**FYP SRS Document**

Final Year Project

Software Requirement Specification

For

Info Gator

Bachelor of Science in Computer Science

By

|  |  |  |  |  |
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Table of Contents

[1. Introduction 4](#_Toc27397209)

[1.1 Purpose 4](#_Toc27397210)

1.2 Document Conventions…………………………………………………………………………………………………………..4

[1.3 Intended Audience and Reading Suggestions 5](#_Toc27397211)

[1.4 Product Scope 5](#_Toc27397212)

[2. Overall Description 6](#_Toc27397213)

[2.1 Product Perspective 6](#_Toc27397214)

[2.2 Product Functions 6](#_Toc27397215)

[2.3 User Classes and Characteristics 7](#_Toc27397216)

[2.4 Operating Environment 7](#_Toc27397217)

[2.5 Design and Implementation Constraints 8](#_Toc27397218)

[2.6 User Documentation 9](#_Toc27397219)

[2.7 Assumptions and Dependencies 9](#_Toc27397220)

[3. External Interface Requirements 9](#_Toc27397221)

[3.1 User Interfaces 9](#_Toc27397222)

[3.2 Hardware Interfaces 10](#_Toc27397223)

[3.3 Software Interfaces 10](#_Toc27397224)

[3.4 Communications Interfaces 10](#_Toc27397225)

[4. System Features 10](#_Toc27397226)

[4.1 Signup and login as admin and user 10](#_Toc27397227)

[4.1.1 Description and Priority 10](#_Toc27397228)

[4.1.2 Stimulus Sequences 10](#_Toc27397229)

[4.1.3 Functional Requirements 11](#_Toc27397230)

[4.2 QR code Generator – admin side 11](#_Toc27397231)

[4.2.1 Description and Priority 11](#_Toc27397232)

[4.2.2 Stimulus Sequences 11](#_Toc27397233)

[4.2.3 Functional Requirements 12](#_Toc27397234)

[4.3 Search bar – user side 12](#_Toc27397235)

[4.3.1 Description and Priority 12](#_Toc27397236)

[4.3.2 Stimulus Sequences 12](#_Toc27397237)

[4.3.3 Functional Requirements 13](#_Toc27397238)

[4.4 Navigation – user side 13](#_Toc27397239)

[4.4.1 Description and Priority 13](#_Toc27397240)

[4.4.2 Stimulus Sequences 13](#_Toc27397241)

[4.4.3 Functional Requirements 14](#_Toc27397242)

[4.5 QR code scanner – user side 14](#_Toc27397243)

[4.5.1 Description and Priority 14](#_Toc27397244)

[4.5.2 Stimulus Sequences 14](#_Toc27397245)

[4.5.3 Functional Requirements 15](#_Toc27397246)

[4.6 pdf converter – user side 15](#_Toc27397247)

[4.6.1 Description and Priority 15](#_Toc27397248)

[4.6.2 Stimulus Sequences 15](#_Toc27397249)

[4.6.3 Functional Requirements 15](#_Toc27397250)

[5. Other Nonfunctional Requirements 16](#_Toc27397251)

[5.1 Performance Requirements 16](#_Toc27397252)

[5.2 Safety Requirements 16](#_Toc27397254)

[5.3 Security Requirements 16](#_Toc27397256)

[5.4 Software Quality Attributes 16](#_Toc27397257)

[5.5 Business Rules 18](#_Toc27397258)

[References 18](#_Toc27397259)

# 1. Introduction

## 1.1 Purpose

The motivation behind this document is to construct a live application where tourist can easily find historical places and other such places, now we are cover Lahore and later we will work on northern areas. In our historical places specially in museums, information of each old item is written on a large board that is costly and tourist may not read it thoroughly during tour. By using our app tourist will just scan the QR code and will get all information about specific item. They can save it for later study, can share it will friends and can convert in pdf format.

There will be two side of this application. One will be admin side and second will be user side. From admin side, admin will make QR codes including specific data with the link of the site where from user can get more data about the item. And the second side will be useable by users. User will sign up and login will by username and password and will use this application as user wants.

1.2 Document Conventions

Primary heading:

o Font family: times new roman

o Font Face: Normal

o Font Size: 16, Heading 1

Sub heading:

o Font Family: Times new roman

o Font Face: Normal

o Font Size: 14, Heading 2

Other content clarification:

o Font Family: Times new roman

o Font Face: Normal

o Font Size: 12

o Line Spacing: 1.5

o Paragraph Spacing: 6pt after and 12pt previously

## 1.3 Intended Audience and Reading Suggestions

This undertaking is a model for traveller guide and things data getter by QR scanner application. It is confined inside the college premises. This has been actualized under the direction of college teachers. This undertaking is helpful for the visitor.

Developers:

Developer will get the idea by considering himself the end user and what the user wants in that software (Requirements), what tools are going to be used to develop the application. Developer will get the methodology of developing application.

Project manager:

Project manager will get the idea that what functions and features to be used in the application and how these functions can be more effective. He will be responsible for checking the progress of the project. He can guide the developers because of his experience.

User:

User will check either the application is fully functional. If any problem or issue occurs, it must be reported. User must also rate our services.

Tester:

Tester is responsible for testing the project thoroughly. He must test either the website can be visited by more and more customers.

## 1.4 Product Scope

The motivation behind data gator framework is to assist the traveler with finding the most loved spots and way of that spot by means of google guide to make an advantageous and simple to-utilize application for vacationer to get the data of the particular thing or explicit bit of that chronicled spot. This application is especially for the tourist to visit the different places easily and get the information by QR code scanning. This application can be used by each category of people. Because tourist may be belonging with lower, middle or upper class. The QR codes will be generated by this application on admin side. Admin will make different QR code for different items and after printing and lamination, QR code will be display for the tourist instead of a large costly board. Tourist will be able to save the information got by scanning QR code in pdf format for later study. The main difficulty to start this application working properly needs legal complications. Because it is illegal to replace the boards with QR code. And we can also display QR code on that board and it will be user choice to read from or read by scanning QR code.

# 2. Overall Description

## 2.1 Product Perspective

Info GatorApplication is absolutely an autonomous application which isn't identified with some other framework and not a part of a bigger framework. This application has just one sort of client, and along these lines there is no usefulness contrasts between clients. That is the reason, the application just has one kind of UI. This application is to design the general excursion as indicated by course inclination which will give increasingly upper hands. What's more, cause them to fulfil with Lahore culture.

* QR codegenerator

Admin will generate the QR code consisting information of different items. It will just useable by admin side.

* QR code scanner

Client will examine the QR code and will get data of explicit thing.

* Navigation

By clicking on navigation button available on regarding place, map will be open with place route.

## 2.2 Product Functions

* Sign up
* Login as admin
* Login as user
* QR code generator
* Search the place
* Scroll to view the places
* Navigate to selected place
* QR code scanner
* Saving information in pdf format
* Link from where he read more information about item

## 2.3 User Classes and Characteristics

Clients of the framework ought to have the option to look through the spot or look over the spots if they have no idea about places. They should be able to navigate to the specific selected place to visit. In navigation they should be a complete route of that place.They should also be able to scan the QR codes to get information of specific item and save it in pdf format. There will be two type of users, tourist and administration.

Users ought to have the option to do following capacities.

* Search for the desire place
* Scroll the given places if no previous idea of desire place (name is unknowing for user)
* Navigate to the desire place
* Scan the QR code
* Save the information of the specific item in pdf form for later study
* Wikipedia links where from tourist can read more information

Administration should be able to do following functions:

* Generating QR code for specific item information
* Add new visit able places

## 2.4 Operating Environment

Software requirements

* Android version 6.0
* Strong internet connection
* Google map
* Browser

Hardware Requirements

* Android phone
* 2 GB Ram
* 16 GB Rom

## 2.5 Design and Implementation Constraints

In software engineering, planning and usage is unequivocally sorted as the appreciation of a specialized particular or calculation as a program, programming segment through PC programming and sending. The framework runs huge numbers of the dialects and various apparatuses that make it completely utilitarian, responsive and dynamic.

1. JAVA: Java is a broadly useful PC programming language that is simultaneous, class-based, object-situated, and explicitly intended to constructed the product and android applications. We use java language for backend work in our android ventures.
2. XML:XML is a front-end development language. We use XML to built front-end of android applications. It's may be buttons, images, layout, input field etc.
3. JDK: java development kit is consisting of java libraries that used in android application development. When we use functions in java programming, these functions basically built-in in JDK. When we install android studio, we have also should install JAVA JDK for working.
4. SQLite: SQLite is an item library that gives a social database the administrators system. SQLite database is composed with the application that gets to the database. The applications partner with the SQLite. Database peruse and compose straightforwardly from the database records put away on circle.
5. GUI: GUI of the framework is because of the considerable number of instruments and dialects expressed above, both at the server-side and customer side, meeting up to shape an associated unit. All the client needs to do is to give precise login subtleties, which is checked by the database, to get to every one of the items.

There is likewise a regulatory dashboard which permits just the head to include or expel clients from the framework. This element is acquainted with check for any gatecrashers or unapproved work force in the framework, who might need to arrange sedates illicitly. Likewise, by the utilization of the programming dialects and devices expressed over, the framework is completely agreeable to all gadgets accessible today.

## 2.6 User Documentation

Online assist will with being accessible consistently while utilizing the framework. This online assist will with managing the client, which might possibly be PC or Internet master, through every part of the framework.The application will be easy to use. Video tutorial will also be uploaded on YouTube where user can watch the video for guideline. Information of the application will also be given on play store in the form of reviews.

## 2.7 Assumptions and Dependencies

It is expected that the application will work accurately with the android mobiles and tablets and also will be work correctly with other applications like google maps. Because the application acquires database update for the new user’s registration. Some components of the application are dependent on internet like to run the google maps, strong internet connection id required. Other components can work without internet like QR scanner and pdf converter.

# 3. External Interface Requirements

## 3.1 User Interfaces

The information gator's client has been explicitly planned in view of their clients, giving them comfort while they are on visit. Data gator ensures at each point, that the clients for the most part utilizing the application benefits instead of making sense of how to utilize it.

The master screen offers a menu with a rundown of spots if tourer has no idea about places. If he has idea about places, they simply search it from search bar. After selecting the place, User will click on navigation, the other screen will be open of google maps with a best route of this place. There will also be a back option after reaching to destination. Then by pressing the scanner button the screen of QR code will be open where from user can scan the QR code. A button for saving the information will also be available to save the information for later study.

* login and signup screen where user will register and then login to use application
* Desire place selection via search or scrolling
* Navigation button to view route to the desire place
* QR code scanner where client will filter QR code
* Saving the information in pdf form

## 3.2 Hardware Interfaces

Our project is basically android based. There is no hardware required to make this project. Our hardware is just a mobile phone or may be a tablet on which application can be downloaded and run. Our application just run on mobile and tablet not computer or laptop.

## 3.3 Software Interfaces

* The info gator application just run on android phone and android tablet
* We choose the database SQLite to store the users record
* We choose android studio with java JDK to implement the project
* We choose google maps to show the route of the places to the tourer
* We choose the text converter into pdf which will convert the information into pdf form for later study

## 3.4 Communications Interfaces

Tourer will use our application for the best path of the place. Our app will communicate with google maps to show the routes of that places. Tourer will be able to share the information via WhatsApp or Bluetooth to their friends.

# 4. System Features

# 4.1 Signup and login as admin and user

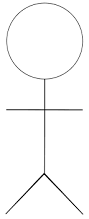
### 4.1.1 Description and Priority

The application comprises two side. One side will be for administrator and opposite side will be for client. Administrator will login with his email and secret phrase and client will login with his email and secret phrase with which he is enlisted.

**Priority:**component need is high.

### 4.1.2 Stimulus Sequences

|  |  |
| --- | --- |
| **UC #** | **UC-1** |
| **UC name** | Signup and login as admin and user |
| **Actor-Name** | User and admin |
| **Descriptions** | Admin will login and user will sign up and login |
| **Pre-conditions** | **Admin and user must valid email and login password** |
| **Post-conditions** | **admin should be successfully login and user should be successfully sign up and login** |
| **Basic flow** | Opens the application  Administrator will enter email and secret key for login  Client will tap on join button  Client will give information to enlistment  Client will enter email and secret word for login. |



User / Admin

### 4.1.3 Functional Requirements

|  |  |
| --- | --- |
| **ID #** | **FR-1** |
| **Name** | Signup and login as admin and user |
| **Description** | Admin will login and user will sign up and login |
| **Input** | User registered and enter his email and password for login |
| **Output** | Admin logged in and user signed and logged |
| **Dependency** | NULL |

## 4.2 QR code Generator – admin side

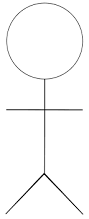
### 4.2.1 Description and Priority

This component is to produce the QR code of the particular thing data. This QR code will be printed and show for the clients. QR code generator will be on administrator side.

**Priority:**component need is high.

### 4.2.2 Stimulus Sequences

|  |  |
| --- | --- |
| **UC #** | **UC-2** |
| **UC name** | QR code Generator |
| **Actor-Name** | Administration |
| **Descriptions** | This will generate the QR code |
| **Pre-conditions** | Admin must be login |
| **Post-conditions** | QR code must be generate |
| **Basic flow** | **Admin will click on generate QR code button**  **Admin will write information for QR code**  **Admin will click on print to print the QR code** |



Admin

### 4.2.3 Functional Requirements

|  |  |
| --- | --- |
| **ID #** | **FR-2** |
| **Name** | QR code generator |
| **Descriptions** | This will generate QR code |
| **Input** | Click on generate QR code, write information for QR code and click on print |
| **Output** | QR should be generate |
| **Dependency** | FR1 |

## 4.3 Search bar – user side

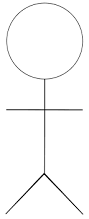
### 4.3.1 Description and Priority

The component is to search the specific place. Because many times, tourer has known of the place by name. Then he is determined to visit that place. At this time, he is opportunity to search the desire place by searching. He will quickly select that place without scrolling the list.

**Priority:**component need is medium.

### 4.3.2 Stimulus Sequences

|  |  |
| --- | --- |
| **UC #** | **UC-3** |
| **UC name** | **Search bar** |
| **Actor-Name** | Tourer |
| **Descriptions** | User will search the place where he wants to go |
| **Pre-conditions** | User have to login |
| **Post-conditions** | **Place should be search** |
| **Basic flow** | User enter place name |



User

### 4.3.3 Functional Requirements

|  |  |
| --- | --- |
| **ID #** | **FR-3** |
| **Name** | Search bar |
| **Description** | This will search the place |
| **Input** | User enter the name of place into search bar |
| **Output** | User find the place |
| **Dependency** | FR1 |

## 4.4 Navigation – user side

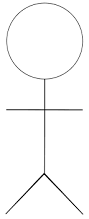
### 4.4.1 Description and Priority

This component of the info gator application is navigating to the selected place. After selecting the place, user will click on navigation button. Google maps will be open and will show the route to the selected place

**Priority:**component need is high.

### 4.4.2 Stimulus Sequences

|  |  |
| --- | --- |
| **UC #** | **UC-4** |
| **UC name** | Navigation |
| **Actor-Name** | Tourer |
| **Descriptions** | This will navigate the user to the place |
| **Pre-conditions** | User should be found the place first |
| **Post-conditions** | Route of the place should be navigating |
| **Basic flow** | User will click on navigation button  **Google maps will show the complete route of the place**  **User will follow that route to reach the place** |



User

### 4.4.3 Functional Requirements

|  |  |
| --- | --- |
| **ID #** | **FR-4** |
| **Name** | Navigation |
| **Description** | This will navigate the user to the place |
| **Input** | User found the place and click on navigation button |
| **Output** | User found the route of the place |
| **Dependency** | FR3 |

## 4.5 QR code scanner – user side

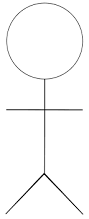
### 4.5.1 Description and Priority

This element is to examine the QR code. The QR code showed by the administrator, will be check by the client. Client will filter the QR code by the QR scanner to get the data of the particular thing.

**Priority:**component need is high.

### 4.5.2 Stimulus Sequences

|  |  |
| --- | --- |
| **UC #** | **UC-5** |
| **UC name** | **QR code scanner** |
| **Actor-Name** | Tourer |
| **Descriptions** | This will scan the QR code generated |
| **Pre-conditions** | Tourer should scan the QR code generated |
| **Post-conditions** | **Information should be got of QR code** |
| **Basic flow** | User opens QR code scanner for scanning  User scan the QR code generated by scanner  User get information of QR code |



User

### 4.5.3 Functional Requirements

|  |  |
| --- | --- |
| **ID #** | **FR-5** |
| **Name** | QR scanner |
| **Description** | This will scan the QR code |
| **Input** | Open QR scanner, scan the QR code |
| **Output** | User got information of QR code |
| **Dependency** | NULL |

## 4.6 pdf converter – user side

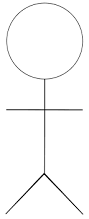
### 4.6.1 Description and Priority

This module is to convert the information of the QR code about the specific item into pdf format for later study.

**Priority:**component need is low.

### 4.6.2 Stimulus Sequences

|  |  |
| --- | --- |
| **UC #** | **UC-6** |
| **UC name** | **Pdf converter** |
| **Actor-Name** | Tourer |
| **Descriptions** | This will convert the information in pdf form |
| **Pre-conditions** | **User should get information** |
| **Post-conditions** | Reminder must be set. |
| **Basic flow** | **Userclick on pdf form button**  **Information will be converted in pdf form** |



User

### 4.6.3 Functional Requirements

|  |  |
| --- | --- |
| **ID #** | **FR-6** |
| **Name** | Pdf converter |
| **Descriptions** | This convert information in pdf format |
| **Input** | User will click on pdf form button |
| **Output** | Information will be converted in pdf form to save |
| **Dependency** | FR5 |

# 5. Other Nonfunctional Requirements

## 5.1 Performance Requirements

## The application ought to have superior and low disappointment rates. The application and upheld gadget ought to have the option to transmit and get information from databases with high baud rates. Gadgets ought to have all ongoing working framework refreshes introduced and have their security not undermined by infections. Gadgets must have security introduced and dynamic infection examining programming in use. Gadgets ought to exclusively be utilized for tasks of the application, so as to amplify execution and security. Besides, QR checking modules ought to work with in little wellbeing resistance. All database questions and information getting/transmitting ought to be finished utilizing higher security transmission.

## 5.2 Safety Requirements

## In the event that there is broad harm to a wide segment of the database because of disastrous disappointment, for example, a plate crash, the recuperation strategy re-establishes a past duplicate of the database that was sponsored up to authentic stockpiling (normally tape) and reproduces an increasingly current state by reapplying or re-trying the activities of submitted exchanges from the upheld up log, up to the hour of disappointment.

## 5.3 Security Requirements

Security frameworks need database stockpiling simply like numerous different applications. Be that as it may, the extraordinary prerequisites of the security showcase imply that merchants must pick their database accomplice cautiously. An unregistered user should not be login into system.

## 5.4 Software Quality Attributes

* Correctness
* Flexibility
* Maintainability
* Portability
* Reusability
* Robustness
* Testability
* Reliability
* Adaptability

## 5.5 Business Rules

Our application aim is to kick out the large boards of information which is very costly if we display it for each and every item in museum and other historical places. And to display the simple QR code.

# References

# [file:///C:/Users/rehma/OneDrive/Desktop/How%20to%20Write%20Specifications%20for%20a%20Mobile%20App%20Development%20Project%20-%20APRO%20Software.html](file:///C:\Users\rehma\OneDrive\Desktop\How%20to%20Write%20Specifications%20for%20a%20Mobile%20App%20Development%20Project%20-%20APRO%20Software.html)

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