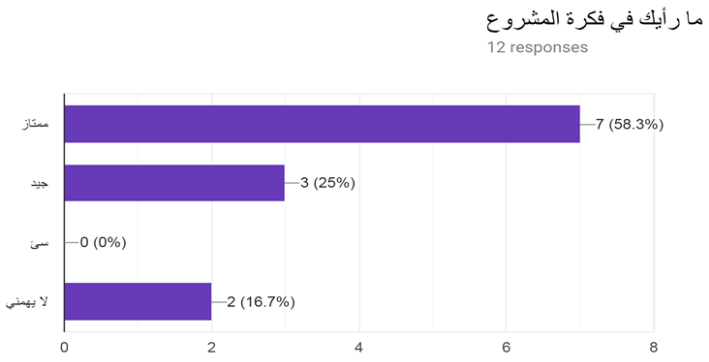
- EconomicFeasibility

The cost plan of the project contains the hardware requirements, which indicates the cost of the Tablet PC or the smart phone with Android OS and the software packages which depend on the number of users who will use the application daily. All in all, the project can be carried out within budget.

- Alternative Solution

The alternative solution to the Android mobile application would be IOS mobile application if the number of Apple phones become much larger than Android ones. Also, another alternative of the mobile application would be a web application if it will provide the same features of the mobile application as soon as possible.

We make a questioner about the agreement about this project or not. We have the following results.



1.10Limitations of the application

There are some limitations that would be occurred such as:

(1) Distractions of the environment:

Mobile users much more liable to dropping off than their web counterparts. Phones are often used in non-work settings, whereas personal computers are more commonly used in workspaces such as coffee shops, home offices, and at work. This means there are a host of possible distractions in a busy world, causing them to disengage.

(2) Making Any Update Is Incredibly Hard:

Updates of the mobile application would be difficult for some users.

(3) Lack of Android users in the city.

(4) Internet connection would not be available.

(5) Users would not be capable of using the application.

1.11Project Scheduling

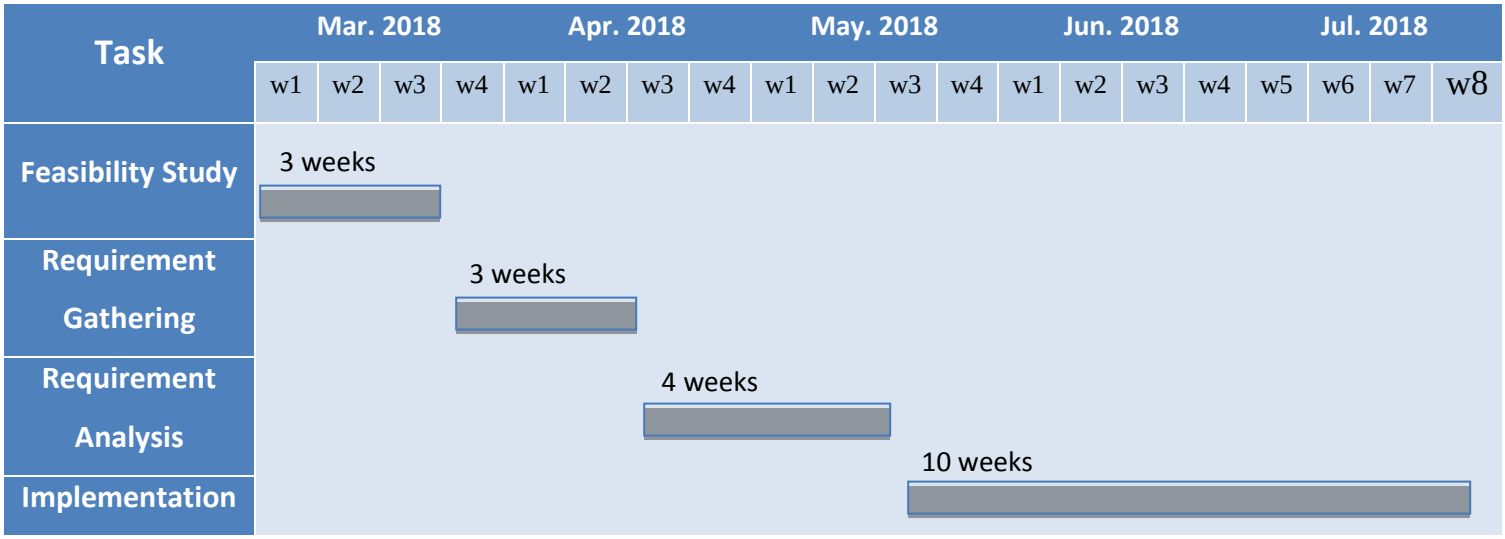


Figure 10. Project Scheduling

1.12Tools to be used

- Android Studio IDE: Android Studio is Android's official IDE. It is purpose built for Android to accelerate your development and help you build the highest-quality apps for every Android device. It offers tools custom-tailored for Android developers, including rich code editing, debugging, testing, and profiling tools.

Figure 11. Android Studio IDE

- Google Maps: Aweb mapping service developed by Google. It offers satellite imagery, street maps, 360° panoramic views of streets (Street View), real-time traffic conditions (Google Traffic), and route planning for traveling by foot, car, bicycle (in beta), or public transportation.

Figure 12. Google Maps

- Google APIs:A set of application programming interfaces (APIs) developed by Google which allow communication with Google Services and their integration to other services. Examples of these include Search, Gmail, Translate or Google Maps.

- JAVA: A general-purpose computer-programming language that is concurrent, class-based, object-oriented,and specifically designed to have as few implementation dependencies as possible. Java is the programming language that used for Android mobile applications.

Figure 13. Java programming lang.

- SQLite: A software library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed SQL database engine in the world. We depend on SQLite as a database engine for our Android mobile application.

Chapter 2

Requirement analysis

2.1 System Purpose

The purpose of this Documentation is to explain the whole system of AL Riyadh, present all features of thesystem, interfaces that used to perform the operation, what the system will do in each step, this documentation is proposed for stakeholders and developers of the system and it's organized in proper manner for this purpose.

2.2 Scope of the system

This software system will be a mobile application for helping lost people to search for any places they want in an easy way, using this app user can search for hospitals, historical places, governmental institutions and so in the other hand he can know his position and distances between him and other places in the city Riyadh.

The second part of this system, allow admin to add new places and update the data for every place in any time and in a friendly way.

2.3 Glossary

Term	definition
Attribute	A named property or characteristic of an entity that is of interest to the organization
Class Diagram	Shows the static structure of an object-oriented model: the object classes, their internal structure, and the relationships in which they participate.
Field	A cell within a forum.
Visitor	Any one that can visit and view Al-Riyadh places.
Admin	The controller of the system.
Database	The application data.

Table 1. Glossary

2.4 System Environment

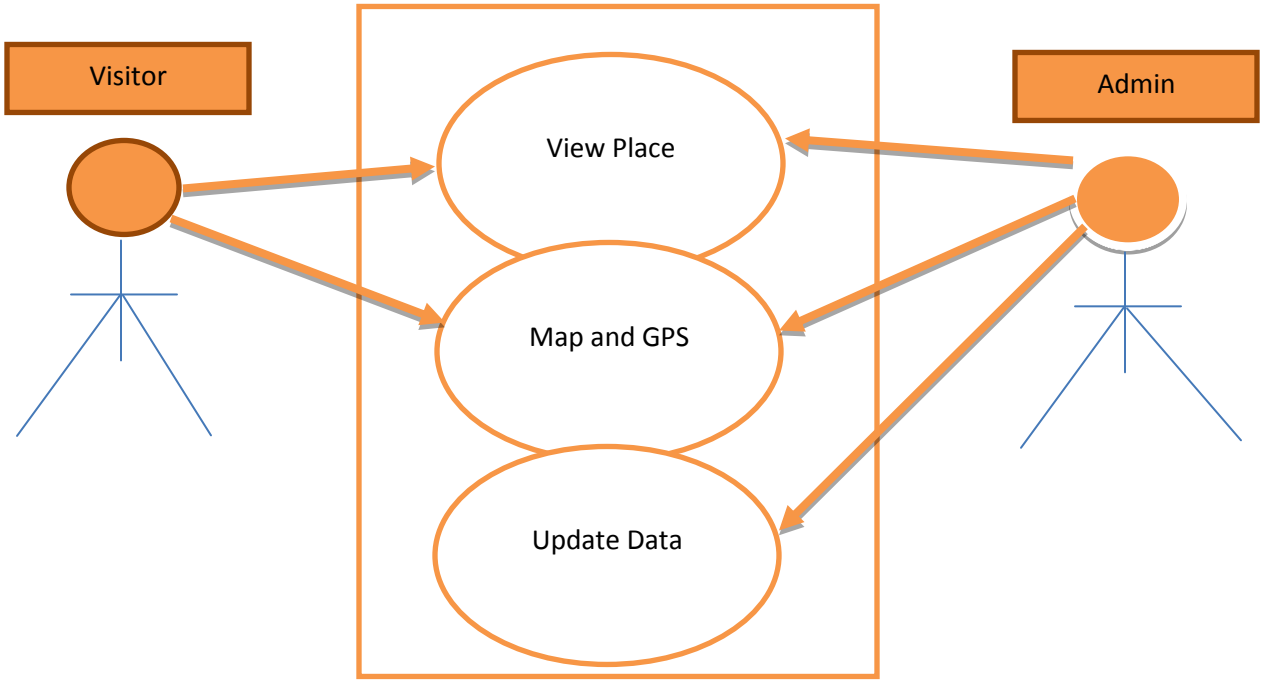


Figure 14. System Block Diagram

AlRiyadh system has two main actors, visitor and the admin, the visitor is the user that can view places and searching for anything in the system and maps, the admin is the controller that can update the data and delete it.

2.5 Functional Requirements.

For the functional requirements, Google Maps is required to be shown and the GPS Location must be enabled for performing functions of get nearby places and get position location and searching for any place for the visitor.

2.6 User Characteristics.

Characteristics of the visitor are his name, age, phone, address and email for contact and for booking.

2.7 Requirement Specification

Requirement System: Android System

Requirement Hardware: Android Device

2.8 Requirement Analysis.

2.8.1 External Interface Requirement

The external links are existing for verifying the visitor and get the data to the application from the database in the server and for booking, the visitor must communicate with the server to perform these operations.

2.8.2 Non-Functional Requirements

Nonfunctional requirement like:

- **Usability**: Prioritize the important functions of the system based on usage patterns. Frequently used functions should be tested for usability, as should complex and critical functions. Be sure to create a requirement for this.
- **Reliability**: Users have to trust the system, even after using it for a long time.
- **Performance**: It's a good idea to also include requirements that make it easier to monitor system performance.

- **Supportability**: The system needs to be **cost-effective to maintain**. Maintainability requirements may cover diverse levels of documentation, such as system documentation
- **Implementation**: able to modify the implantation
- **Interface**: have a good user interface and easy to use

2.8.3 Detailed Functional Requirement

Create Account

Usecase name	Create Account
Trigger	The user press create account
Precondition	The visitor in the home page of the application, can show places and search any place.
Postcondition	Account created successfully.
Exception paths	If there is no internet connection.

Table 2. Create Account

Usecase name	Login
Trigger	The user press login button.
Precondition	The visitor in the home page of the application, can show places and search any place.
Postcondition	login successfully.
Exception paths	If there are mistakes in the username or password or e-mail.

Table 3. Login

Usecase name	Update account
Trigger	The user press update account setting.
Precondition	The visitor in the home page of the application, can show places and search any place.
Postcondition	Account updated successfully.
Exception paths	If there is no internet connection or not following constraints.

Table 4. update account

Usecase name	Browse Place
Trigger	The visitor search for place and click on it to show information.
Precondition	The visitor in the home page of the application, can show places and search any place.
Postcondition	The place is shown successfully.
Exception paths	If there is no internet connection.

Table 5. Browse place

Usecase name	GetPosition
Trigger	The user press get position button
Precondition	The visitor in the home page of the application.
Postcondition	Visitor's location is displayed in the map using GPS.
Exception paths	If there is no internet connection.

Table 6. GetPosition

Usecase name	Nearby places.
Trigger	The user press nearby places.
Precondition	The visitor in the home page of the application, can show places and search any place.
Postcondition	Nearby places are shown in the Google Maps.
Exception paths	If there is no internet connection.

Table 7. Nearby places.

Usecase name	Logout
Trigger	The user press logout
Precondition	The visitor in the home page of the application, can show places and search any place.
Postcondition	logout successfully.
Exception paths	If there is no internet connection.

Table 8. Logout.

Usecase name	Update data
Trigger	The admin press update place , he can choose to delete ,add or update any place in the server.
Precondition	In the home page.
Postcondition	Information updated successfully.
Exception paths	If there is no internet connection.

Table 9. Update Data

Chapter 3

System Diagrams

3.1 The concept of the project can be categorized into two categories according to different users' perspectives:

User:

- User can create an account.
- Browse (shops, cinemas, restaurants) offers and sees the navigation to this place.
- Browse nearby place depend on GPS location.

Admin:

- Create account to update data.
- Add a city and city category (restaurants, hotels, cinemas).
- Add information about any place.
- Delete a city, city category.
- Update profile data, he can edit his profile if wanted.

3.2 View of project Class Diagram:

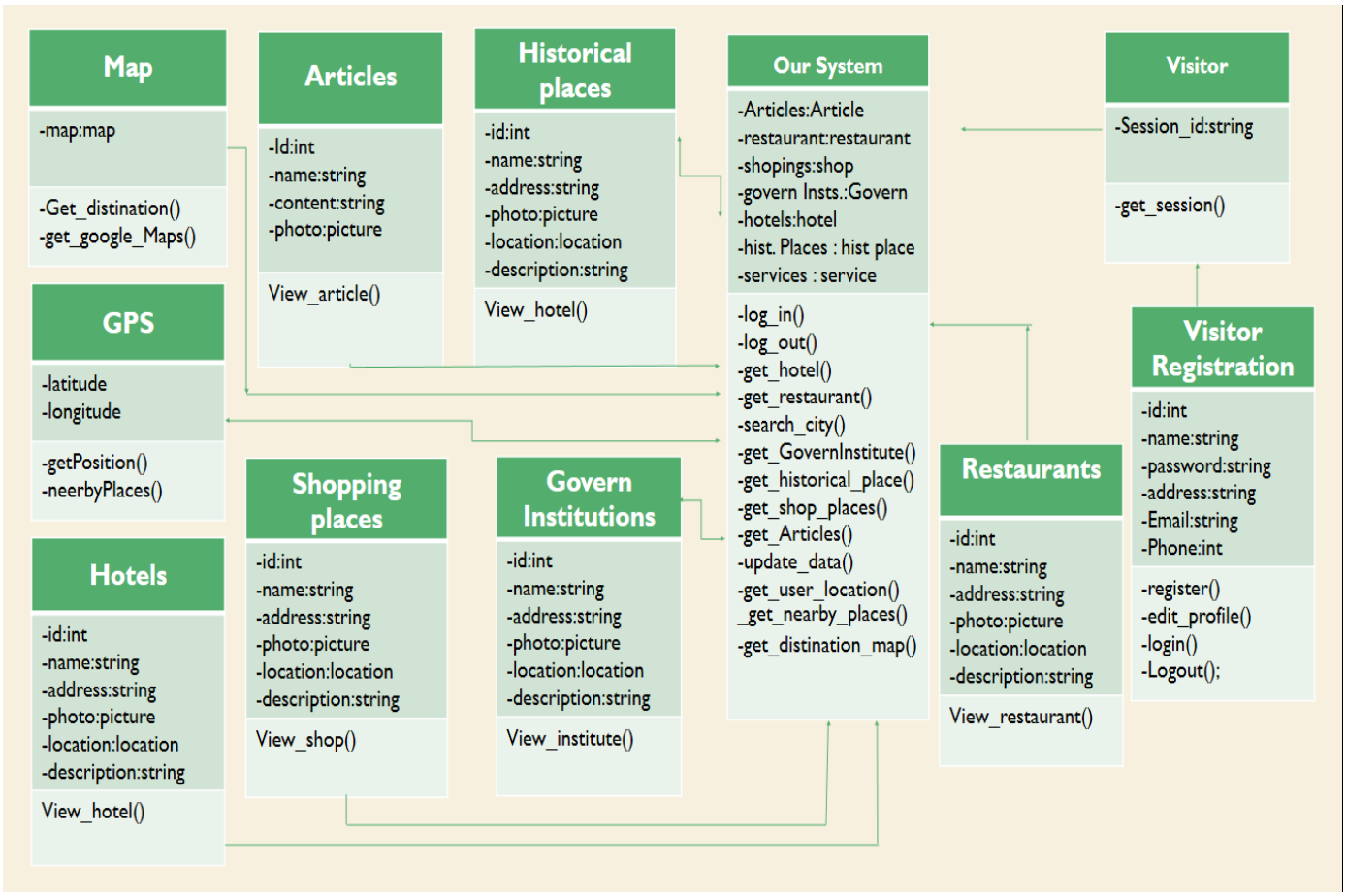


Figure 15. class diagram for the system

3.3 Use Case Diagram:

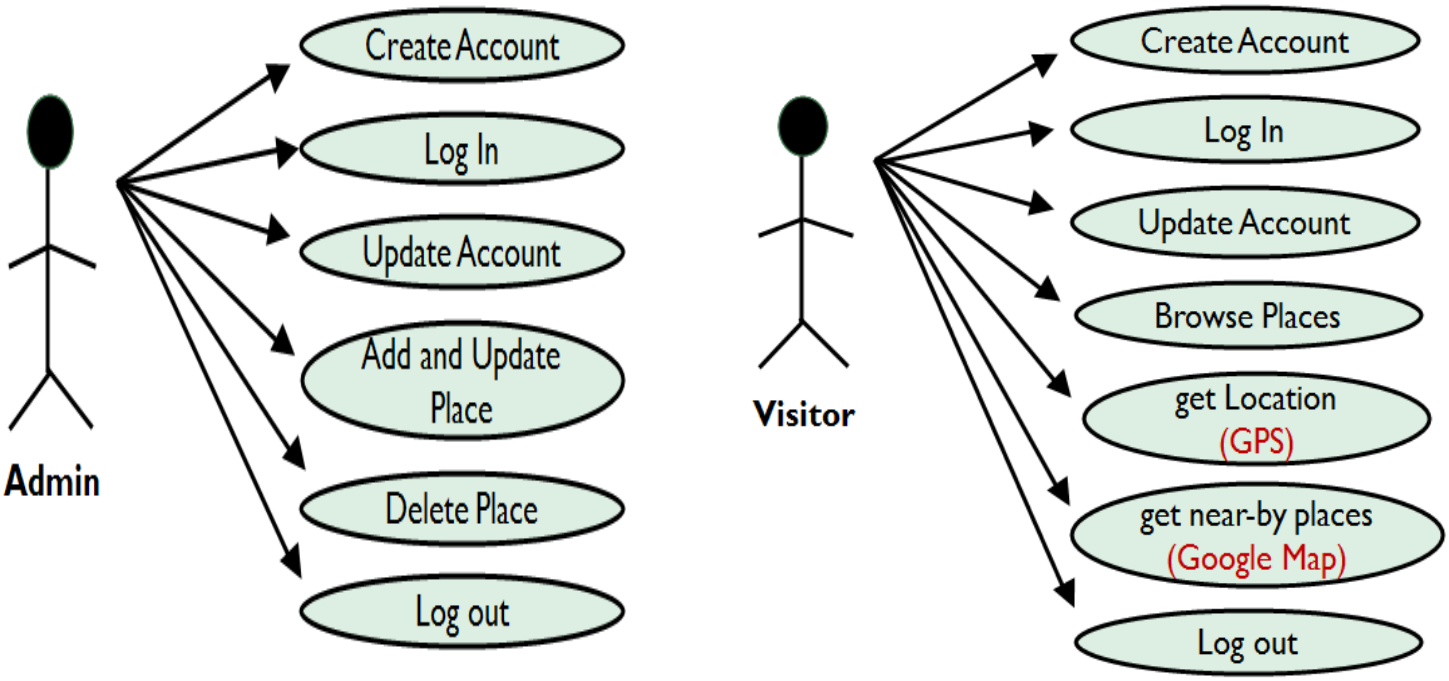


Figure 16. Use Case diagram for the visitors and admins

- Use case that shows the difference between admin and visitors and how they act to the application.

3.4 Sequence Diagram:

3.4.1 Sequence Diagram of admin:

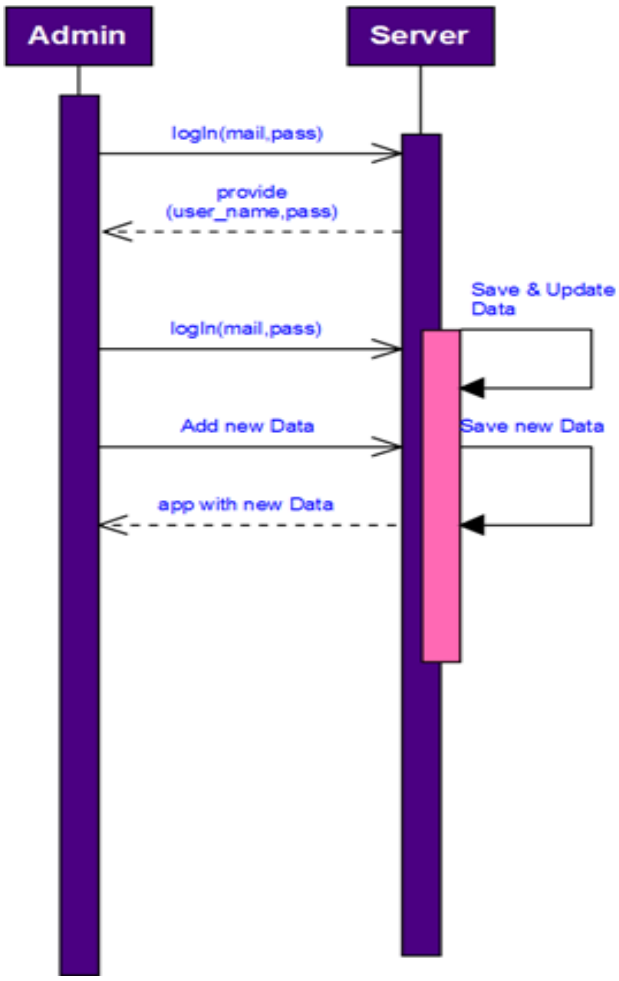


Figure 17. Sequence diagram of Admin

- Sequnce diagram of the admin in the system and how he interacts with the system via logIn, add new places, delete places and update system states.

3.4.2 Sequence Diagram of user:

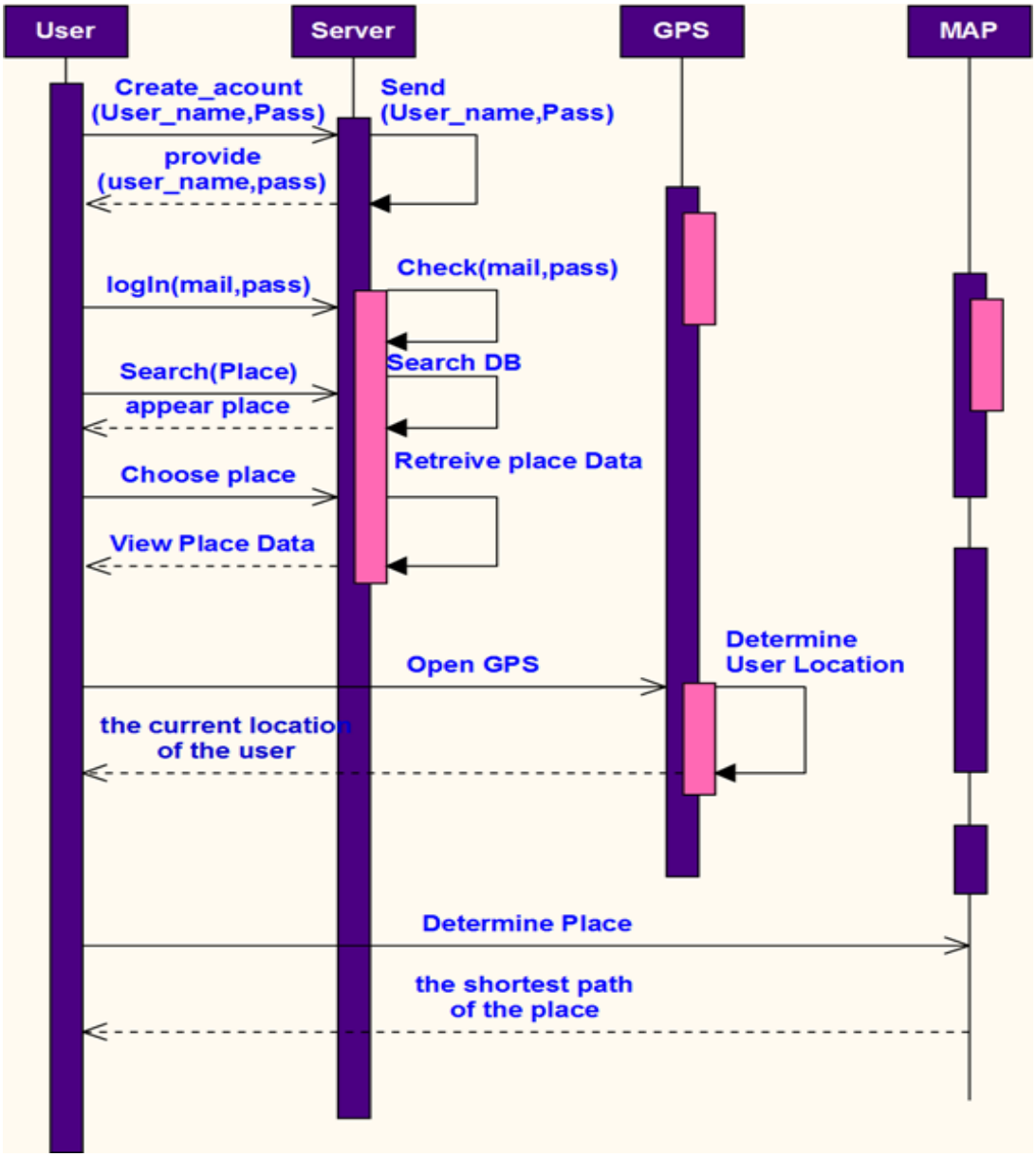


Figure 18. Sequence diagram of User

- Sequnce diagram of the user in the system and how he interacts with the system via logIn, Browse Categories, Search for places and View Nearby places.

3.5 Activity Diagram

The basic purposes of activity diagrams. It captures the dynamic behavior of the system. Other diagrams are used to show the message flow from one object to another, but activity diagram is used to show message flow from one activity to another.

Activity is an operation of the system. Activity diagrams are not only used for visualizing dynamic nature of a system, but they are also used to construct the executable system by using forward and reverse engineering techniques. The only missing thing in activity diagram is the message part.

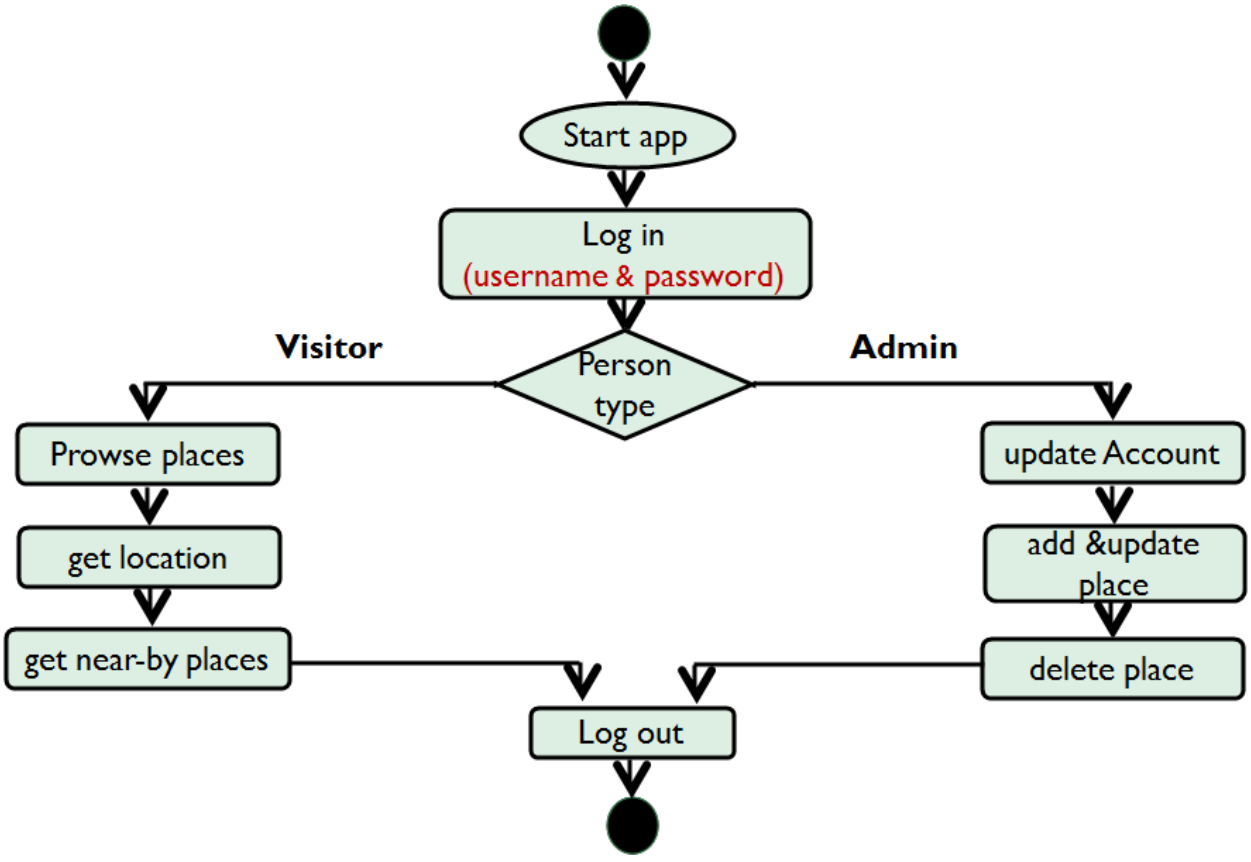


Figure 19. Activity diagram

3.6 State Diagram

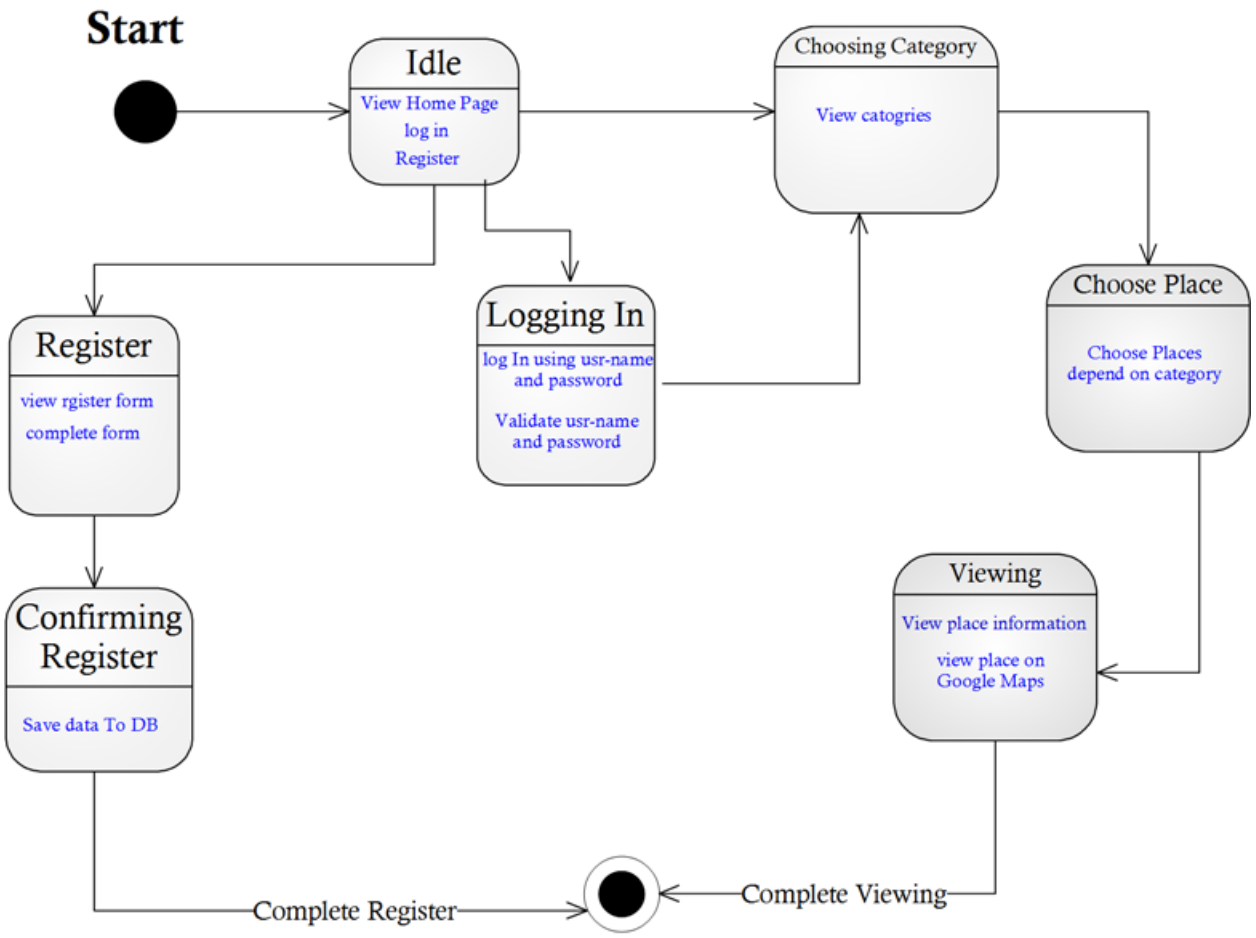


Figure 20. State diagram

3.7 Entity Relationship Diagram (ERD)

An entity-relationship model (ERM) is an abstract and conceptual representation of data. Entity-relationship modeling is a database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relational database, and its requirements in a top-down fashion. Diagrams created by this process are called entity-relationship diagrams, ER diagrams, or ERDs.

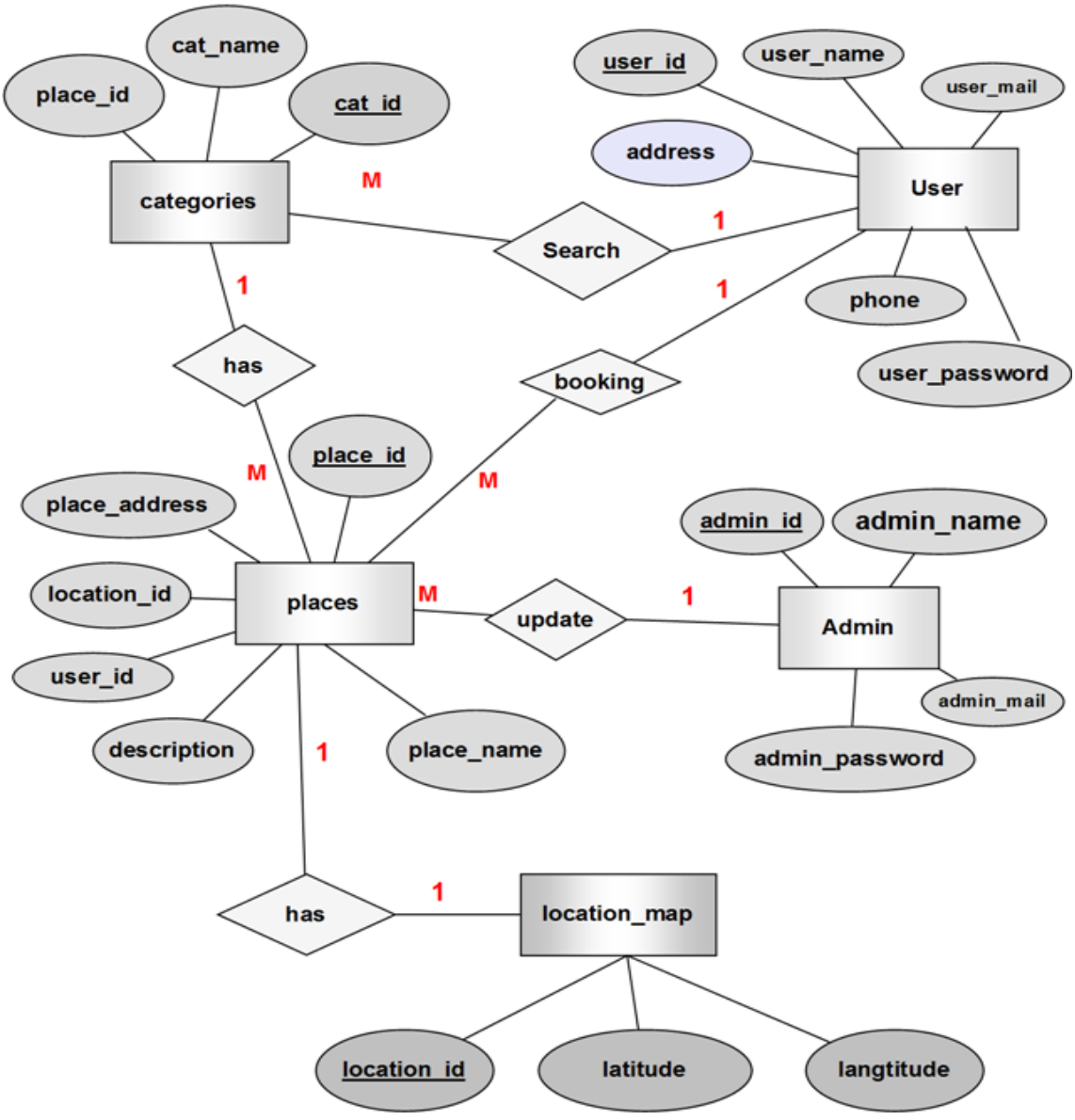


Figure 21.Entity Relationship Diagram

3.8 Mapping Diagram

Mapping is the process of converting the entity relationship diagram (ERD) to database tables which we use it to create the database in any framework such as MY SQL workbench, Oracle or SQL Server. In this diagram, we join between tables by foreign key.

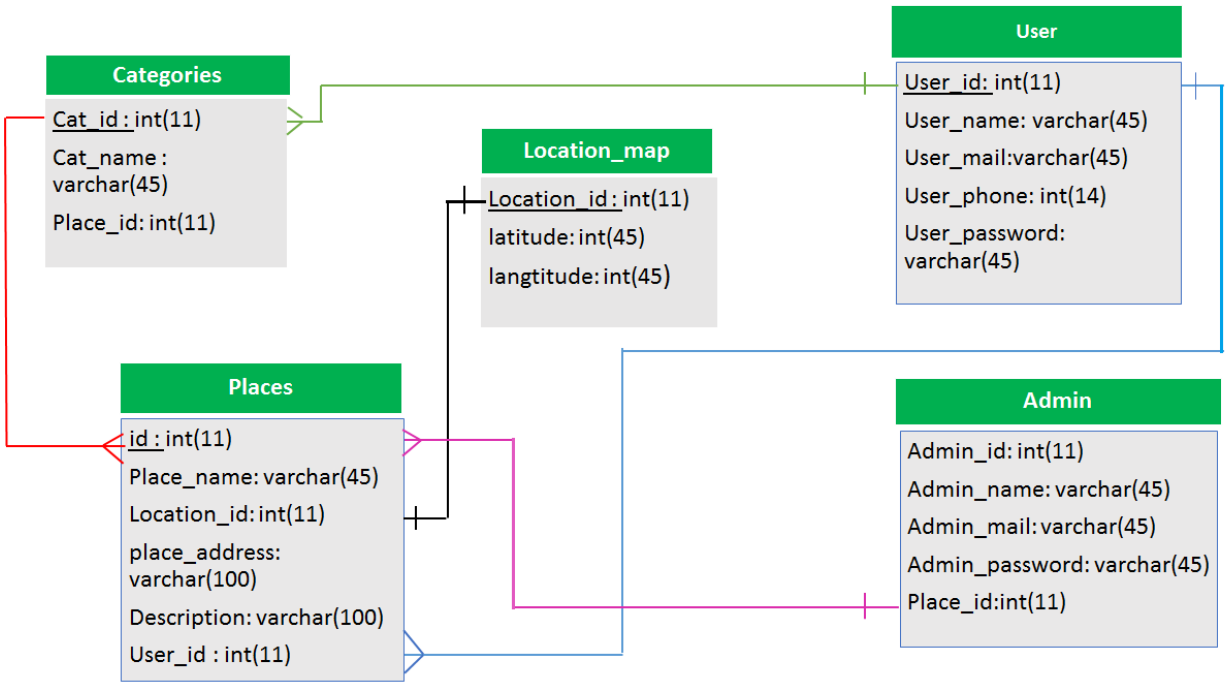


Figure 22. Entity Relationship Diagram

Chapter 4

DataBase

4.1Introduction

Database refers to a collection of electronic records that could be processed to produce useful information. The data can be accessed, modified, managed, controlled and organized to perform various data-processing operations. The data is typically indexed across rows, columns and tables that make workload processing and data querying efficient. There are different types of databases: Object-oriented, Relational, Distributed, Hierarchical, Network and others. In enterprise applications, databases involve mission-critical, security-sensitive and compliance-focused record items that have complicated logical relationships with other datasets and grow exponentially over time as the userbase increases. As a result, these organizations require technology solutions to maintain, secure, manage and process the data stored in databases. This is where Database Management System come into play.

Database Management System (DBMS) refers to the technology solution used to optimize and manage the storage and retrieval of data from databases. DBMS offers a systematic approach to manage databases via an interface for users as well as workloads accessing the databases via apps. The management responsibilities for DBMS encompass the information within databases; the processes applied to databases such as access and modification; as well as the logical structure of the database.

4.2 SQLite

SQLite: A software library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed SQL database engine in the world. We depend on SQLite as a database engine for our Android mobile application.

Figure 23. SQLite

DB Browser for SQLite (DB4S) is a high quality, visual, open source tool to create, design, and edit database files compatible with SQLite.

DB4S is for users and developers who want to create, search, and edit databases. DB4S uses a familiar spreadsheet-like interface, and complicated SQL commands do not have to be learned.

Controls and wizards are available for users to:

- Create and compact database files
- Create, define, modify and delete tables
- Create, define, and delete indexes
- Browse, edit, add, and delete records
- Search records
- Import and export records as text
- Import and export tables from/to CSV files
- Import and export databases from/to SQL dump files
- Issue SQL queries and inspect the results

4.3 Database Tables

In our project we have five tables (Admin, User, Places, Categories, and Location_Map) as showing in the following figure.

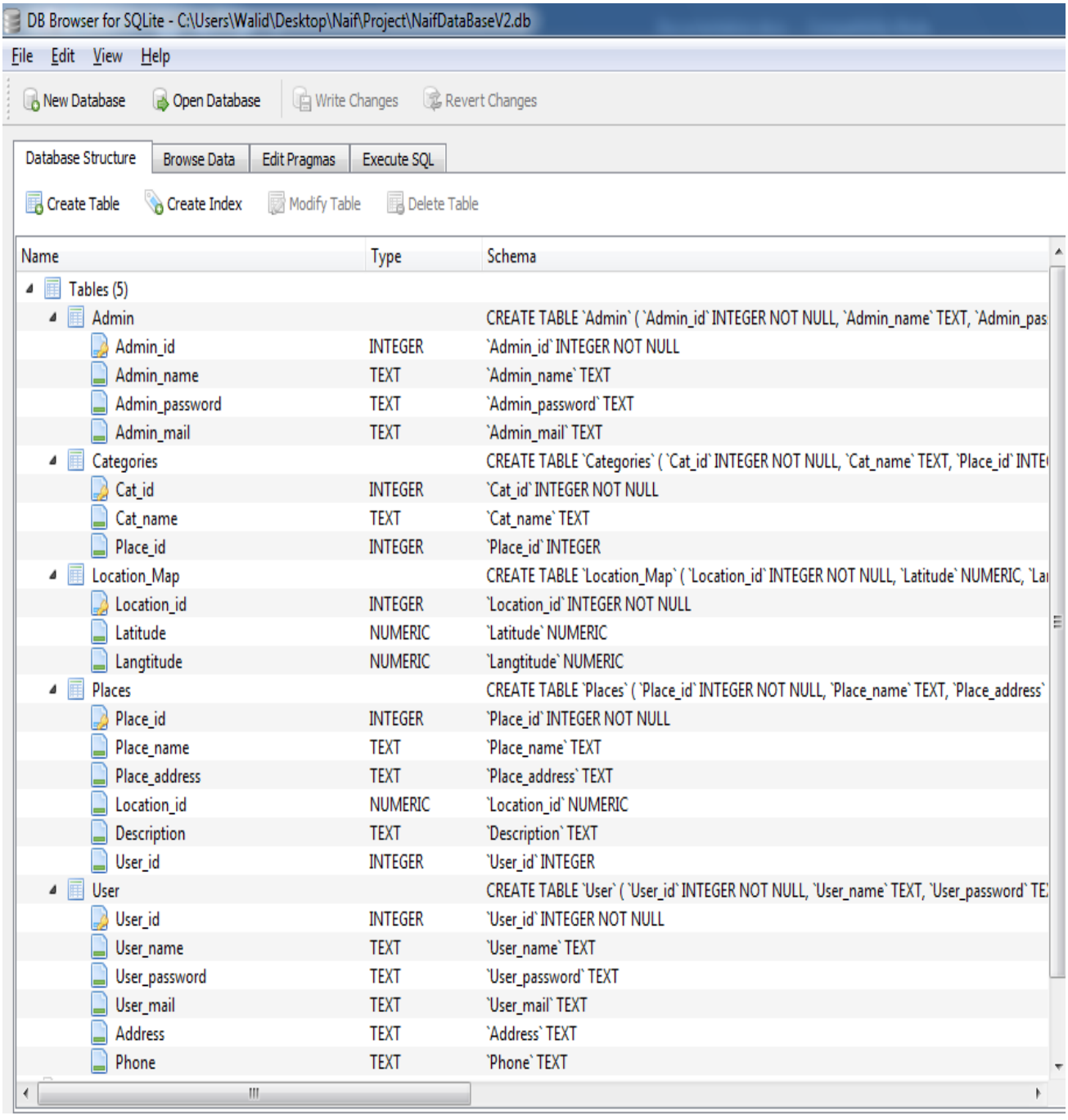


Figure 24 Database Tables

4.3.1 Admin Table

In this table we have four fields (Admin_id (number), Admin_name (Text), password (Text) and admin_mail (Text). Admin_id is the primary key in this table as shown in the figure 26.

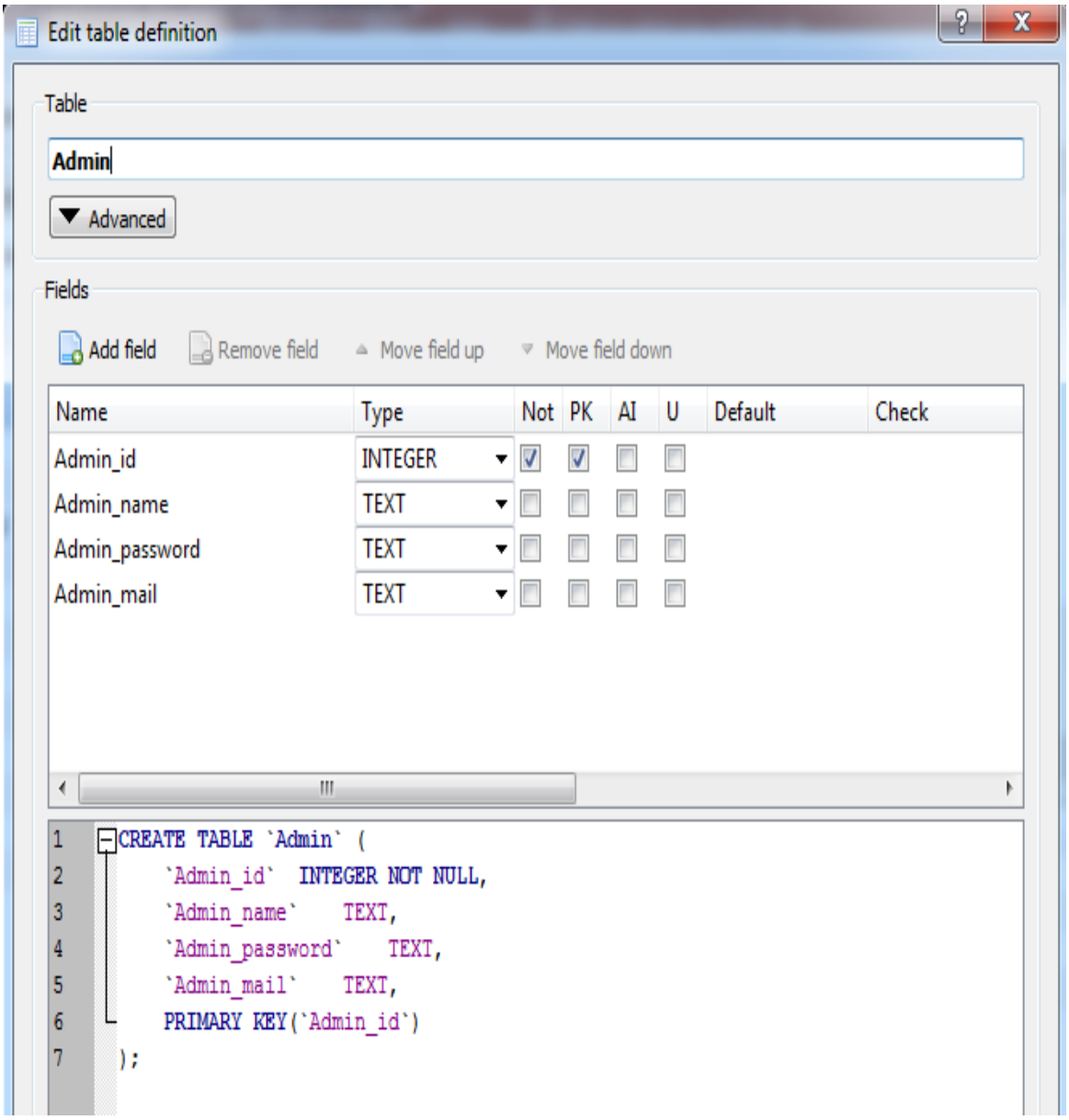


Figure 25 Admin Table

4.3.2 User Table

In this table we have six fields (User_id (number), User _name (Text), User_password (Text) and User _mail (Text), address (Text) and Phone (Text). User_id is the primary key in this table as shown in the figure 27.

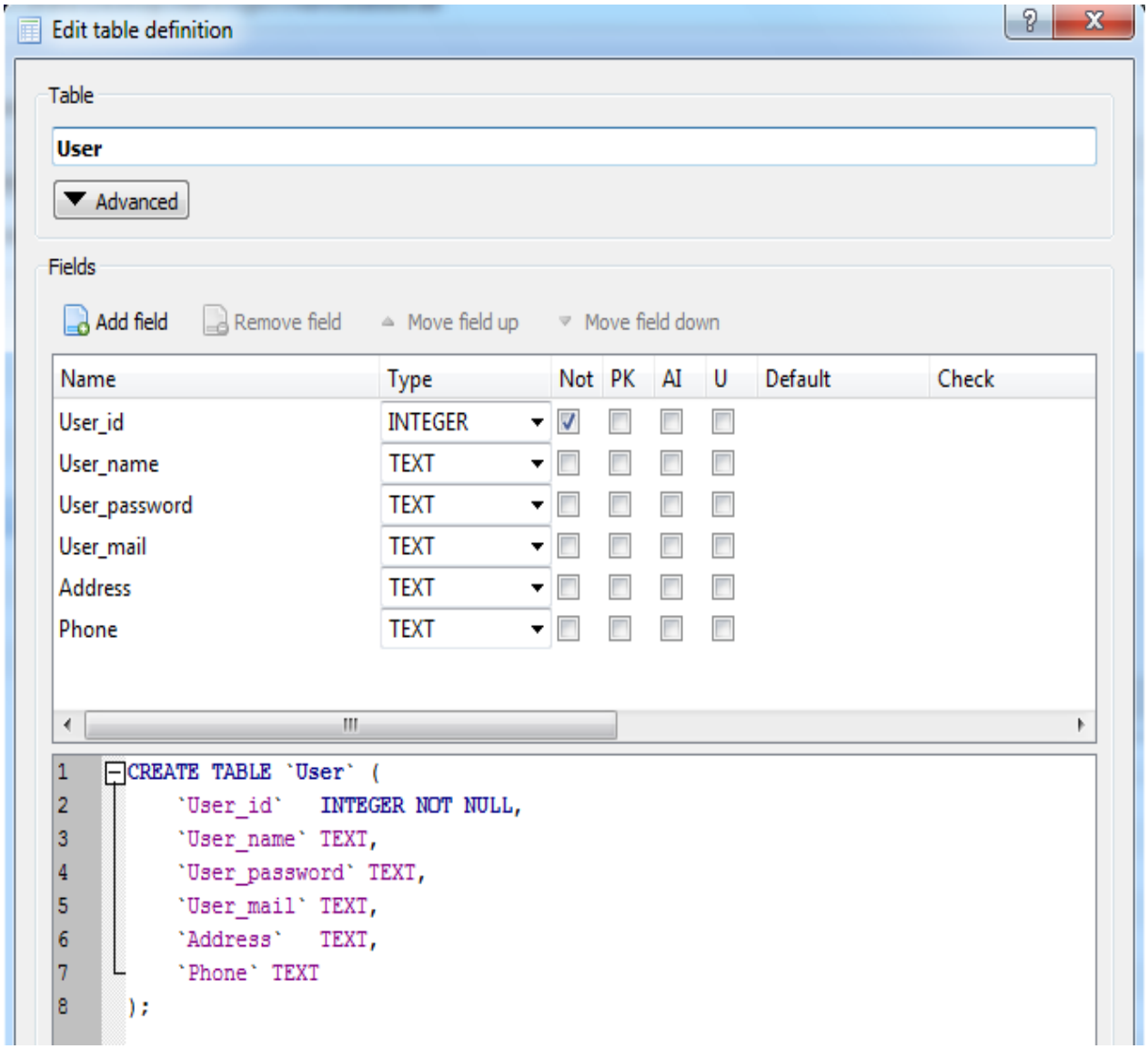


Figure 26 User Table

4.3.3 Places Table

In this table we have six fields (Place_id (number), Place_name (Text), Place_address (Text) and Location_id (number), Description (Text) and User_id (number). Place_id is the primary key in this table as shown in the figure 28.

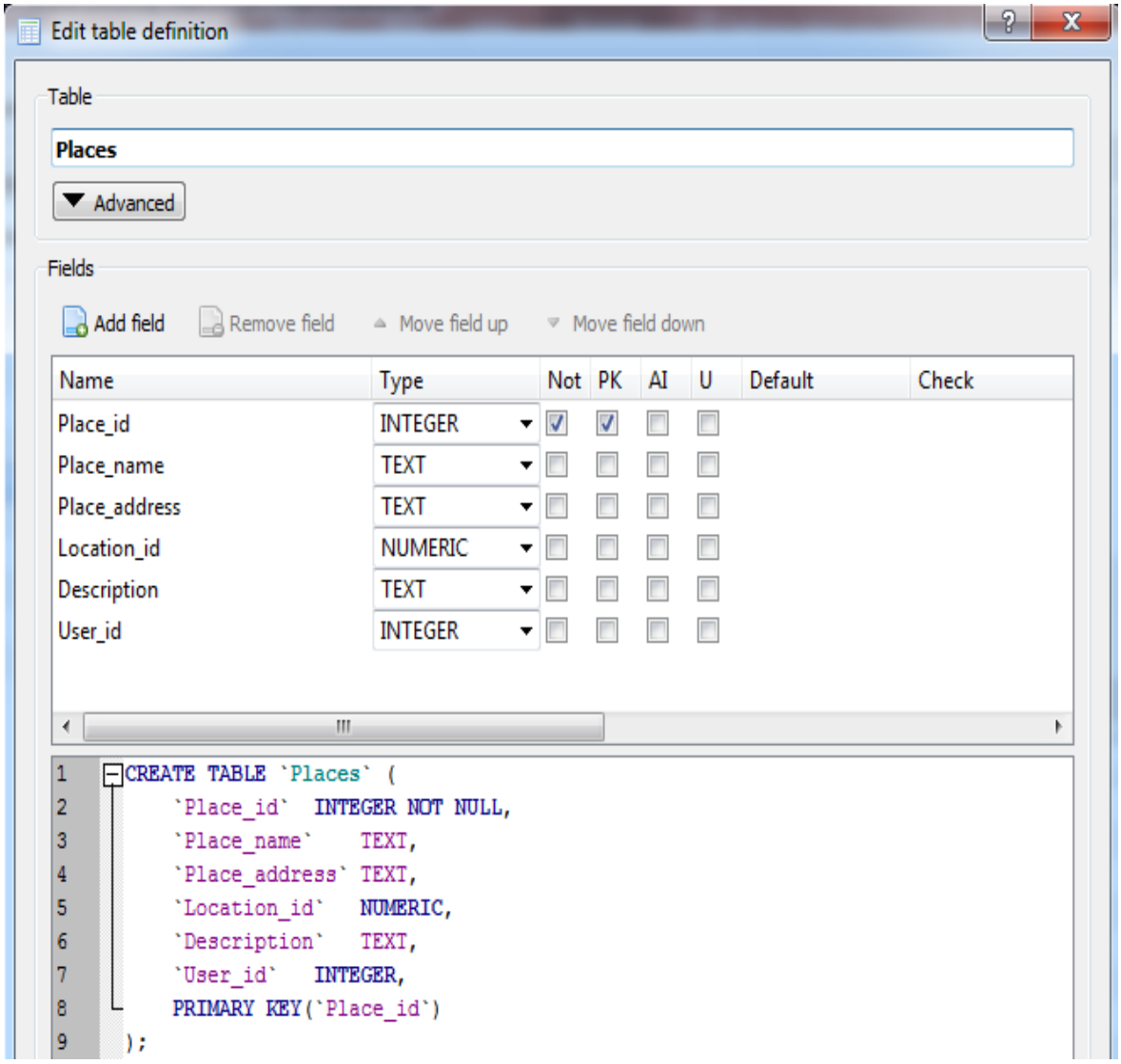


Figure 27 Place Table

4.3.4 Categories Table

In this table we have three fields (cat_id (number), Cat_name (Text), and Place_id (number) Cat_id is the primary key in this table as shown in the figure 29.

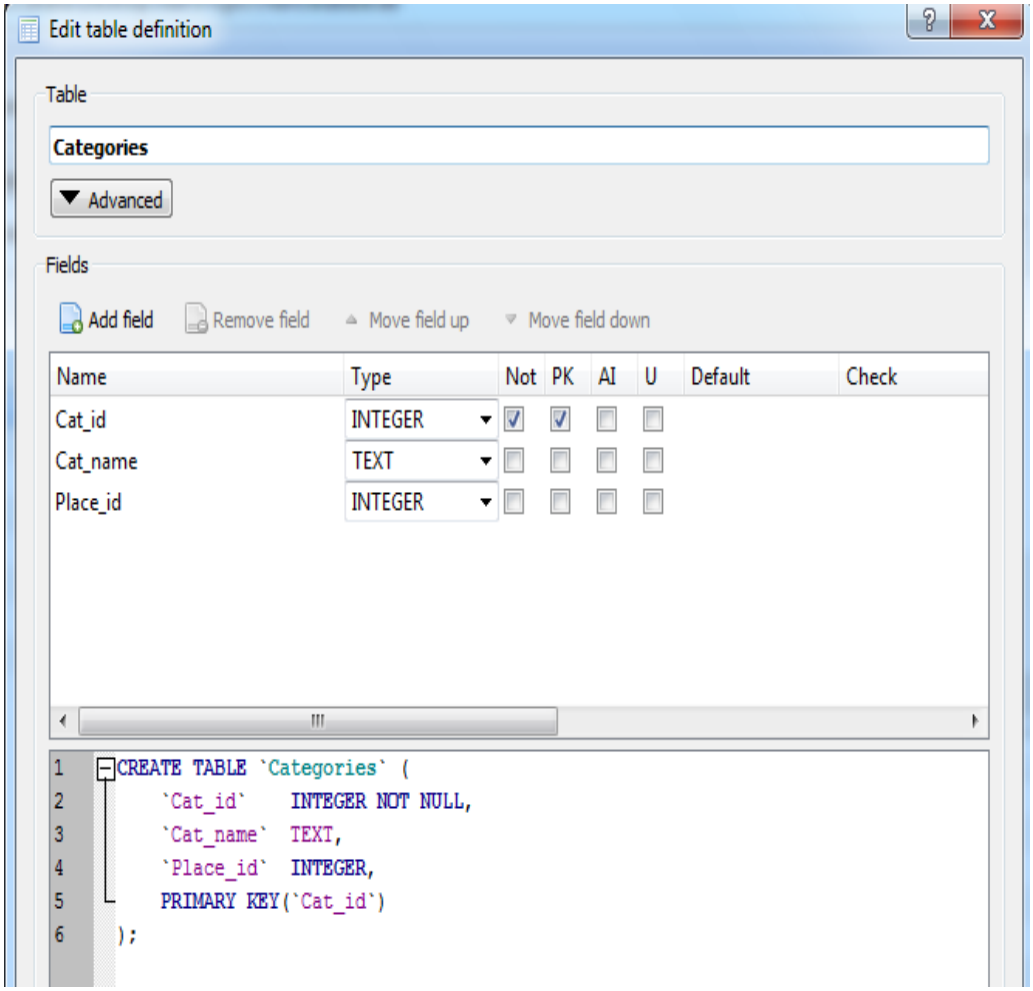


Figure 28 Categories

4.3.5 Location_Map Table

In this table we have three fields (cat_id (number), Cat_name (Text), and Place_id (number). Location_id is the primary key in this table as shown in the figure 30.

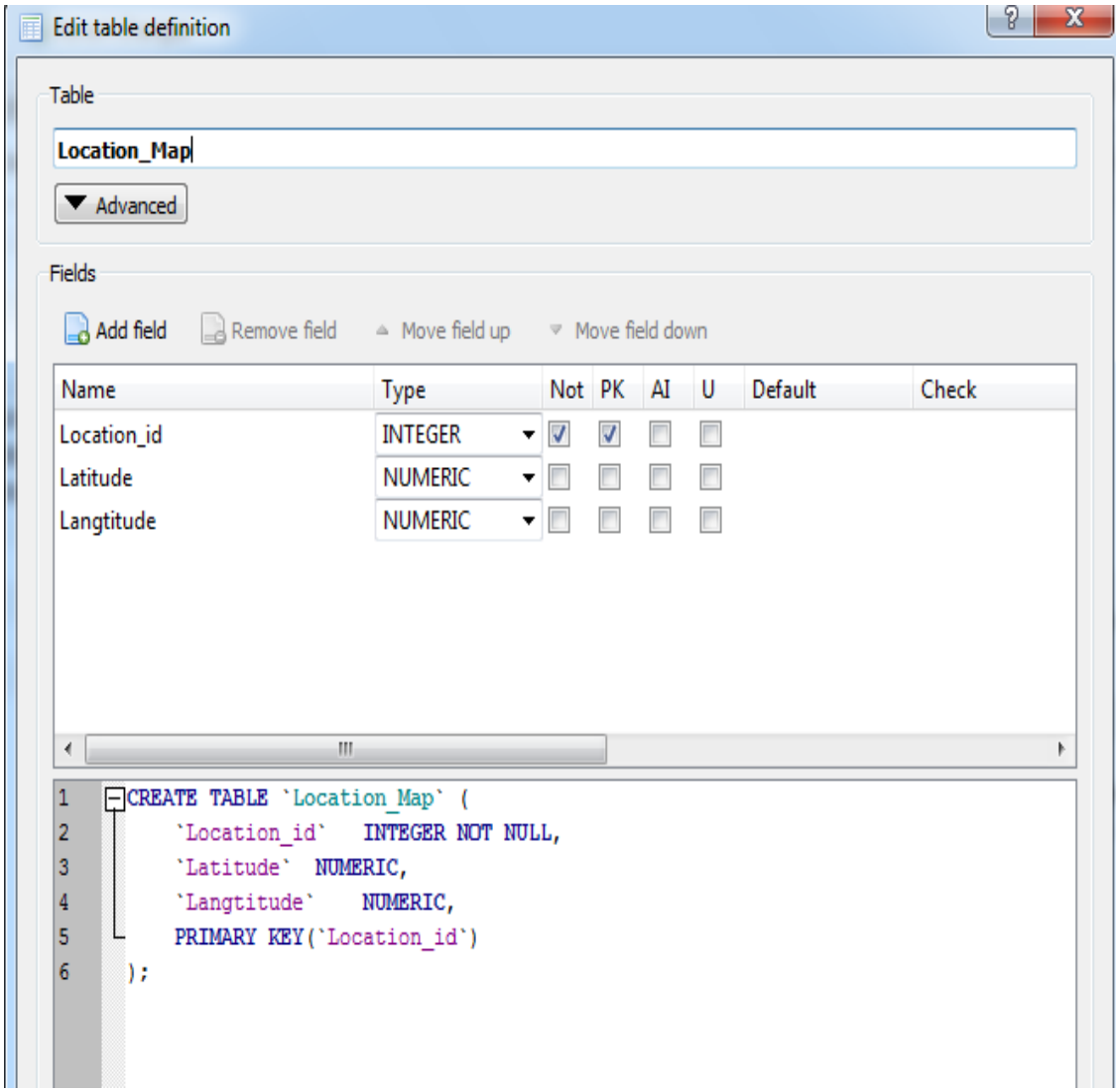


Figure 29 Location_Map

Chapter 5

Graphical User Interface

5.1 Introduction

Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools(ADT) as the primary IDE for native Android application development.

Figure 30 Android Studio

Android Studio was announced on May 16, 2013 at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0. The current stable version is 3.3, which was released in January 2019.

The following features are provided in the current stable version:

- Android-specific refactoring and quick fixes
- Lint tools to catch performance, usability, version compatibility and other problems
- ProGuard integration and app-signing capabilities
- Template-based wizards to create common Android designs and components
- A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configurations.
- Support for building Android Wear apps
- Built-in support for Google Cloud Platform, enabling integration with Firebase Cloud Messaging (Earlier 'Google Cloud Messaging') and Google App Engine.
- Android Virtual Device (Emulator) to run and debug apps in the Android studio.

Android Studio supports all the same programming languages of IntelliJ (and CLion) e.g. Java, C++, and more with extensions, such as Go;[18] and Android Studio 3.0 or later supports Kotlin and "Java 7

language features and a subset of Java 8 language features that vary by platform version." External projects backport some Java 9 features. While IntelliJ that Android Studio is built on supports all released Java versions, and Java 12, it's not clear to what level Android Studio supports Java versions up to Java 12 (the documentation mentions partial Java 8 support). At least some new language features up to Java 12 are usable in Android.

5.2 System requirement for Android Studio

Criterion	Description
OS version	Microsoft Windows 7/8/10 (32-bit or 64-bit), 64-bit required for native debugging Mac OS X 10.10 (Yosemite) or higher, up to 10.13 /10.14 (macOS High Sierra/macOS Mojave) GNOME or KDE desktop Linux (64-bit capable of running 32-bit applications) (GNU C Library (glibc) 2.19+)
RAM	3 GB RAM minimum, 8 GB RAM recommended; plus 1 GB for the Android Emulator
Disk space	2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
Java version	Java Development Kit (JDK) 8, use of bundled OpenJDK is recommended.[24]
Screen resolution	1280×800 minimum screen resolution

5.3 Project structure

Each project in Android Studio contains one or more modules with source code files and resource files. Types of modules include:

- Android app modules
- Library modules
- Google App Engine modules

By default, Android Studio displays your project files in the Android project view, as shown in figure 1. This view is organized by modules to provide quick access to your project's key source files.

All the build files are visible at the top level under Gradle Scripts and each app module contains the following folders:

- **manifests**: Contains the AndroidManifest.xml file.
- **java**: Contains the Java source code files, including JUnit test code.
- **res**: Contains all non-code resources, such as XML layouts, UI strings, and bitmap images.

The Android project structure on disk differs from this flattened representation. To see the actual file structure of the project, select Project from the Project dropdown.

You can also customize the view of the project files to focus on specific aspects of your app development. For example, selecting the Problems view of your project displays links to the source files containing any recognized coding and syntax errors, such as a missing XML element closing tag in a layout file.

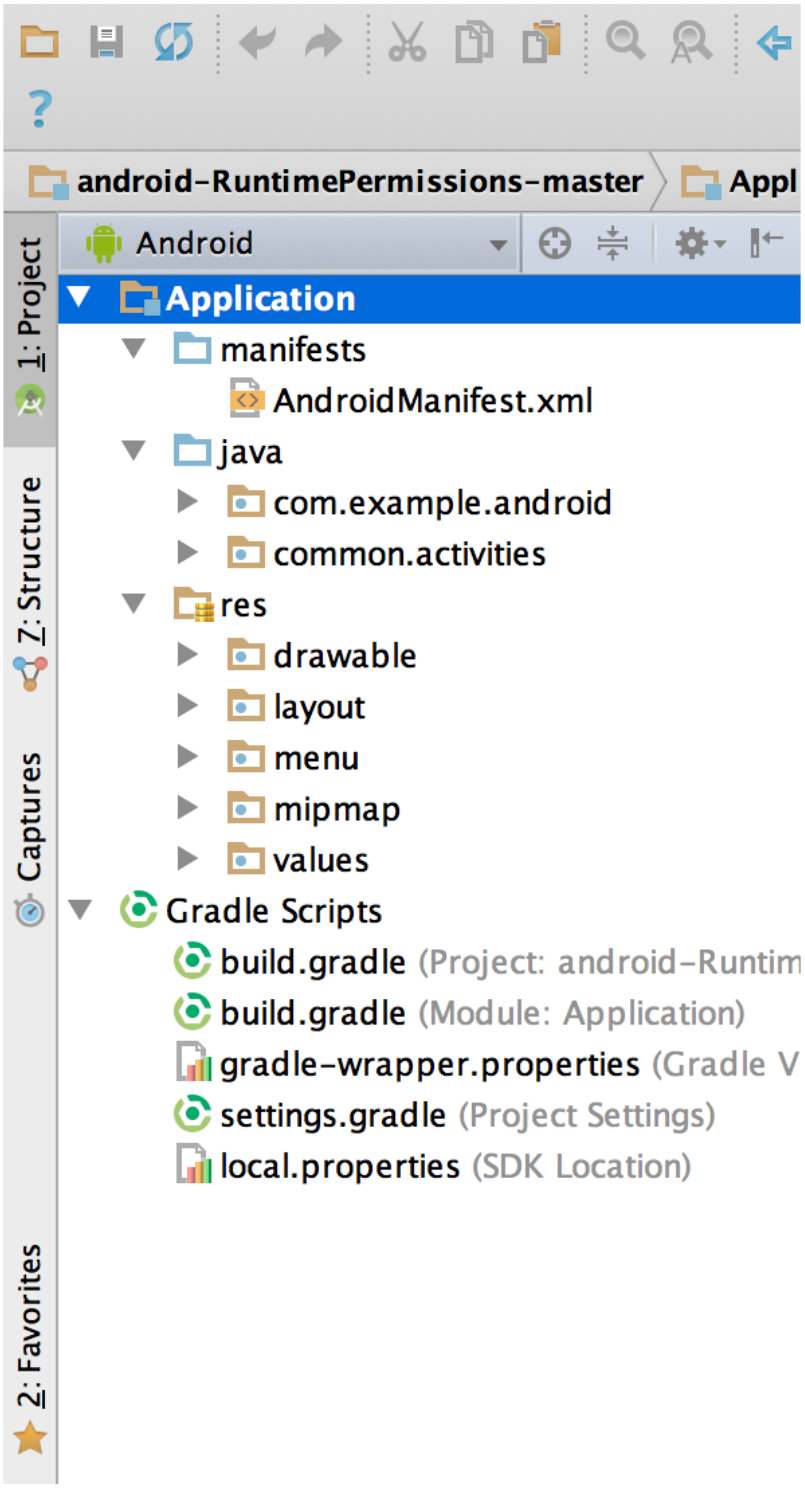


Figure 31 Project files in Android view

5.4 Android Studio interface

The Android Studio main window is made up of several logical areas identified in figure 33.

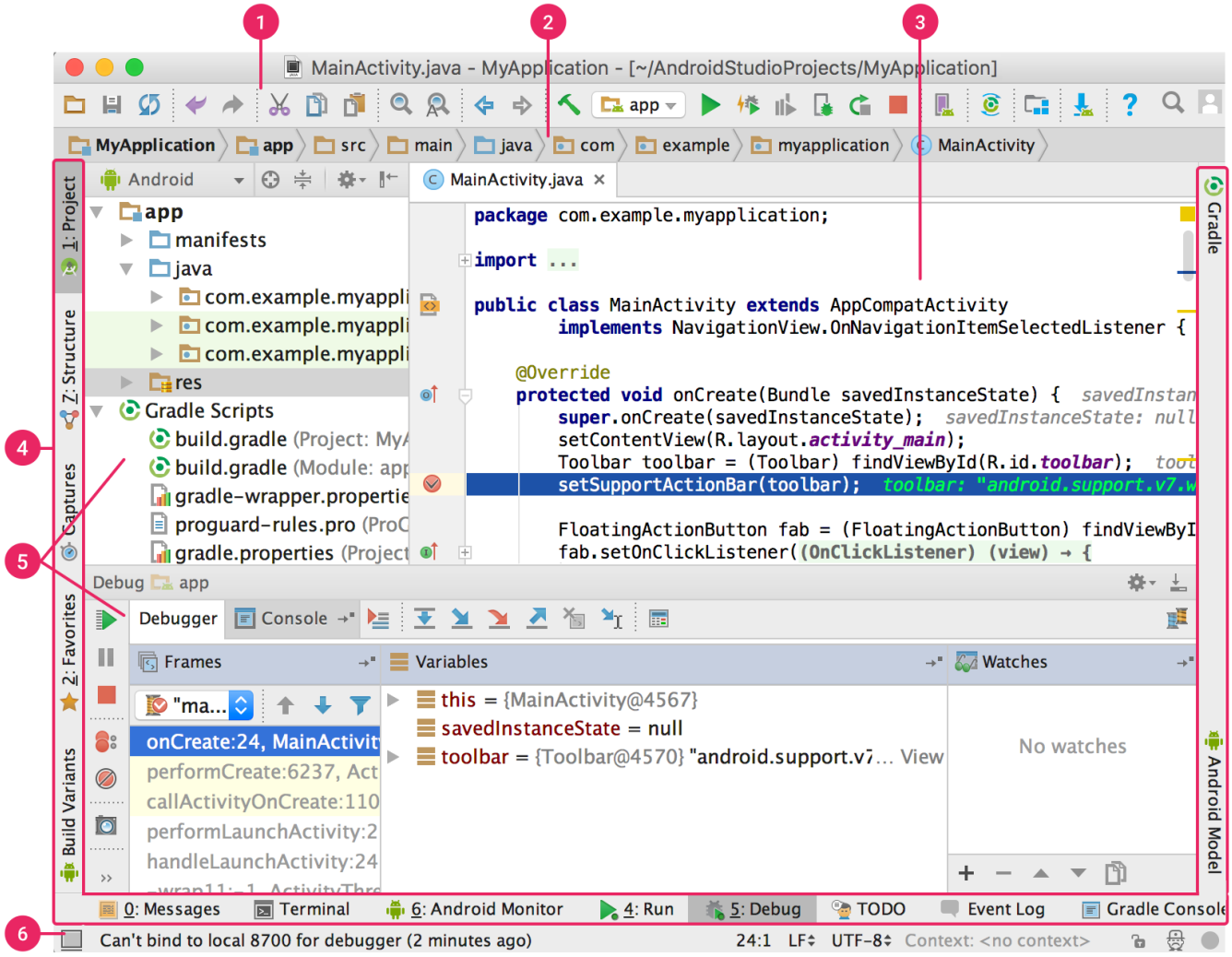


Figure 32 The Android Studio main window

1. The **toolbar** lets you carry out a wide range of actions, including running your app and launching Android tools.
2. The **navigation bar** helps you navigate through your project and open files for editing. It provides a more compact view of the structure visible in the **Project** window.

3. The **editor window** is where you create and modify code. Depending on the current file type, the editor can change. For example, when viewing a layout file, the editor displays the Layout Editor.
4. The **tool window bar** runs around the outside of the IDE window and contains the buttons that allow you to expand or collapse individual tool windows.
5. The **tool windows** give you access to specific tasks like project management, search, version control, and more. You can expand them and collapse them.
6. The **status bar** displays the status of your project and the IDE itself, as well as any warnings or messages.

You can organize the main window to give yourself more screen space by hiding or moving toolbars and tool windows. You can also use keyboard shortcuts to access most IDE features.

At any time, you can search across your source code, databases, actions, elements of the user interface, and so on, by double-pressing the Shift key, or clicking the magnifying glass in the upper right-hand corner of the Android Studio window. This can be very useful if, for example, you are trying to locate a particular IDE action that you have forgotten how to trigger.

5.5 Project User Interface

5.5.1 Registration and Login Window

First when we start the project, we can log in using the account we created in the registration form. Figure 34 show how to create an account as we need to enter the name, email, mobile, password and repeat the password again to check if the user enter password correct or not. If the user enter two different password the project will display massage that the password is incorrect. If the all data in the registration is correct then the project will display the log in window.

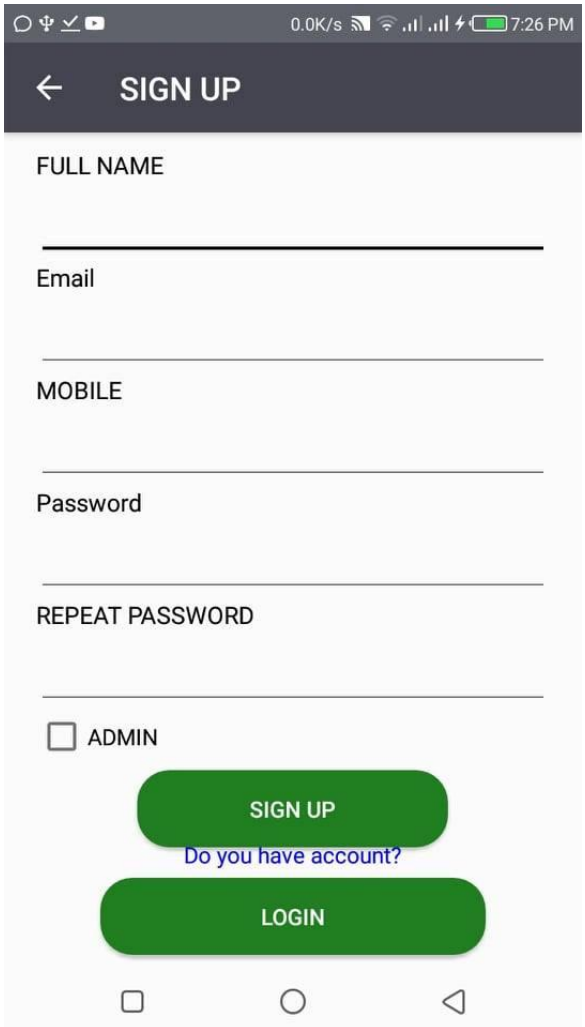


Figure 33 Registration Form

After the user register in the project, he can now login using the following figure as he need to enter the email and password. If the email or password is incorrect the project will display massage that the password is incorrect. If the all data in the log in window is correct then the project will display the main window.

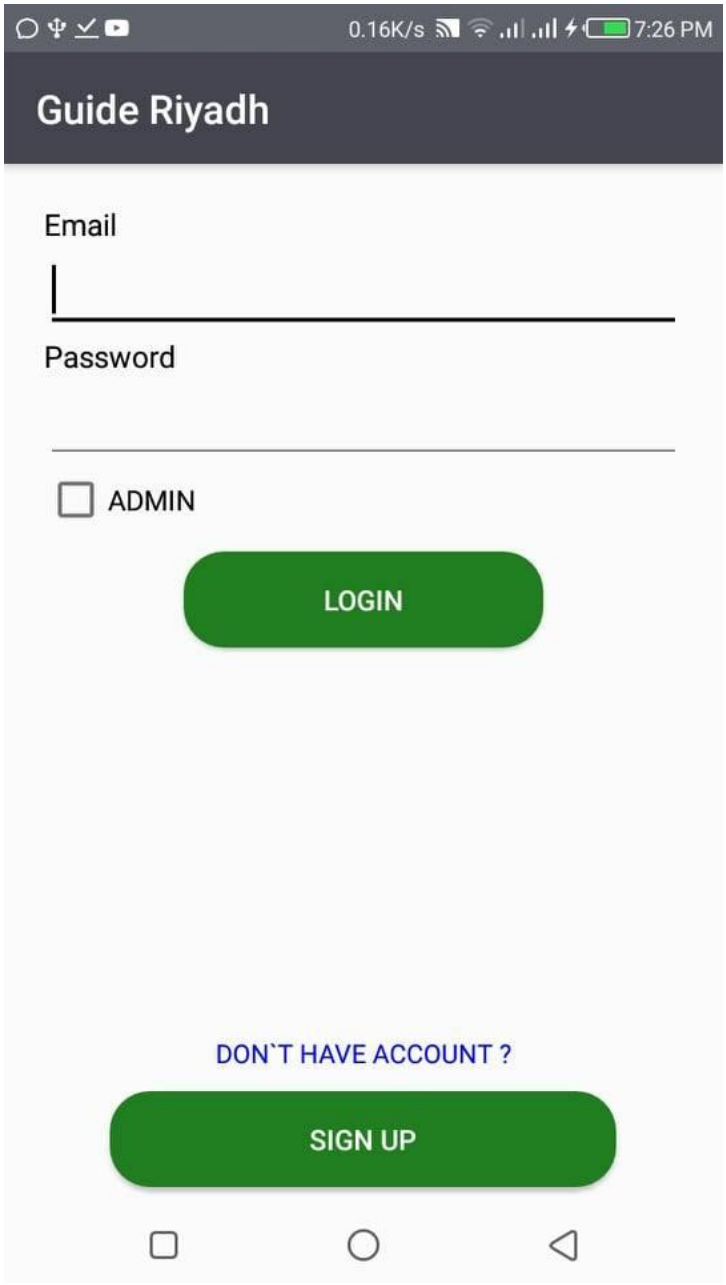


Figure 34Login Form

5.5.2 Main Menu Screen

After you login, the main window will be displayed as following figure. In the main window we have four parts (Hospitals, Hotels, Governments, and Tourism). If you click on any part the data that are stored in this part will be displayed, for example; if you click on Hospitals, you can see all the hospitals in this part.

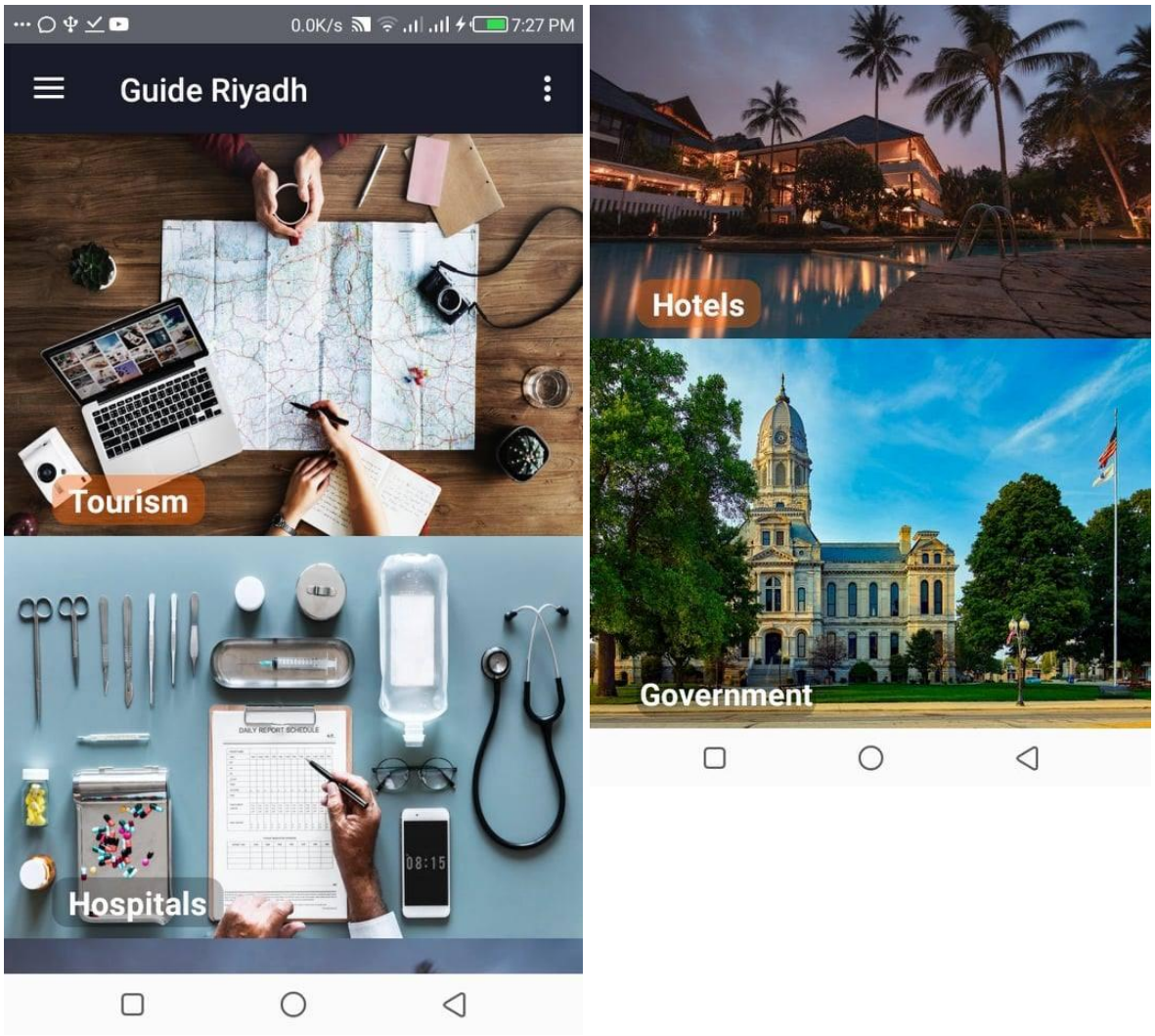


Figure 36. Main Menu Screen

5.5.3 Admin Screen

If you login as administrator, you can see the following window as you can update your profile, add new item, update item, remove item and log out.

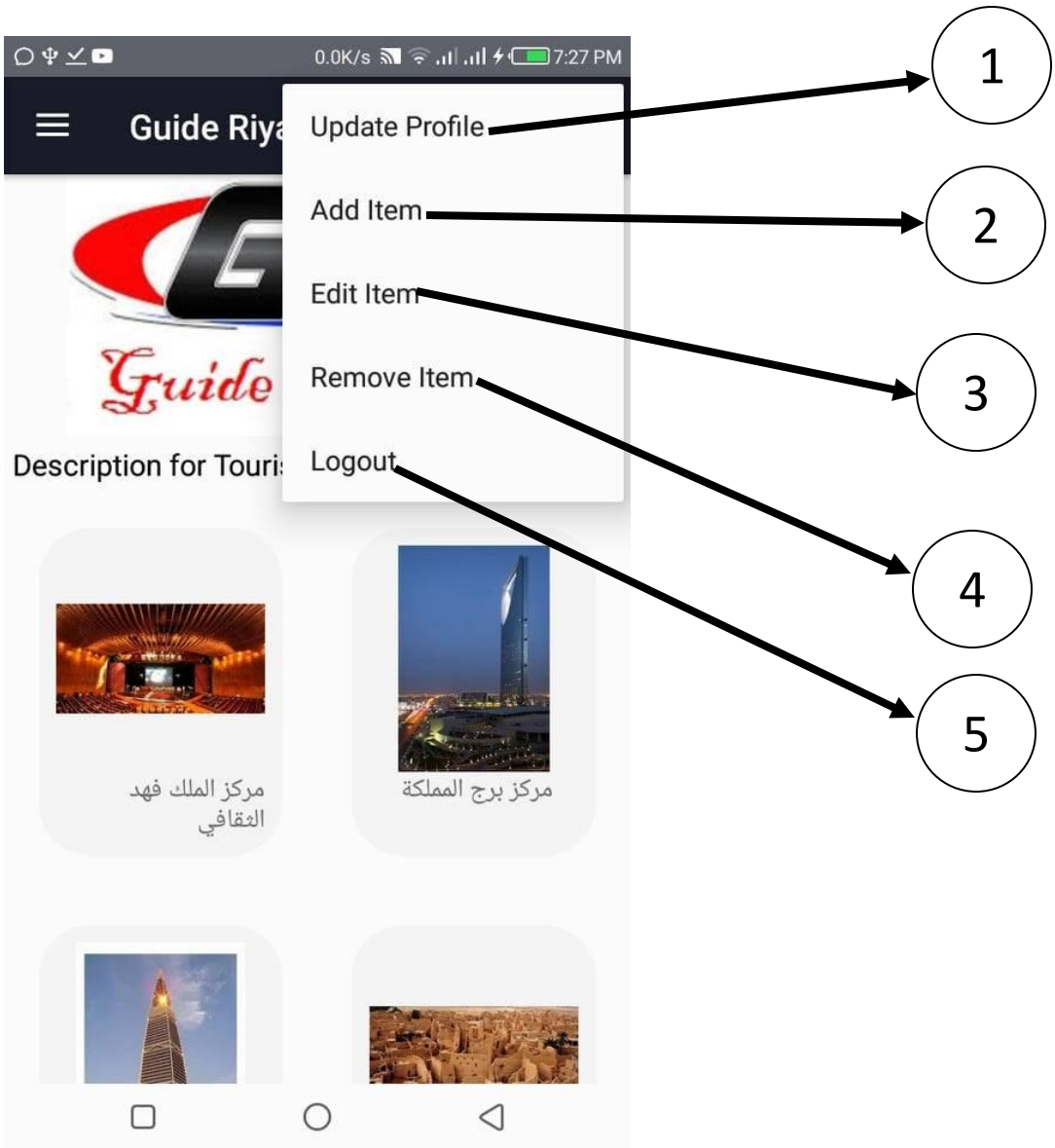


Figure 37. Admin Screen

(1) If the admin click update profile the following window will be displayed and the admin need to modify his information then the data will be updated to the database.

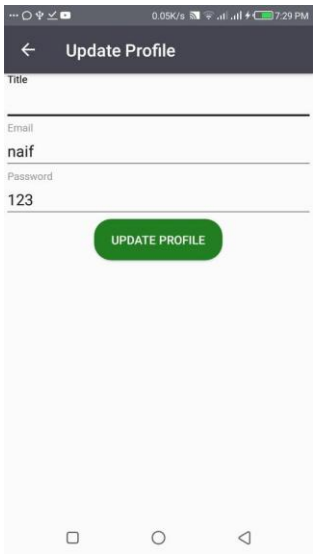


Figure 35 Update Profile

(2) If the admin click add item the following window will be displayed and the admin need to add the data about the new place and when the admin click to update button, the data will be added to the database.

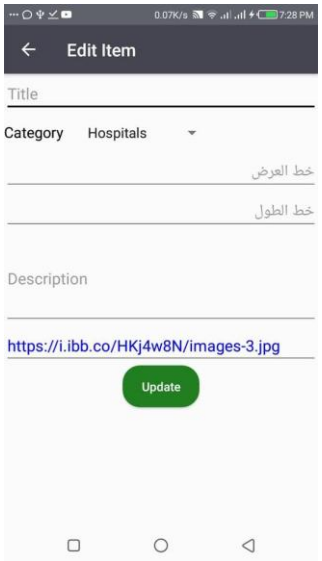


Figure 36 Add New Place

(3) If the admin click update item the following window will be displayed and the admin need to modify the information about this palce then the data will be updated to the database.

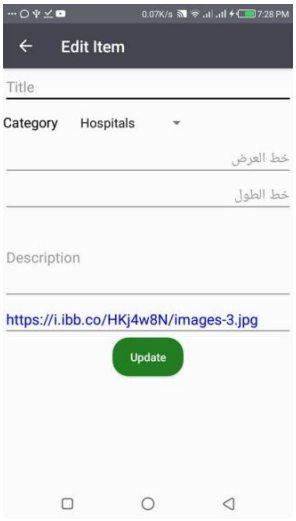


Figure 37 Update Place

(4) If the admin click remove item the project will ask the admin about which place need to removed, when admin enter the place that need to remove it, the project will display a massage that the place has been removed from the database.

(5) If the admin click logout, the login window will displayed again.

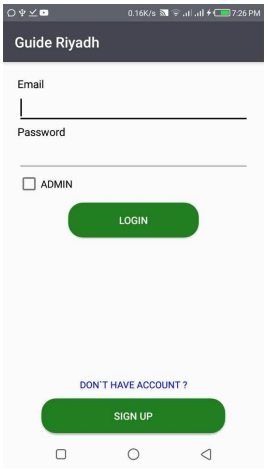
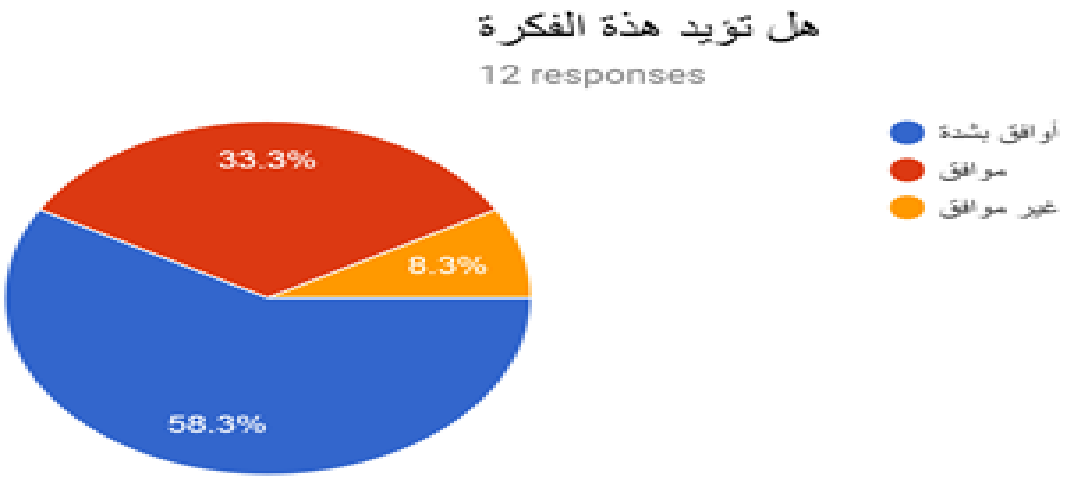


Figure 38 Login Page

Chapter 6

Conclusion

The city of Riyadh is both a modern metropolis and a historical and cultural treasure. When someone visit AL Riyadh city for the first time, he will spend a lot of time for exploring the city for any services he wants such as: hotels, hospitals, governmental institutions, and tourist attractions. So this is a proposal for the solution of this problem that will be a mobile application that provide some facilities for anyone in Al Riyadh city especially the visitors. The idea of the project is to provide a Mobile Application that provide some facilities for anyone in Al Riyadh city especially the visitors. It provide an effortless way to reach the important places in the city. Using this mobile application make it easy to use the application anywhere with any restrictions of your location. Also, it display near-by important places automatically depending on google map service in the mobile. After creating the project we make a questioner, about are you agree this project or not. We have the following results.


هل تؤيد هذة الفكرة
12 responses
أوافق بشدة
موافق
غير موافق
33.3%
8.3%
58.3%

Chapter 7

Future Work:

- Web application will provide powerful support to the system.
- The proposed system maps capabilities will be improved to provide more ease of use.
- Using a real server to enable access to the application from everywhere via internet.
- Develop the application in other programming languages to be run on different operating systems such as iOS, Windows phone, ……etc.

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