A Project Report on

Contact Management System

SubmittedTo

Dr.Sonal Bordia Jain
Assistant Professor

SubmittedBy

Chanchal Jain
18CPGXX221

S.S. Jain Subodh P.G. College, MCA Institute
Affiliated to
Rajasthan Technical University, Kota

Batch (2018-20)
April-2020

Certificate

This is to certify that the project entitled, "Contact Management System" submitted by Chanchal Jain d/o Atam Prakash Jain Roll. No.18CPGXX221 in partial fulfillment of the requirements for the award of Master of Computer Application at the S.S. Jain SubodhP.G. College MCA Institute, Jaipur is an authentic work carried out by him under my supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other University / Institute for the award of any Degree or Diploma.

Date:

Dr. Sonal Bordia Jain
Assistant Professor
S.S. Jain Subodh P.G. College, MCA Institute

Acknowledgment

I express my deep sense of gratitude to my respected and learned guide, **Dr.Sonal Bordia Jain** for his valuable help and guidance. I am thankful for the encouragement he/she has given me in the completion of my project.

I am also grateful to our respected **Prof. K.B. Sharma**, Director and **Mr. Ashish Chandra Swami,** Head of Department for allowing me to utilize all the necessary resources of the institution to complete my project. I am also thankful to all the other faculty and staff members of our department for their kind co-operation and help.

Lastly, I would like to express my deep appreciation towards my classmates and indebtedness to my parents for providing me the moral support and encouragement.

Date:

Chanchal Jain
Class– MCA 6thsem
RollNo.- 18CPGXX221

Table of Content

Introduction

A Contact Management System (most commonly known as a CRM or Customer Relationship Management) is a program that enables you to store and manage contact information. They are essentially databases that track all your information and communication based on your contacts.

A contact management system offers many benefits for the user, which include:

- Centralization of information which makes it easy to search for contacts.
- Sales tracking
- Email integration
- Calendar integration
- Documents, notes and conversation management
- Import/export utility
- Ease of communication

Objective

The main **objective** for developing this project **Contact Management System** is to storing the detail of the employees and other persons that are associated with an organization. ... It can also **manage Contacts**, Peoples, Mobiles, Address, Reminders, Phone Numbers. File handling has been used to record all data.

Once a company has established a Contact Management System, it can cater to the needs of the customer better. The records of the customer can now be studied to understand his or her preferences and implement them for each individual lead. This gives way to contact personalization.

By managing contacts, the organization can also look for opportunities to upsell and cross-sell a product or service depending on the customer's current situation. By doing so, the company achieves a two-part objective.

Scope

Opting for a Contact Management System (preferably automated) can provide the following benefits to an organization:

- Storing of customer information in a well-incorporated data repository from where it can be accessed by any computer terminal in the organization.
- Maintaining customer records with greater efficiency and less overhead as well as utilizing them to achieve maximum customer satisfaction.
- Tracking sales records and promoting new offers to enthusiastic customers, indirectly inducing upselling.
- Implementation of drip marketing using e-mails, social sites and other mediums.

Technology Used

ExpressJs : Restful API

Express is a minimal and flexible Node.js web application framework that provides a robust set of features to develop web and mobile applications. It facilitates the rapid development of Node based Web applications. Following are some of the core features of Express framework −

- Allows to set up middlewares to respond to HTTP Requests.
- Defines a routing table which is used to perform different actions based on HTTP Method and URL.
- Allows to dynamically render HTML Pages based on passing arguments to templates.

NodeJS: JavaScript Server Side

Node.js is a very powerful JavaScript-based platform built on Google Chrome's JavaScript V8 Engine. It is used to develop I/O intensive web applications like video streaming sites, single-page applications, and other web applications. Node.js is open source, completely free, and used by thousands of developers around the world.

ode.js is an open source, cross-platform runtime environment for developing server-side and networking applications. Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux.

Node.js also provides a rich library of various JavaScript modules which simplifies the development of web applications using Node.js to a great extent.

AngularJs: Presentation

- Angular is a typescript -based web application framework led by the Angular Team at Google and by a community of individuals and corporations.
- Angular is a widely-used, open source front-end framework
- Angular is free to download and use

MongoDb :database

MongoDB is a cross-platform, document oriented database that provides, high performance, high availability, and easy scalability. MongoDB works on concept of collection and document.

Database

Database is a physical container for collections. Each database gets its own set of files on the file system. A single MongoDB server typically has multiple databases.

Collection

Collection is a group of MongoDB documents. It is the equivalent of an RDBMS table.

A collection exists within a single database. Collections do not enforce a schema.

Requirement Analysis

Since this whole project runs on the web server, the server must have at least these hardware and software configurations in order to run this smoothly.

Hardware

Dual Core Processor

1 GB Ram

160 GB Hard Drive

Software

Operating System – Windows 7,8 , 8.1, 10

Node js

Angular

CMD

Browser (like Google Chrome, Safari, Mozilla etc.)

Mongodb

Visual Studio Code

System Analysis

System Analysis refers to the comparison between the existing and new system. It helps us answer so many questions like –

How our new system is better than the existing one?

What are the advantages the new system holds over the existing one? And so on…

A. Add contact function

Add contact function appears as :

The Admin/user is allowed to enter contact details

- Name of the person
- Technology
- Location
- E-mail
- Contact no.
- Profile

B. Add technology

- New technologies can be entered

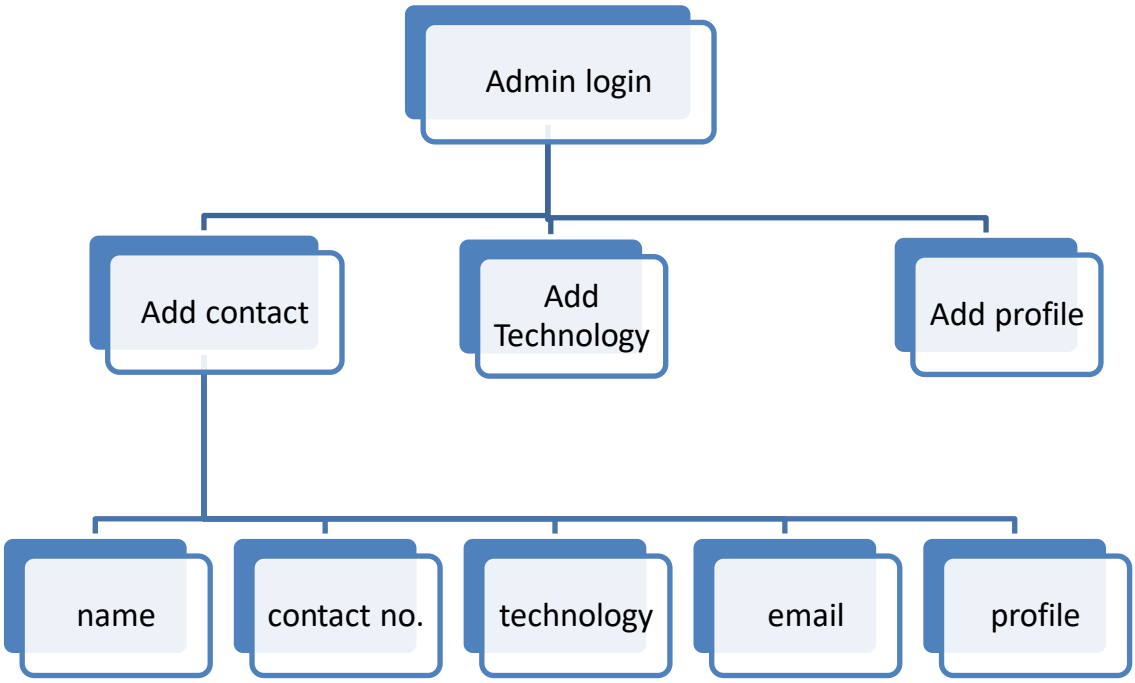
C. Add profile

- New profile of the contact person is added

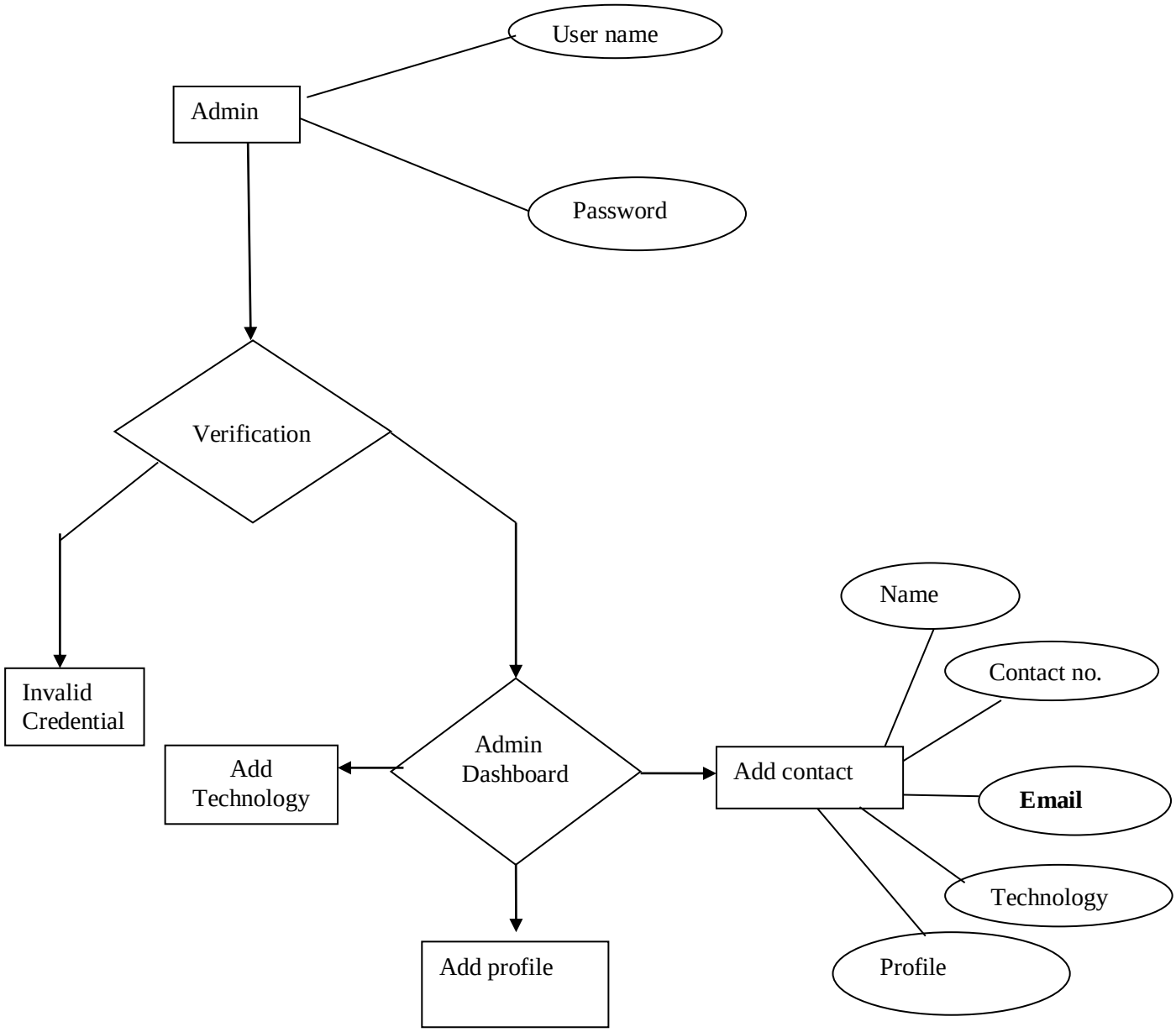
D. Manage

Admin or user can Update or delete a contact

System Design



ER diagrams


User name
Admin
Password
Verification
Invalid Credential
Admin Dashboard
Add Technology
Add contact
Add profile
Name
Contact no.
Email
Technology
Profile

Databases Used:

User Details

S no.	Column Name	Datatype
1	Name	Varchar
2	E- mail	Varchar
4	Contact number	Varchar
5	Profile	Varchar
6	Technology	Varchar

Testing

Software testing methodologies are the various strategies or approaches used to test an application to ensure it behaves and look as expected. These encompass everything from front to back-end testing, including unit and system testing.

Functional vs. Non-functional Testing

The goal of utilizing numerous testing methodologies in our development process is to make sure our software can successfully operate in multiple environments and across different platforms. These can typically be broken down between functional and non-functional testing. Functional testing involves testing the application against the business requirements. It incorporates all test types designed to guarantee each part of a piece of software behaves as expected by using uses cases provided by the design team or business analyst. These testing methods are usually conducted in order and include:

- Unit testing
- Integration testing
- System testing
- Acceptance testing

Non-functional testing methods incorporate all test types focused on the operational aspects of a piece of software. These include:

- Performance testing
- Security testing
- Usability testing
- Compatibility testing

The key to releasing high quality software that can be easily adopted by your end users is to build a robust testing framework that implements both functional and non-functional software testing methodologies.

Unit Testing

Unit testing is the first level of testing and is often performed by the developers themselves. It is the process of ensuring individual components of a piece of software at the code level are functional and work as they were designed to. Developers in a test-driven environment will typically write and run the tests

prior to the software or feature being passed over to the test team. Unit testing can be conducted manually, but automating the process will speed up delivery cycles and expand test coverage. Unit testing will also make debugging easier because finding issues earlier means they take less time to fix than if they were discovered later in the testing process. TestLeft is a tool that allows advanced testers and developers to shift left with the fastest test automation tool embedded in any IDE.

Integration Testing

After each unit is thoroughly tested, it is integrated with other units to create modules or components that are designed to perform specific tasks or activities. These are then tested as group through integration testing to ensure whole segments of an application behave as expected (i.e, the interactions between units are seamless). These tests are often framed by user scenarios, such as logging into an application or opening files. Integrated tests can be conducted by either developers or independent testers and are usually comprised of a combination of automated functional and manual tests.

System Testing

System testing is a black box testing method used to evaluate the completed and integrated system, as a whole, to ensure it meets specified requirements. The functionality of the software is tested from end-to-end and is typically conducted by a separate testing team than the development team before the product is pushed into production.

Acceptance Testing

Acceptance testing is the last phase of functional testing and is used to assess whether or not the final piece of software is ready for delivery. It involves ensuring that the product is in compliance with all of the original business criteria and that it meets the end user's needs. This requires the product be tested both internally and externally, meaning you'll need to get it into the hands of your end users for beta testing along with those of your QA team. Beta testing is key to getting real feedback from potential customers and can address any final usability concerns.

Security Testing

With the rise of cloud-based testing platforms and cyber attacks, there is a growing concern and need for the security of data being used and stored in software. Security testing is a non-functional software testing technique used to determine if the information and data in a system is protected. The goal is to purposefully find loopholes and security risks in the system that could result in unauthorized access to or the loss of information by probing the application for weaknesses. There are multiple types of this testing method, each of which aimed at verifying six basic principles of security:

- Integrity
- Confidentiality
- Authentication
- Authorization
- Availability
- Non-repudiation

Usability Testing

Usability testing is a testing method that measures an application's ease-of-use from the end-user perspective and is often performed during the system or acceptance testing stages. The goal is to determine whether or not the visible design and aesthetics of an application meet the intended workflow for various processes, such as logging into an application. Usability testing is a great way for teams to review separate functions, or the system as a whole, is intuitive to use.

Compatibility Testing

Compatibility testing is used to gauge how an application or piece of software will work in different environments. It is used to check that your product is compatible with multiple operating systems, platforms, browsers, or resolution configurations. The goal is to ensure that your software's functionality is consistently supported across any environment you expect your end users to be using.

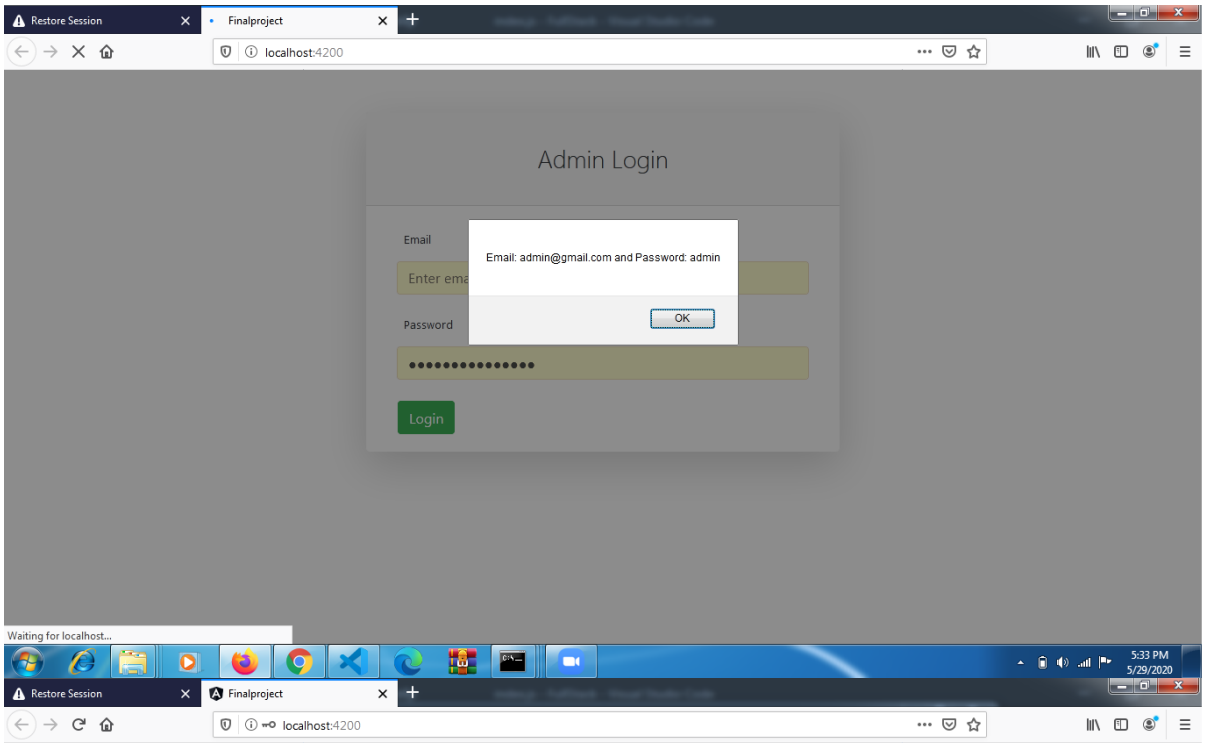
Implementation

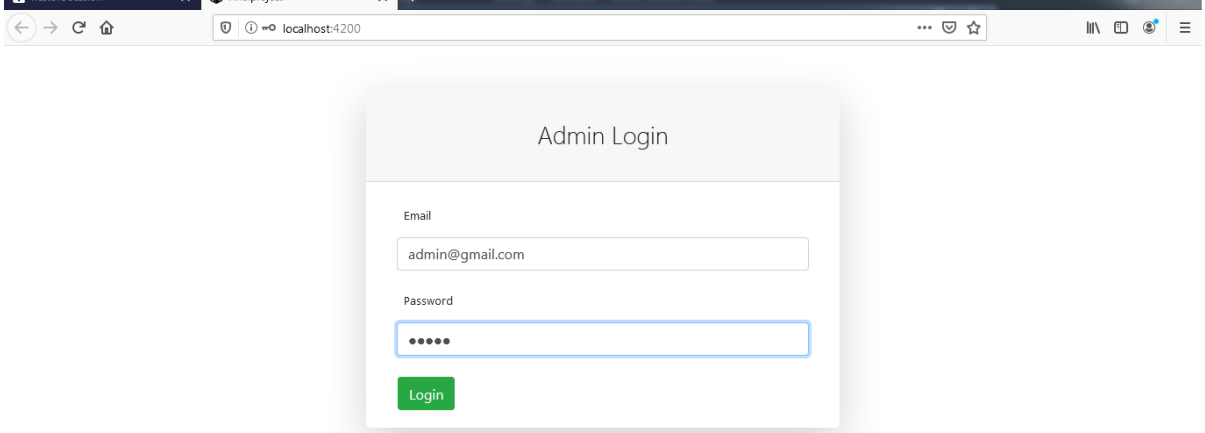
Contact Management System is a fully web-based system . It does not require any special kind of software to be installed on the user's computer to use it. The admin/user simply needs to visit the URL (Uniform Resource Locator) of the where it has been hosted in order to use it. You can instantly search regarding any food recipes and also let you add your own recipe.

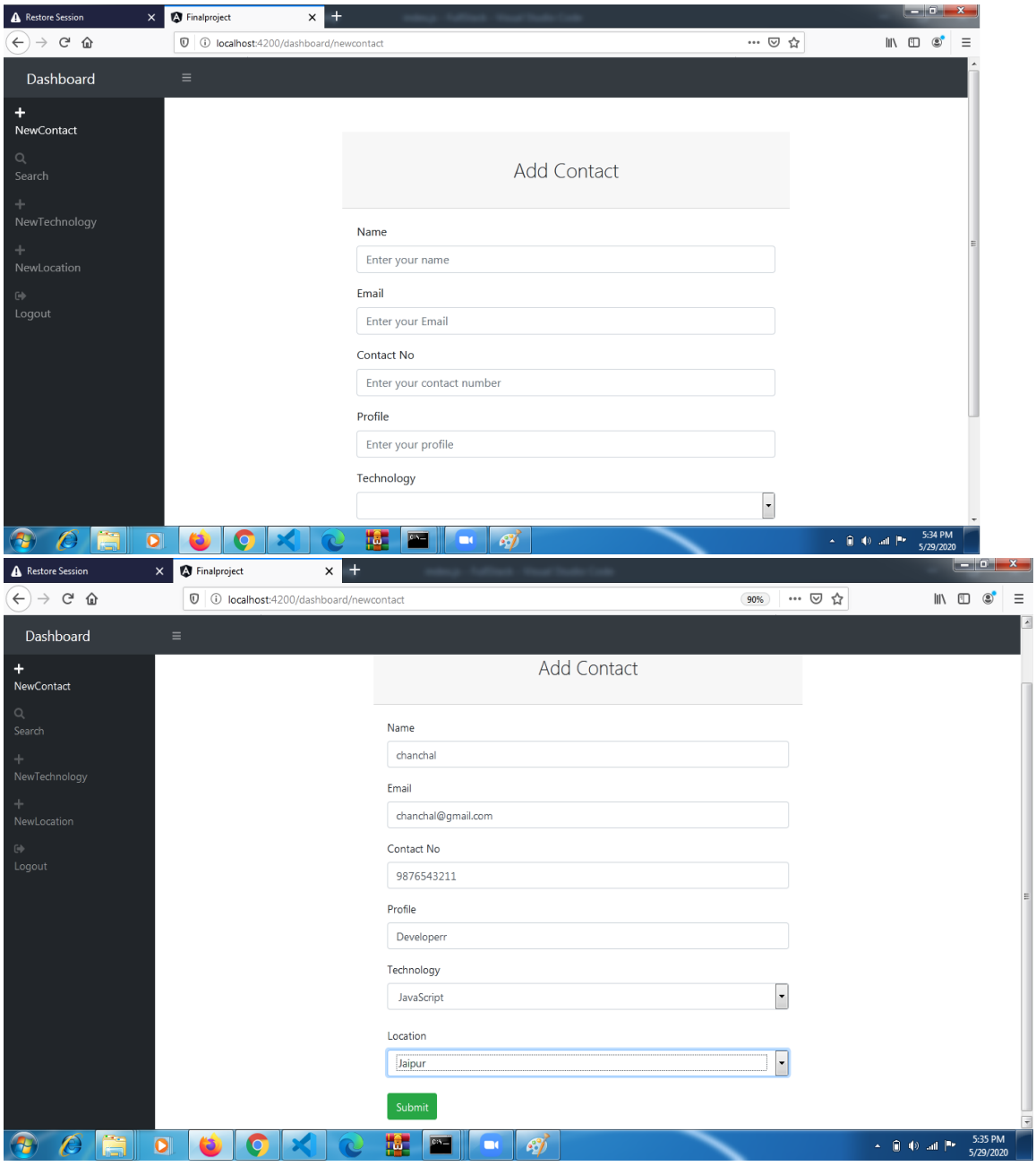
A web browser like Google Chrome, Mozilla Firefox, and Safari etc. is the least required software to access the website.

Screenshots

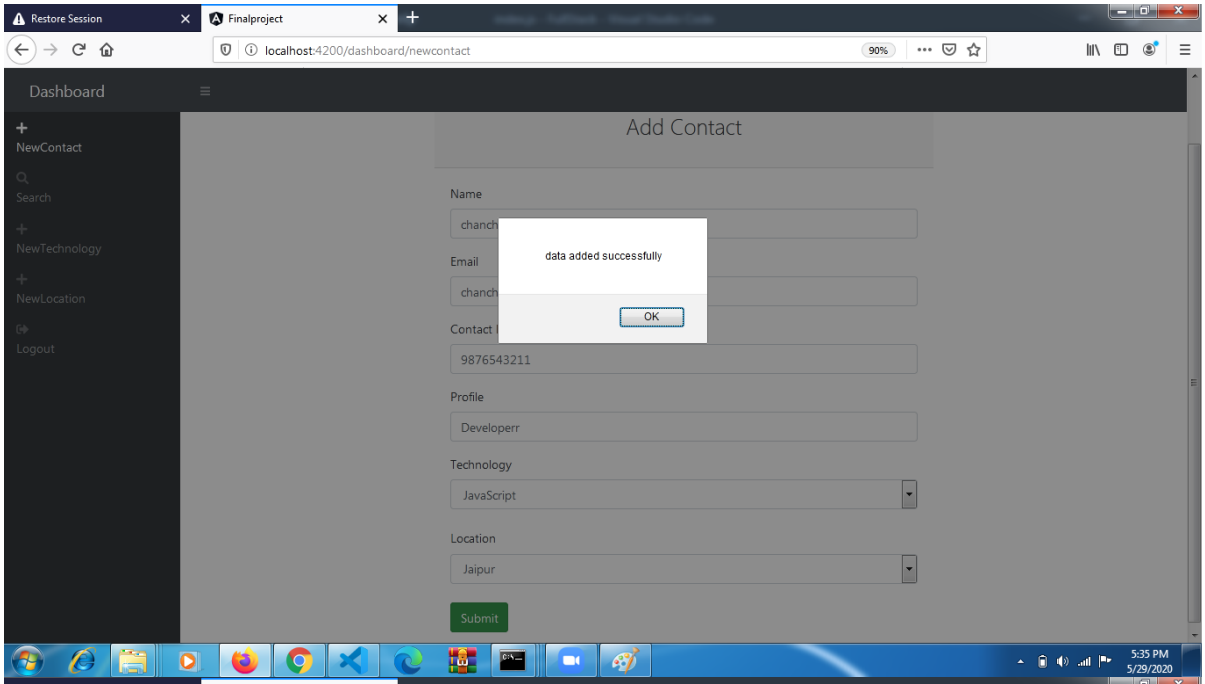
Admin Login Page

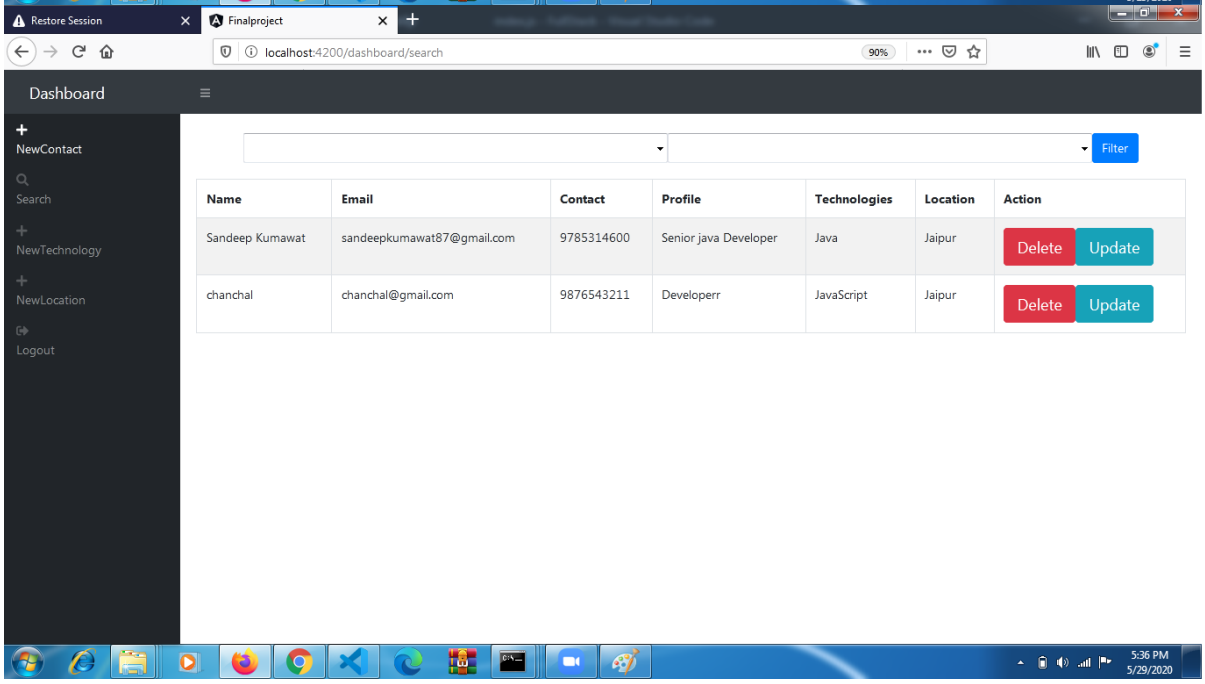


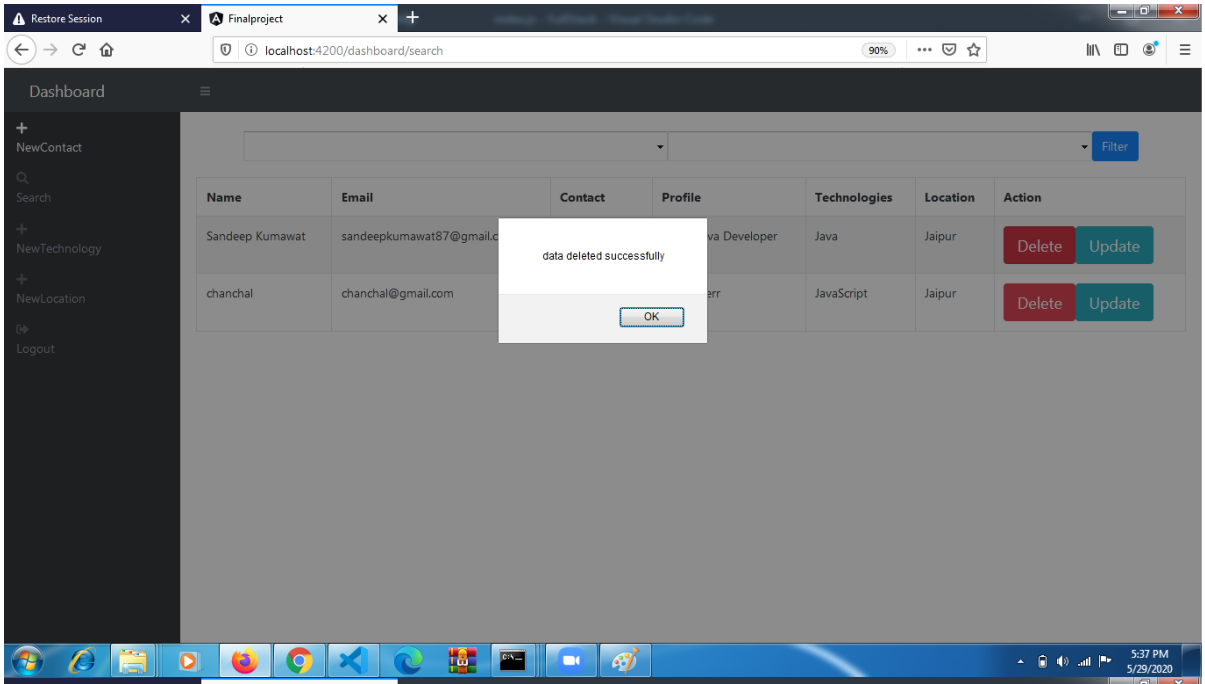


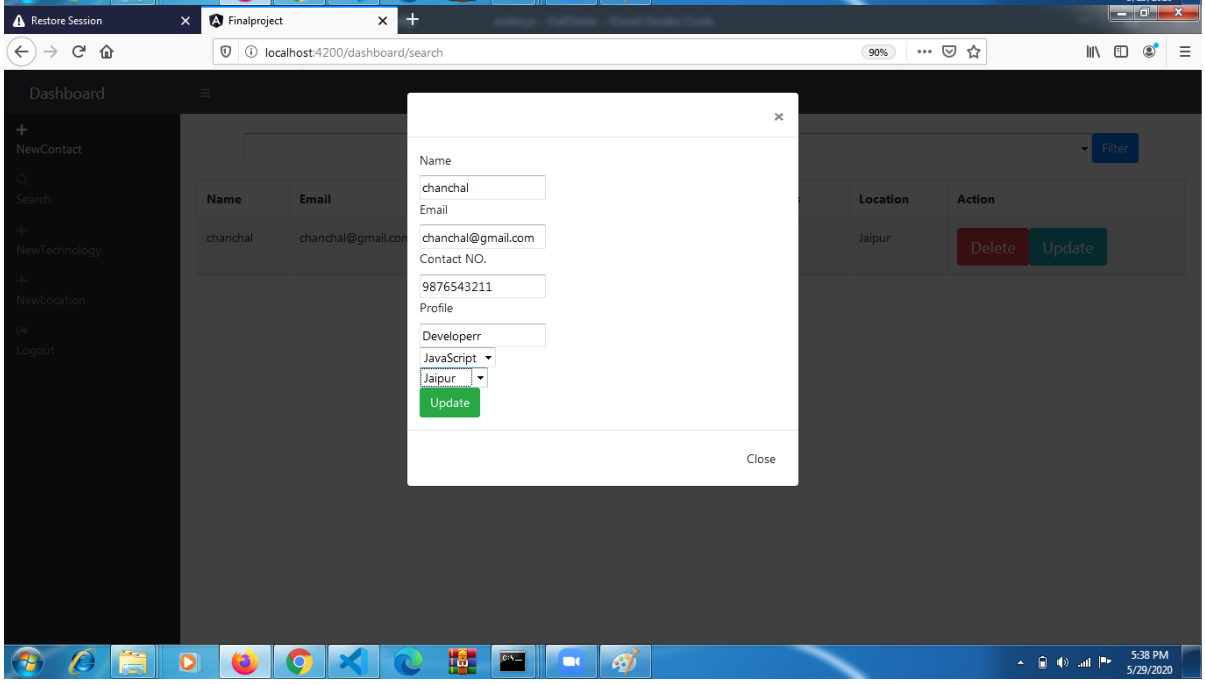


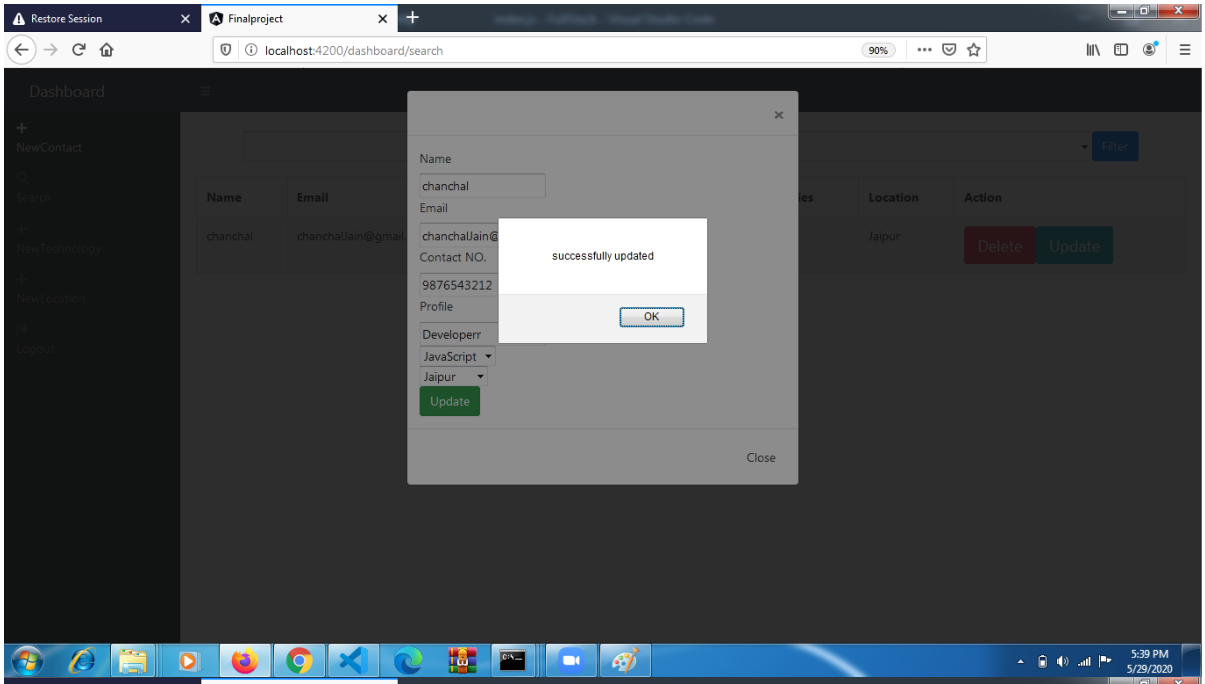
Add contact page

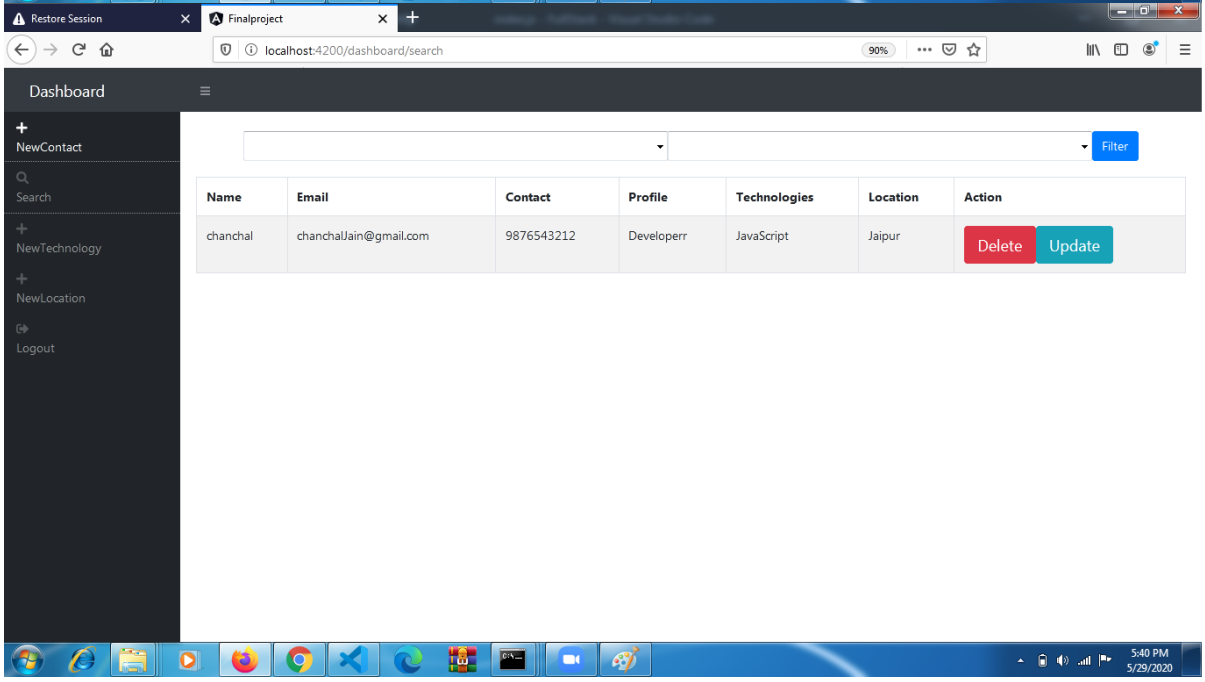

Restore Session
Finalproject
localhost:4200/dashboard/newcontact
90%
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
Add Contact
Name
chanch
Email
chanch
Contact
9876543211
Profile
Developerr
Technology
JavaScript
Location
Jaipur
Submit
data added successfully
OK
5:35 PM
5/29/2020

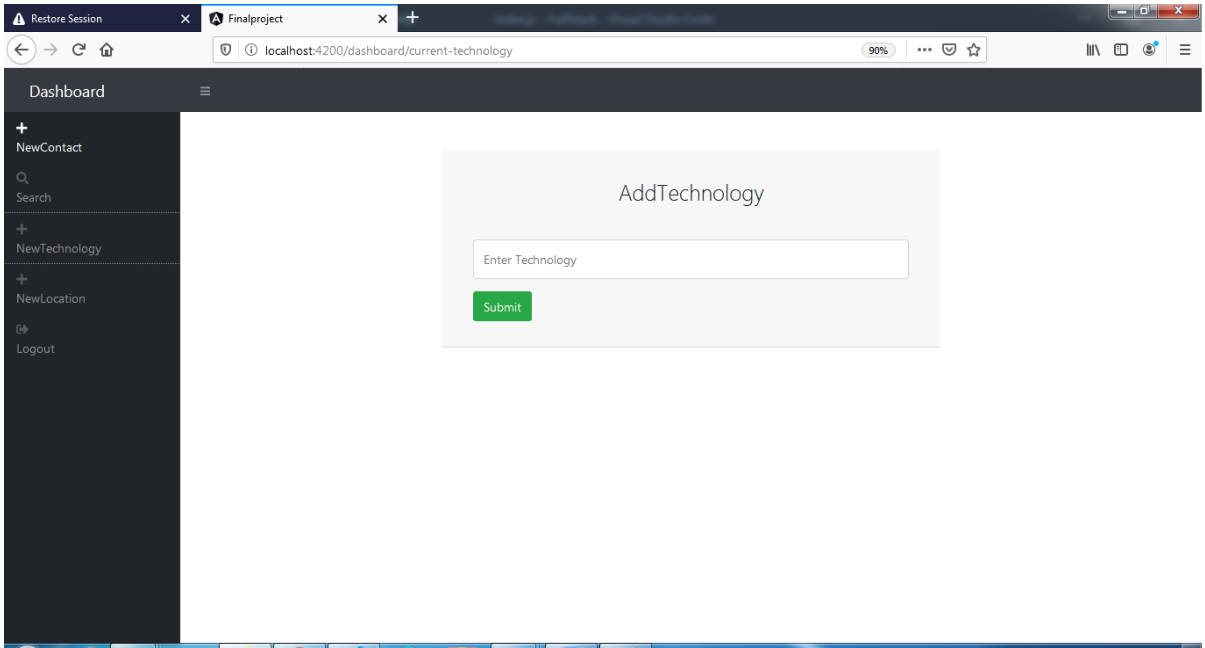

Restore Session
Finalproject
localhost:4200/dashboard/search
90%
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
Filter
Name
Email
Contact
Profile
Technologies
Location
Action
Sandeep Kumawat
sandeepkumawat87@gmail.com
9785314600
Senior java Developer
Java
Jaipur
Delete
Update
chanchal
chanchal@gmail.com
9876543211
Developerr
JavaScript
Jaipur
Delete
Update
5:36 PM
5/29/2020

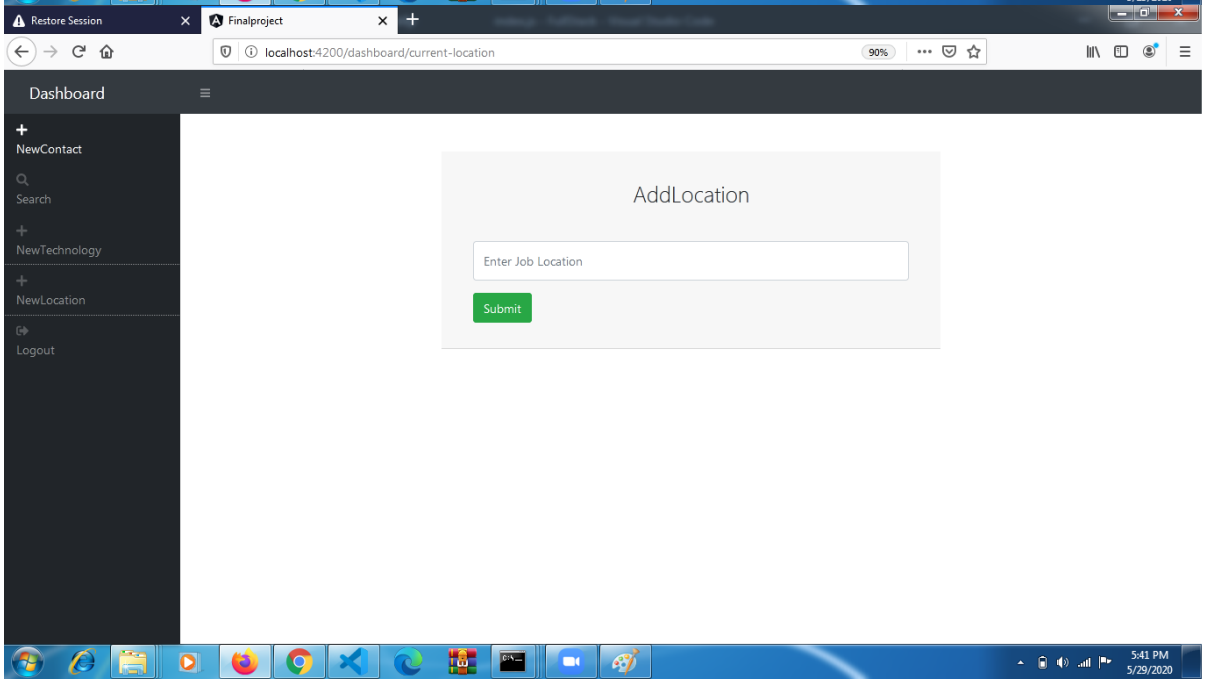

Restore Session
Finalproject
localhost:4200/dashboard/search
90%
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
Filter
Name
Email
Contact
Profile
Technologies
Location
Action
Sandeep Kumawat
sandeepkumawat87@gmail.c
va Developer
Java
Jaipur
Delete
Update
chanchal
chanchal@gmail.com
JavaScript
Jaipur
Delete
Update
data deleted successfully
OK
5:37 PM
5/29/2020


Restore Session
Finalproject
localhost:4200/dashboard/search
90%
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
Filter
Name
Email
Location
Action
chanchal
chanchal@gmail.com
Jaipur
Delete
Update
Name
chanchal
Email
chanchal@gmail.com
Contact NO.
9876543211
Profile
Developerr
JavaScript
Jaipur
Update
Close
5:38 PM
5/29/2020


Restore Session
Finalproject
localhost:4200/dashboard/search
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
Filter
Name
Email
Location
Action
chanchal
Jaipur
Delete
Update
Name
chanchal
Email
Contact NO.
9876543212
Profile
Developerr
JavaScript
Jaipur
Update
Close
successfully updated
OK
5:39 PM
5/29/2020


Restore Session
Finalproject
localhost:4200/dashboard/search
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
Filter
Name
Email
Contact
Profile
Technologies
Location
Action
chanchal
chanchalJain@gmail.com
9876543212
Developerr
JavaScript
Jaipur
Delete
Update
5:40 PM
5/29/2020


Restore Session
Finalproject
localhost:4200/dashboard/current-technology
90%
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
AddTechnology
Enter Technology
Submit
5:40 PM
5/29/2020


Restore Session
Finalproject
localhost:4200/dashboard/current-location
90%
Dashboard
NewContact
Search
NewTechnology
NewLocation
Logout
AddLocation
Enter Job Location
Submit
5:41 PM
5/29/2020

Bibliography

A bibliography is a list of works (such as books and articles) written on a particular subject or by a particular author. There are so many websites and magzines which has been utilised by me throughout the whole development process of this . All the below written books and websites helped me in so many ways and only because of the knowledge they hold, I was able to create such an effective recipe website.

Websites

1. https://www.w3schools.com
2. https://www.w3schools.com/nodejs/
3. https://www.tutorialspoint.com/mongodb/index.htm
4. https://angular.io
5. https://www.tutorialspoint.com/mongodb/mongodb_create_database.htm
6. https://www.google.com/search?sxsrf=ALeKk03ylP1Y0ecL5GnX87NqBSdPHn0hvQ:1590763973633&source=univ&tbm=isch&q=contact+management+system+data+design&sa=X&ved=2ahUKEwjShMfMqdnpAhUtyDgGHRREBK0QsAR6BAgIEAE&biw=1280&bih=609
7. https://www.tutorialspoint.com/mongodb/mongodb_drop_database.htm