# Chapter 1
# Introduction

## 1.1 PROJECT SUMMARY

Mainly through newspaper, magazines, radio and other simple ways those are available easily. But problem is that tourists are not able to get travel information timely when they are on the move. While today's mobile devices are becoming more intelligent, compared with PC, they still have the following limitations like small screen and tiny keyboard, limited CPU capacity, limited memory space, slow and fitful Internet connection. The project is to investigate the realization of City Guide over the platform of Android. One City Guide should contains some functionalities like automatic localization, navigation support, retrieving information from points of interests, setting reminder, adding reviews, communication support and so on. Finally, the project will result in the demonstration of prototype of city guide.

## 1.2 PROBLEM SPECIFICATION

Visitors have typically different needs when visiting a city. They have different interests. They can travel alone, with friends, with family or in a group. Some visitors stay some hours in the city, others stay several days. Some have a low travel budget. The following scenario addresses the problem of tailoring the discovery of a city to particular needs.

The present invention relates to a tour guiding assisting system and method for an amusement park, and the system comprises a control sever or an admin, at least one service end and at least one portable electronic device. Basically City tour Guide provides Information of nearby Attraction, Hotels, and Restaurants and also provide one additional feature that is transportation and generation of cost.

## 1.2 SCOPE

Mainly through newspaper, magazines, radio and other simple ways those are available easily. But problem is that tourists are not able to get travel information timely when they are on the move. While today's mobile devices are becoming more intelligent, compared with PC, they still have the following limitations like small screen and tiny keyboard, limited CPU capacity, limited memory space, slow and fitful Internet connection. The Scope of this application is wide City Tour Guide that will provide all necessary information about the important places at the specific city e.g. Transportations, Attractions, Hotels and restaurants etc. The project was mainly aimed at guiding travelers as well as local people, information, direction and mode of communication to reach these places. Thus it will help the user not be

cheated and they can choose various mean of transportation. They can even book a private cab. Thus CITY TOUR GUIDE has a wide scope.

## 1.3 OBJECTIVE

Today, people want to adapt their living environment to intelligent environment, which includes a powerful infrastructure and some intelligent objects. People perform their tasks through the intelligent environment. However, it leads to an issue about how users customize computing activity for themselves, because sometimes there are a great number of services around them, how to manage the complexity and tailor them to what users really want. End users are considered non-IT professional. Then, developers should provide composition tools, which enable users to compose services by themselves. It is just the goal of system challenge is that service composition framework must be sophisticated enough to support correct service composition, as well, must be intuitive enough for ordinary end-users. The platform of Android has been chosen to implement mobile services in City Tour Guide

.

## 1.5 LITERATURE REVIEW AND PRIOR ART SEARCH

### Transportation management

It is a main object of the present invention to provide a system capable of deciding the situation of transportation of a transportation object with high precision and rapidly reporting the same situation during transportation. In order to attain the object, the present invention provides a transportation system for transporting a transportation object from a fixed point on a determined route to another fixed point by means of a transportation medium to be periodically operated along the route, in which a system for managing the transportation state.

### Portable Multimedia Tourist Guide

A portable tourist guide provides guiding service. The portable guide has a GPS positioning module for determining its precise position, and a portable computer system. The computer correlates the device's position with relevant touristic information of multimedia format, including digitized audio and visual data. Updatable data storage is provided so that the relevant information is stored in the device and may be updated as needed. A user interface is provided to gather
Instructions from a user and provide this user with the touristic information.

### Map

Maps traditionally are designed for mapping area, a specific location, or designation. Examples of map types or forms can include print, Satellite, Electronic, Internet, Computer, Telephone, Mobile Telephone, Google Earth, Google Maps, Google Maps Street View, Navman Car GPS, and Tom GPS

## 1.6 TECHNOLOGIES USED

---

This application is built by using Android. In which we are used the different facilities given by the software. The full details about the technology which we use are as follow:

- Android
- .Net
- SQL Server 2008

### Development tools

- Eclipse
- Microsoft Visual Studio 2010

### *1.6.1 Android*

Android is Mobile Platform developed by Google. Developers create applications in Java on the platform. It includes some important features like 3D graphics, Media support for common audio, video, and still image formats (MPEG4, H.264, MP3, AAC, AMR, JPG, PNG, GIF), GSM Telephony, Bluetooth, 3G, Wi-Fi, GPS depending on hardware capability of mobile devices.

### Highlights of Android

Firstly, Android is open-source platform. Secondly, Android enables reuse of components. For example, there is one component for editing text files in one application; other applications can make use of the component as needed, of course, the application has released the permission that other applications can use it. Thirdly, Android can be native access to Google map infrastructure. And it supports GPS localization. Fourthly, its network can work in the way of Bluetooth, 3G or Wi-Fi. Finally, it provides Widgets classes and Layout classes for designing UI.

### Application Fundamentals

The part presents main concepts for application development. There are four types of application components: Activity, Service, Broadcast Receivers, and Content Provider. Android application may consist of one or several of these components types.

### *1.6.2 Microsoft Visual Studio 2010*

## Introduction

Microsoft Visual Studio is the main Integrated Development Environment from Microsoft. It can be used to develop console and GUI applications along with Windows Forms applications, web sites, web applications, and web services in both native code as well as managed code for all platforms supported by Microsoft Windows, Windows Mobile, .NET Framework, .NET Compact Framework and Microsoft Silver light. Visual Studio includes a code editor supporting IntelliSense as well as code refectory. The integrated debugger works both as a source-level debugger and a machine-level debugger. Other built-in tools include a forms designer for building GUI applications, web designer, class designer, and database schema designer.

## ASP.NET with C#

C# is a simple, modern, object oriented language derived from C++ and Java. It aims to combine the high productivity of VB and the raw power of C++. It is a part of Microsoft Visual Studio7.0. Visual studio supports Vb, VC++, C++, Vbscript and Jscript. Some of the main features of C# are: Modern, Interoperability, Scalable and Updateable.

### *1.6.3 Microsoft SQL Server 2008*

Microsoft SQL (Structured Query Language) Server is a relational database management system developed by Microsoft. As a database server, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet). There are at least a dozen different editions of Microsoft SQL Server aimed at different audiences and for workloads ranging from small single-machine applications to large Internet-facing applications with many concurrent users.

SQL Server 2008 was released on August 6, 2008 and aims to make data management self-tuning, self-organizing, and self-maintaining with the development of SQL Server Always On technologies, to provide near-zero downtime. SQL Server 2008 also includes support for structured and semi-structured data, including digital media formats for pictures, audio, video and other multimedia data. In current versions, such multimedia data can be stored as BLOBs (binary large objects), but they are generic bit streams. Intrinsic awareness of multimedia data will allow specialized functions to be performed on them. According to Paul Flessner, senior Vice President, Server Applications, Microsoft Corp., SQL Server 2008 can be a data storage backend for different varieties of data: XML, email, time/calendar, file, document, spatial, etc. as well as perform search, query, analysis, sharing, and synchronization across all data types

# 1.7 PROJECT MANAGEMENT

Project Management is the process and activity of planning, organizing, motivating, and controlling resources, procedures and protocols to achieve specific goals in scientific or daily problems. A project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables), undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value

## *1.7.1 Project Planning*

This phase begins once the project has been defined and teams appointed. It will usually involve creating a suite of planning documents to help guide the team throughout the project

### *1.7.1.1 Project Development Approach*

An effective City Tour Guide project methodology will include a project planning phase review to determine whether all the planning activities and tasks have been successfully completed. It will also approve the decision to move to proceed to the project execution phase of the project. An integral part of a well-executed and a successful survey is the "planning quality".

### *1.7.1.2 Project Plan*

Creating Effective Survey Plans Depending on scope of your survey, there could be many interrelated issues. Every survey plan should include consideration of the following six areas:

- Survey Value
- Survey Cost
- Defining the Project
- Defining the Audience
- Defining the Project Team
- Project Timeline

### *1.7.1.3 Milestones and Deliverables*

**Milestones:**

When planning for the project series of milestones established. These milestones are end-point for software activity. At each milestone in our project some formal output for project generated. It may be in form of report.

Some milestones which occurred in our project are discussed as below:

- User Requirements: In this milestone user requirement for system, requirements and some matrices for that requirement are generated.

- Architecture design: In this milestone design for software, its architecture design and also it graphical user interface also generated.

- System Requirements: After Design system requirements for requirements specification is generated.

**Deliverables:**

A deliverable is a project report that is delivered to use. It is usually delivered at the end of some major phase such as specification and design. We have decided that we will produce mainly four deliverable documents for each phase. The main four deliverables that we have decided to prepare are Analysis, Design, Implementation and Testing.

## *1.7. 2 Project Scheduling*

Defining a project timeline will help list the entire set of tasks that are to be conducted for the survey and assign them to specific people in your company. By setting a timeline that includes each of these tasks, you can keep track of their commencement and end, and maintain control over the survey process. The system is divide in some modules show at below:

**User View:** In the User view first User can Registration in Application when Registration successful than also send mail to User Email-id. To User can Successful creation new Account and then after User can provide the Proper Username and Password for Using this application.

**Update Profile:** User can update his profile like password, First Name, Last Name, Country, State and City and update User image in Update Profile.

**Manage Product:** Admin Can Edit and Delete your Existing Product in Manage Product.

**Administrator View:** In the administrator view administrator can view as well as delete the details of the User.

**Survey handling:** The survey handling is done survey handler for customer query, product feedback handle by this system.

**Email handling:** The Admin will send emails to the user regarding the registration details or to set new password in case user has forget the password.

### *1.7.2.1 Timeline Chart*

| Task (Sequential Steps) | Date of Start (DD-MM-YYYY) | Date of Completion (DD-MM-YYYY) | Duration (Days) |
|---|---|---|---|
| Requirement Gathering | 11-07-2014 | 28-07-2014 | 17 |
| System Analysis | 29-07-2014 | 10-08-2014 | 13 |
| System Design | 11-08-2014 | 14-10-2014 | 63 |
| Coding | 15-12-2014 | 28-02-2015 | 73 |
| Testing | 01-03-2015 | 25-03-2015 | 25 |
| Implementation | 05-04-2015 | 28-04-2015 | 23 |
| Documentation | 09-07-2014 | 28-04-2015 | 215 |

Table 1.1 Project Plan

### *1.7.2.2 Task Sets*

We have selected the "Incremental Model" so that there are four different work tasks to work together. A tasks set is a collection of software engineering work tasks, milestones, and deliverables that must be accomplished to complete a particular project. Tasks set are designed to accommodate different types of projects and different degree of rigor. These tasks are common to all the models

- Communication
- Planning
- Modeling
- Construction
- Deployment

**Refinement of major tasks**

- Communication:
    1. It helps to understand the problem

- Planning:
    1. Prepare the goal
    2. The flow of project is plan

- Modeling: Involves business modeling, data modeling, and process modeling.
    1. Analysis for the project
    2. Designing of the project

- Construction: This involves the reuse software components and automatic code.
    1. Coding
    2. Testing
    3. Create the database

- Deployment: Integration of all the increments.
    1. Feedback
    2. Delivery

# 1.8 RISK MANAGEMNT

---

A risk is a potential for loss or damage to an Organization from materialized threats. Risk Analysis attempts to identify all the risks and then quantify the severity of the risks. A threat as we have seen is a possible damaging event. If it occurs, it exploits vulnerability in the security of a computer based system.

## *1.8.1 Risk Identification*

**1. Software Risks:** Knowledge of the most common risks associated with Software development, and the platform you are working on.

**2. Business Risks:** Most common risks associated with the business using the Software.

**3. Testing Risks:** Knowledge of the most common risks associated with Software Testing for the platform you are working on, tools being used, and test methods being applied.

**4. Premature Release Risk:** Ability to determine the risk associated with releasing unsatisfactory or untested Software Products.

**5. Risk Methods:** Strategies and approaches for identifying risks or problems associated with implementing and operating information technology, products and process; assessing their likelihood, and initiating strategies to test those risks.

## *1.8.2 Risk Analysis*

Risk analysis (what can go wrong, how and why, and what are the likely consequences), critical risk assessment (which are the most significant risks in terms of exposure, which can we do something about in terms of leverage), risk mitigation and contingency planning (formulating a strategy to deal with risks and to manage the risk profile) are all undertaken. Risk assessment methods (for example, decision trees and process simulations) should be used in order to highlight and evaluate risks. The following are the risks associated with our project:

**Employee Risk:**

There is not much employee risk as each employee has to follow same process given by the organization so that all document regarding analysis, design, coding are made parallel, so if any employee leaves the organization they can replace him by other employee and the members of the organization are very good at technology so they can also train new employee.

**Process Risks:**

We strictly follow the process given by the organization and parallel we do all necessary documentation regarding the work done, like first we complete our analysis part and do some review with our guide and then we made Functional document and Global function document which contains all standards that must followed by us to develop the system. So, process risk reduces.

### *1.8.3 Risk Planning*

**Traceability** means that you would like to be able to trace back and forth how and where any work product fulfills the directions of the proceeding (source-) product. The matrix deals with the where, while the how you have to do yourself, once you know the where.
Take e.g. the Requirement of User Friendliness (UF). Since UF is a complex concept, it is not solved by just one design-solution and it is not solved by one line of code. Many partial design-solutions may contribute to this Requirement and many groups of lines of code may contribute to it.

# Chapter 2
# System Requirements Study

# 2.1 USER CHARACTERISTICS

Basically in our application **City Tour Guide** users who are going to use this application will be the common people like tourist, students, teachers, workers etc.

There are basically 2 types of Users:

**Admin:** Admin manages the user's registration and main task of admin is to provide the data entry. Admin is responsible for managing the application or supporting the system to be worked. Admin also manages fallowing:

- Create Accounts.
- Sets more than one admin for data entry.
- Data entry.
- Deletes entry.
- Update entry.
- Publish or not publish data.
- Sends Notifications.

**Registered Users:** These are the users that are mainly going to use this application. They are going to first download this application and then they need to register themselves then mail will be sent then user need to first activate their account then only they are able to login. This application also provides different services to users are as follows:

- They are able to get there current location on map.
- They can see the nearby Hotels, Restaurants and Attractions on map.
- They can view the lists of Hotels, Restaurants and Attractions based on the Categories.
- They can share the applications to others.
- They can get the Transportation cost so that they can't be cheated
- They can view there profile.

# 2.2 HARDWARE AND SOFTWARE REQUIREMENTS

## *2.2.1 Hardware Requirements (Minimum Requirements)*

- **Processor:** PC with a Pentium II-class processor,3GHz
- **Device :** Android Platform(Minimum version froyo and Maximum version kitkat)
- **RAM:** 512 MB
- **Mouse:** Microsoft Mouse or compatible pointing device
- **Keyboard:** Any keyboard

### *2.2.2 Software Requirements*

**Operating System:** Android Platform (Minimum version froyo and Maximum version kitkat)

## 2.3 SYSTEM REQUIREMENT

The part first presents two scenarios based on the scenarios given in City Tour Guide. It helps me understand the functional requirements of the project. Of course, existing mobile city guides also help me understand the functional requirement of the project. Finally, I will list the functional requirements in different priorities for implementation and divide them to different groups.

After exploring existing mobile city guides and scenarios, we list the functionalities in different priorities. The priorities are given according to the importance of functions for a city guide. For example, the function of showing map is very important for a city guide. The priorities are divided into three different levels: **High (H), Medium (M), and Low (L)**. H is considered the most important for a city guide and implemented firstly, M is less important and implemented after H, L is the least important and considered to implement after the high and medium.

### *2.3.1 Functional Requirements:*

The functional requirement for a system describes the functionality or services that the system is expected to provide. Functional requirements specifications of a system should be both complete and consistent. Completeness means that all services required by the user should be defined. Consistency means that requirement should not have contradictory definitions.

**1) Map**

| ID | Requirement | Priority |
|---|---|---|
| 1 | The city guide can show map of a city. | H |
| 2 | The map can be zoomed in and out | H |
| 3 | Users can move around the map | H |
| 4 | The city guide can show user's current position on the map | H |
| 5 | The city guide can show the route between different locations on the map | M |
| 6 | Transportation/Route Cost | H |
| 7 | Provide information's of Private cabs | M |

Table 3.2.1: Map in Functional Requirements

**2) Information Retrieval**

| ID | Requirement | Priority |
|---|---|---|
| 8 | The city guide can retrieve information of Hotels, Restaurants and Nearby Attractions | M |
| 9 | The city guide can retrieve information about reviews of points of interest | M |

Table 3.2.2: Information Retrieval in Functional Requirements

### *2.3.2 Non-Functional Requirements:*

According to the goal of the project, the resulting prototype should be extendible, tolerable, and explore and put existing innovational technologies as many as possible as building blocks in the project. And user interface should be readable, easy to understand, and easy to operate.

| ID | Requirement | Priority |
|---|---|---|
| 10 | The resulting prototype should be flexible (extendible). | H |
| 11 | The user interface should be usable, easy to understand and operate. | H |
| 12 | The prototype should combine existing innovational technologies like Google Map as many as possible. | H |

## 2.4 LEARNING DESIGN THINKING

### *2.4.1 Observation Matrix*

**Observations:**

**Scouted Challenges:**

**Top 5 problems on the basis of desirability, feasibility**

**and viability:**

**Final problem**:

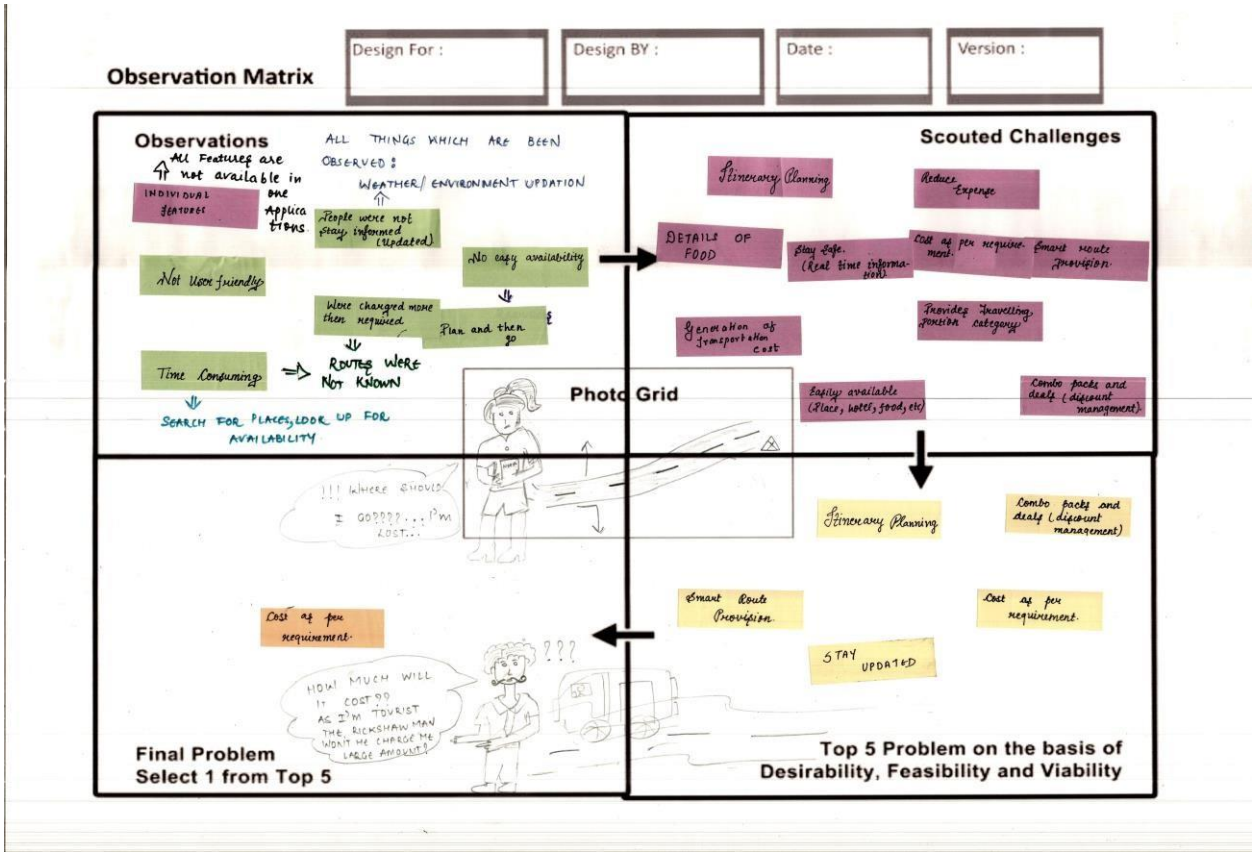



Figure 2.1 Observation Matrix

## *2.4.2 Ideation Canvas*

**People:**

**Activities:**

**Situations\Context\Locations:**

**Props\Possible:**

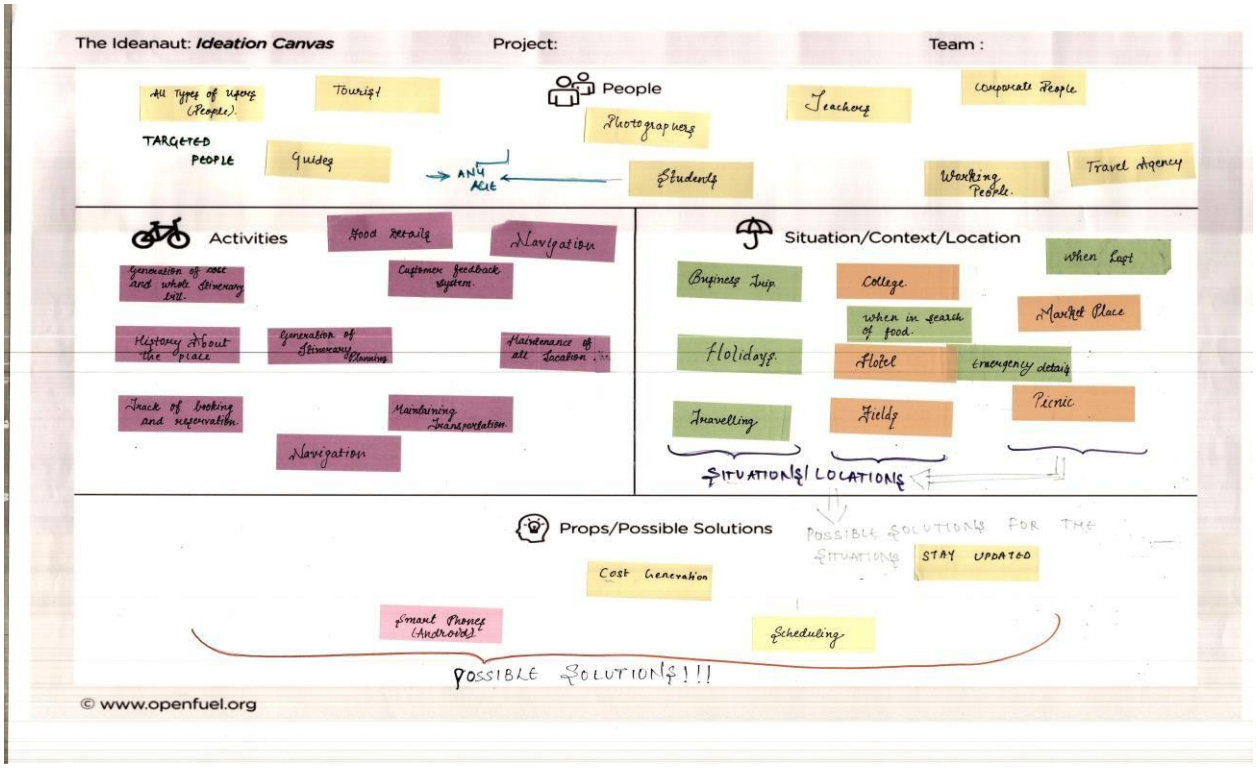



Figure 2.3 Idea Canvas

## *2.4.3 Ideation Funnel Canvas*

**People:**

**Activities:**

**Problem:**

**Situations\Context\Locations:**

**Props\Possible Solution:**

**Inputs:**

**Revenues:**

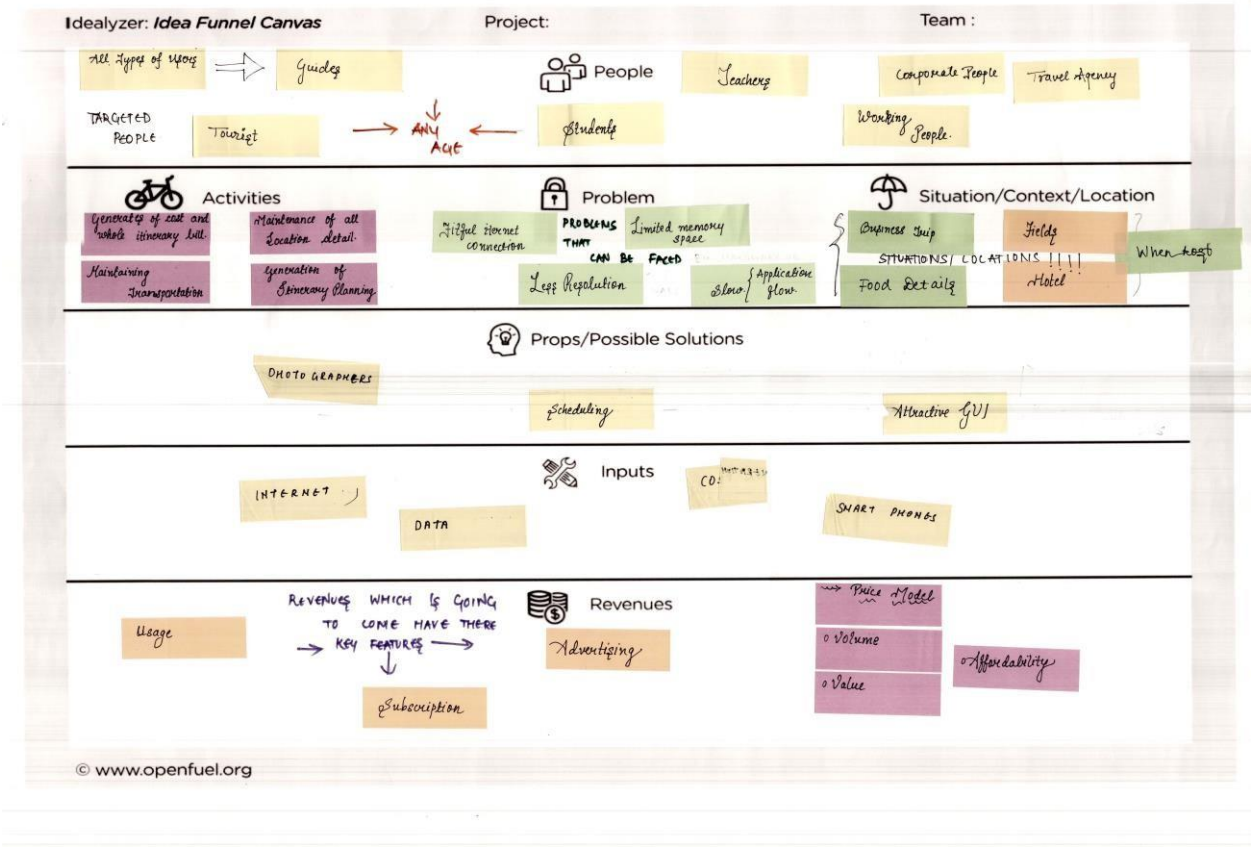



Figure 2.3 Idea Funnel Canvas

## *2.4.4 Business Model Canvas*

**Key Partners:**

**Key Activities:**

**Value Prepositions:**

**Key Resources:**

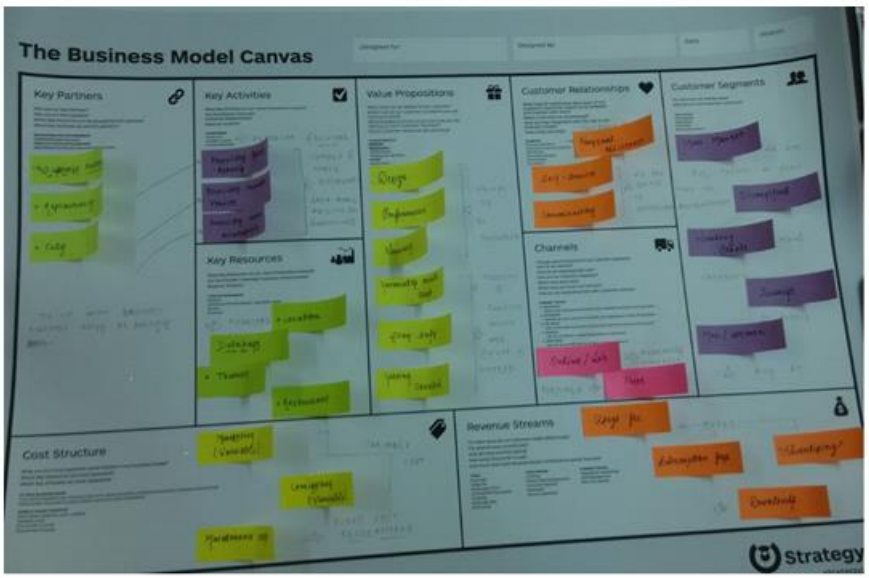
**Customer Relationships:**

**Channels:**

**Customer Segments:**

**Cost Structure:**

**Revenue Systems:**


The Business Model Canvas
Key Partners
Key Activities
Value Propositions
Customer Relationships
Customer Segments
Key Resources
Channels
Cost Structure
Revenue Streams
Strategy

# Chapter 3
# System Analysis

## 3.1 EXISTING SYSTEM

In the tourism industry, tourist information is obtained mainly through newspaper, magazines, radio and other simple ways those are available easily.

- But problem is that tourists are not able to get travel information timely when they are on the move. Many mobiles of recent decades have travel guide application.
- Therefore, the mobile end-user's operation is very difficult, and the contents display on the screen of mobile device is limited.
- People are not aware of the prices about the transportation due to which they are cheated.
- For any tourism, people first used to plan the trip before they visit some places.

## 3.2 PROBLEM AND WEAKNESS OF CURRENT SYSTEM

- In current system no total revenue is generated.
- Customer feedback for their service.
- In this system customers are not informed of real time information.
- No Discount Management is done i.e. regular update of combos and deals
- Less efficient.

## 3.3 PROPOSED SYSTEM

The application aims to develop detailed texts, pictures, generate cost for transportation's and other guidance information are provided, and so people can better understand the tourist attractions and make decision objectively. The application also has one component Map Activity. Other than this our system also aims to perform following operations:

- Find Current Location
- Locate in Map
- Find nearby Hotels, Attractions and Restaurants on Map w.r.t to user Locations on Map.
- Provide user to maintain their Profile.
- User can Comment.
- Provide Information of Private Cabs.
- Provide Details Description of Hotels, Restaurants and Attractions based on categories.
- Provide generation of transportation Cost.

### *3.3.1 Modules Description*

#### *3.3.1.1 Hotel Module*

It is a module of City Tour Guide application. Hotel Module is designed to enable the users to provide the lists of hotels on the map w.r.t user's location on map. It also provide detail information like Various Images, Detail description of particular hotels, their amenities ,address, contact number, email address and also users can view the comments of the visited tourist and also they can rate that particular hotels so that it will help other tourist to decide whether this hotel is good or not.

#### *3.3.1.2 Attraction Module*

It is a module of City Tour Guide application. Attraction Module is designed to enable the users to provide the lists of Attractions on the map w.r.t user's location on map. It also provide detail information like Various Images, Detail description of particular Attractions, their amenities ,address, contact number, email address and also users can view the comments of the visited tourist and also they can rate that particular place so that it will help other tourist to decide whether that place is good to visit or not.

#### *3.3.1.3 Restaurant Module*

It is a module of City Tour Guide application. Restaurant Module is designed to enable the users to provide the lists of Restaurants on the map w.r.t user's location on map. It also provide detail information like Various Images, Detail description of particular hotels, their amenities ,address, contact number, email address and also users can view the comments of the visited tourist and also they can rate that particular Restaurants so that it will help other tourist to decide whether this Restaurant is good or not.

#### *3.3.1.4 Transportation Module*

It is a module of City Tour Guide application. Transportation Module is designed to enable the users or tourist to provide the source and destination place and the application will generate the cost of reaching at that place. Tourist need to provide the mode of communication whether by rickshaws or by private cabs. Information of private cabs will be provided so that tourist can directly call and book the cabs.

#### *3.3.1.5 Manage Profile module*

Manage profile module is designed for managing the profile of users.

### *3.3.1.6 Admin Module (Desktop Application):*

It is a module of City Tour Guide application. Admin Module is basically designed for data entry purpose .Here more than one admin can be set to speed up the task of data entry. Admin is responsible for managing the application or supporting the system to be worked. Admin also manages fallowing:

- Create Accounts.
- Sets more than one admin for data entry.
- Data entry.
- Deletes entry.
- Update entry.
- Publish or not publish data.
- Sends Notifications.

## 3.4 FEASIBILITY STUDY

Feasibility is the determination of whether or not a project is worth doing the process allowed making this determination is called feasibility study. This determines if a project can and should be taken. Once it has been determined that a project is feasible, the analyst can go ahead and prepare the project specification which finalizes project requirements.
Generally, feasibility studies are undertaken within right time constraints and normally culminate in a written and oral feasibility report. The contents and recommendations of such a study will be used as a sound basis for deciding whether to proceed, postpone or cancel the project. Thus, since the feasibility study may lead to the commitment of large resources, it becomes necessary that it should be conducted competently and that no fundamental errors of judgment are made.

### *3.4.1 Technical Feasibility*

The project seems to be simple regarding the technology to be used, as various software's are available for such kind of developments as stated above. At present, the necessities are of a front-end as the user interface for input of data and back-end for storage which is the database variety of software is available on both fronts to choose from. The tool used as java with framework makes the project technically feasible.

**Front-end selection**

- It must have a graphical user interface that assists employees that are not from IT background.
- Scalability and extensibility.
- Flexibility.
- Robustness.
- According to the organization requirement and the culture.
- Platform independent.

- Easy to debug and maintain.

**Back-end Selection**

- Multiple user support.
- Efficient data handling.
- Provide inherent features for security.
- Efficient data retrieval and maintenance.
- Stored procedures.
- Popularity.
- Operating System compatible.
- Easy to install.

### *3.4.2 Economic Feasibility*

The cost of creating such a system in the present scenario does not seem to be much as the organization has the software and hardware technology. The finance needed for the project development is not at all a factor. The main aspect then become the time devoted by the designers and developers and system specialist who has sufficient benefits in terms of processing speed and management of the present manually done work.

### *3.4.3 Schedule Feasibility*

The project is to be developed according to a time line chart prepared in Turbo project. By following the time line chart the project is completed at the mid of May and the project seems feasible to be completed at such a time.

# Chapter 4
# System Design andTesting

## 4.1 UML DIAGRAMS

The Unified Modeling Language is a standard visual modeling language intended to be used for modeling business and similar processes, analysis, design, and implementation of software-based systems. UML can be applied to diverse application domains (e.g., banking, finance, internet, aerospace, healthcare, etc.) It can be used with all major object and component software development methods and for various implementation platforms (e.g., J2EE, .NET).

### *4.1.1 Use-case Diagrams*

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well.

### *4.1.2 Sequence Diagrams*

The Sequence Diagram models the collaboration of objects based on a time sequence. It shows how the objects interact with others in a particular scenario of a use case. With the advanced visual modeling capability, you can create complex sequence diagram in few clicks. Besides, Visual Paradigm can generate sequence diagram from the flow of events which you have defined in the use case description.

### *4.1.3 Activity Diagrams*

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes (i.e. workflows).

### *4.1.4 E-R Diagram*

An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data-an object or concept about which data is stored.

### *4.1.5 Class Diagram*

Class diagram is UML structure diagram which shows structure of the designed system at the level of classes and interfaces, shows their features, constraints and relationships - associations, generalizations, dependencies, etc.

### *4.1.6 Data Flow Diagram*

A Data Flow Diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated. A DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of process or information about whether processes will operate in sequence or in parallel (which is shown on a flowchart).

### *4.1.7 State Diagram*

A state diagram is a diagram used in computer science to describe the behavior of a system considering all the possible states of an object when an event occurs. This behavior is represented and analyzed in a series of events that occur in one or more possible states. Each diagram represents objects and tracks the various states of these objects throughout the system.

There exist different types of state diagrams that have different semantics and are slightly different. State diagrams graphically represent finite state machines. They are only used to understand object behavior throughout the whole system.

## 4.2 DATA DICTIONARY

---

Data dictionary is a set of information describing the contents, format, and structure of a database and the relationship between its elements, used to control access to and manipulation of the database

## 4.3 GRAPHICAL USER INTERFACE SNAPSHOTS

---

## 4.4 TESTING

---

Testing is the process of evaluation a software item to detect differences between given input and expected output. Also to assess the feature of a software item. Testing assesses the

quality of the product. Software testing is a process that should be done during the development process. In other words software testing is a verification and validation process.

**Verification**

Verification is the process to make sure the product satisfies the conditions imposed at the start of the development phase. In other words, to make sure the product behaves the way we want it to.

**Validation**

Validation is the process to make sure the product satisfies the specified requirements at the end of the development phase. In other words, to make sure the product is built as per customer requirements.

### *4.4.1 Testing Method*

There are two basics of software testing:

1. Black box testing
2. White box testing.

**Black box Testing**

Black box testing is a testing technique that ignores the internal mechanism of the system and focuses on the output generated against any input and execution of the system. It is also called functional testing.

**Methods of Black box Testing:**

1. **Graph Based Testing Methods**

   Each and every application is buildup of some objects. All such objects are identified and graph is prepared. From this object graph each object relationship is identified and test cases written accordingly to discover the errors.

2. **Error Guessing**

   This is purely based on previous experience and judgment of tester. Error Guessing is the art of guessing where errors can be hidden. For this technique there are no specific tools, writing the test cases that cover all the application paths.

3. **Boundary Value Analysis**

   Many systems have tendency to fail on boundary. So testing boundary values of application is important. Boundary Value Analysis (BVA) is a test Functional Testing

technique where the extreme boundary values are chosen. Boundary values include maximum, minimum, just inside/outside boundaries, typical values, and error values.

4. **Equivalence Class Partitioning**

   The equivalence class partition is the black box test case design technique used for writing test cases. This approach is use to reduce huge set of possible inputs to small but equally effective inputs. This is done by dividing inputs into the classes and gets one value from each class. Such method is used when exhaustive testing is most wanted & to avoid the redundancy of inputs. In the equivalence partitioning input are divided based on the input values

**White box Testing**

White box testing is a testing technique that takes into account the internal mechanism of a system. It is also called structural testing and glass box testing.

**Methods of White box Testing:**

1. **Statement Coverage**

   In this white box testing technique try to cover 100% statement coverage of the code, it means while testing the every possible statement in the code is executed at least once.

2. **Decision Coverage**

   In this white box testing technique try to cover 100% decision coverage of the code, it means while testing the every possible decision conditions like if-else, for loop and other conditional loops in the code is executed at least once.

3. **Condition Coverage**

   In this white box testing technique try to cover 100% Condition coverage of the code, it means while testing the every possible conditions in the code is executed at least once.

### *4.4.2 Test Cases for Modules*

### *4.4.2.1 Login*

| | |
|---|---|
| **Test Case :** | **1** |
| **Name of Test:** | To test successful login in to system. |

| | |
|---|---|
| **Sample Input:** | ID and Password |
| **Expected output:** | Homepage |
| **Actual output:** | Login Successfully |
| **Remarks:** | - |

### *4.4.2.2 Registration*

| | |
|---|---|
| **Test Case :** | **2** |
| **Name of Test:** | To test successful Register the users |
| **Sample Input:** | First Name=Yask<br>Last Name=Patel<br>Email=Yask@gmail.com<br>Password=********<br>Confirm Password=********<br>Contact Number=9934567767<br>Gender=male<br>Address=Sayajigunj, Baroda<br>Pin code=390004 |
| **Expected output:** | System should generate a message “Registration successful…” |
| **Actual output:** | Test is Successfully completed. |
| **Remarks:** | - |

### *4.4.2.3 For Forgot Password*

| | |
|---|---|
| **Test Case :** | **3** |
| **Name of Test:** | For Forgot Password. |
| **Sample Input:** | Email=farahnaaz@gmail.com |
| **Expected output:** | Email is sent to the user with their new password |
| **Actual output:** | Test is Successfully completed. |
| **Remarks:** | - |

### *4.4.2.4 Homepage*

| | |
|---|---|
| **Test Case :** | **4** |
| **Name of Test:** | To test Homepage |
| **Sample Input:** | Display of Map<br>User current Location<br>Floating Buttons:<br>1]Attraction<br>2]Hotel<br>3]Restaurant |
| **Expected output:** | All the things need to display proper results. |
| **Actual output:** | All the things were displaying proper results. |
| **Remarks:** | - |

### *4.4.2.5 Slider*

| **Test Case :** | **5** |
|---|---|
| **Name of Test:** | Slider |
| **Sample Input:** | Home<br>About Us<br>Attraction<br>Hotel<br>Restaurant<br>Transportation<br>My Profile<br>Feed Back<br>Contact Us<br>Logout |
| **Expected output:** | Displaying the correct result |
| **Actual output:** | Displaying the correct result |
| **Remarks:** | **-** |

### *4.4.2.6 Hotels*

| **Test Case :** | **6** |
|---|---|
| **Name of Test:** | To test details of Hotels |
| **Sample Input:** | Enter text to Search<br>Select Category<br>List view of hotels |
| **Expected output:** | List page of Hotels |

| | |
|---|---|
| **Actual output:** | Work Successfully |
| **Remarks:** | - |

### *4.4.2.7 Login (Admin)*

| | |
|---|---|
| **Test Case :** | **7** |
| **Name of Test:** | To test Login(Admin) |
| **Sample Input:** | Email=farahnaaz@gmail.com<br>Password=******* |
| **Expected output:** | User will be redirected to AdminHomePage. |
| **Actual output:** | User will be redirected to AdminHomePage. |
| **Remarks:** | - |

# Chapter 5
# Limitation and Future Enhancement

## 5.1 Limitation

- It requires a Smart Phone.
- It requires a high speed Internet.
- Users are not allowed to use the application without doing registration.

## 5.2Future Enhancement

There is always scope for enhancements in any system, are so in the ever-changing world of computers the advancement of the technology. Below mentioned are some for the changes that are possible in the future, to increase the efficiency and adaptability of the system.

- Integrate it with other modules.
- Expansion of our application for different cities.

# Chapter 6
# Conclusion

Thus, we presented the requirements and design analysis of a mobile application called City Tour Guide, with which mobile users can get tourism guidance information they need anytime and anywhere. By City Tour Guide, users can get an attraction's detailed information, including text, picture, provide information of nearby hotels, attractions and restaurants and also provide one additional feature that is generation of transportation cost. In particular, City Tour Guide can provide users with location-based information, which can be browsed or queried through a map. User can search the nearby attractions after he or she configures the distance between the current location and the view spots. Also it will generate the transportation cost so that people will stay safe, real time information.