

Bihar Tourist Guide Application (2)

**A Project Report Submitted
In partial fulfillment of the Requirements
for the Degree of**

MASTER OF COMPUTER APPLICATION

by

NIRANJAN DARSHAN
University Roll No 1900290140021

**Under the Supervision of
Ms. Vidushi Mishra
Assistant Professor
KIET Group of Institutions, Delhi -NCR ,Ghaziabad**



to the

**Faculty of MASTER OF COMPUTER APPLICATION
DR. APJ ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW**

(Formerly Uttar Pradesh Technical University, Lucknow)

June, 2022

To
Mr. Niranjan Darshan

Ref No- TWW/HR/043

Date: May 06, 2022

Sub – INTERNSHIP COMPLETION CERTIFICATE

Dear Niranjan,

We would like to certify that **Niranjan Darshan** has successfully completed his internship in **Android Development** at The Web Wox from **01/02/2022** to **06/05/2022** (DD/MM/YYYY).

During his internship, he has done various activities on project **Bihar Tourist Guide** (Android Application) and he performed well.

His association with us was very fruitful and we wish him all the best in his future endeavors.

Yours Sincerely,
The Web Wox

(Signature)

SUMIT KUMAR GIRI
(Managing Director)

This is a system-generated letter and has been sent to the employee in electronic form.



A/16 ,Saket Vihar Rd., Ashok Kunj
Harmu Housing Colony Ranchi ,
Jharkhand , India - 834002



+91- 8709798213



support@thewebwox.com

Declaration

I hereby declare that The Project entitled Bihar Tourist Guide Application (2) is an outcome of my own efforts under the guidance of **Ms. Vidushi Mishra**. The project is submitted to the department of MCA. For the partial fulfilment of Master of Computer Application 2019-22.

I also declare that project report is not submitted in any of the university previously.

Date: 24-May-2022

Place: Ghaziabad

CERTIFICATE

Certified that **Niranjan Darshan (University Roll No 1900290140021)** have carried out the project work having “Bihar Tourist Guide Application 2” for Master of Computer Applications from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Technical University, Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Date:

Niranjan Darshan

(1900290140021)

This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

Date:

Ms. Vidushi

Assistant Professor

Department of Computer Applications

KIET Group of Institutions, Ghaziabad

Signature of External Examiner

Signature of Internal Examiner

Dr. Ajay Kumar Shrivastava

**Head, Department of Computer Application
KIET Group of Institutions, Ghaziabad**

Abstract

The project “**Bihar Tourist Guide(2)**” is to automate the existing system by the help of android application, fulfilling their requirements, so that their valuable information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with. This application helps tourist to get all the required information about the places without the needs of guide man. That means one need not be distracted by information that is not relevant, while being able to reach the information. Basically the project describes how to manage for good performance and better services for the clients. Every districts has different tourist places, therefore we design exclusive application that are adapted by the tourist to know about the place . This is designed to assist in strategic planning and will help you ensure that every person has android mobile phone as its general needs with the right level of information and details for future goal. This application will ultimately allow us for better Guide resources.

ACKNOWLEDGEMENTS

Success in life is never attained single handedly. My deepest gratitude goes to my team leader at The WebWox for his guidance, help and encouragement throughout my work. Their enlightening ideas, comments, and suggestions. Words are not enough to express my gratitude to Dr. Ajay Kumar Shrivastava, Professor and Head, Department of Computer Applications and all the faculties, for his insightful comments and administrative help at various occasions.

Fortunately, I have many understanding friends, who have helped me a lot on many critical conditions.

Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me moral support and other kind of help. Without their support, completion of this work would not have been possible in time. They keep my life filled with enjoyment and happiness.

Table of contents

S.No.	Description of Project	Page No.
i	Declaration	2
ii	Certificate	3
iii	Abstract	4
iii	Acknowledgements	5
iv	List Of Figures	10-11
v	List Of Tables	12
1.	CHAPTER 1 :INTRODUCTION	13-14
	1.1. Project Description	13
	1.2 Background	13
	1.3 Motivations	14
2.	CHAPTER 2 : Literature Review	15-16
3.	CHAPTER 3: Project Category	17-21
	3.1 Technology Used	17
	3.2. Language Used	18
	3.3 Application Description	19
	3.4 Quality Function Deployment	20
	3.4.1 Must have requirements	20
	3.4.2 Should have requirements	20
	3.4.3 Nice to have requirements	20
	3.5 Database and UI Design	21

	3.5.1 Database Design	21
	3.5.2 User Interface Design	21
3.	CHAPTER:4 Software Requirement Specification	22-34
	4.1 General Description	22
	4.1.1 Product Description	22
	4.1.2 Problem Statement	22
	4.2 System objectives	23
	4.2.1 Requirement Specifications	23
	4.3 Functional Requirements	24
	4.4 Non-functional Requirement	25
	4.5 Software and Hardware Requirement	25
	4.5.1 Software Requirements	25
	4.5.2 Hardware Requirement	25
	4.6 Existing Vs Proposed System	26
	4.7 Software System attributes	26
	4.8 Features of Bihar tourist guide	27
	4.9 Preliminary investigation	28
	4.10 Approach used:Agile apporach	29-33
	4.11 Preliminary description	34
4.	CHAPTER :5 Feasibility study	35-37
	5.1 Economical feasibility	35
	5.2. Technical feasibility	35
	5.3 Operational feasibility	36

5.4	Tools for Conducting a Feasibility Study	36
5.4.1	Suggested Best Practices	36
5.4.2	Suggested Components	37
5.	CHAPTER:6 Planning and Scheduling &flow	38-58
6.1	Gantt chart	38
6.1.1	Software requirement & specification	39
6.1.2	Hardware requirement with specification	39
6.2	Data flow diagram	40-42
6.3	Entity relationship diagram	43-44
6.4	Use Case Diagram	45-46
6.5	Relationship in Use Case Diagram	47
6.6	Use Case Diagram of Tourist Guide Apps	48
6.7	Sequence Diagram	49-51
6.8	Application Architecture	52
6.9	Proposed System	53
6.10	Methodology	54
6.(a)	Data Structure(Tables)	55-56
6.11 (b)	Modules	57-58
6.11.1	login module	57
6.11.2	Signup module	57
6.11.3	District module	58
6.	CHAPTER:7 Activities intent in the project	59-72
7.1	welcome page	59

7.2 login page	60-61
7.3 Signup page	62-63
7.4 Place Bihar	64-65
7.5 Patna place	66-67
7.6 Expandiable item of the list	68-72
7.6.1 Information activity	68-69
7.6.2 Maps:	70
7.6.3 Direction	71-72
7. CHAPTER:8 Module Description	73-74
8.1 Modules of Bihar Tourist Guide Apps	73
8. CHAPTER 9: TEST STRATEGY	75-77
9.1 The Objective of Test Strategy	75
9.2 Test Trategies Used in Project	76
9.3 How to do Testing	77
9. Objective	78
10. Purpose	79
11. Scope	80
12. Conclusion	81
13. Bibliography	82

List of Figures

Fig Num	Name Of Figure	Page_Num
01	Approach Used in development	30
02	Gantt Chart	36
03	DFD Of Bihar Toursit Guide Application	40
04	ER Diagram Of Bihar Tourist Guide Apps	42
05	Use Case Diagram Of Tourist Guide Apps	46
06	User Log in Sequence Diagram	47
07	User insert Sequence Diagram	48
08	Guide User Method Sequence Diagram	49
09	Architectural Design	50
10	Methodology Used	52
11	Login Module	55
12	SignUp Module	55
13	Districts Module	56
14	Welcome Page	57
15	Login Page	59
16	SignUP Page	61

17	Districts Of Bihar	63
18	Tourist Places of a particular District	65
19	Introduction of particular place	67
20	Location of tourist place on Map	68
21	Route to reach tourist place	70

List Of Tables

Table Number	Table Name	Page Number
1	Software Requirement with Specification	38
2	Hardware Requirement with Specification	38
3	Datastructure of Signup Page	55
4	Datastructure of Login Page	55
5	Datastructure of Login with Facebook Page	56

Chapter 1

Introduction

1.1 Project Description

This project has been developed to override the problems prevailing in the practicing manual system. This application is supported to eliminate and in some cases reduce the hardships faced by the existing system. Moreover, this application is designed for the particular need of the company to carry out operations in a smooth and effective manner.

This application is developed to avoid errors while entering the data. It also provides error messages while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user friendly. So, This “Bihar Tourist Guide” can lead to error-free, secure, reliable and fast system.

Every districts has different tourist places, therefore we design exclusive application that are adapted by the tourist to know about the place . This is designed to assist in strategic planning and will help you ensure that every person has android mobile phone as its general needs with the right level of information and details for future goal. This application will ultimately allow us for better Guide resources.

1.2 Background

As someone who travels often, it is a challenge for me to connect with the local people and culture where I travel. Problems can happen when someone travels to a whole new country where local people have different type of thinking, culture, beliefs, etc. This application come out to help tourist to get quick and better view about where they are about to visit, as well as better connects with local people and reduce the chance that troubles happen along the journey. Developing a mobile app plays an important role in the technology nowadays, as the number of mobile devices are multiple times more than the number of our population. From that huge market, Android devices get 85.9% of all mobile devices, which show us how big potential that an Android application has to affect our society. Android Studio is one of the most useful types of API, which offers a cross platform mobile development. Developing an application for android using Android Studio will give us an opportunity for later, if we want to expand the application to IOS operating system. C# is one of the most popular programming languages at the moment, with approximately 31% of all developers using it regularly. The language creates 17000 jobs each month globally. It is very effective and powerful.

1.3 Motivations

The motivation for this project comes from personal issues of myself, as I love traveling usually, and most of the time when I travel through Bihar, I have to spend quite a lot of time doing research while being busy with College and daily routine. The problem does not only occur to me, but also to many young travelers. This could lead to many other serious problems, as the difference in cultures is huge, and the number of people who travel is enormous and still growing rapidly. Similar to AirBnb, which shows the problem of housing, this application could show the problem about guiding. The motivation also comes from the personal practice as a Android developer in my training.

Chapter 2

LITERATURE REVIEW

In the earlier tourism industry, tour and travel information is obtained mainly through communication media like newspaper, magazines etc. But the tourists on travel do not get the necessary travel information on time. While today's mobile devices are becoming more intelligent, which provides information in mobile itself. Mobile Technology is now set to improve tourism in various fields. Due to busy schedule people want quick and easy ways to obtain information of all kinds and tourism is no different. The tour management system which is based on internet provides self guidance for tourists in mobile phones . This proposed paper presents travel guidance that draws out a number of methods for designing tourist management system.

The smart phone or a tablet is portable and always in the pocket for anytime use. The combination of tourism and technology makes the business towards the development of mobile applications, to provide services to the customers efficiently. The travel management system makes it possible for the users to plan their trips, make reservations and make other required arrangements for their trips. This would provide them with more time to enjoy their vacation.

The increasing growth of tourism industry has a good scope in today's world. This industry is posing greater competition in the business oriented world. Since this is a technology oriented world, our priorities for tours and travel are keeps on changing. In earlier days people used to go to travel consultancies for tour travel destinations and other travel related information. Now there is tremendous changes in earlier and current tourism.

The travellers make excess use of internet to collect the information about the various destinations and offers. For the effective management of tourism quality, the complex information technologies are used by travel industry. The products, information and services should be of higher quality for the consumers satisfaction. The user actually look for is the value for their money. The tourism business makes use of internet for effective operation.

Chapter 3

PROJECT CATEGORY

3.1 Technology Used

Android Studio

Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA . On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps.

SoftWare and Applications Used

APPLICATION	:	Android Studio
OPERATING SYSTEM	:	WINDOWS 10
FRONT END	:	JAVA , Xml
BACK END	:	Firebase

Back-end : Firebase

- **Firebase:-** It is realtime database developed by firebase and then acquired by Google in 2014 used for developing the high quality applications act as a storage of information of various data.

3.2 Language Used

This project has been developed XML and Java.

- **XML:** XML stands for extensible markup language. A markup language is a set of codes, or tags, that describes the text in a digital document. The most famous markup language is hypertext markup language (HTML), which is used to format Web pages..
- **JAVA:** Java is an object-oriented programming language developed by Sun Microsystems, and it was released in 1995.

James Gosling initially developed Java in Sun Microsystems (which was later merged with Oracle Corporation).

Java is a set of features of C and C++. It has obtained its format from C, and OOP features from C++.

Java programs are platform independent which means they can be run on any operating system with any processor as long as the Java interpreter is available on that system.

Java code that runs on one platform does not need to be recompiled to run on another platform; it's called write once, run anywhere(WORA).

3.3 APPLICATION DESCRIPTION

3.3.1 Function Description

The purpose of the application is to create an environment for people who travels often to meet locals, who provide the guide service through an android application. The application includes two separate view, which provide different function to different group of users.

- **Travel User Group:** First allows the user to register, then uses that register information to log in. In the main tab, the user will be able to view past request, as well as create a new request which will be sent to Guide User Group for their acceptance. This will require the user to enable the location service on their mobile application, for the authorization.
- **Guide User Group:** This view also allows the user to register and log in. From the main tab, users of this group will see all the pending requests, which they will be able to click in, in order to view the information of that pending request, as well as contact the one who sent the request in order to negotiate about the upcoming trip. After that, the guide person will either accept that request, so that other guide users will not see that request or choose to leave it for the other guide users.

We Use to work on allocating the tourist guide on different location like as we do in Ride booking. So we will send notification to the guides that if anyone is available then after accepting the request the guide will be assigned to the requester.

The details will be shown at what time the guide will reach to him or her the existing system only shows the information but don't have this system. We are firstly working for Bihar then we will increase our area. This will bring the employment opportunity.

This will help Tourist from different language ,culture and tradition to get introduced with them well.

Focusing on tourist is now a days plan in Bihar so to boost up this we are working on this application .

3.4 Quality Function Deployment

3.4.1 Must have requirements

For Travel User Group The user of this group must be able to register into the application with an account which holds an email and password. After that, the account information can be used to log in to the application. From the application, a new request from user's upcoming trip can be created, stored in the database and sent to Guide User Group. For Guide User Group: The user of this group must be able to register into the application with an account which hold email and password. The account will be used later to log in to the user into the main tab. After logging in, that user will see a list of requests, which are pending. He can choose to view the details of that request, then click accept it if he agrees with the travel user about the upcoming trip.

3.4.2 Should have requirements

Users from both of the groups should be able to use their social media account to register and log in to the application. The travel user should be requested to enable the location service to identify their location for authorization purpose. A travel user should also be able to review their past requests.

3.4.3 Nice to have requirements

Both views of the application should have a responsive user interface without bug. It would be better if the travel user could get a notification if their request has been accepted. Guide user group should be able to see their past requests that they approved before.

To bring new innovative idea to enrich the world of digitalization assigning guide for tourist in the Bihar Tourist Guide application(2) is seen here The Application requirement is seen and felt by many that's why we think to work on must have , should have and nice to have .

3.5 DATABASE AND UI DESIGN

3.5.1 Database Design

Firebase service is used to save all the data of the application. There are three tables for the application, they are

- **TravelUser:** store user ID, name and password for the travel user group
- **GuidePerson:** store user ID, name and password for the guide user group
- **Request:** store request data that User group send and retrieve those data back to GuidePerson group users.

Since Firebase do not support diagrams in the same way as a normal database does, a third-party tool is used to draw the ER diagram, which is Visual Paradigm.

The user table has a one-to-many relationship with PendingRequest table, since one user could create many requests, but one request cannot belong to many users. The GuidePerson table has a one-to-many relationship with the PendingRequest table as well, it means that one guide person can get many requests, but one request cannot be selected by many Guide users.

3.5.2 User Interface design

The application includes two separate views, one for the travel user and one for the guide person. However, only one page will be designed for both views, in order to focus on the function.

Chapter 4

SOFTWARE REQUIREMENT SPECIFICATION

4.1 GENERAL DESCRIPTION

4.1.1 PRODUCT DESCRIPTION:

Bihar tourist Guide (2) is a computerized system which helps user(tourist) to visit the tourist places in electronic format. It reduces the risk of manpower such as Guide man and time saving.

4.1.2 PROBLEM STATEMENT:

The problem occurred before having computerized system includes:

- Seeking for the Guide man at the tourist place.
- Improper information or sometimes it is seen that false information given by the tourist.
- Animal type behavior by the guide man with the outsider.
- Excessive expenses on the tourist guide.
- Unavailability of knowledge to reach the destination.
- Verification of the guide its character and behaviour will be done by Police and the required documents will be submitted by guide for fair work and job role.
- This will help in raising and identifying guide for proper use and work.
- This will also Automate the whole process and customer can continuously track themselves.

4.2 SYSTEM OBJECTIVES

☐ **Improvement in control and performance**

The system is developed to cope up with the current issues and problems of tourist .The system can add user, validate user and is also bug free.

☐ **Save cost**

After computerized system is implemented less man power will be required to maintain the tourist place thus reducing the overall cost.

☐ **Save time**

Tourists are able to get particular name of the district record by clicking on it thus saving his valuable time.

☐ **Option of getting direction**

Tourists will be able to provide a brief description of tourist places of particular district of Bihar.

4.2.1 Requirement Specifications:

The software requirement specification is produced at the analysis task. The function and performance allocated to application as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioural description, an indication of performance requirements and design constraints.

4.3 Functional Requirements:

Internet Connectivity:

As discussed that Application will work on Online mode so it need regular Internet Connectivity to signup and login.

Facebook Account

User can directly login to the facebook account to access this application they don't need to signin in apps environment for which facebook account is mandatory.

Email id and Mobile Number

To access the application and to signin or login user must have email id and mobile number to fill the mandatory field in the form.

OTP should be shared with the guide

For proper authentication the OTP should be shared with the guide so that people can easily identify them. It will help in secure and happy journey.

4.4 Non-functional Requirements:

Performance Requirements

1. **User friendly:** The system should be user friendly so that it can easily be understood by the user without any difficulty.
2. **Ease of maintenance :-** System should be easy to maintain and use.
3. **Less time consuming:** The system should be less time consuming which could be achieved by good programming.
4. **Error free:** The system should easily handle the user error in any case.
5. **Static:** Application runs on stand alone machine i.e. Android mobile phone of API level 16 and onward. Support only single user.

4.5 SOFTWARE AND HARDWARE REQUIREMENTS

This section describes the software and hardware requirements of the system .

4.5.1 SOFTWARE REQUIREMENTS

□ **Operating system-** Android operating system is required for the android apps with the API Level 16 and onwards.

□ **Database:-** Firebase is used as database as it is easy to maintain and retrieve records by simple queries which are in English language which are easy to understand and easy to write.

□ **Development tools and Programming language-** XML is used to write the whole designing code and coding is done in java programming language.

4.5.2 HARDWARE REQUIREMENTS

- Android Mobile phone of API Level 19 and onward.
- Memory Used Total 6.31 MB with 5.98 MB of application space and 340 KB of data

4.6 EXISTING VS PROPOSED SYSTEM

Existing system does not have a facility of online information of tourist place whereas proposed system has a facility of online information of tourist places of respective districts of Bihar

Existing system does not have any facility of online Location of the tourist place where location of particular tourist place can be known by this apps.

Existing System does not highlight many of the tourist places but this app will provide you all the places related to devotees, History etc. and will also update after finding the data.

Existing system does not have any facility of direction or the traffic route to reach the destination whereas proposed system provides tourists with a tool to reach destination.

4.7 Software System Attributes

1. **Security:** The system should be secure from the unauthorized access and should be password protected so that no other user can access it.
If the user is new then he needs to Signup with required details and a can also login with the facebook.
2. **Portability:-** The system should be machine independent.
3. **Maintainability:** The system will be designed in a maintainable order. The system can be easily modified and renewed according to the need of the organization.

4.8 Features of Bihar tourist Guide:

- Security of data.
 - Ensures data accuracy.
 - Minimize manpower.
 - Minimum time consumption.
 - Greater efficiency.
 - Fast
 - Better services.
 - User friendliness and interactive.
 - Minimum time required.
-
- Easy to update
 - User friendly
 - Free for the user
 - knowing about Bihar, India

The basic idea of the application is that the user only needs a Android mobile phone with the ability to connect to the Internet. By using the Internet the user can open play store and download it by searching the name. When the user has started the application the user can find the district name where he want to go for tour and with the map there will be icons that represent different locations of interest. These icons will be different depending on what the user wants to have information about, and this should be customized on the mobile phone. The information displayed should be easy to customize. **Our suggestion is that the user could choose different ‘skins’ and that these skins would represent different types of stores and events.** Our vision is to encourage the tourist to visit the places without any hurdle in there journey. The user will always have the brief information about the tourist places along with map and direction they don’t need to pay extra amount to the Guide man of that place tom make there safe and memorable journey.

4.9 Preliminary investigation:

Fact Finding:

After obtaining the background knowledge, we began to collect data on the existing system.

The tools that are used in information gathering are as follows:

- On-site observation.
- Questionnaire.
- Review of the peoples.

The model we have used is Waterfall Model. In this model, first of all the existing system is observed, then customer requirements are taken in consideration then planning, modelling, construction and finally deployment.

4.10 Approach used

Software Development life cycle (SDLC) is a spiritual model used in project management that defines the stages include in an information system development project, from an initial feasibility study to the maintenance of the completed application.

There are different software development life cycle models specify and design, which are followed during the software development phase. These models are also called "**Software Development Process Models**." Each process model follows a series of phase unique to its type to ensure success in the step of software development.

Here, are some important phases of SDLC life cycle:

Waterfall Model

The waterfall is a universally accepted SDLC model. In this method, the whole process of software development is divided into various phases.

The waterfall model is a continuous software development model in which development is seen as flowing steadily downwards (like a waterfall) through the steps of requirements analysis, design, implementation, testing (validation), integration, and maintenance.

Linear ordering of activities has some significant consequences. First, to identify the end of a phase and the beginning of the next, some certification techniques have to be employed at the end of each step. Some verification and validation usually do this mean that will ensure that the output of the stage is consistent with its input (which is the output of the previous step), and that the output of the stage is consistent with the overall requirements of the system.

RAD Model

RAD or Rapid Application Development process is an adoption of the waterfall model; it targets developing software in a short period.

The RAD model is based on the concept that a better system can be developed in lesser time by using focus groups to gather system requirements.

- Business Modeling
- Data Modeling
- Process Modeling
- Application Generation
- Testing and Turnover

Spiral Model

The spiral model is a **risk-driven process model**. This SDLC model helps the group to adopt elements of one or more process models like a waterfall, incremental, waterfall, etc. The spiral technique is a combination of rapid prototyping and concurrency in design and development activities.

Each cycle in the spiral begins with the identification of objectives for that cycle, the different alternatives that are possible for achieving the goals, and the constraints that exist. This is the first quadrant of the cycle (upper-left quadrant).

The next step in the cycle is to evaluate these different alternatives based on the objectives and constraints. The focus of evaluation in this step is based on the risk perception for the project.

The next step is to develop strategies that solve uncertainties and risks. This step may involve activities such as benchmarking, simulation, and prototyping.

V-Model

In this type of SDLC model testing and the development, the step is planned in parallel. So, there are verification phases on the side and the validation phase on the other side. V-Model joins by Coding phase.

Incremental Model

The incremental model is not a separate model. It is necessarily a series of waterfall cycles. The requirements are divided into groups at the start of the project. For each group, the SDLC model is followed to develop software. The SDLC process is repeated, with each release adding more functionality until all requirements are met. In this method, each cycle act as the maintenance phase for the previous software release.

Modification to the incremental model allows development cycles to overlap. After that subsequent cycle may begin before the previous cycle is complete.

Agile Model

Agile methodology is a practice which promotes continues interaction of development and testing during the SDLC process of any project. In the Agile method, the entire project is divided into small incremental builds. All of these builds are provided in iterations, and each iteration lasts from one to three weeks.

Any agile software phase is characterized in a manner that addresses several key assumptions about the bulk of software projects:

1. It is difficult to think in advance which software requirements will persist and which will change. It is equally difficult to predict how user priorities will change as the project proceeds.
2. For many types of software, design and development are interleaved. That is, both activities should be performed in tandem so that design models are proven as they are created. It is difficult to think about how much design is necessary before construction is used to test the configuration.
3. Analysis, design, development, and testing are not as predictable (from a planning point of view) as we might like.

Iterative Model

It is a particular implementation of a software development life cycle that focuses on an initial, simplified implementation, which then progressively gains more complexity and a broader feature set until the final system is complete. In short, iterative development is a way of breaking down the software development of a large application into smaller pieces.

Like other SDLC models, Iterative and incremental development has some specific applications in the software industry. This model is most often used in the following scenarios –

- Requirements of the complete system are clearly defined and understood.
- Major requirements must be defined; however, some functionalities or requested enhancements may evolve with time.
- There is a time to the market constraint.
- A new technology is being used and is being learnt by the development team while working on the project.
- Resources with needed skill sets are not available and are planned to be used on contract basis for specific iterations.
- There are some high-risk features and goals which may change in the future.

Big bang model

Big bang model is focusing on all types of resources in software development and coding, with no or very little planning. The requirements are understood and implemented when they come.

This model works best for small projects with smaller size development team which are working together. It is also useful for academic software development projects. It is an ideal model where requirements are either unknown or final release date is not given.

Prototype Model

The prototyping model starts with the requirements gathering. The developer and the user meet and define the purpose of the software, identify the needs, etc.

A '**quick design**' is then created. This design focuses on those aspects of the software that will be visible to the user. It then leads to the development of a prototype. The customer then checks the prototype, and any modifications or changes that are needed are made to the prototype. In many instances, the client only has a general view of what is expected from the software product. In such a scenario where there is an absence of detailed information regarding the input to the system, the processing needs, and the output requirement, the prototyping model may be employed.

Steps of Prototype Model

1. Requirement Gathering and Analyst
2. Quick Decision
3. Build a Prototype
4. Assessment or User Evaluation
5. Prototype Refinement
6. Engineer Product

Agile Approach

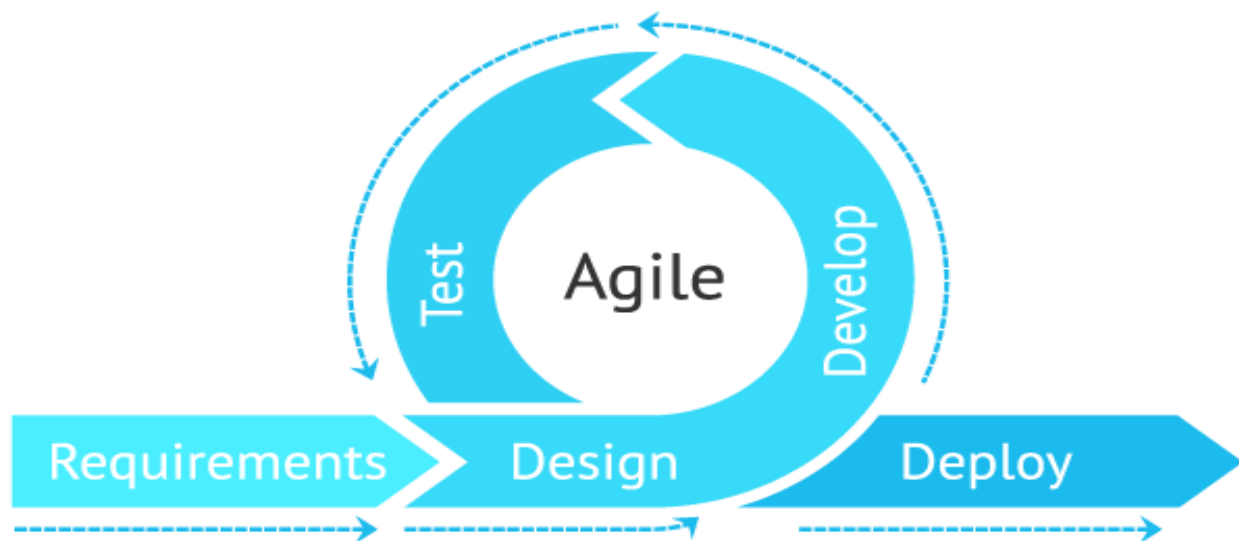


Fig 1 Approach Used in development

Agile is **an iterative approach to project management and software development that helps teams deliver value to their customers faster and with fewer headaches**. Instead of betting everything on a "big bang" launch, an agile team delivers work in small, but consumable, increments.

This Project goes from various development models i.e. incremental model, evaluation model and most important Agile Approach. Every model give a brief description about the project development. Each has its own importance.

4.11 Preliminary Description:

The first step in the system development life cycle is the preliminary investigation to determine the feasibility of the system. The purpose of preliminary investigation is to evaluate project requests. It is not a design study nor does it include the collection of details to describe the system in all respect. Rather, it is the collecting of information that helps committee members to evaluate the merits of project request and make an informed judgement about the feasibility of the proposed project. The project preliminary report **describes your progress so far**. It should form the basis of your final report. The preliminary report should include: Problem: A clear description of the problem you are addressing

Analyst working on the preliminary investigation should accomplish the following objectives:

- Clarify and understand the project request.
- Determine the size of the project.
- Access costs and benefits of alternative approaches.
- Determine the technical and operational feasibility of alternative approaches.
- Report the findings to management with recommendations outlining the acceptance and rejection of the proposal.

Chapter 5

Feasibility study

After studying and analyzing all the existing and requires functionalities of the system, the next task is to do the feasibility study for the project. Feasibility study includes consideration of all the possible ways to provide a solution to a given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements.

5.1 Economical Feasibility:

It will be freely available on the Google play store without having any cost. This term means the assessment and analysis of a project's potential to support the decision-making process by objectively and rationally identifying its strengths, weaknesses, opportunities and risks associated with it, the resources that will be needed to implement the project, and an assessment of its chances of success. It consists of **market analysis, economic analysis, technical and strategic analysis.**

5.2 Technical feasibility:

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionalities to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of front end and back end platform. Technical feasibility is **the process of figuring out how you're going to produce your product or service to determine whether it's possible for your company.** Before launching your offerings, you must plan every part of your operations, from first sourcing your production materials all the way to tracking your sales.

5.3 Operational Feasibility:

No doubt the technically growing Bihar needs more enhancement in technology, this app is very user friendly and all inputs to be taken all self-explanatory even to a layman. Operational feasibility is **the measure of how well a proposed system solves the problems**, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

5.4 Tools for Conducting a Feasibility Study

5.4.1 Suggested Best Practices

Although each project can have unique goals and needs, below are some best practices for conducting a feasibility study:

- Conduct a preliminary analysis, which involves getting feedback about the new concept from the appropriate stakeholders; consider other business scenarios and ideas
- Analyze and ask questions about the data obtained in the early phase of the study to make sure that it's solid
- Conduct a market survey or market research to identify the market demand and opportunity for pursuing the project or business
- Write an organizational, operational, or business plan, including identifying the amount of labor needed, at what cost, and for how long
- Prepare a projected income statement, which includes revenue, operating costs, and profit
- Prepare an opening day balance sheet
- Identify obstacles and any potential vulnerabilities, as well as how to deal with them
- Make an initial "go" or "no-go" decision about moving ahead with the plan

5.4.2 Suggested Components

Once the initial due diligence has been completed, listed below are several of the components that are typically found in a feasibility study:

- **Executive summary:**

Formulate a narrative describing details of the project, product, service, plan, or business.

- **Technological considerations:**

Ask what will it take. Do you have it? If not, can you get it? What will it cost?

- **Existing marketplace:**

Examine the local and broader markets for the product, service, plan, or business.

- **Marketing strategy:**

Describe it in detail.

- **Required staffing** (including an organizational chart):

What are the human capital needs for this project?

- **Schedule and timeline:**

Include significant interim markers for the project's completion date.

- **Project financials.**

- **Findings and recommendations:**

Break down into subsets of technology, marketing, organization, and financials.

Chapter 6

Planning and Scheduling and Flow

6.1 Gantt chart

A Gantt chart can be developed for the entire project or a separate chart can be developed for each function. A tabular form is maintained where rows indicate the task with milestones and columns indicate duration(weeks/months).

A Gantt chart shows all of the tasks that need to be done, the amount of time each task is expected to take, the time frames in which individual tasks are to be completed, and the relationship between various tasks





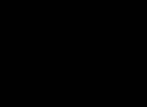


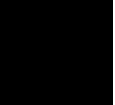
Days  Process 	1-5	6-25	26-30	30-80	80-85	85-90
Requirement Gathering						
Design						
Test Cases						
Coding						
Testing						
Build						

Fig 2 Gantt Chart

6.1.1 Software Requirements with specifications

Name of Components	Specifications
Operating system	Android Operating system
Language	Java eclipse 2 Runtime Environment
Database	Firebase
Software Development kit	Android Studio
Markup Language Enable	Xml

Table Num 1: Software requirement with specifications

6.1.2 Hardware Requirements with specifications

Name of Components	Specifications
Cell Phone	Android Mobile phone API 17 and onward
Application	13.52MB
Data	304KB

Table Num 2: Hardware requirement with specifications

6.2 DATA FLOW DIAGRAM

DFD is the abbreviation for **Data Flow Diagram**. The flow of data of a system or a process is represented by DFD. It also gives insight into the inputs and outputs of each entity and the process itself. DFD does not have control flow and no loops or decision rules are present. Specific operations depending on the type of data can be explained by a flowchart. Data Flow Diagram can be represented in several ways. The DFD belongs to structured-analysis modeling tools. Data Flow diagrams are very popular because they help us to visualize the major steps and data involved in software-system processes.

Components of DFD

The Data Flow Diagram has 4 components:

- **Process**

Input to output transformation in a system takes place because of process function. The symbols of a process are rectangular with rounded corners, oval, rectangle or a circle. The process is named a short sentence, in one word or a phrase to express its essence

- **Data Flow**

Data flow describes the information transferring between different parts of the systems. The arrow symbol is the symbol of data flow. A relatable name should be given to the flow to determine the information which is being moved. Data flow also represents material along with information that is being moved. Material shifts are modeled in systems that are not merely informative. A given flow should only transfer a single type of information. The direction of flow is represented by the arrow which can also be bi-directional.

- **Warehouse**

The data is stored in the warehouse for later use. Two horizontal lines represent the symbol of the store. The warehouse is simply not restricted to being a data file rather it can be anything like a folder with documents, an optical disc, a filing cabinet. The data warehouse can be viewed independent of its implementation. When the data flow from the warehouse it is considered as data reading and when data flows to the warehouse it is called data entry or data updation.

- **Terminator**

The Terminator is an external entity that stands outside of the system and communicates with the system. It can be, for example, organizations like banks, groups of people like customers or different departments of the same organization, which is not a part of the model system and is an external entity. Modeled systems also communicate with terminator.

Data flow diagram levels

Data flow diagrams are also categorized by level. Starting with the most basic, level 0, DFDs get increasingly complex as the level increases. As you build your own data flow diagram, you will need to decide which level your diagram will be.

Level 0 DFDs, also known as context diagrams, are the most basic data flow diagrams. They provide a broad view that is easily digestible but offers little detail. Level 0 data flow diagrams show a single process node and its connections to external entities.

Level 1 DFDs are still a general overview, but they go into more detail than a context diagram. In a level 1 data flow diagram, the single process node from the context diagram is broken down into subprocesses. As these processes are added, the diagram will need additional data flows and data stores to link them together.

Level 2+ DFDs simply break processes down into more detailed subprocesses. In theory, DFDs could go beyond level 3, but they rarely do. Level 3 data flow diagrams are detailed enough that it doesn't usually make sense to break them down further.

Data Flow Diagram Of Bihar Tourist Guide Applications

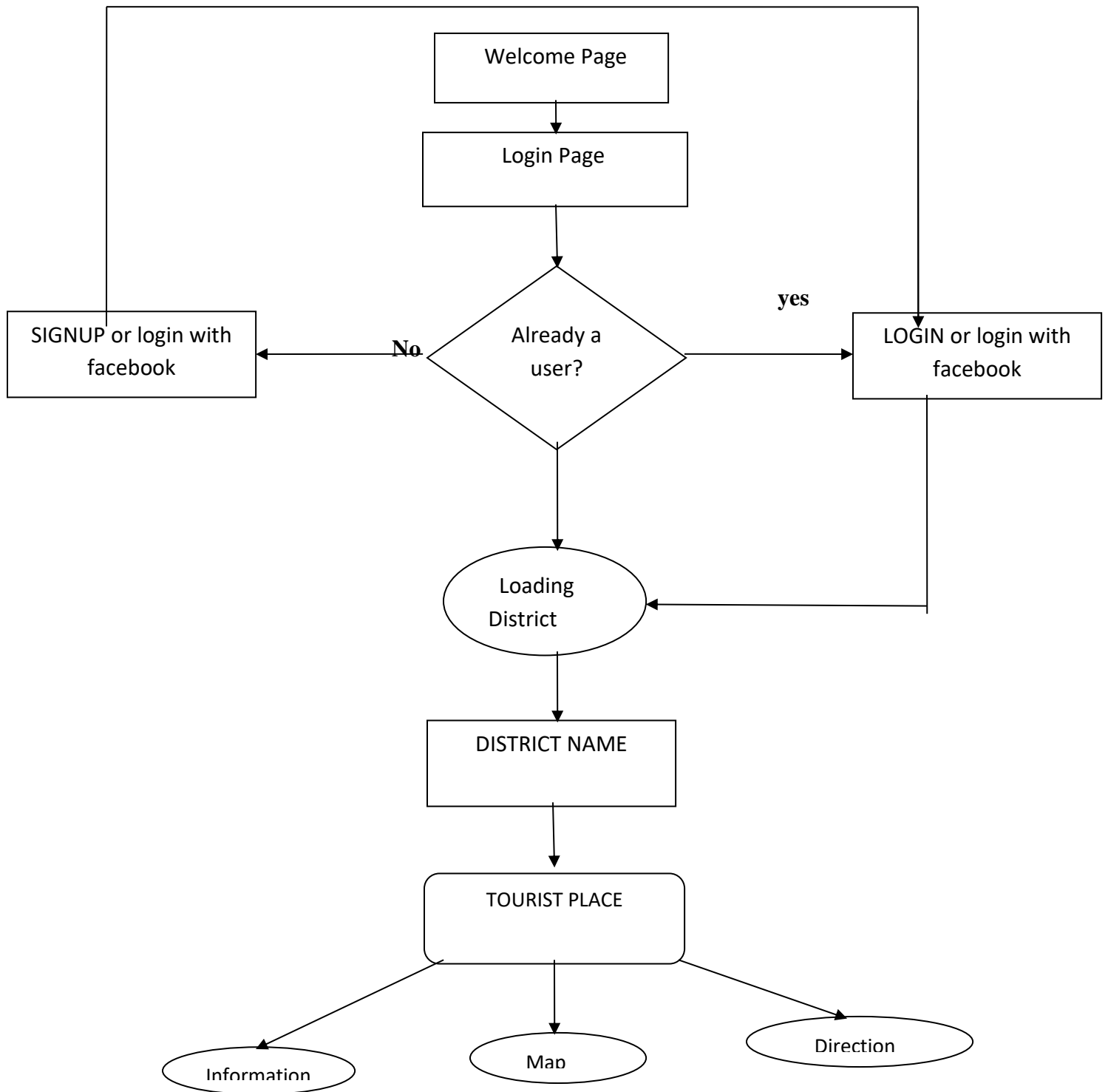


Fig 3 DFD Of Bihar Toursit Guide Application

6.3 ENTITY RELATIONSHIP DIAGRAM:

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.

Following are the main components and its symbols in ER Diagrams:

- **Rectangles:** This Entity Relationship Diagram symbol represents entity types
- **Ellipses :** Symbol represent attributes
- **Diamonds:** This symbol represents relationship types
- **Lines:** It links attributes to entity types and entity types with other relationship types
- **Primary key:** attributes are underlined
- **Double Ellipses:** Represent multi-valued attributes



ER Diagram of Bihar Tourist Guide Application

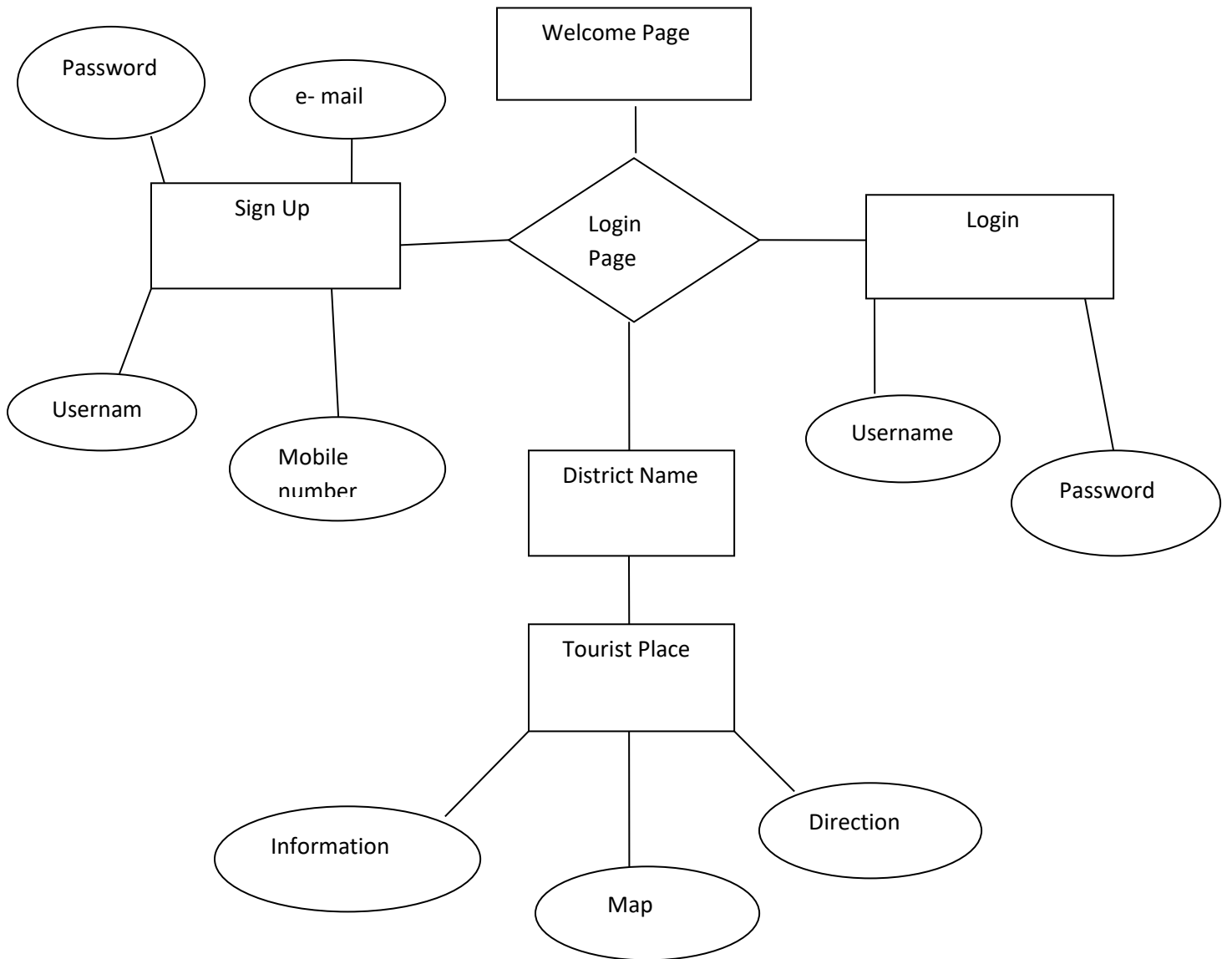


Fig 4 ER Diagram Of Bihar Tourist Guide Apps

6.4 Use Case Diagram

A use case diagram is used to represent the dynamic behavior of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles a system.

Use Case Diagram objects

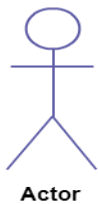
Use case diagrams consist of 4 objects.

- Actor
- Use case
- System
- Package

The objects are further explained below.

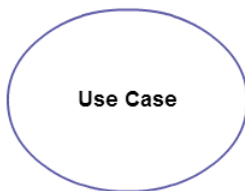
Actor

Actor in a use case diagram is **any entity that performs a role** in one given system. This could be a person, organization or an external system and usually drawn like skeleton shown below.



Use Case

A use case **represents a function or an action within the system**. It's drawn as an oval and named with the function.



System

The system is used to **define the scope of the use case** and drawn as a rectangle. This an optional element but useful when you're visualizing large systems. For example, you can create all the use cases and then use the system object to define the scope covered by your project. Or you can even use it to show the different areas covered in different releases.



Package

The package is another optional element that is extremely useful in complex diagrams. Similar to class diagrams, packages are **used to group together use cases**. They are drawn like the image shown below.



Use Case Diagram Guidelines

Although use case diagrams can be used for various purposes there are some common guidelines you need to follow when drawing use cases.

These include naming standards, directions of arrows, the placing of use cases, usage of system boxes and also proper usage of relationships.

We've covered these guidelines in detail in a separate blog post. So go ahead and check out use case diagram guidelines.

6.5 Relationships in Use Case Diagrams

There are five types of relationships in a use case diagram. They are

- Association between an actor and a use case
- Generalization of an actor
- Extend relationship between two use cases
- Include relationship between two use cases
- Generalization of a use case

We have covered all these relationships in a separate blog post that has examples with images.

We will not go into detail in this post but you can check out [relationships in use case diagrams](#).

6.6 Use Case Diagram Of Tourist Guide Application

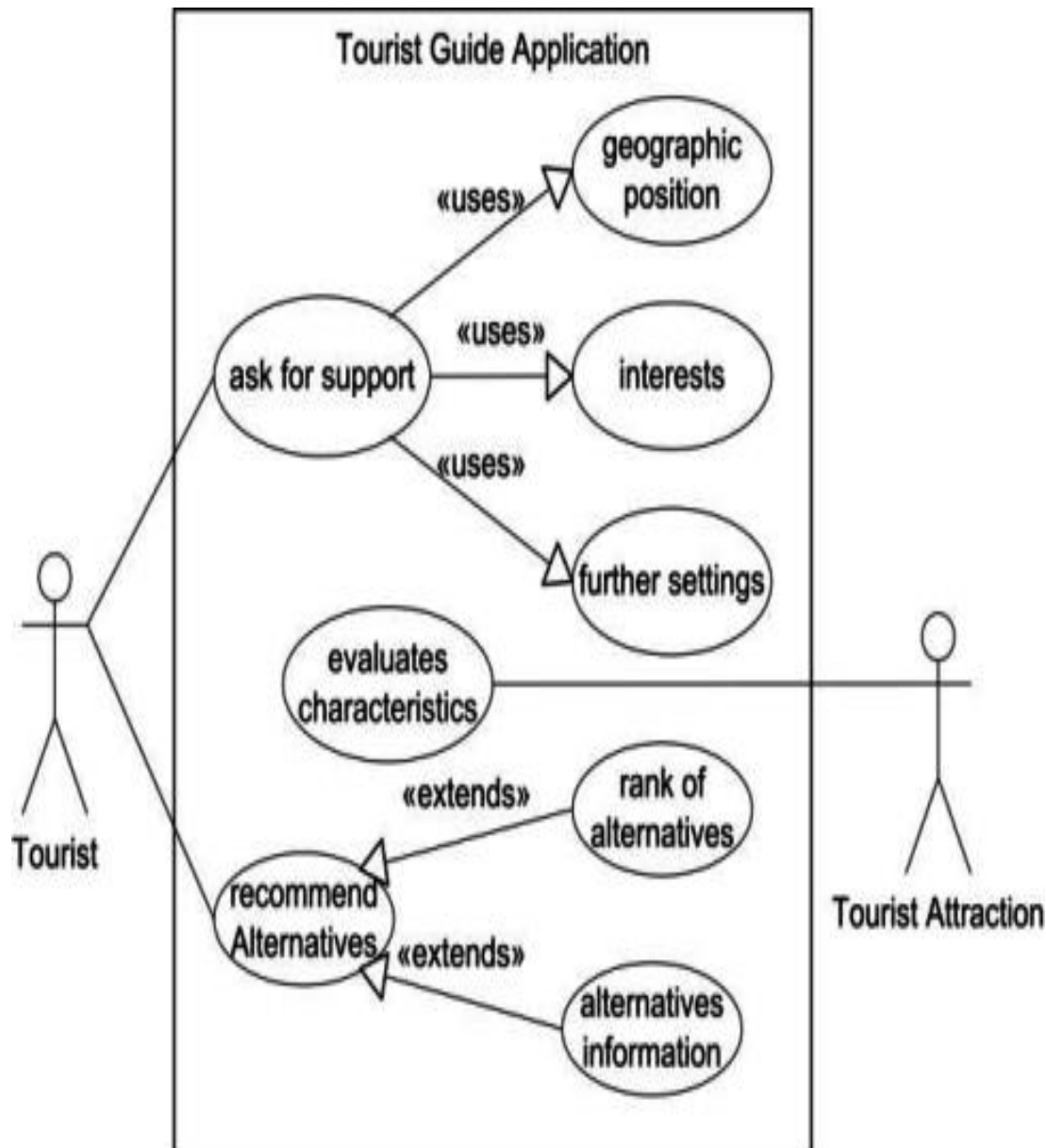


Fig 5 Use Case Diagram Of Tourist Guide Apps

As shown in the Guide User use case diagram, the user can register for an account, then log in with that account information. After logging in, the user will be able to access to a number of features. First, the user will be able to see a list of requests from different tabs, which are Waiting, Processing and Processed. After that, this user can check all the details of the request's user and put the request's status into Processing.

After negotiating with the travel user about the upcoming trip, this user will be able to put the request status to Processed or not, if the user decides to do so, the request will be moved to Processed tab and removed from Processing tab.

The travel Application for the first user group includes the signing up and logging in method, which is using the email and password attributes. If the value is valid, it will be accepted, the data is inserted in the database. Then the user enters that information to log in. If the information is correct with data in the database, the user will be navigated to Main Tab, otherwise the user will see a toast, which asks him to check again the data that he enters.

6.7 Sequence Diagram

User from both groups will enter the register data, which includes email and password, then hit the register button. If the value is valid, it will be accepted, the data is inserted in the database. Then the user enters that information to log in. If the information is correct with data in the database, the user will be navigated to Main Tab, otherwise the user will see a toast, which asks him to check again the data that he enters.

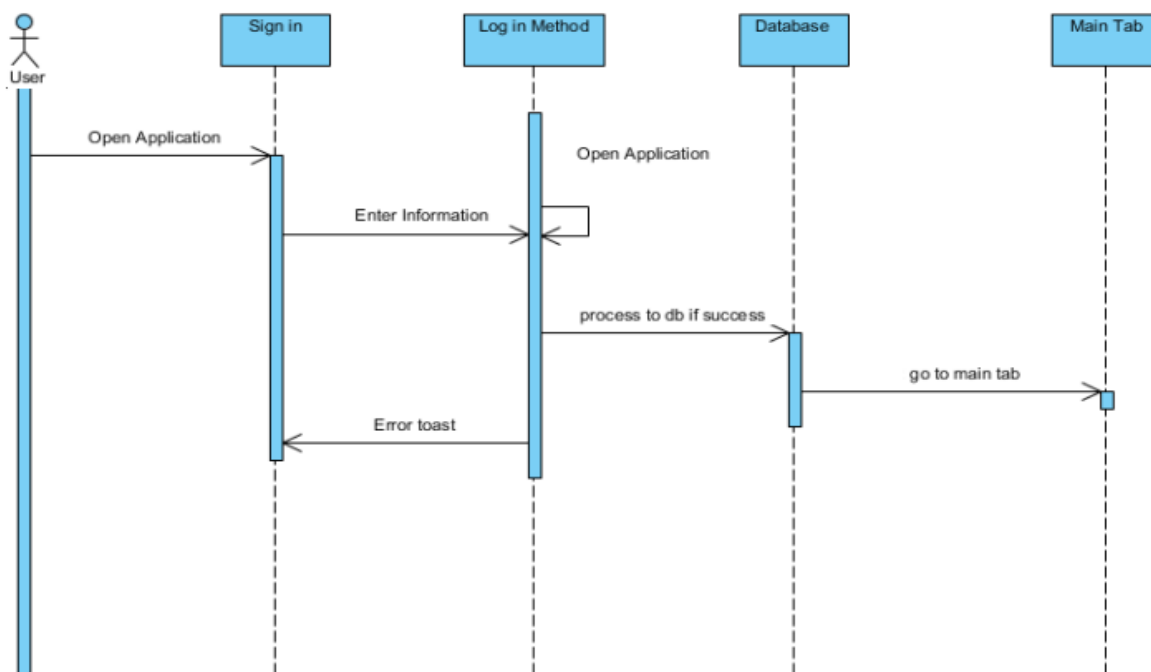


Fig 6 User Log in Sequence Diagram

When the Travel user decides to add a new request, the user will be navigated to a view, where he can use the Insert Method. First the user will fill in all the details of the fields as well as allowing the location service. If the data that user input is valid, it will be inserted to the database, otherwise the user will get an error alert to let that user know that the value is invalid.

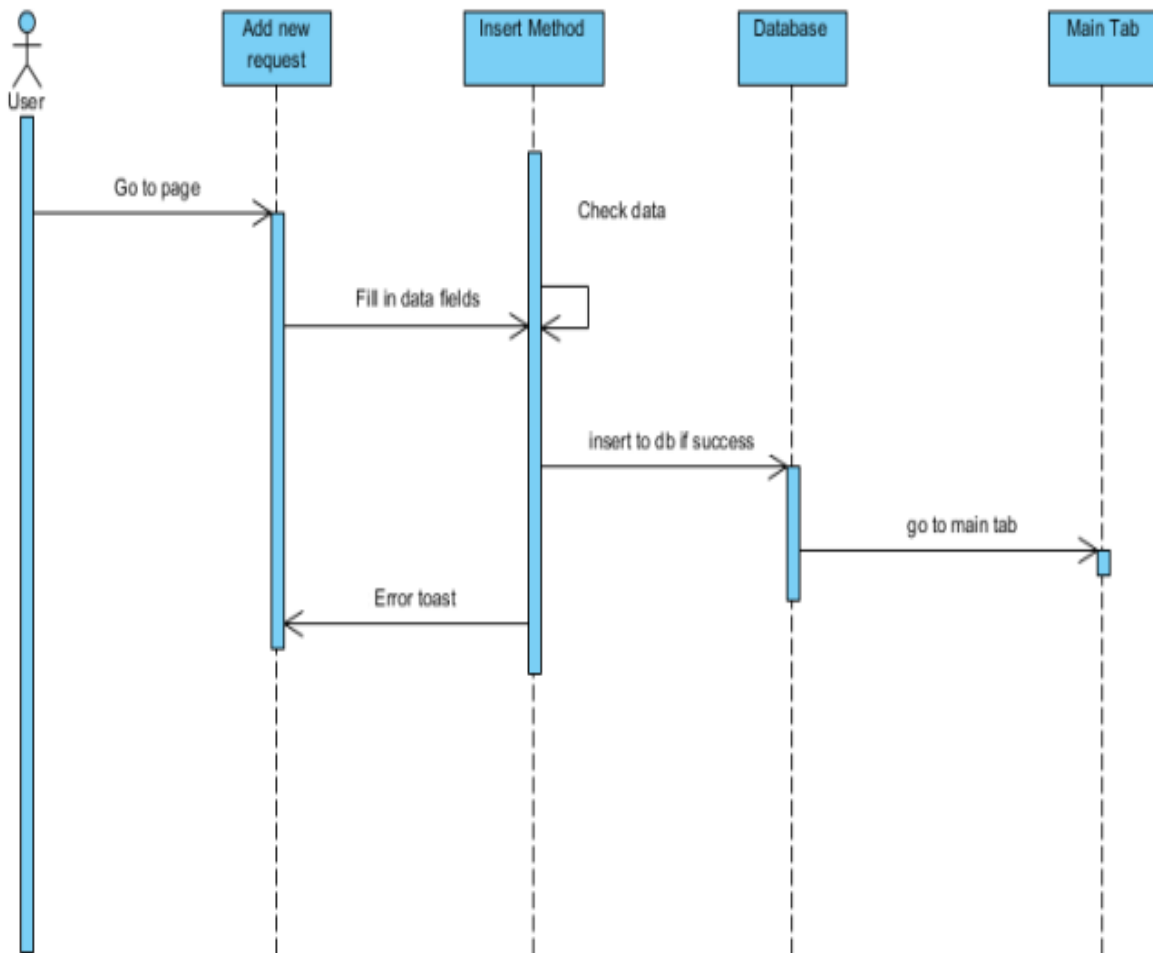


Fig 7 User Insert Sequence Diagram

The Guide person will be able to check all the details of requests, which include Waiting request and Processing request. For the Waiting request, the user can mark as Processing by clicking on the Process button and calling the Process method. After that, the status value of the request will be changed and updated to the database. Similarly, the user can mark the Processing request to Processed, which will call the Accept method, change the status value of the request to 2 and updated to the database.

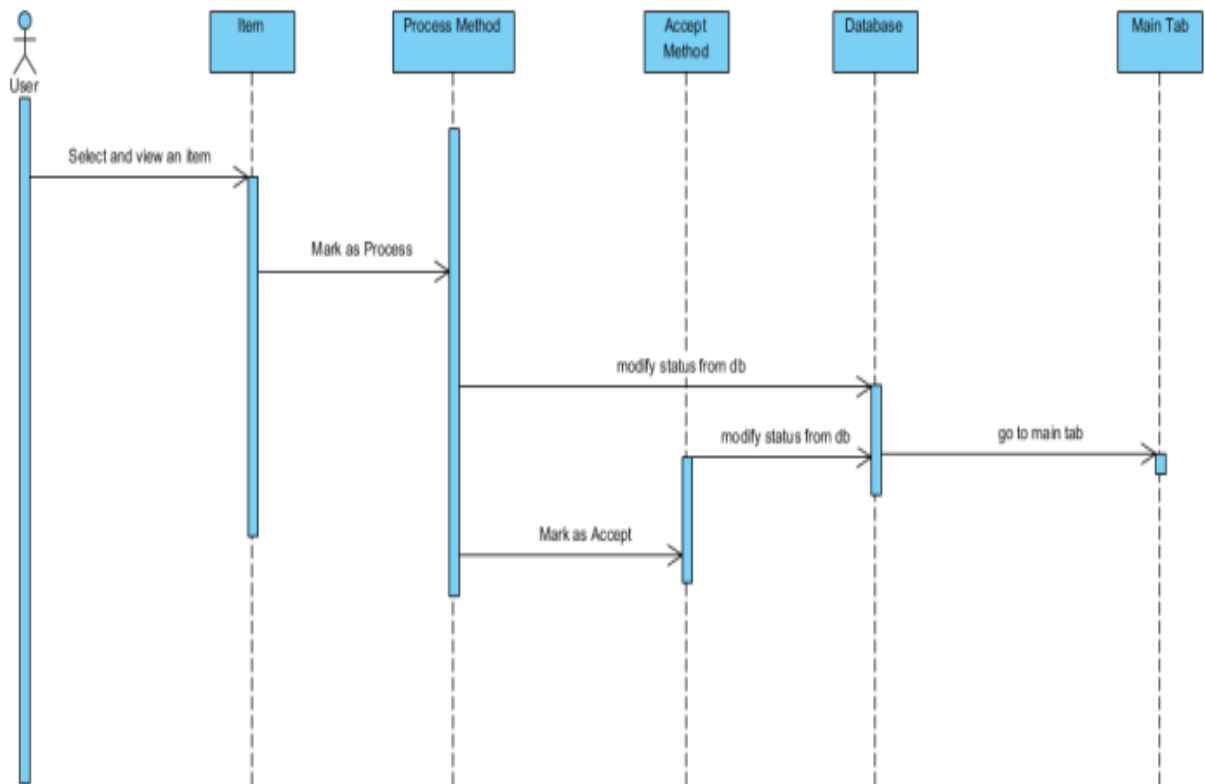


Fig 8 Guide User Method Sequence Diagram

6.8 APPLICATION ARCHITECTURE

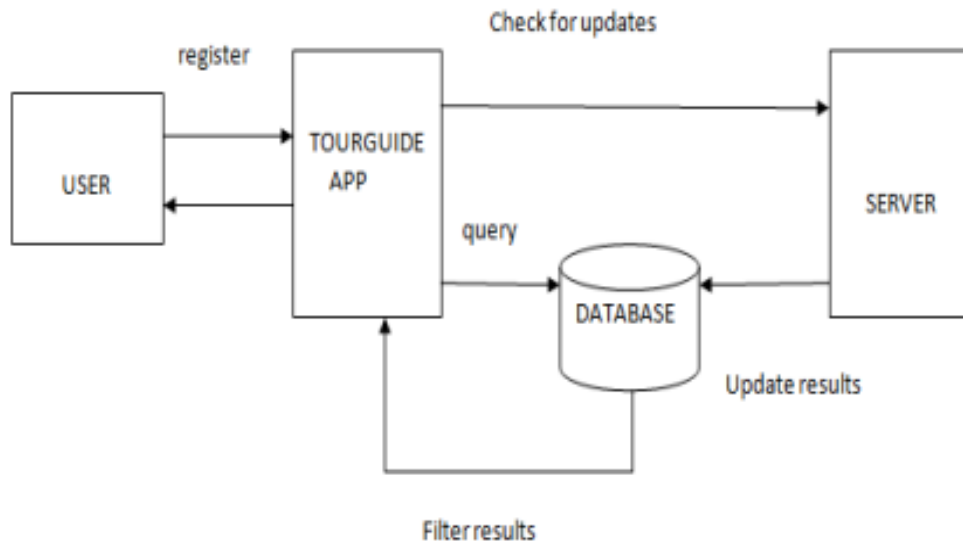


Fig 9 Architectural Design

The three layers of architectural design are presentation layer business layer and access layer.

1) Presentation layer:

The front end of the system is in the presentation layer. Interaction of the presentation layer with the user transforms all the activities that the user performs into requests which is then passed to next layer called business layer. When response is received from access layer the results are displayed in a way that is appropriate to the user.

2) Business layer:

All the calculations and operations in the system are performed by the logic, which is present in this layer. The operations are performed on the data, which is received from the previous layer i.e. Presentation layer. Then the results are stored in the database which is present in the access layer. This layer doesn't perform data storage and display mechanism.

3) Access layer:

The data is stored to and retrieved from the database which is present in this layer.

6.9. PROPOSED SYSTEM

Bihar Tourist Guide Application² first requires the new user or the tourist to register and if the user has already registered they may login into their account. Once the user logs in successfully, they can search for the desired places by entering the name of the place. After the search operation completes, the user gets the image and description of the selected places. The caching of all the information about the places is made for the quick access by tourists without using the external sources .

The user can also view the map of the selected place for better guidance .The application provides weather forecasting facilities to the user. There is an option for creating tour and the user can select any of the three facilities available such as travelling, food and lodging.

The minimum distance between the current location of user and the target destination is measured using GPS module . Based on the users selection cost is estimated for the individual facilities. Total cost is then calculated by summation of individual costs.

The users can also select the individual facilities. It also provides customised packages, based on the cost and number of days. Before selecting the package user can view the predefined list of dates, places and hotels. The users can then view the orders placed and pay online.

The user will get the notification about the ongoing activity and the current time when he reaches the entered destination . They can also provide the feedback regarding their experience. The feedback provided by each user is visible to everyone, so that the other users can plan for a better trip. The users after visiting the desired locations, can upload the pictures which can be viewed by other users. The uploaded pictures can be liked, disliked or commented by other users.

6.10 METHODOLOGY

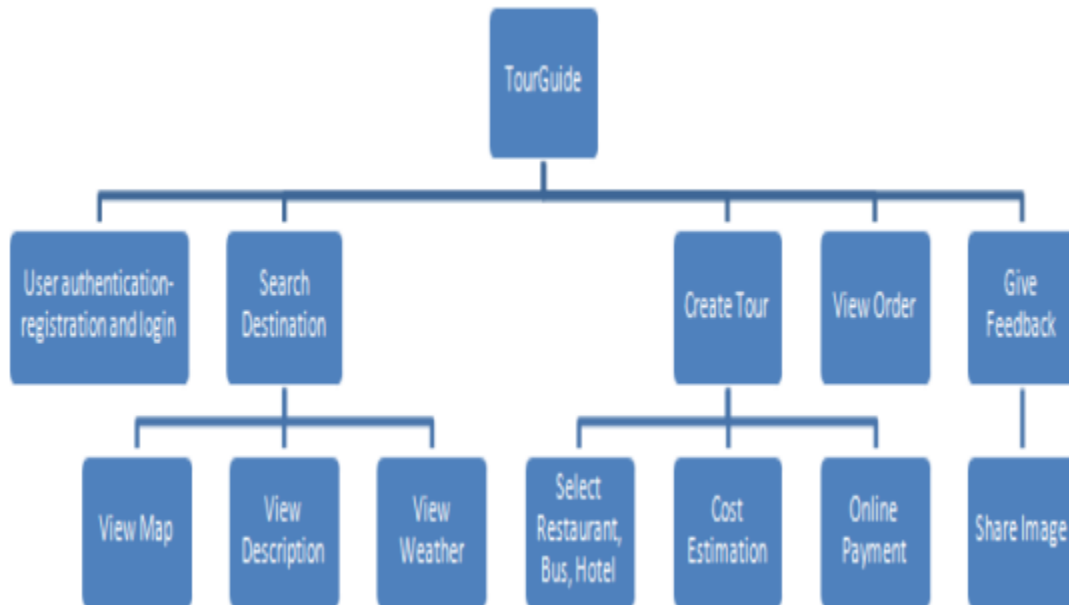


Fig 10_Methodology Used

Tourist Guide Application has five modules namely:

- **User Authentication** – The user who has no account must first register to create an account. The user who already has an account logs in.
- **Search Destination**- The user after logging in searches the location he wants to visit. This has three sub modules namely:
 - View map-The user views the map of desired location.
 - View description-The user views the description of the desired location.
 - View weather- The user can view the weather condition of the selected place.
- **Create Tour**-The user can plan a tour by selecting any of the options like travel, hotels and restaurants. The cost is then estimated based on the selection and payment is done online.
- **View Order**-The orders placed by the users can be viewed by them.
- **Give Feedback**-The user can give feedback about the application.
 - Share image- The user can upload the image of the visited place and share tour experience.

Table 3 Data Structure of SignUp Page:

FIELD	DATATYPE	DEFAULT
User name	VARCHAR(50)	NOT NULL
Email id	VARCHAR(255)	NOT NULL
Password	VARCHAR(255)	NOT NULL
Mobile Number	Integer	NOT NULL

Table 4 Data Structure of Login Page:

FIELD	DATATYPE	DEFAULT
Email id	VARCHAR(255)	NOT NULL
Password	VARCHAR(255)	NOT NULL

Table 5 Data Structure of Login with Facebook :

FIELD	DATATYPE	DEFAULT
Email id	VARCHAR(255)	NOT NULL
Password	VARCHAR(255)	NOT NULL

(Note:- If Facebook is Logout then only you need to give above details otherwise it will take your logged in Facebook id)

6.11 Modules

6.11.1. Login Module

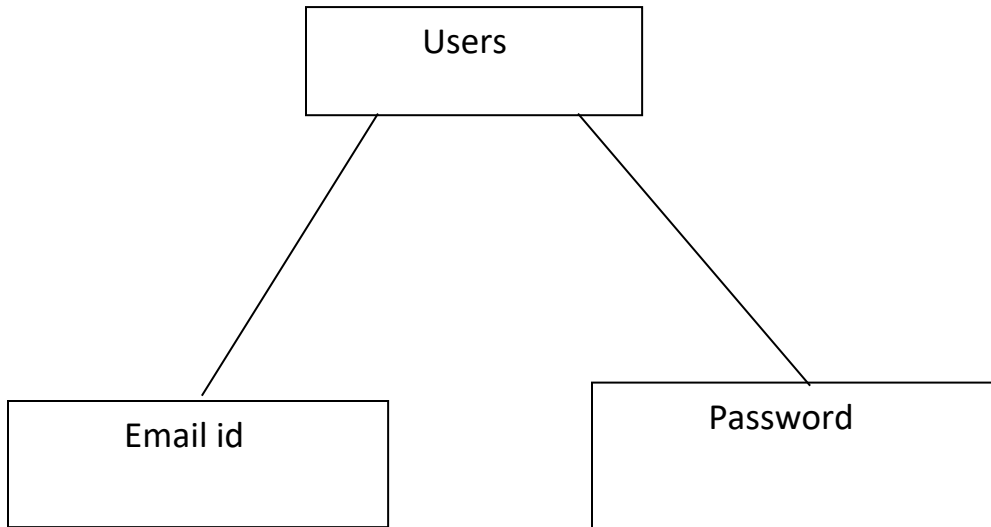


Fig 11 Login Module

6.11.2 SignUp Module

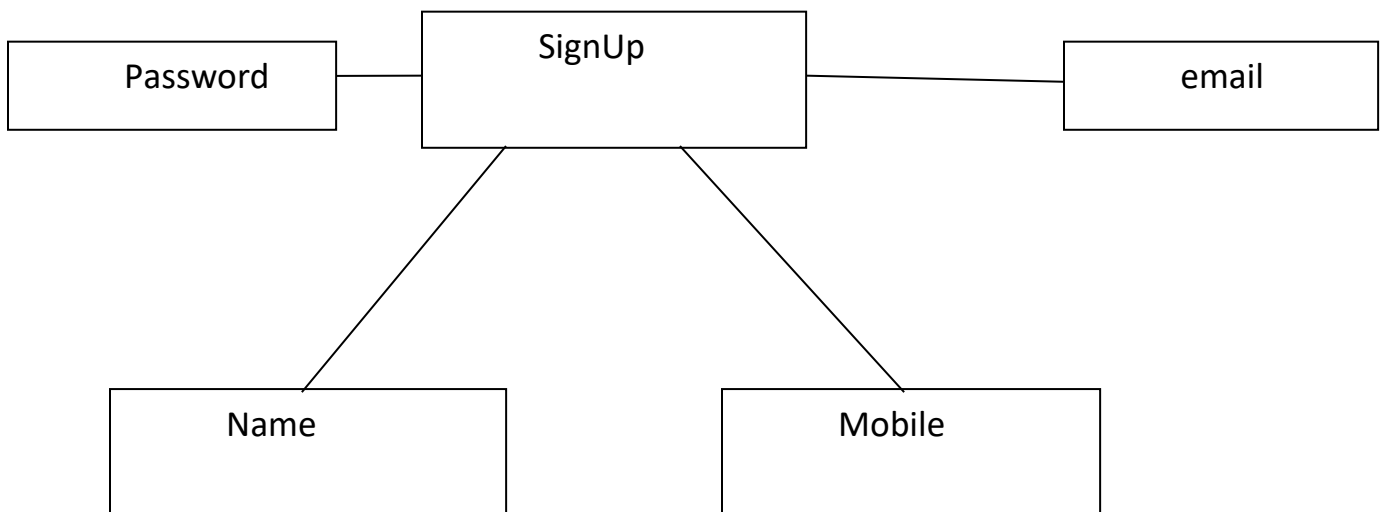


Fig 12 SignUp Module

6.11.3 District Module:

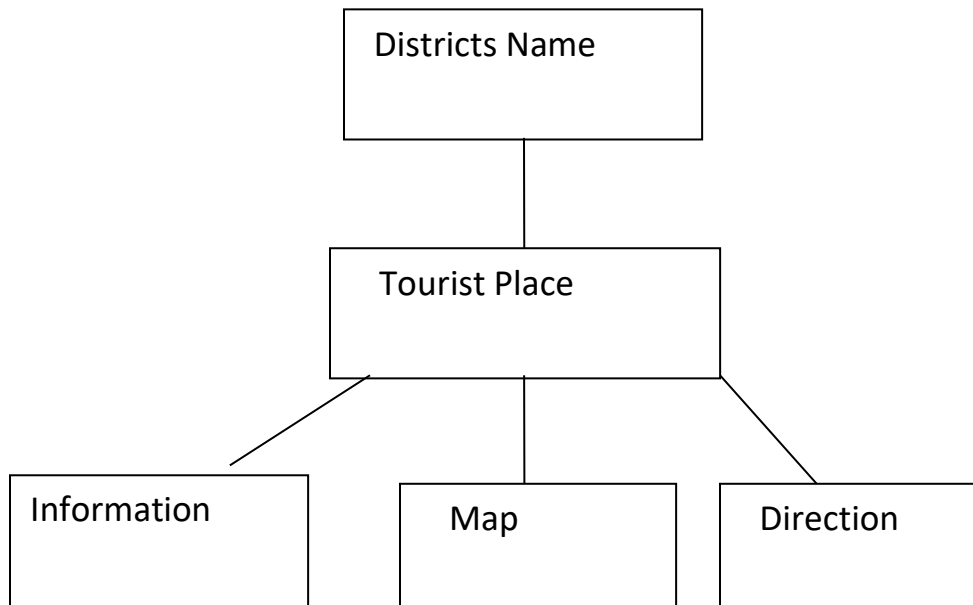


Fig 13 Districts Module

Chapter 7

Activities Intent in the Project

7.1 Welcome Page :

This page consist of the written Statement **“Welcome To Bihar”** with the animated Image having its design page in the xml markup language with the coding part the coding part is declared in java language.

This activity page looks like:



Fig 14 Welcome Page

7.2 Login Page:

This page allows the registered users to login this page to access the apps to go to the required activity the user wants. The information gets stored in the database. In this page we had used the “Skip>>” button in which we can also access the apps by not login it with email id and password by entering the registered email id and password the page contains the Login Button also by which the user can access the apps by logging it in.

By clicking on the signup Button the new Users can give their details to become the authenticated users and their details will be more secure and can be placed in the Firebase the cloud Database.

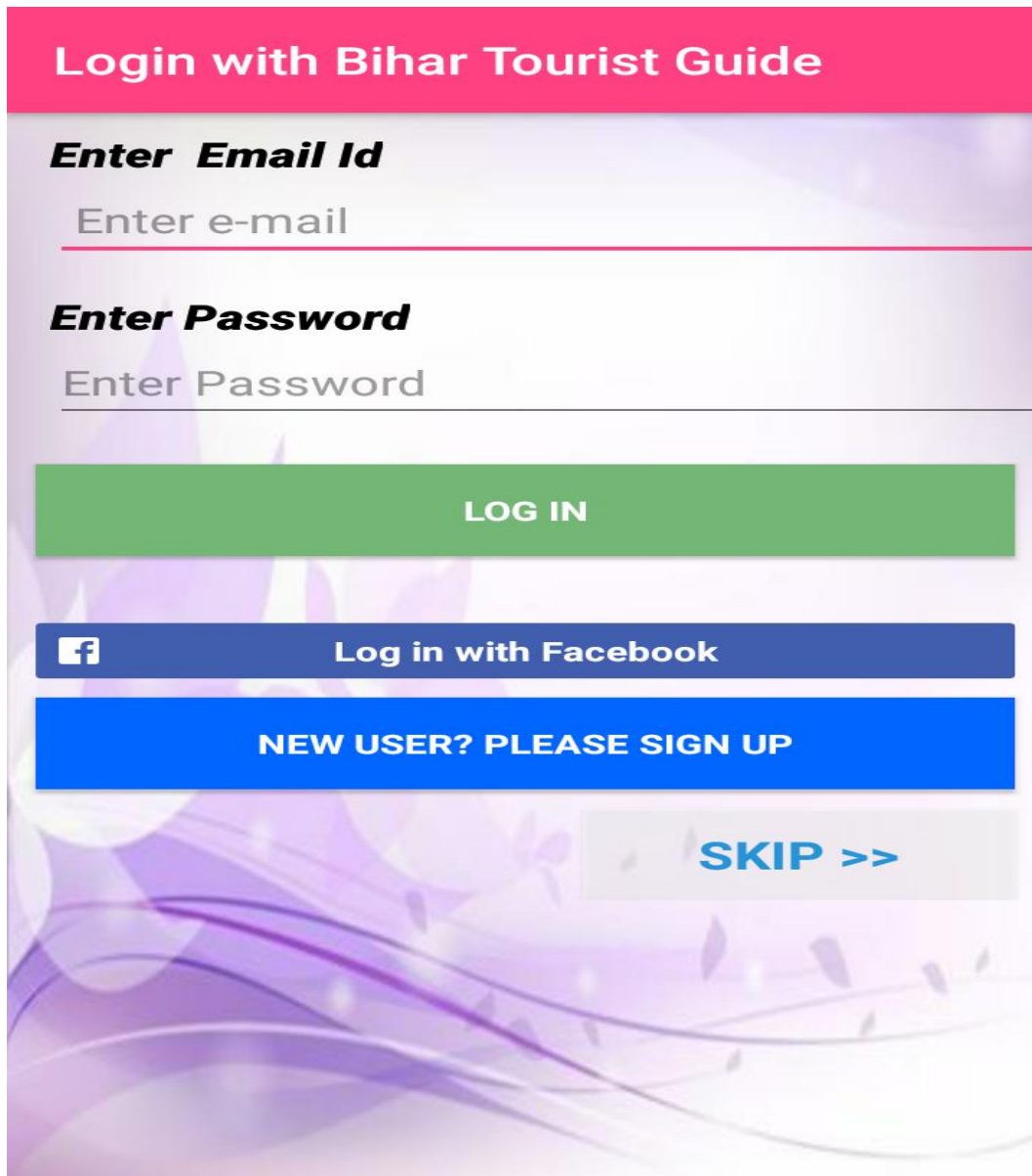
By clicking the button “Login with facebook ” the button will automatically access the logged in id in the system and if any of the id is not logged in the System will ask you to enter the required field details to login with the facebook.

We can also access the apps by Facebook login .

The visitors may also go to the Sign up page through this page .

- The User Authentication is mandatory steps for safe and secure visit to any place. The user data will be stored with the organization for fast and safe verification.
- It will be used to stop the useless traffic from the application.
- Unwanted people cannot visit to the application until login is successful.
- So Login is the mandatory step in running the application.

The Activity Page Look Like:-



The image shows a login page for 'Bihar Tourist Guide'. It features a pink header with the title 'Login with Bihar Tourist Guide'. Below the header, there are two input fields: 'Enter Email Id' with a placeholder 'Enter e-mail' and 'Enter Password' with a placeholder 'Enter Password'. A green 'LOG IN' button is positioned below the password field. Further down, there is a dark blue button with a Facebook icon and the text 'Log in with Facebook'. Below that is a blue button with the text 'NEW USER? PLEASE SIGN UP'. At the bottom right, there is a light gray button with the text 'SKIP >>'. The background of the page has a decorative purple and white floral pattern.

Login with Bihar Tourist Guide

Enter Email Id
Enter e-mail

Enter Password
Enter Password

LOG IN

Log in with Facebook

NEW USER? PLEASE SIGN UP

SKIP >>

Fig 15: Login Page

7.3SignUp Page:

This page consist of the all details required to authenticate the new users to access the Application.

It consist of many Columns:-

1. Users Name:- This column have to get the name of the User to be registered in the authenticated area of the Database.
2. Phone Number:- This edit text column provide you the facility to enter the phone number of a particular person which must be valid hoping to add the new feature with this apps may help you to get updated with it.
3. E-mail id:- The user have to give the e mail id which must contain atleast “@” and “.com” the email id must be valid which may be used for the further use in the future.
4. Password :- The users have to create a password must be above 6 varchars which will be used for login the apps.
5. SignUp Now:- This is a button used to Signup the application by storing these details in firebase database.
 - The Signup page allows you show, in a direct way, the benefits to your visitor of joining your list. Benefits are a common feature of any good landing page and for good reason. Benefits sell.
 - When you have a dedicated page with an easily remembered link, you can share it easily with others and they can remember it. Add it to your email signature, call it out on a podcast, say it to a new business contact etc.
 - When creating your subscribe page, add internal links to resource pages and popular posts. Google likes Internal links that are relevant so be sure to add these throughout your blog, in posts and such, not only on the subscribe page.

This page Look Like:

Signup with Bihar tourist Guide

Enter Your User Name

Enter Your Phone Number

Enter Your Mail Id

Enter Your Password

SIGN UP NOW

Fig 16 SignUP

7.4Place Bihar:

This activity consist of the districts name in Bihar. These district is more known for the tourist place in Bihar in the historical point of view as well as the nature beauty and also known for the devotional purpose.

Few of the District names are:-

- 1.Patna
2. Bodhgaya
3. Sonepur
4. Darbhanga
5. Nalanda
6. Bhagalpur
7. Rajgir

Bihar is a state in East India, bordering Nepal. It is divided by the River Ganges, which floods its fertile plains. Important Buddhist pilgrimage sites include the Bodhi Tree in Bodhgaya's Mahabodhi Temple, under which the Buddha allegedly meditated. In the state capital Patna, Mahavir Mandir temple is revered by Hindus, while Sikhs worship at the domed, riverside Gurdwara of Takht Sri Harmandir Sahib Ji.

The outlook of the activity are:



Fig 17 Districts Of Bihar

7.5 Patna Place:

This activity contains the lists of all the tourist places in Patna District.

Some of the mentioned Tourist Place of Patna are:-

1. GolGhar
2. Agamkuan
3. GandhiMaidan
4. Patna Planitorium
5. Shri Krishna Memorial Hall
6. Mahavir Mandir
7. Maa Patneshwari Mandir
8. Budha Smriti Park
9. Sanjay Gandhi Jaivik Udhyaan
10. Bihar Museum
11. Takhat Shri Harimandir Saheb ji
12. Jalla Hanuman Mandir

All of the places mentioned above are some of the tourist places of Patna District and many of the places will be included later on time to time. These places are the expandible list which contain Information, Map, Direction as the child.

Similar to this all the District have Similar type of design with their respective tourist places. The designing part will have one activity and one new layout.

Layout for the list of Tourist place in that district and other for the Expandible list.

The Activity will Look like:



Fig 18 Tourist Places of a particular District

7.6 Expandible Items of the List:

1. Information
2. Maps
3. Direction

Every tourist places of a particular District contain these child list with the separate functionality. This apps contain the list of the District in Bihar and the District contain the Tourist place of the particular District to visit and all these Tourist places have these list intended to perform the task. We call these list as the child list and the Tourist place list is called as the Parent List.

7.6.1 Information Activity:


This Activity consist of brief information of the particular place which may be Historical, Devotional and Nature Beauty. This activity also contain the image view as well as the paragraph in string form in the value folder under res and value contain the String.xml layout and the paragraph is written nicely over here.


Res->values->String.xml

This activity also consist of Designing as well as Coding part. Designing is in xml and coding in java programming language.

Image view consist of the image of a particular Image of that place.

This Activity look like:

 **Mahavir Mandir**



Introduction

The Mahavir Mandir is one of the most famous Hindu temples dedicated to Lord Hanuman, located in front of Patna junction and the second most visited religious shrine in North India.

Mahavir Mandir providing online facility to have live darshan of the deity

Fig 19 Introduction of particular place

7.6.2 Maps:

This Activity consist of location of the particular place which may be Historical, Devotional and Nature Beauty. This activity also contain the fragment tag .

This activity is new activity named as Google Activity which make both xml as well as java part with them.

This activity also consist of Designing as well as Coding part. Designing is in xml and coding in java programming language.

It also have alert dialogue box while existing out from the activity.

This Activity look like:

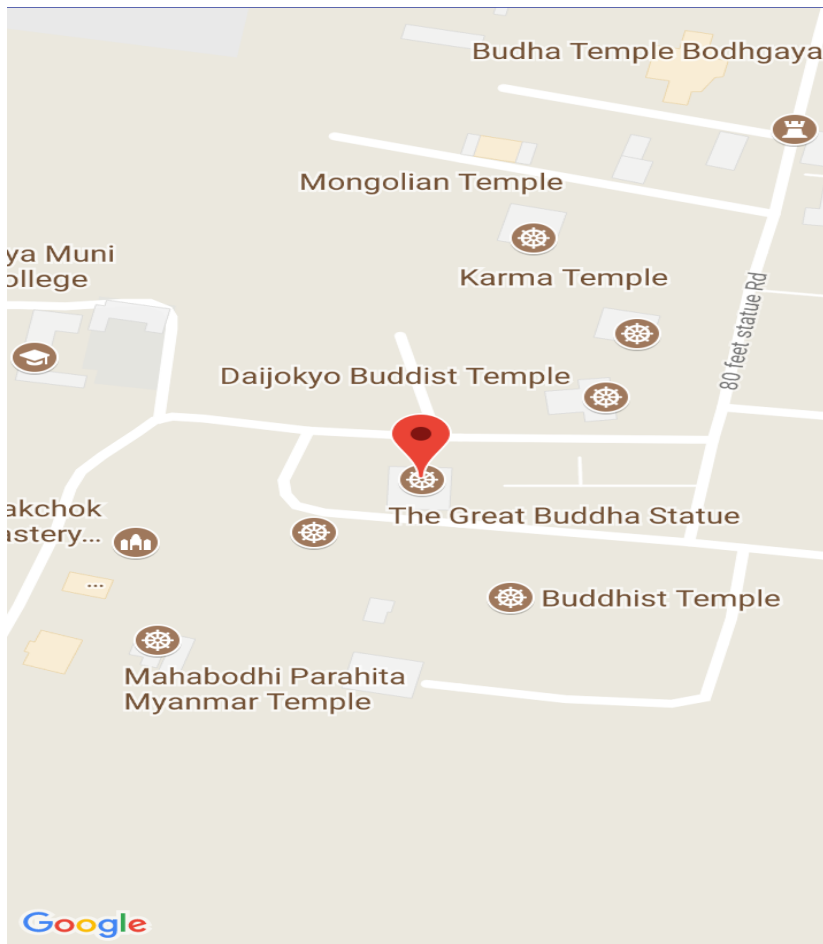


Fig 20 Location of tourist place on Map

7.6.3 Direction:

It will allocate the tourist place with the direction to approach the destination from particular location to the particular Tourist Place.

This Activity consist of location of the particular place which may be Historical, Devotional and Nature Beauty. This activity also contain the fragment tag .

This activity is new activity named as Google Activity which make both xml as well as java part with them.

This activity also consist of Designing as well as Coding part. Designing is in xml and coding in java programming language.

It shows all the navigational route to move from one place to the destination.

It also shows the traffic and the routes by vehicle or by foot or by metro and train.

It help people to know approximately how much time does it take to reach one place to other.

It also have alert dialogue box while existing out from the activity.

It means it ask the user to confirm whether they wants to close the application or the current windows or not?

This Activity look like:

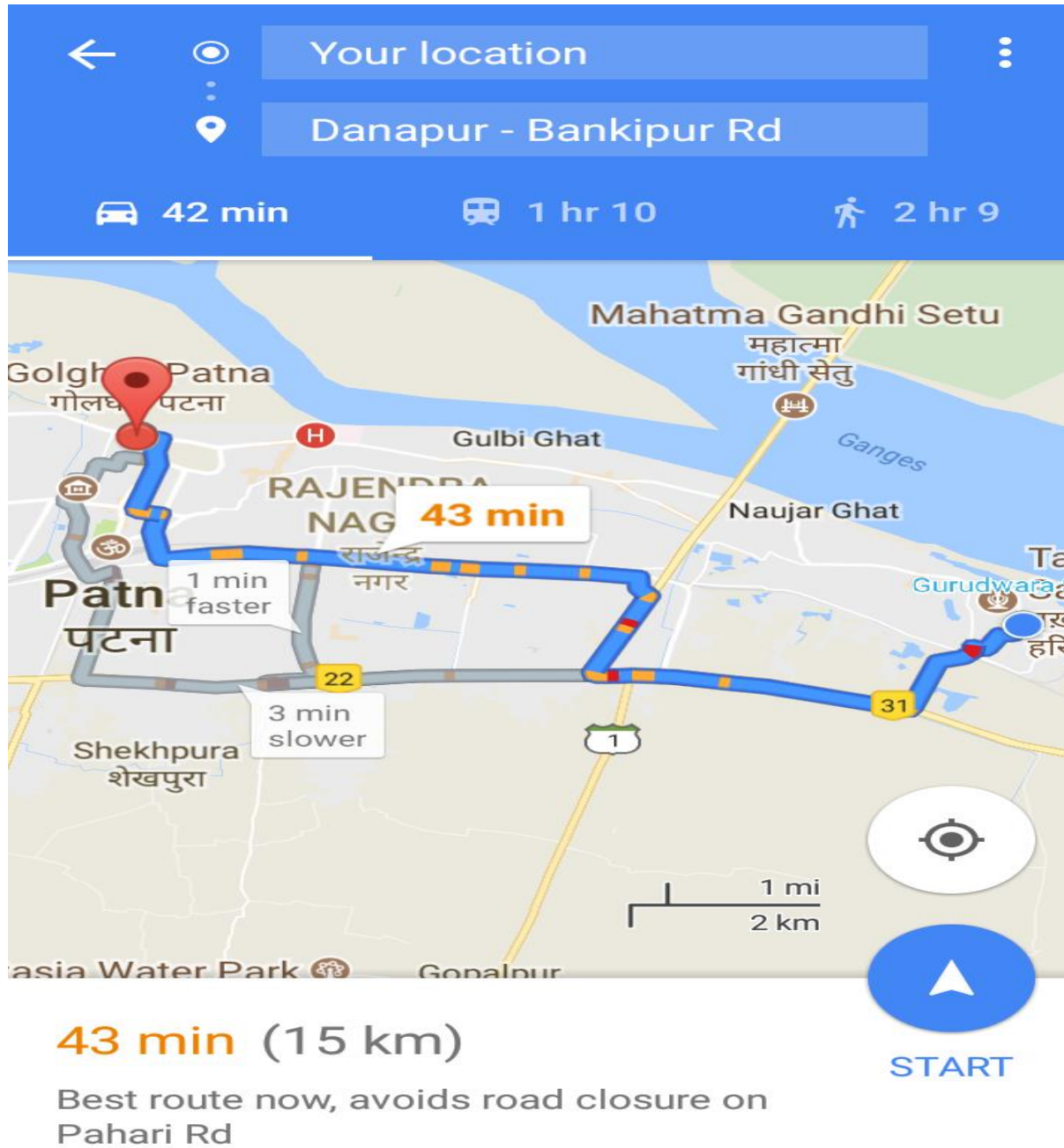


Fig 21 Route to reach tourist place

Chapter 8

Module Description

It is a high-level description of a functional area, consisting of a group of processes describing the functionality of the module and a group of packages implementing the functionality.

8.1 Modules of Bihar Tourist Guide Apps

- **Login:**

It's a login page where you can login as a tourist.

- **Sign Up:**

This activity is used to register the user for future login and secure placement of data flow.

- **Facebook Login:**

This module work mainly for login user with facebook id it validate all the data needs of the user by this mode of login where user don't need to register first then use .

- **District Module:**

In this module we can get the name of the districts of Bihar technically we can say the list of items here place is listed in the list which acts as a object here.

- **Tourist Place :**

This will provide all the tourist place name of the particular district.

- **Information :** This will provide the brief description of the Tourist place.

A tourist attraction is a place of interest that tourists visit, typically for its inherent or an exhibited natural or cultural value, historical significance, natural or built beauty, offering leisure and amusement of Bihar.

- **Map:-** This will allocate the current location of the tourist place.

Tourist maps are often **topographic maps with added information** eg walking, skiing or cycling routes, mountain huts or watersports facilities. They may have added pictorial symbols to show tourist attractions eg stately homes, good beaches, theme parks

- **Direction:-** This will provide the tourist to reach the destination from his/her current location and the short distance to reach the destination. It shows how people can reach from one to other by the different modes of transportation. This will also shows the shortest path and the route having traffic jam and so on.

Chapter 9

Test Strategy

A high-level document is used to validate the test types or levels to be executed for the product and specify the **Software Development Life Cycle's** testing approach is known as Test strategy document.

Once the test strategy has been written, we cannot modify it, and it is approved by the **Project Manager, development team.**

The development design document includes the following documents:

- **System design documents:** Primarily, we will use these documents to write the test strategy.
- **Design documents:** These documents are used to specify the software's functionality to be enabled in the upcoming release.
- **Conceptual design documents:** These are the document which we used Infrequently.

9.1 The Objective of Test Strategy

The primary objective of writing the test strategy is to make sure that all purposes are covered entirely and understood by all stakeholders, we should systematically create a test strategy.

Furthermore, a test strategy objective is to support various quality assurance stockholders in respect of **planning of resources, language, test and integration levels, traceability, roles and responsibilities**, etc.

Software Testing is Important because if there are any bugs or errors in the software, it can be identified early and can be solved before delivery of the software product. Properly tested software product ensures reliability, security and high performance which further results in time saving, cost effectiveness and customer satisfaction.

9.2 Testing Strategies

Here are important strategies in software engineering:

Unit Testing: This software testing basic approach is followed by the programmer to test the unit of the program. It helps developers to know whether the individual unit of the code is working properly or not.

Integration testing: It focuses on the construction and design of the software. You need to see that the integrated units are working without errors or not.

System testing: In this method, your software is compiled as a whole and then tested as a whole. This testing strategy checks the functionality, security, portability, amongst others.

Program Testing

Program Testing in software testing is a method of executing an actual software program with the aim of testing program behavior and finding errors. The software program is executed with test case data to analyse the program behavior or response to the test data. A good program testing is one which has high chances of finding bugs.

Manual testing

The process of checking the functionality of an application as per the customer needs without taking any help of automation tools is known as manual testing. While performing the manual testing on any application, we do not need any specific knowledge of any testing tool, rather than have a proper understanding of the product so we can easily prepare the test document.

Manual testing can be further divided into three types of testing, which are as follows:

- **White box testing**
- **Black box testing**
- **Gray box testing**

Automation testing

Automation testing is a process of converting any manual test cases into the test scripts with the help of automation tools, or any programming language is known as automation testing. With the help of automation testing, we can enhance the speed of our test execution because here, we do not require any human efforts. We need to write a test script and execute those scripts.

Functional Testing

Functional testing is a type of testing that seeks to establish whether each application feature works as per the software requirements. Each function is compared to the corresponding requirement to ascertain whether its output is consistent with the end user's expectations. The testing is done by providing sample inputs, capturing resulting outputs, and verifying that actual outputs are the same as expected outputs.

The prime objective of Functional testing is checking the functionalities of the software system. It mainly concentrates on –

- **Mainline functions:** Testing the main functions of an application
- **Basic Usability:** It involves basic usability testing of the system. It checks whether a user can freely navigate through the screens without any difficulties.
- **Accessibility:** Checks the accessibility of the system for the user
- **Error Conditions:** Usage of testing techniques to check for error conditions. It checks whether suitable error messages are displayed.

9.3 How to do Functional Testing :

- Understand the Functional Requirements
- Identify test input or test data based on requirements
- Compute the expected outcomes with selected test input values
- Execute test cases
- Compare actual and computed expected results

Objective

The main objective of the project on Bihar Tourist Guide2 is to manage the details of districts, tourist places of respective district. It manages all the information regarding history of the place, map shows the locative, and direction to reach the destination, Hotel and Restaurant for Stay and Dine. The project is built user friendly, only the valid user is authorized to access.

The main objective of this project are as follows:

- It manages all the tourist place of Bihar's districts.
- It provide brief information about the tourist place.
- It stores all the necessary details of the users which is fully protected and secured.
- It show the location of the area in the Google Map.
- It also show the direction and the shortest path to travel the destination.
- It Provide the authenticated Guide In different language to the Tourist who Knows well About the tourist place.
- It will help tourist to know more easily about culture and society.

PURPOSE

The old system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hands, the process of keeping, maintaining and retrieving the information was very tedious and lengthy. There would always be unnecessary consumption of time by listening the different different history of the same place which was not the real one. One more problem was that it was very difficult to find guide of best human nature and dedicated on the “Atithi Devo Bhabha” while journey. The reason behind it is to make the safe and memorable journey of the tourists who eagerly want to see the beauty and history of Bihar. For this reason, we have provided present system with fully featured and automated actually existing system is quite unsafe and helpless.

SCOPE

It may help collecting perfect details. In a very short time, collection will be obvious, simple and sensible. It may help a person to know the places and culture of the place nearby them. It will also reduce the cost of **Guide man**.

The main aim of this project are:

- To automate the tourist place.
- It satisfies the user requirements.
- Easy to understand the user and operator.
- Have a good user interface.
- Be expandable.
- Portable
- Delivered on schedule within the budget.

CONCLUSION

In this project, we present a mobile tourist application (Bihar Tourist Guide2) that is designed for Bihar state (District wise) and will become operable on android phone of respective API Level. The goal of this application is to provide tourism the geographical services through mobile phone application that encourage tourist to travel around the city and reduce efforts and shorten the time to organize the city trip and the outsider does not need any tourist guide for there journey this project will also provide the history of the respective tourist place this is best suited for safe and memorable journey.

BIBLIOGRAPHY :

- JavatPoint, java ,Android
- Database System Concept , Silberschatz, Abraham, February 26, 2020
- Mobile Applications Development with Android, Admin, 26 Feb 2020 ebook, Aktu Nalanda e Consortium
- Flash Mobile: Rapid Android Development in Flash CS5, Android, e book admin, Aktu Nalanda e Consortium, 26 Feb 2020
- Introduction to Software Design with Java, admin, e book, 26 Feb 2020, Aktu Nalanda e Consortium
- GPS Tracking with Java EE Components, admin, e book,26 Feb 2020,AKTU Nalanda e Consortium
- Fundamentals of Java Programming, admin, e book, 26 Feb 2020, Aktu e Consortium
- Java in Two Semesters, e book, admin, 26 Feb 2020, AKTU Nalanda e Consortium
- Fundamentals of Java Programming, e book,admin, 26 Feb 2020, Nalanda e Consortium
 - AbhiAndroid
- A. de Solages and J. Traor'e, "An efficient fair off-line electronic cash system with extensions to checks and wallets with observers," in International Conference onTelemedicine. Springer, 1998, pp. 275–295.
- National preparedness Resource Plan for Telemedicine 209_291.
- Hyperlocal : The Future of Online Pharmacy Business Model.
- I. Teranishi, J. Furukawa, and K. Sako, "Why we Buy medicine online? (extended

abstract),” in *Advances 2018*. Springer, 2004, pp. 308–322.

- I. Teranishi and K. Sako, “k-times anonymous authentication with a constant proving cost,” in *Medicare - PKC 2006*, M. Yung, Y. Dodis, A. Kiayias, and T. Malkin, Eds. Springer, 2006, pp. 525–542.
- L. Nguyen and R. Safavi-Naini, “Dynamic k-times anonymous authentication,” in *Applied In tele medicine*. Springer, 2005, pp. 318–333.
- L. Nguyen, “Efficient dynamic k-times anonymous authentication,” in *Progress in medicine - VIETCRYPT 2006*. Springer, 2006, pp. 81–98
- M. Bellare, D. Micciancio, and B. Warinschi, “Foundations of group signatures: Formal definitions, simplified requirements, and a construction based on general assumptions,” in *International Conference on the Theory and Applications of micro biology Techniques*. Springer, 2003, pp. 614–629.
- O. Bicer and A. Kucuk, “Versatile abs: Usage limited, revocable, threshold traceable, authority hiding, decentralized attribute based signatures.” *E-commerce Archive*, vol. 2019, p. 203, 2019.
- Y. Dodis and A. Yampolskiy, “A verifiable random function with short proofs and keys,” in *International Workshop on Hospitality*. Springer, 2005, pp
- Teranishi, J. Furukawa, and K. Sako, “Why we Buy medicine online? (extended abstract),” in *Advances 2018*. Springer, 2004, pp. 308–322.

- I. Teranishi and K. Sako, “k-times anonymous authentication with a constant proving cost,” in Medicare - PKC 2006, M. Yung, Y. Dodis, A. Kiayias, and T. Malkin, Eds. Springer, 2006, pp. 525–542.
- L. Nguyen and R. Safavi-Naini, “Dynamic k-times anonymous authentication,” in Applied In tele medicine. Springer, 2005, pp. 318–333.