

# **“CITY GUIDE APPLICATION”**

## **MINOR PROJECT REPORT**

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*in partial fulfillment for the award of the degree*

*of*

**BACHELOR OF ENGINEERING**

*in*

**INFORMATION TECHNOLOGY**



**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**GYAN GANGA INSTITUTE OF TECHNOLOGY & SCIENCES**  
**JABALPUR (M.P.)**  
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**APRIL 2019**

## ***CERTIFICATE***

This is to certify that the Minor Project Report entitled “**CITY GUIDE APPLICATION**” submitted by **ABHIJEET JAIN, ANKIT PATEL, DEEPAK THAKUR, VAIBHAV MISHRA** has been carried out under my guidance & supervision. The Minor project report is approved for submission towards partial fulfillment of the requirement for the award of degree of **BACHELOR OF ENGINEERING in INFORMATION TECHNOLOGY** from “**RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL (M.P.)**.”

(Prof. Ashish Mishra)

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**Dept of Information Technology.**

## ***CERTIFICATE***

This is to certify that the Minor Project Report entitled “**CITY GUIDE APPLICATION**” is submitted by **ABHIJEET JAIN, ANKIT PATEL, DEEPAK THAKUR, VAIBHAV MISHRA** for the partial fulfillment of the requirement for the award of degree of **BACHELOR OF ENGINEERING in INFORMATION TECHNOLOGY** from **RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL (M.P.)**.

Internal Examiner

Date:

External Examiner

Date:

## ***DECLARATION***

We hereby declare that the Minor Project Report entitled “**CITY GUIDE APPLICATION**” which is being submitted in partial fulfillment of the requirement for award of the Degree of Bachelor of Engineering in Information Technology to “**RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL (M.P.)**” is an authentic record of our own work done under the guidance of Prof. **Ashish Mishra**, Department of Information Technology, **GYAN GANGA INSTITUTE OF TECHNOLOGY & SCIENCES, JABALPUR.**

The matter has not been submitted earlier for the award of any other degree.

**Dated:**

**Place:** JABALPUR

**ABHIJEET JAIN**

**ANKIT PATEL**

**DEEPAK THAKUR**

**VAIBHAV MISHRA**

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We owe sincere thanks to all the faculties in **“Information Technology Department”** for their advice and counseling time to time.

**Dated:**

**Place:** JABALPUR

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## **ABSTRACT**

India is the one among the fast-growing countries. Everyone can visit the country throughout India. In the list of visiting places cities are the mostly visited places. Tourists are come from different places and new to the city they don't know about the cities, cultures of the people, local language to communicate and how to approach.

Tourist guides are the persons who guide the tourists about the city like the visiting places, their importance and how to approach by taking money from them. Tourist guides may cheat tourists for money by telling lies and chance to retheming some cities they are not available.

To overcome these problems an efficient and powerful web application called city guide has implemented.

This is the online application that provides brief information about the city by using efficient web applications. To get the details about top restaurants, hotels, lodges, events online city guide is an efficient web application.

It provides every one detailed description about entertainment, museum exhibits, monuments and memorials, movies, theaters, hotels, events for concerts and guides the visitors with stories, events listings and theater listings.



# **1. Introduction**

This application will give services to tourist's, businessman as well as local people. A tourist needs technologies which can serve for them. So, this web application should be easy to use and efficient to manage the travelling activities. Due to unavailability of such application tourist are facing problems while travelling to Jabalpur. They have to pay handsome amount of travelling budget to local guides and agents to get information. This proper tourist guide will serve to tourist and locals in the ways like weather, history, places, attractions, people, local services and provide proper guidelines textual and pictorial information about the location.

This application will also serve local businessman in the city as they can advertise their service or product in this application.

Finally, this document gives a systematic way to look through the project and analyses the horizons of the thought process behind the system

## **1.1 Purpose of the system**

The purpose of this project is to develop a City Guide Application that provides person to access any information about the city via the internet.

This application will give services to tourist's, businessman as well as local people. A tourist needs technologies which can serve for them. So, this web application should be easy to use and efficient to manage the travelling activities. Due to unavailability of such application tourist are facing problems while travelling to Jabalpur. They have to pay handsome amount of travelling budget to local guides and agents to get information. This proper tourist guide will serve to tourist and locals in the ways like weather, history, places, attractions,

people, local services and provide proper guidelines textual and pictorial information about the location.

This application will also serve local businessman in the city as they can advertise their service or product in this application.

Finally, this document gives a systematic way to look through the project and analyze the horizons of the thought process behind the system. This document also provides all the functional and non-functional requirements of the project. The final product would be as per the specifications in this SRS

## **1.2 Intended audience**

The expected audience of this document is the citizen of city, admin and customers and the developers.

## **1.3 Scope of the document**

The task of developing the document was distributed amongst the team members. The team divided itself into various worlds present in the Requirements Engineering scenario and thus played their part. The team was responsible for gathering the requirements and represents them in the required format.

The main constraint placed on the process was the time constraint. For every phase of project, a specific deadline was set which had to be met by the development team. The team was scheduled to work in the given time frame and produce the result.

## 1.4 Objective of the System

The core objective is to implement the project City guide was to reduce the work and efforts and at identical time increase the flow of the work done.

- All information about the city, online.
- Easy access for user who want the any information of city for travelling, business purpose.
- The tourist will visit city online and find the tourist place in the city easily.
- The business man has facility to advertise our product online.
- Complete History of the city
- About the City: Restaurants, Hotels, Hospitals.

## 2. Problem Statement

To create a web application which will give services to a tourist & also local people. A tourist needs technologies which can serve for them. So, the web application should be easy to use and efficient to manage the travelling activities. Due to unavailability of such application tourist are facing problems while travelling to Jabalpur. They have to pay handsome amount of travelling budget to local guides and agents to get information. This proper tourist guide will serve to tourist and locals in the ways like detect a current location, calculate distance, provide proper real time direction, and provide proper guidelines textual and pictorial information about the location.

App to provide all generic public information of Jabalpur City. Information is about city main attraction, hospitals, police stations, public representatives, bus time table, restaurants etc. based on geo location.

For a city to be smart there should be proper communication between citizens and government.

Our mobile app Smart Jabalpur Guide builds a bridge to overcome this gap.

Smart Jabalpur Guide mobile app provide all generic public information of Jabalpur City.

Information is about city main attraction, hospitals, police stations, advocates, public representatives, transportation services like bus time table, train information, flight information, restaurants, blood bank, history, public data like birth rate, death rate, rainfall statistics etc. based on geo location.

## **2.1 Existing System**

The main problem within the existing systems is that the work done in they are performed by the individual who takes more time to enter and store the details in which there is more possibility for human made errors. The data retrieval takes more time and sometimes the data may be lost and there are even no chances to find the appropriate statistical calculations of the bills.

## **2.2Proposed System**

The Smart Jabalpur Guide mobile app provide all generic public information of Jabalpur City.

Information is about city main attraction, hospitals, police stations, advocates, public representatives, transportation services like bus time, restaurants, based on geo location.

This proper tourist guide will serve to tourist and locals in the ways like detect a current location, calculate distance, provide proper real time direction, and provide proper guidelines textual and pictorial information about the location.

App to provide all generic public information of Jabalpur City.

### 3. REQUIREMENTS

#### 3.1 SPECIFIC REQUIREMENTS

##### Hardware Interfaces:

<b>SOFTWARE</b>	<b>PROCESSOR</b>	<b>RAM</b>	<b>DISK SPACE</b>
<b>CLIENT SIDE</b>			
Internet Explorer	Intel Pentium IV at 1 GHz	512 MB	2 GB
<b>SERVER SIDE</b>			
Apache Tomcat	Intel Pentium IV at 2.6 GHz	1 GB	2 GB

##### Software Interfaces:

###### Front End Client:

Front end of this application will be web interface which can be accessible on Internet Explorer 6.0+, Firefox, Chrome, and Safari.

###### Web Server:

Apache Tomcat Application Server.

###### Data Base Server:

MySQL

###### Back End:

J2EE/JSP/Servlet

## **Supplementary Requirements.**

This project requires 2 external libraries.

- json-simple.jar: this library is used to manipulate JSON received by the API calls.
- mysql-connector.jar: this library consists of the important classes which are used to connect to MySQL database through JDBC.

## **3.2 Non-functional Requirements**

### **Safety Requirements**

One way of calculating software safety is to categorize our software failures into the following states:

- Transient - Occur only with certain inputs.
- Permanent - Occur with all inputs
- Recoverable –System can recover data with no operator intervention
- Unrecoverable-operator intervention needed for recovery.
- Non-corrupting-Failure does not corrupt data.
- Corrupting-Failure corrupts data.

## **Security Requirements:**

- **Code security** - Proper code depending upon the area, region, state and country should be generated to provide each customer a unique identification.
- **Authorization** - only license creators can acquire content from the content creator
- **Secrecy** - The content is protected from eavesdropping when it is communicated to another component of the system.
- **Trust** -The manager/renderer pair on the user side will only render the content if all terms of any one valid license governing this content are met
- **Robustness**- The internal workings of the manager/renderer pair cannot be influenced or disrupted by the license creator, the user nor any third party.
- **Authentication**- no component sends the content to another component, unless the receiving component is authenticated as an official component.



## **Software Quality Attributes:**

- i.) Performance - from the tradition of hard real-time systems and capacity planning.
- ii.) Dependability -from the tradition of ultra-reliable, fault-tolerant systems.
- iii.) Usability - from the tradition of human-computer interaction and human factors.
- iv.) Safety - from the tradition of hazard analysis and system safety engineering.
- v.) Security - from the traditions of the government, banking and academic communities.
- vi.) Access to user transactions shall be restricted to holders of valid banking cards and personal Identification numbers.
- vii.) System shall shutdown upon detection of device error, fatal software error or upon loss to the link to database.
- viii.) System shall record all transactions in its daily log.

## **4. SOFTWARE DEVELOPMENT METHODOLOGY**

The establishment and use of sound engineering principles in order to obtain economically developed software that is reliable and works efficiently on real machines is called software engineering.

Software engineering is the discipline whose aim is:

1. Production of quality software
2. Software that is delivered on time
3. Cost within the budget
4. Satisfies all requirements.

Software process is the way in which we produce the software. Apart from hiring smart, knowledgeable engineers and buying the latest development tools, effective software development process is also needed, so that engineers can systematically use the best technical and managerial practices to successfully complete their projects.

A software life cycle is the series of identifiable stages that a software product undergoes during its lifetime. A software lifecycle model is a descriptive and diagrammatic representation of the software life cycle. A life cycle model represents all the activities required to make a software product transit through its lifecycle phases. It also captures the order in which these activities are to be taken.

Typical formal definitions of software engineering are:

- "research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications."

- "The systematic application of scientific and technological knowledge, methods, and experience to the design, implementation, testing, and documentation of software."
- "The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software."
- "An engineering discipline that is concerned with all aspects of software production."
- "The establishment and use of sound engineering principles in order to economically obtain software that is reliable and works efficiently on real machines."

## 4.1 SOFTWARE PROCESS MODEL

There are various life cycle models to improve the software processes.

WATERFALL MODEL

PROTOTYPE MODEL

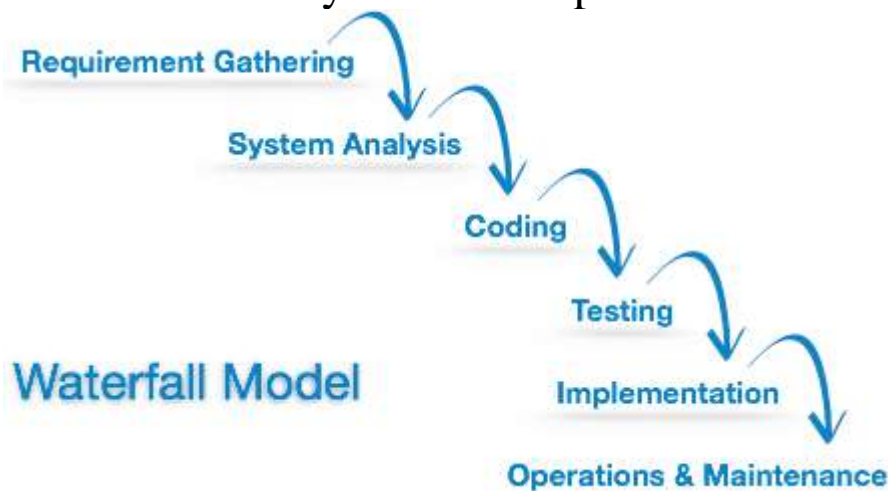
ITERATIVE INCREMENTAL MODEL

EVOLUTIONARY MODEL

SPIRAL MODEL

### Waterfall Model

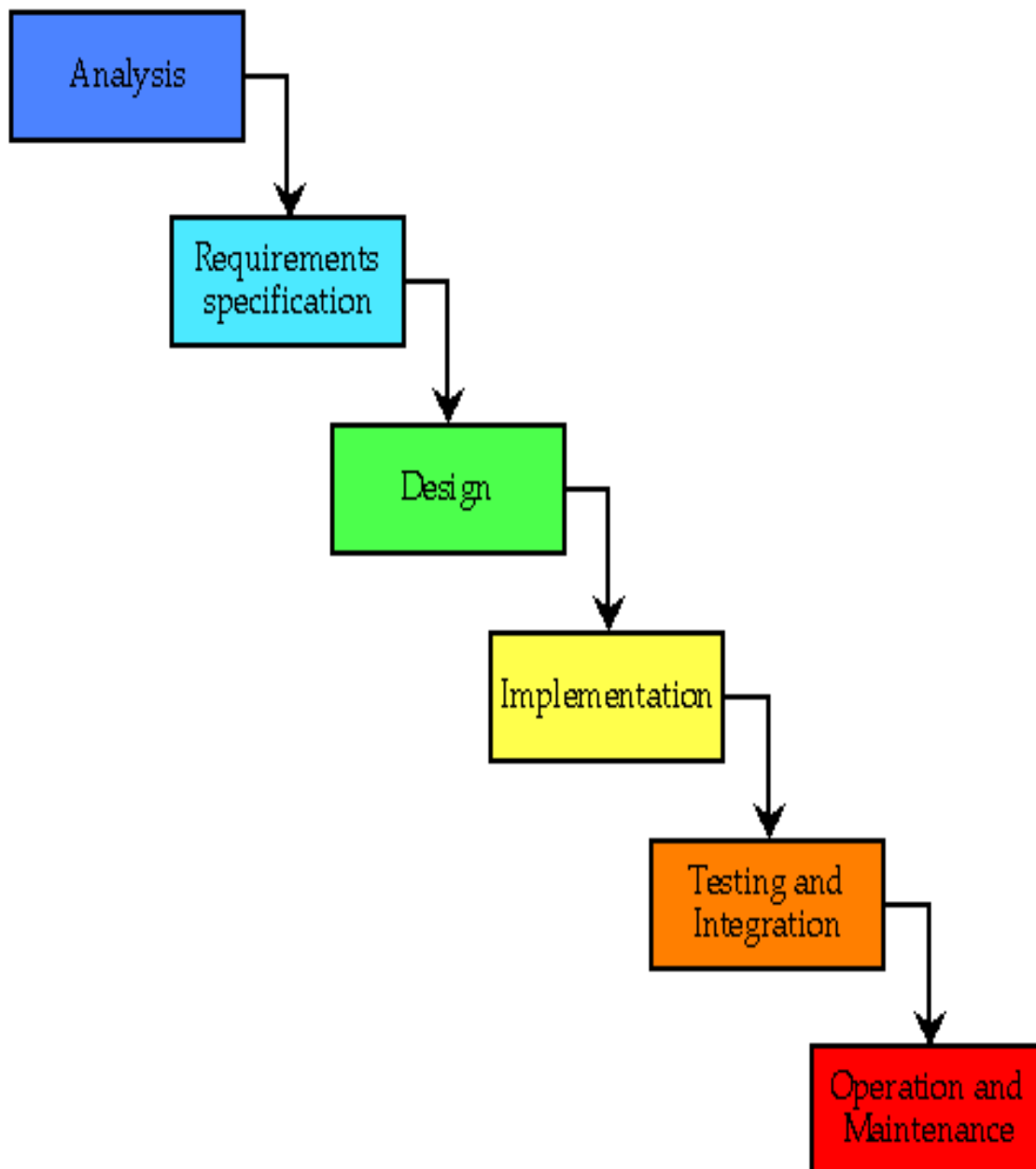
Waterfall model is the simplest model of software development paradigm. It says the all the phases of SDLC will function one after another in linear manner. That is, when the first phase is finished then only the second phase will start and so on.



This model assumes that everything is carried out and taken place perfectly as planned in the previous stage and there is no need to think about the past issues that may arise in the next phase. This model does not work smoothly if there are some issues left at the previous step. The sequential nature of model does not allow us go back and undo or redo our actions.

This model is best suited when developers already have designed and developed similar software in the past and is aware of all its domains.

In the project, Waterfall model is followed.



# WATERFALL MODEL

This model contains 6 phases:

- Feasibility study

The feasibility study activity involves the analysis of the problem and collection of the relevant information relating to the product. The main aim of the feasibility study is to determine whether it would be financially and technically feasible to develop the product.

- Requirement analysis and specification

The goal of this phase is to understand the exact requirements of the customer and to document them properly (SRS).

- Design

The goal of this phase is to transform the requirement specification into a structure that is suitable for implementation in some programming language.

- Implementation and unit testing

During this phase the design is implemented. Initially small modules are tested in isolation from rest of the software product.

- Integration and system testing

In this all the modules are integrated and then tested altogether.

- Operation and maintenance

Release of software inaugurates the operation and life cycle phase of the operation.

The phases always occur in this order and do not overlap.

## 4.2 FEASABILITY STUDY

Once scope has been identified (with the concurrence of the customer), it is reasonable to ask: “Can we build software to meet this scope? Is the project feasible?” All too often, software engineers rush past this question (or are pushed past them by impatient managers or customers), only to become mired in a project that is doomed from the onset.

When we are developing the system (software), we must know the proposed system will be feasible or i.e. practically implemented or not it may possible the proposed (candidate) system may not implemented due to many reasons like it may take long time in development than the specified time limit, cost may increase than proposed one etc. Therefore, we must analyze the feasibility of the system.

Feasibility is the analysis of risks, costs & benefits relating to economics, technology & user operation. There are several types of feasibility depending on the aspect they cover.

Some important feasibility is as follows: -

- (I) Technical Feasibility
- (II) Operational Feasibility
- III) Economical Feasibility

### **4.2.1 TECHNICAL FEASIBILITY**

The technical feasibility study basically centers on alternatives for hardware, software and design approach to determine the functional aspects of system.

This project on City Guide will be platform independent since it is being coded in JAVA language.

MySQL database will be used for storing data.

Hardware requirements used are compatible with all O.S. Only authorized person would be able to use the website so it would be secure. The system can also be expanded as per the needs of requirement specification.

### **4.2.2 OPERATIONAL FEASIBILITY**

Operational Feasibility is a measure of how people are able to work with system. This type of feasibility demands if the system will work when developed and installed.

Since web-based applications are very user friendly so users will find it comfortable to work on it.

### **4.2.3 ECONOMICAL FEASIBILITY**

Economic analysis is the most frequently used evaluating the effectiveness of proposed system, more commonly known as Benefit analysis. The Benefit analysis is to determine benefits and savings which are expected from billing system and compare them with cost. If the benefits are more than the cost, then decision is made to design and implement the system. The cost and benefits may be direct or indirect and tangible or intangible.



## 5. TESTING

- Software testing is the process of executing a program with intension of finding errors in the code. It is a process of evolution of system or its parts by manual or automatic means to verify that it is satisfying specified or requirements or not.
- Generally, no system is perfect due to communication problems between user and developer, time constraints, or conceptual mistakes by developer.
- To purpose of system testing is to check and find out these errors or faults as early as possible so losses due to it can be saved.
- Testing is the fundamental process of software success.
- Testing is not a distinct phase in system development life cycle but should be applicable throughout all phases i.e. design development and maintenance phase.
- Testing is used to show incorrectness and considered to success when an error is detected.

## **OBJECTIVES OF SOFTWARE TESTING**

The software testing is usually performed for the following objectives: -

### **SOFTWARE QUALITY IMPROVEMENT**

The computer and the software are mainly used for complex and critical applications and a bug or fault in software causes severe losses. So, a great consideration is required for checking for quality of software.

### **VERIFICATION AND VALIDATION**

- Verification means to test that we are building the product in right wayside. are we using the correct procedure for the development of software so that it can meet the user requirements.
- Validation means to check whether we are building the right product or not.

### **SOFTWARE RELIABILTY ESTIMATION**

The objective is to discover the residual designing errors before delivery to the customer. The failure data during process are taken down in order to estimate the software reliability.

# **PRINCIPLES OF SOFTWARE TESTING**

Software testing is an extremely creative and challenging task. Some important principles of software testing are as given: -

- All tests should be traceable to customer requirements.
- Testing time and resources should be limited i.e. avoid redundant testing.
- It is impossible to test everything.
- Use effective resources to test.
- Test should be planned long before testing begins i.e. after requirement phase.
- Test for invalid and unexpected input conditions as well as valid conditions.
- Testing should begin in “in the small” and progress towards testing “in the large”.
- For the most effective testing should be conducted by an independent party.
- Keep software static (without change mean while) during test.
- Document test cases and test results.
- Examining what the software not doing which it expected to do and also checking what it is doing that was not expected to do.

# STRATEGY FOR SOFTWARE TESTING

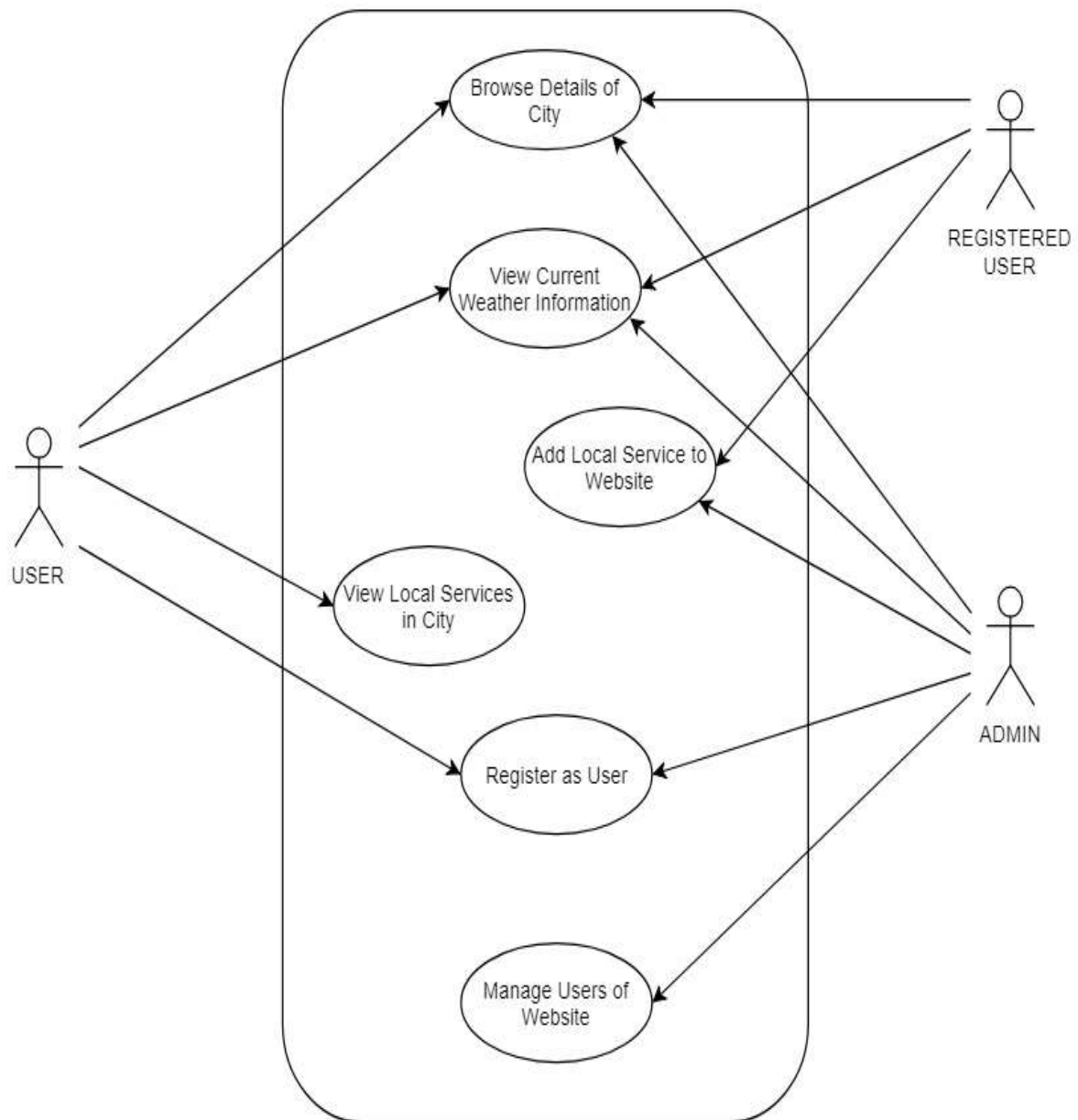
Different levels of testing are used in the test process each level of testing aims to test different aspects of the system.

- The first level is **unit testing**. In this testing, individual components are tested to ensure that they operate correctly. It focuses on verification efforts.
- The **second level** is **integration testing**. It is a systematic technique for constructing the program structure. In this testing, many tested modules are combined into the sub systems which are then tested. The good here is to see if the modules can be integrated properly.
- Third level is **system testing**. System testing is actually a series of different tests whose primary purpose is to fully exercise computer-based system. These tests fall outside scope of software process and are not conducted solely by software engineers

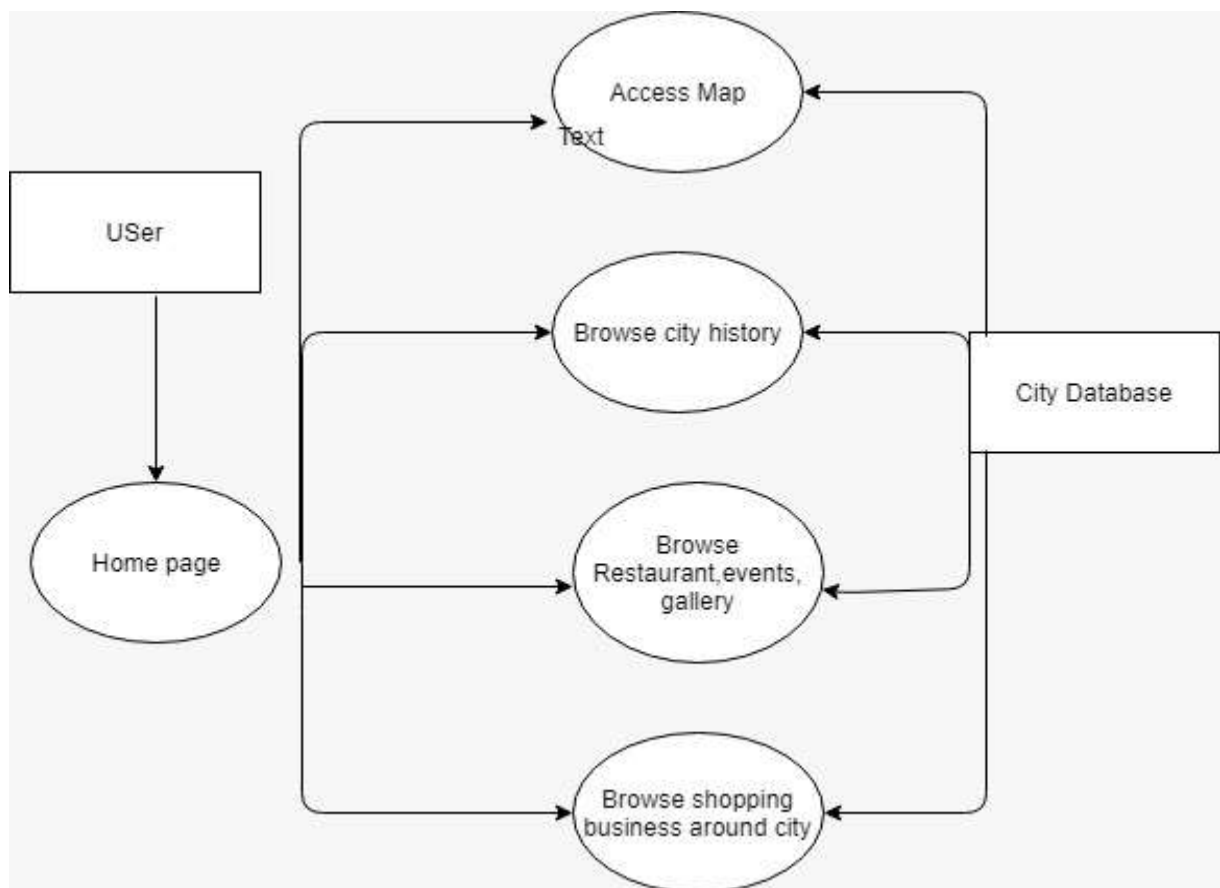
## 6. DIAGRAMS

### USE CASE DIAGRAMS

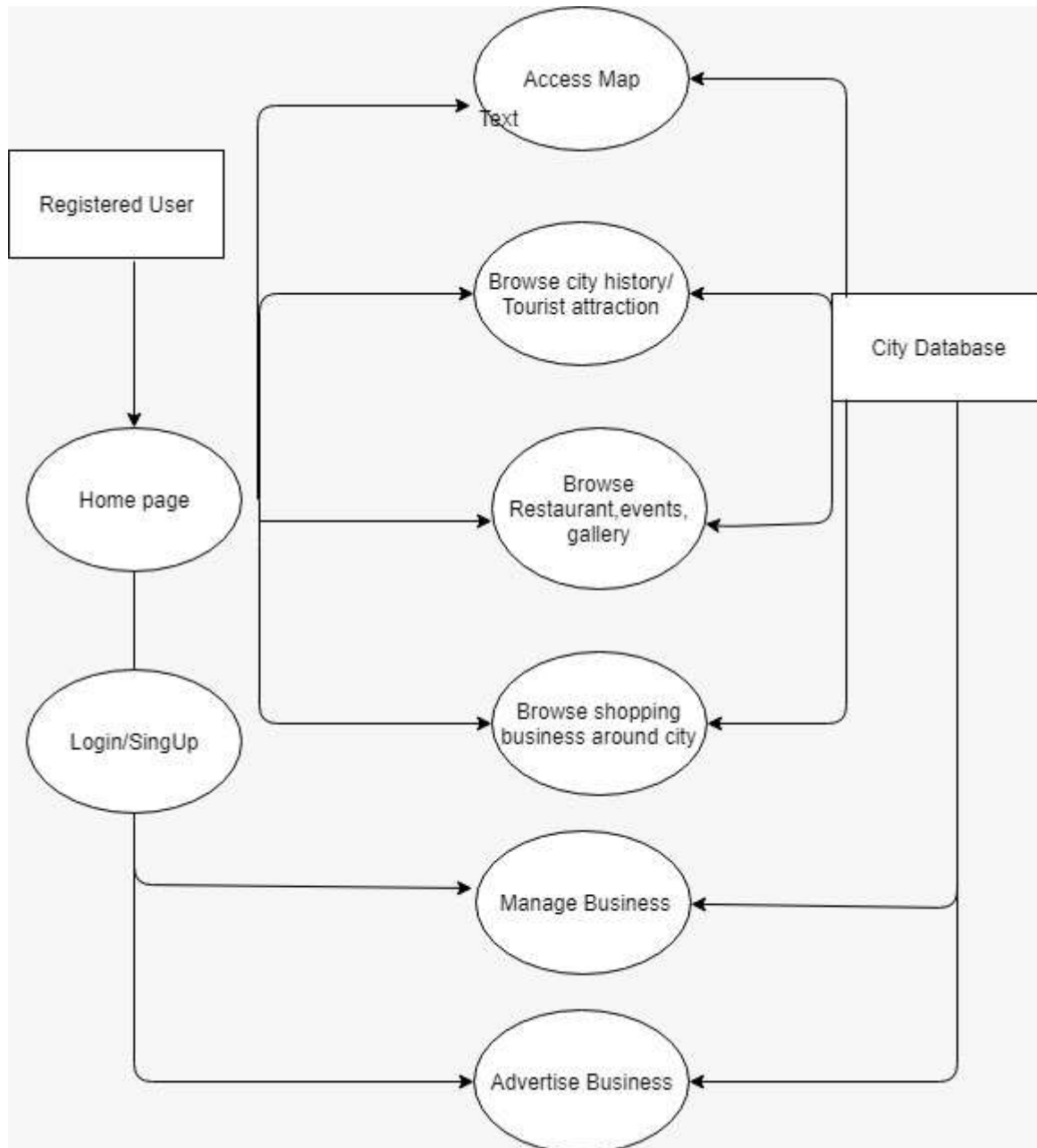
#### 1. General Use Case:



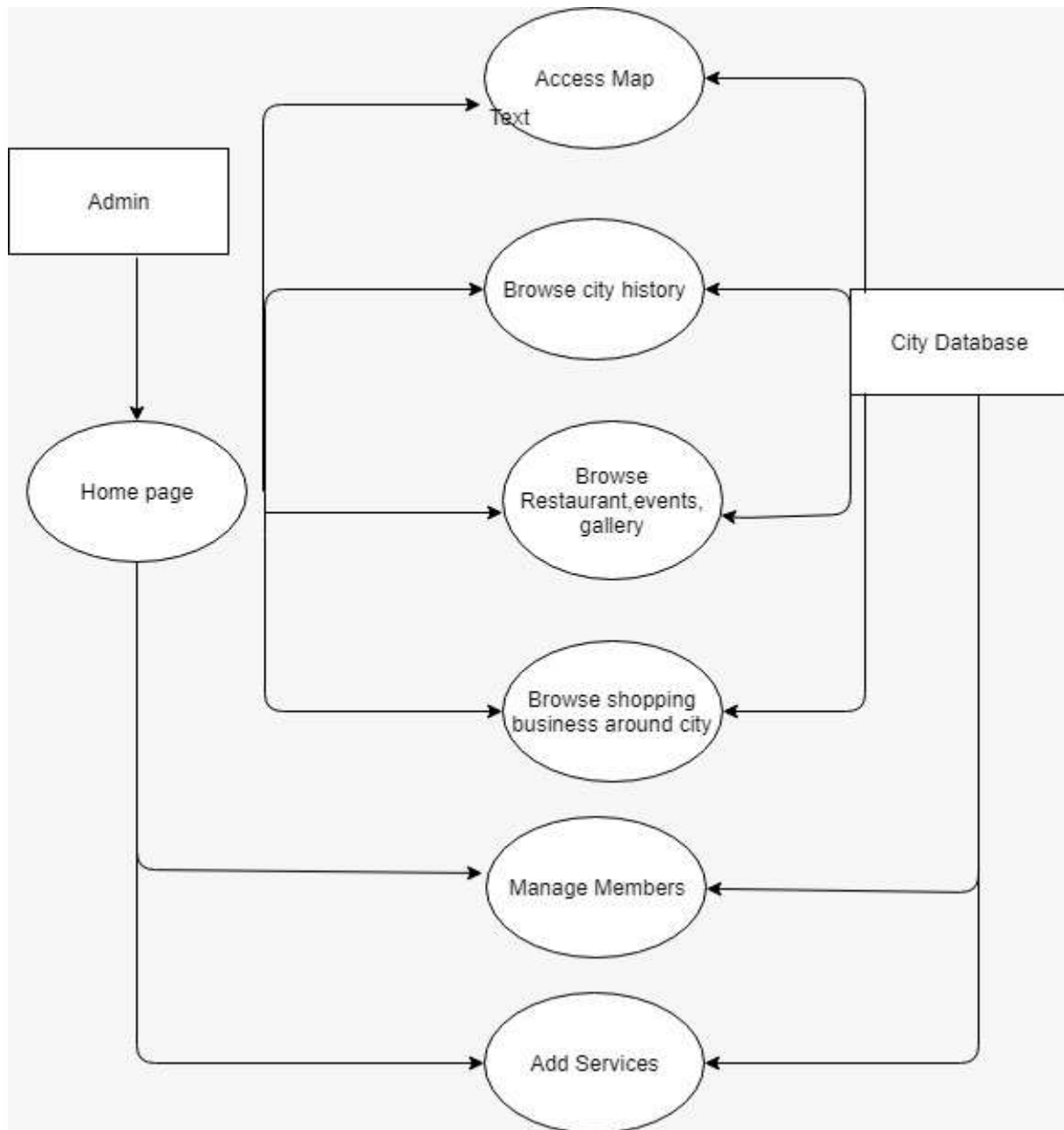
## 2. Unregistered user:



### 3. Registered User:



## 4. Admin





## **7. USER CHARACTERISTICS:**

There will be various kinds of users on the site. Majorly they belong to these groups.

### **1. Local Citizens**

- Details of city
- General Facts of City
- History of City
- Current weather information of City.
- Attractions
- Accommodations

### **2. Tourists**

- Details of city
- Attractions
- Accommodations
- Different Statistics of City

### **3. Local Businessmen**

- Business Listings
- Advertise their business
- Different Statistics of City

### **4. Remote Businessmen**

- Local Business detail

### **5. Admin Team**

- Manage different User.
- Global configuration of the site
- Manage different local Services.

## 8. DATABASE TABLES

Some abbreviations listed below -

- PK – Primary Key
- FK – Foreign Key
- AI – auto-incremented, the seed and increment values are 1 unless specified.
- Def – default value
- NN – Not Null (Required)
- UC – Unique Constraint
- SLT – Single Line of Text
- MLT – Multiple Lines of Text
- PG – Person or Group
- Yes/No (checkbox) – Yes/No

### i.) Members

Table Name	Members		
Description	This table will contain the login details of the users.		
Primary Keys	email		
Field Name	Data type	Constraints	Comments
User_Name	Varchar(50)	PK	
Password	Varchar(30)	NN	

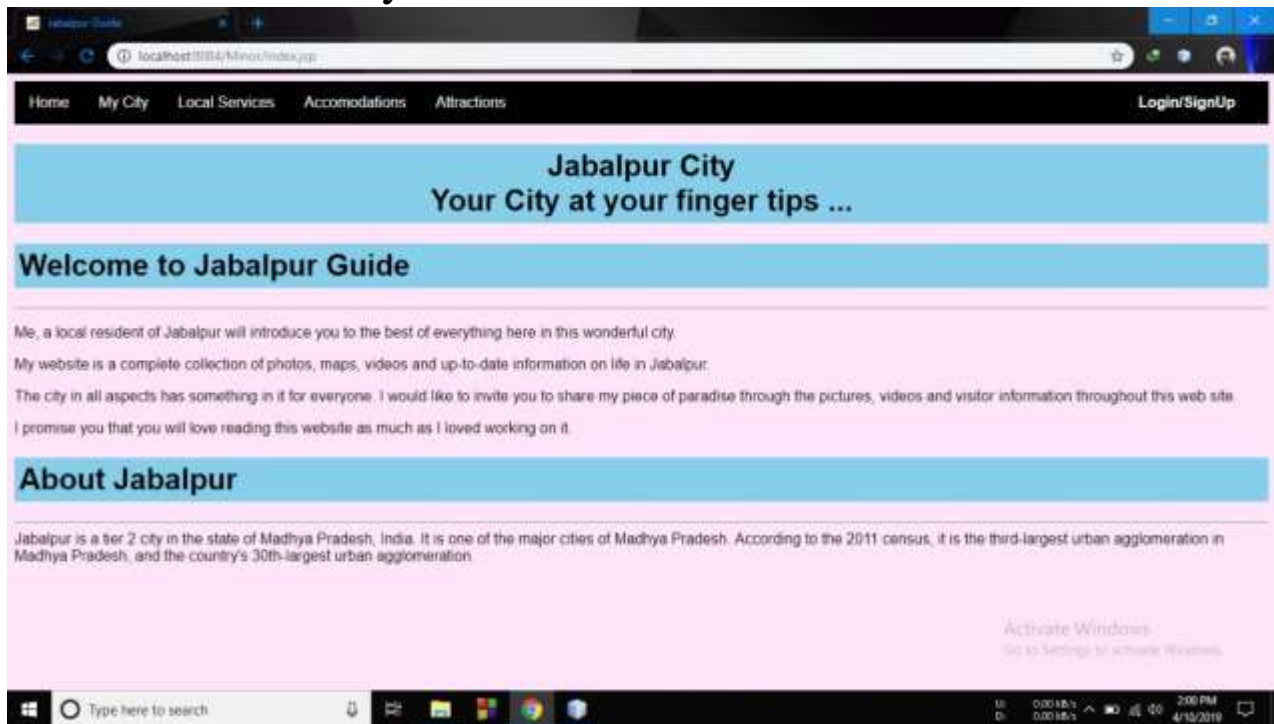
### ii.) Local Services

Table Name	localservices		
Description	This table will contain the information of the local services of the city.		
Field Name	Data type	Constraints	Comments
Phone Number	number	PK	
Name	varchar(20)	NN	
Address	Varchar(20)	NN	
Pincode	number(6)	NN	
Customer Name	varchar(20)	NN	

## 9. SCREENSHOTS:

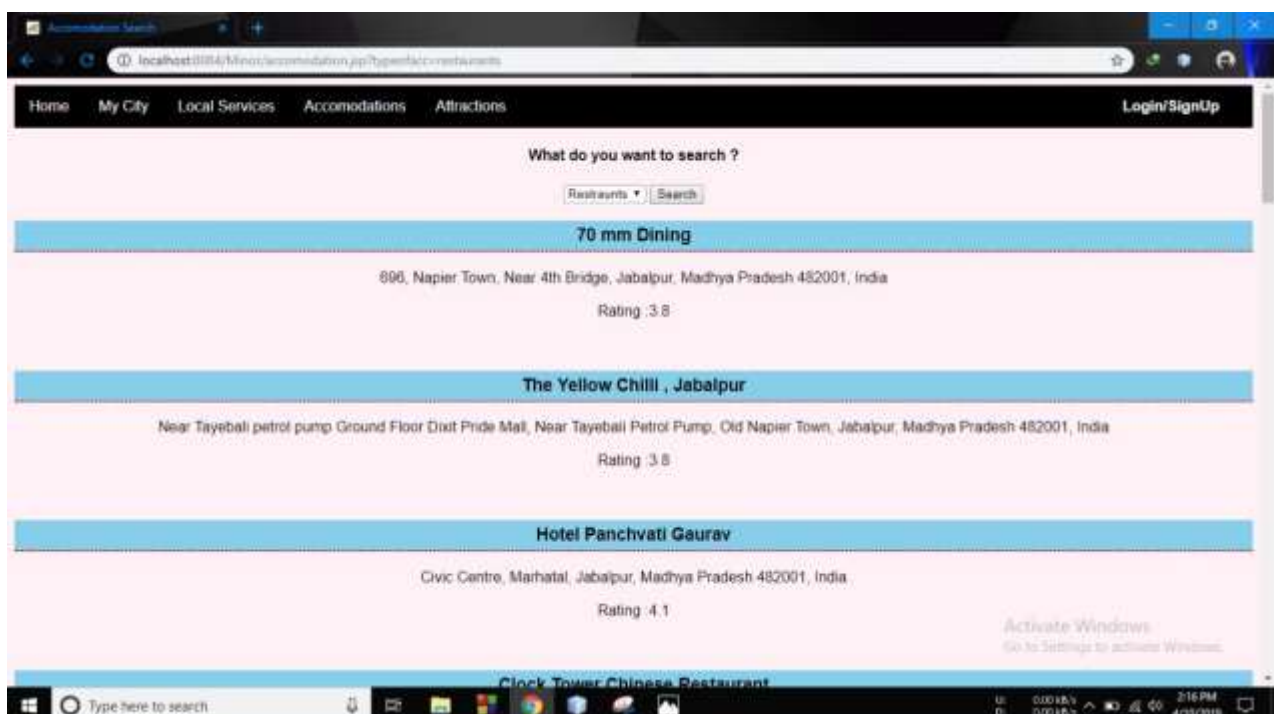
### 1). Home Page:

This page is the home page of the website which shows some details about the city.



### 2). Accommodation Page:

In this page you can search for accommodation in the city like Hotels, Hospitals, Restraunts etc.



### 3). Add your Service Page:

In this Page you can your Business/Service in the website to advertise in this website.



Business Name

Your Full name

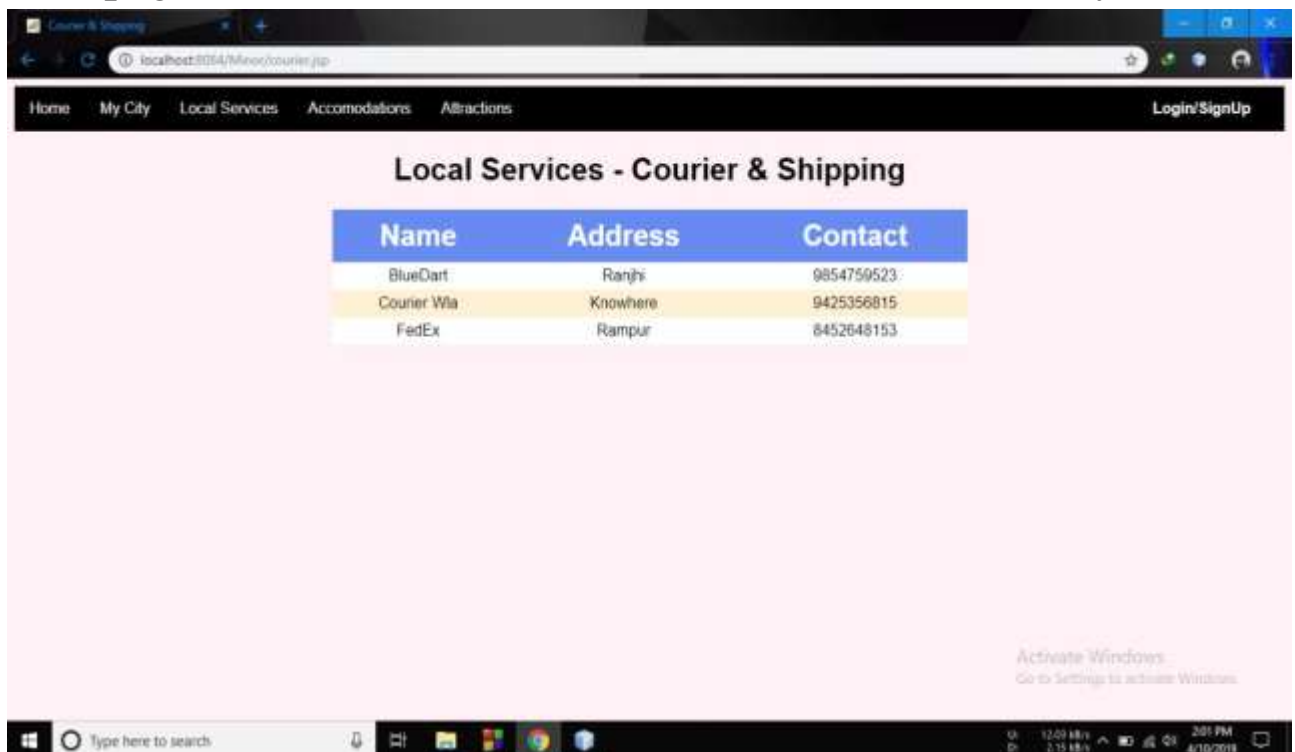
Mobile Number

Address

Type of Business

### 4). View Local Services Page:

This page shows all the local services available in the city.



Name	Address	Contact
BlueDart	Ranghi	9854759523
Courier Wla	Knowhere	9425356815
FedEx	Rampur	8452648153

## 5). Weather Information Page:

This page shows the current weather of Jabalpur City by using Weather API.



## 6). View Attraction in City Page:

This page shows all the attraction int Jabalpur city.



## 10. FUTURE SCOPE

After implementing the system, the project will be great scope of application. Now days in all the organization the work culture has totally changed. The entire application of the system targets to connect the office as paperless office. The table should be converted to computer terminals and all officers are to be considered as the local workstations. In the near future all the systems will be manipulated by the Computer system. Our application will be smart and modern.

In the general service many problems arise when billing and databases are stored in black and white. But in the near future the system will require fulfilling various operations. Day to day the databases will increase very rapidly in the Telephone Exchange. Therefore, it is essential to maintain the administration in such a way that all the data storage and other administrative tasks are accurate and safe. The project scope is very high. All promises are very conceptual and henceforth the result is absolute.

Every project whether large or small has some limitations no matter however diligently developed. In some cases limitations is small while in other cases they may be broad also. The new system has got some limitations. Major areas where modifications can be done are as follows:

- Our system is not online so further it can be improved.
- The security is limited so some additional arrangement could be made to provide more security to the system.
- There is no provision of complain handling so further it can be added.

## 11. CONCLUSION

In this project we have tried our best to make user friendly software. This software can be handled by any person who has little bit of idea of computers. In this software we have tried to meet most of the requirements of the present telephone billing services including maintaining details of customers, their accounts and other information's. We also keep provision to alter the database of customer details and records of the accounts. We have given a professional look to the reports of the services of our system using data-report. In our effort we have tried to make our software all the more user friendly but there may some features which we would like to include in our continuous attempts.

## 12. References

1. [www.google.com](http://www.google.com)
2. [www.wikipedia.org](http://www.wikipedia.org)
3. [www.console.developers.google.com](http://www.console.developers.google.com)