

Visitor App
A
Project Report Submitted
in the Partial Fulfillment of the Requirements
for the award of
Bachelor of Technology
in
COMPUTER SCIENCE AND ENGINEERING
by
Damini(1902310100024)
Kartik Tyagi(1902310100041)
Deepanshu Gaur(1902310100028)
Neeraj(1902310100058)

Under the Guidance of
Prof. Mohd Vakil
Department of Computer Science & Engineering
**R.D. ENGINEERING COLLEGE, TECHNICAL CAMPUS,
GHAZIABAD**



to the



DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW (UP), INDIA
MAY-2023

DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

Signature :

Name : Damini

Roll No. : 1902310100024

Date :

Signature :

Name : Kartik Tyagi

Roll No. : 1902310100041

Date :

Signature :

Name : Deepanshu Gaur

Roll No. : 1902310100028

Date :

Signature :

Name : Neeraj

Roll No. : 1902310100058

Date :

CERTIFICATE

This is to certify that *Project Report entitled – Friend Affinity Finder which is submitted by Damini(1902310100024) Kartik Tyagi(1902310100041) Deepanshu Gaur (1902310100028) Neeraj(1902310100058)* in partial fulfillment of the requirement for the award of degree B. Tech. in Department of CSE, Of Dr. A.P.J. Abdul Kalam Technical University, U.P., Lucknow., is a record of the candidate own work carried out by him/her under my/our supervision. The matter embodied in this Project report is original and has not been submitted for the award of any other degree.

Date:

Project Guide
Prof. Aditya Kr Jha
(Assistant Professor , CSE Department)
RDEC, Ghaziabad

Acknowledgment

It gives us a great sense of pleasure to present the report of the B. Tech Project undertaken during B.TechFinal Year. We owe special debt of gratitude to our guide Prof. Aditya Jha, Department of CSE, R.D. Engineering College, Ghaziabad for his constant support and guidance throughout the course of our work. His sincerity, thoroughness and perseverance have been a constant source of inspiration for us. It is only his cognizant efforts that our endeavours have seen light of the day. We also take the opportunity to acknowledge the contribution of Prof. Mohd. Vakil, Department of CSE, R.D. Engineering College, Ghaziabad, for his full support and assistance during the development of the project. We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

Signature :

Name : Damini

Roll No. : 1902310100024

Date :

Signature:

Name : Deepanshu Gaur

Roll No. : 1902310100028

Date :

Signature :

Name : Kartik Tyagi

Roll No. : 1902310100041

Date :

Signature :

Name : Neeraj

Roll No. : 1902310100058

Date :

Abstract

The era of mobile technology opens the windows to the Mobile application. The websites are vanishing and mobile phones are emerging . It is the time to change from conventional methods to applications , which has become a part of our daily routine .

Our project is a Mobile Application named , “**Visitor App - Application for storing the data of visitor**”.

Mobile technology is one of the vast technologies spread between people. The main motivation behind mobile technology is to connect people with each other . The proposed system will introduce and improve the visitor experience and security of the organization by providing the real-time information about who is on the premises . Additionally , this application includes a check-in feature . Visitor can enter the organization by filling the visitor form.

The main objective of this app is to solve the traditional problems such as there are many organizations and schools who are still using the conventional paper log or guest book to record the access of visitors . This manual method consumes longer time when the number of visitors is exceeded the limit . Meanwhile, an increasing number of visitors indicates that the security issues should be concern in the organisation or school.

Visitor App contribute a good solution to solve the problems exist in the conventional method.

In today’s digital world,visitor management has become an integral part of every organization. Traditional methods of managing visitors have become outdated,time-consuming and lack security. This research paper proposes the development of a Visitor App as a SaaS(Software as a Service) application , that can manage visitors effectively , while ensuring their safety and security. The visitor app will allow visitors to pre-register their visit before entering the organization.

Visitor apps have become an essential tool for businesses to provide seamless and personalized experiences to their visitors. Developing a visitor app requires a systematic and efficient approach to ensure that the app meets the requirements of the users. Agile methodology has gained popularity in software development due to its iterative and incremental approach, which allows for continuous feedback and improvement. This research paper presents an agile methodology for visitor app development, which consists of four phases: planning, development, testing, and deployment. The methodology emphasizes collaboration, flexibility, and responsiveness to changing requirements, which are crucial for the success of visitor app development.

Overall, a visitor app can improve the visitor experience, increase security, and provide valuable data insights to organizations.

Hint : Abstract is brief of complete project report. It should be of 1 page

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Introduction to Visitor App

1.1 Introduction :

Visitor App is a digital system which is used by any organisation to register the user entering to their organisation . It can provide necessary output and information to the users and record the incoming and outcoming visitors within the shortest time. The use of a visitor app can help improve security by providing real-time information about who is on the premises. Visitor App can also be integrated with other systems, such as security systems, to provide a comprehensive view of who is on the property at any given time. This information can be valuable for security and emergency response purposes.

Generally, there are many organisation or school are still using the conventional paper log or guest book to record the access of the visitors. This manual method consumes longer time when the number of visitors is exceeded the limit. Meanwhile, an increasing number of visitors indicates that the security issues should be concern in the organisation or school.

Visitor App contribute a good solution to solve the problems exist in the conventional method.

Visitor apps are becoming increasingly popular in various industries, including hospitality, tourism, and retail. These apps provide visitors with real-time information, personalized recommendations, and interactive experiences. Developing a visitor app requires a structured approach that involves multiple stakeholders, including app developers, designers, business owners, and end-users. Traditional software development methods, such as the Waterfall model, are often rigid and do not allow for changes in requirements or feedback from users. Agile methodology, on the other hand, is a flexible and iterative approach that enables teams to deliver high-quality software while adapting to changing requirements.

The design and implementation of the system is to provide services to the organizations. The system is to provide a comprehensive visitor information and the user interface is to replace the current paper records .Visitor App could be used by the businesses or organizations to manage the check-in process of the visitor , track visitor data , and ensure security and compliance policies and regulations . Visitors can register themselves by filling the visitor form and admin can see the record of visitors who have visited the organization .

Traditional methods of managing the visitor traffic, such as sign-in sheets , paper visitor badges can be time - consuming , inefficient and prone to errors . To address these challenges , we have developed a visitor app that streamlines the check-in processes, enhances security and improves visitor experiences .

The visitor app allows visitor to pre-register themselves before their visit , providing important information such as their name , purpose of visit and identification details. Visitors can easily check-in using this application .

Admin has the access to see the data of visitors who have visited the organization and can export the list of visited users .

The app is user-friendly , customizable and can be adapted to meet the specific needs of different organizations.

Visitor App is a SaaS Application , as it is delivered as a service over the internet and hosted by the third-party provider . Customers would access the visitor app by installing the software on their mobiles. As a SaaS application , the provider of the visitor app would be responsible for hosting and maintaining the software , as well as providing technical support and updates .

Visitor App is an open source software application which can be used by any of the organization.

Hint :

Student will write here the introduction about core concept of project /area.

1. Suppose our project is about visitor in ionic-angular, then I will write here about what is the purpose of visitor app , what is ionic-angular ,benefits of visitor app, benefits of ionic , advantages and disadvantages of Visitor app .

2. Suppose our project is about any web application, like “online exam preparation”. Then I will write here about education in current digital world, importance of online education, impact of online education in current scenario, advantages and disadvantages of online education.importance of online education in distance learning. Challenges of online education, etc .

1.2 Hybrid Application :

A hybrid application is a type of mobile app that is built using a combination of web technologies (such as HTML, CSS , Javascript) and native mobile app development frameworks . Unlike native mobile apps , hybrid mobile apps are not built exclusively for a specific operating system , but can run on multiple platforms such as iOS and android.

Hybrid apps are developed using a hybrid mobile application development frameworks such as Ionic . These frameworks allow developers to write code once and then deploy the same code to multiple platforms, making it easier and most cost-effective to develop mobile apps that work on variety of devices .

Overall, a visitor app can improve the visitor experience, increase security, and provide valuable data insights to organizations.

1.3 Objective :

This report is mainly discussed about the design and develop the Visitor App. Visitor App is made to keep the organisation secure , and to keep the record of people who visited the organisation . The main aim of this project is to improve the existing visitor registration and information management activities. Data is stored digitally in Visitor App, so there are less chances of data loss . By collecting visitor information , visitor apps can help in improving the security and reduce the risk of unauthorized visitors entering a building.

1.4 Project Summary:

Before starting to develop and design the Visitor App , it is necessary to identify the system requirement for the items that used in this project. The system requirement of the Visitor App is the configuration, functional and data requirement as well as the quality constraint. The objective of system requirement is to ensure the Visitor App is running smoothly and efficiently so that it could make the registration process faster and easier.

1.5 Project Overview :

The software requirement specification is the essential role in the software development stages. It defines the features and behaviour of a software application in order to meet the overall requirement for the Visitor App.

1.6 Project Description -

This application consists of 2 Persona :

[A] Admin :

- 1. Admin Registration :** The first step in this application is to get the admin to register . They need to enter their basic information . The respective person will then provide his or her phone's e-mail and password for registration . An OTP would be then sent via e-mail address on the phone for the verification .

2. **Admin Login** : After registering the admin is allowed to login . He or She can now see the admin's dashboard where there options to see visitor list , export visitor list , KPIs of the visitor count and the account settings .

[B] Visitor :

1. **Visitor Registration** : Visitor does not have to create the account for registering himself/herself . He/She will fill the basic details before entering the organization , his/her details will be stored in the database which are to be accessed by the admin of the organization.

SCOPE OF VISITOR APP

2.1 Scope :

The scope of a visitor app can vary depending on the needs and requirements of the organisation. Generally, the scope of a visitor app includes all the features and functionalities that are required to manage and track visitors to an organization's premises. Here are some examples of a scope of the visitor app:

User Management - User management refers to the process of creating, modifying, and maintaining user accounts within a system. Effective user management is essential for ensuring the security and protecting sensitive information.

Visitor Information - This app should store visitor information such as name, email id, contact number , address , City , State ,Zipcode.

Analytics and Reporting : Analytics and reporting are important features in a visitor app as they provide valuable insights into visitor traffic and help organizations identify areas for improvement in their visitor management processes.

Visitor traffic analytics : The app can track the number of visitor to the organization over time, including daily,weekly, and monthly trends. This information can help organizations identify peak times and allocate resources accordingly.

Visitor information analytics : The app can track visitor information such as purpose of visit, and the total number of visitors .

Exporting data: The app can allow administrators to export data in a variety of formats such as CSV or PDF. This can be useful for further analysis.

Security Features : The app should have built-in security features such as secure login.

User Interface : This app should have an user-friendly interface for both the visitor and admin with features such as search, date range

WHAT IS IONIC - ANGULAR ?

3.1 What is IONIC-ANGULAR -

1. Ionic-angular is a specific implementation of the ionic framework that is built on top of the Angular framework . It is one of the most popular combination of front-end frameworks for building mobile applications.
2. Angular provides a powerful platform for building web applications , while ionic provides a UI components and tools to create cross-platform mobile applications .
3. Ionic-angular allows developers to create high performance mobile applications with a consistent look and feel across different platforms , using the power of Angular to build complex application logic and the UI components provide by Ionic to create an intuitive user experience .
4. It also includes features such as theming , animations and routing which allow developers to create a rich and interactive user interface.
5. Overall , Ionic-Angular is a powerful combination of frameworks that provides developers with the tools they need, to create high-quality mobile applications quickly and efficiently.

3.2 IONIC - ANGULAR GOALS -

1. Simplify mobile app development : By providing a set of pre-built UI components , themes , and tools , Ionic-Angular simplifies mobile app development and reduces the need for custom coding , thereby increasing productivity and efficiency .
2. Ensure consistency across platform : Ionic-Angular helps to ensure consistency across multiple platform by providing a unified user experience and look and feel for the application , regardless of the platform.
3. Improve Performance : Ionic-Angular is designed to optimize the performance of mobile applications by using Angular's powerful features and performance optimizations , such as lazy loading and ahead of time(AOT) compilation.

Overall the main goal of Ionic-Angular is to provide developers with a powerful , yet simple , framework for building high-quality , cross-platform mobile applications using Angular .

3.3 This graph shows the cross-platform mobile frameworks used by software developers worldwide from 2019 to 2020.

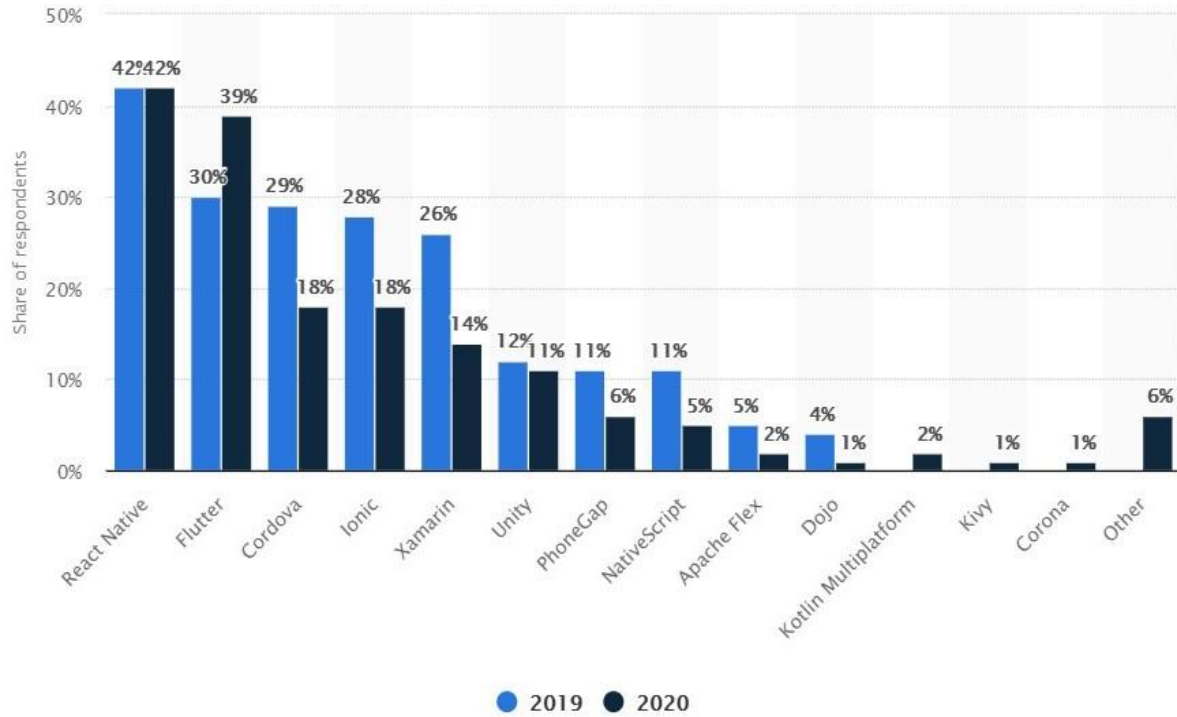


Figure 3.1

WHAT IS NODE.JS ?

4.1 Node.js -

Node.js is a cross-platform, open-source server environment that can run on multiple platforms. Node.js is a back-end JavaScript runtime environment, runs on the V8 JavaScript Engine, and executes JavaScript code outside a web browser.

Node.js lets developers use JavaScript to write command line tools and for server-side scripting. The ability to run JavaScript code on the server is often used to generate dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm, unifying web-application development around a single programming language, as opposed to using different languages for the server- versus client-side programming.

Node.js has an event-driven architecture capable of asynchronous IO. These design choices aim to optimize throughput and scalability in web applications with many input/output operations, as well as for real-time Web applications.

4.2 Why to use Node.js ?

1. Real-Time Apps

Real-time apps are those that allow two-way communication between clients and servers. Using NodeJS with Web-Sockets helps developers easily create one. NodeJS eases handling multiple requests made by the client and enables code sharing and re-usage of library codes. The apps get immediate responses and work within the limited time frame. Its single-threaded functionality makes it best suited for real-time communication. It is the perfect platform to create low-latency apps so it's best when we have to process a high volume of short messages and uses socket.io which makes the creation of straightforward apps.

2. Data Streaming

Companies like Netflix use NodeJS for streaming data because of its lightweight and fast processing feature. The streams allow users to pipe requests to each other, which results in

streaming data to its endpoint. NodeJS handles data streams with I/O bound apps. The process follows file uploading and data coming in a stream and then we process it online. This could also be done for real-time audio or video streaming. There are four types of streams -writable (write data), readable (read data), duplex (write and read data), and transform (convert read to write data, and vice versa).

3. Microservice Architecture

An architecture that considers every application function and puts its service. NodeJS is so flexible and builds both microservice-based and server-less applications. You can easily divide your app into its parts and place each microservice in a team and develop every section as per the need without affecting other sections. Therefore, the applications become lightweight and stateless making their integration easy with server-less architecture

4. REST APIs

Representational State Transfer (REST) introduced in 2000 is an acronym for REST. It is an architecture based on web standards and it uses HTTP protocols. These are essential to make microservices work. To build APIs which are responsive, efficient, and lightweight, using NodeJS with Express would be the best choice. JavaScript when used at both the front-end and back-end makes communication easy via REST APIs.

5. Single Page Applications

Single Page Applications are those that load a single HTML page and update it dynamically as user interaction with the app happens. This reduces response time and SPAs content appears easy for the users to interact with the application. Since NodeJS allows server-side rendering using which page can be rendered before it hits the browser. A few benefits of SPAs are SEO Optimization, fast and flexible, less loading time, and ease of navigation.

4.3 NodeJS Packages -

NPM is the node package manager which contains packages or modules which can be used while implementing small tasks such as adding real-time features, working with databases, and many more. It is used to discover, install, publish, and develop node programs. The command *“npm install package_name”* installs a particular package that can be used during

the application implementation. Although, there are more than **1300 packages** and the count is being increased day-by-day but here are a few packages with which developers can implement tasks very easily and quickly.

1. Express

Express is a NodeJS web application framework. It is used widely to create and publish applications. It is fast, unopinionated, and comes with a robust collection of HTTP helpers. It is also best known for its development of APIs.

2. MongoDB

It's an official MongoDB driver for NodeJS, that provides API for MongoDB databases. Same as MySQL is a relational database that uses structured query language for accessing MongoDB. It ensures data integrity and meets the standards for security and compliance issues.

3. Request

The request is an HTTP library that is used to make HTTP calls. **GET, PUSH, PUT, POST** is the four requests made by HTTP during server-side implementation. It deals with the authentication part of the application.

4. Webpack

Webpack is generally referred to as a module bundler that bundles HTML, CSS, and JS files for its usage in the browser. It helps in providing a clean, organized, and divided code as per the developer's preferences.

5. Socket.io

Socket.io enables real-time, bi-directional, and event-driven communication and it also focuses on two-way real-time connections. Socket generally consists of a Nodejs server and a JS client library.

6. Moment

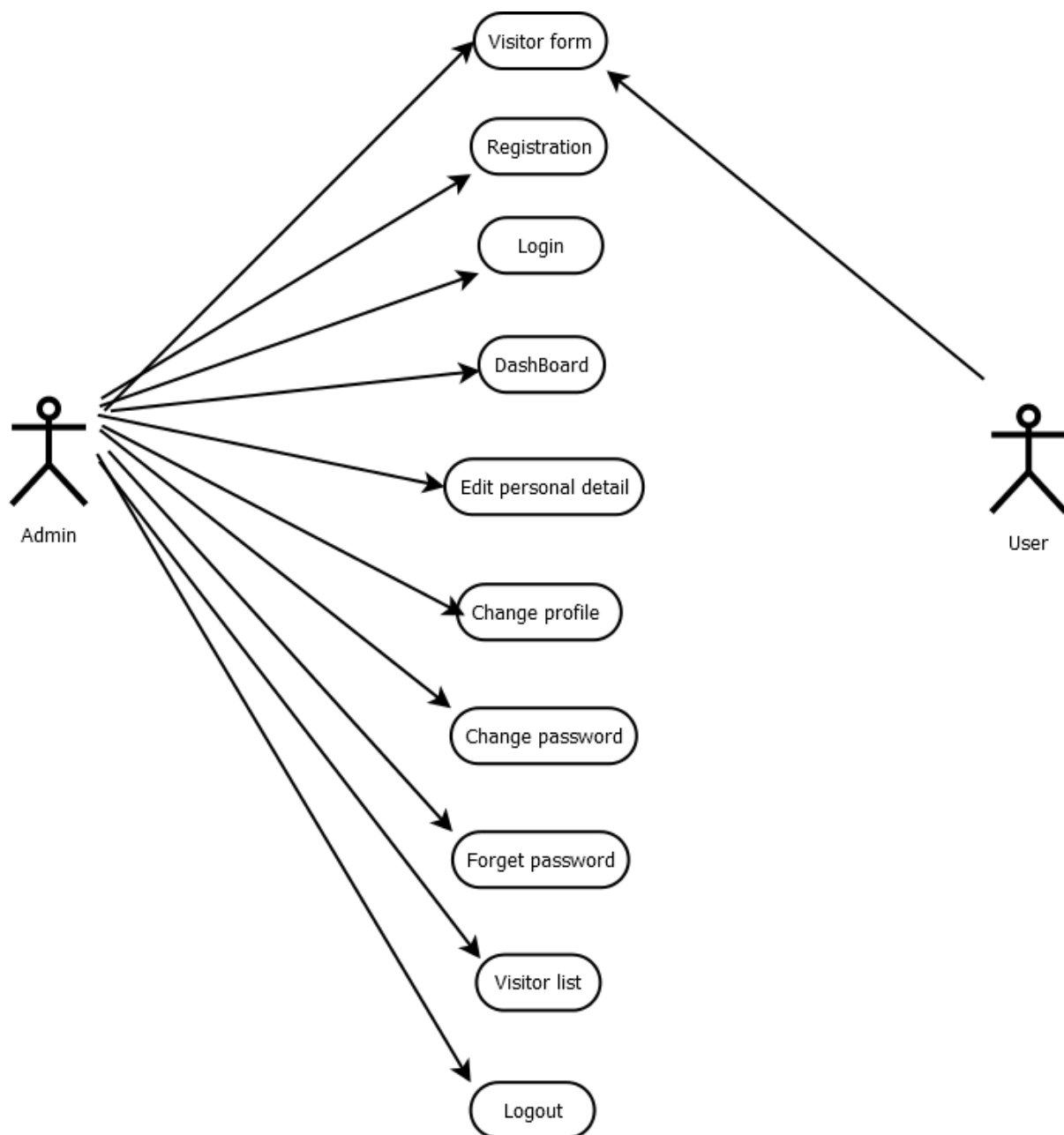
The moment is a JavaScript library that is used for parsing, manipulating, validating, and formatting dates. It displays data as per localization and in a readable format. It is the most secure and maintainable time manipulation library and is preferred for solving problems of parsing, formatting, and working with time forms.

7. Async

Async is a utility module that helps in loading JavaScript content, and also works with browsers so well. It provides powerful functions for asynchronous JavaScript, and render-blocking is eliminated to increase web page performance.

ACTIVITY DIAGRAM OF VISITOR APP

5.1 ACTIVITY DIAGRAM -



CONCEPT AND TECHNIQUE

6.1 CONCEPT AND TECHNIQUE:

Methodology used (Agile Methodology) -

In Visitor App, we have used Agile Methodology :

Agile Methodology is a popular project management methodology that emphasizes flexibility, adaptability and continuous improvement. It is an iterative approach that involves breaking down a project into smaller,manageable tasks, and working on them in short cycles, known as sprints. Agile methodology can be applied to the development of a visitor app,as it allows for quick and efficient development of the software , while providing regular feedback and collaboration with stakeholders.

Here are some ways in which Agile methodology can be applied to the development of a Visitor App :

1. Sprint Planning : The development process can be broken down into sprints, with each sprint focused on a specific feature or functionality of the Visitor App. The team can work collaboratively to plan and prioritize tasks for each sprint , ensuring that the most important features are developed first.

Here we have divided the whole project into 3 sprints :

- Sprint 1 : Generalized version of Visitor App
 - Sprint 2 : Visitor App as a SaaS application
 - Sprint 3 : Bug Fixing
2. Continuous integration and testing : Agile methodology emphasizes continuous integration and testing,which ensures that the software is continuously tested and evaluated , allowing for quick identification and resolution of any issues or bugs.
 3. Daily stand-up meetings : Daily stand-up meetings can be used to keep the team aligned and focused on the development process. During these meetings , team members can discuss progress,challenges , and next steps , ensuring that everyone is aware of the project's status.
 4. User Feedback : Agile methodology emphasizes the importance of user feedback, which can be collected through user testing and surveys. This feedback can be used to make improvements to the Visitor App,ensuring that it meets the needs and expectations of its users .

In conclusion , Agile methodology can be applied to the development of a Visitor App, allowing for efficient and effective development , continuous integration and testing , and

regular collaboration and feedback with stakeholders. By using Agile methodology , the development team can ensure that the Visitor App meets the needs and expectations of its users while providing a high-quality and reliable visitor management solution.

6.2 Why to use Agile Methodology -

Agile methodology is a popular approach to project management that emphasizes flexibility , collaboration , and continuous improvement. There are several reasons why organizations choose to use agile methodology :

1. **Adaptability** : Agile methodology allows teams to be adaptable and respond quickly to changes in the project requirements or market conditions.
2. **Customer Satisfaction** : The customer is involved throughout the development process, ensuring that the final product meets their needs and expectations.
3. **Continuous improvement** : Agile methodology emphasizes continuous improvement and learning from each iteration , which results in a better end product.
4. **Collaboration** : Agile methodology fosters collaboration among team members , which leads to better communication and higher quality output .
5. **Transparency** : Agile methodology provides visibility into the progress of the project and helps stakeholders make informed decisions.

Overall , agile methodology can lead to faster project completion, improved customer satisfaction, and higher quality output.

6.3 Benefits of Agile Methodology for Visitor App Development:

The agile methodology for visitor app development offers several benefits, including:

1. **Flexibility**: Agile methodology allows for changes in requirements and feedback from users, which is crucial for developing a visitor app that meets the users' needs.
2. **Collaboration**: Agile methodology emphasizes collaboration and communication between team members and stakeholders, which results in a better understanding of the app's goals and requirements.
3. **Responsiveness**: Agile methodology enables teams to respond quickly to changing requirements and market conditions, which is essential for developing a visitor app that remains relevant and competitive.

FEATURES OF VISITOR APP

7.1 Features and scope :

The scope and features can vary depending on the specific needs and requirements of the location it is being used in, but some common features and functionalities include :

Check-in process : The app allows visitors to check-in using a digital interface , which can include features such as filling out a visitor form. Now, using this application visitor does not have to fill the data manually.

Visitor Management : The app allows administrators to manage the visitor data,including visitor information,visit purpose.

Reporting : The app can generate reports on visitor data, number of visitors .

Exportability : The app can allow administrators to export data in a variety of formats , such as .csv, .xlsx or PDF.

Date Range : a number of dates that includes a particular start and finish date and all dates in between: You can specify a date range when you search.

7.2 Technology Stack:

Frontend : Angular.js - Angular is a platform and framework for building single-page client applications using HTML and TypeScript. Angular is written in TypeScript . It implements core and optional functionality as a set of TypeScript libraries that you import into your applications.

Backend : Node.js- Node. js is a popular programming environment that can be used for building high-scale applications that need to support multiple concurrent requests.

Database : My SQL - MySQL is an Oracle-backed open source relational database management system (RDBMS) based on Structured Query Language (SQL) . MySQL runs on virtually all platforms, including LINUX , UNIX and Windows . Although it can be used in a wide range of applications, MySQL is most often associated with web applications and online publishing.

VISITOR APP AS A SaaS APPLICATION

8.1 Visitor App as a SaaS Application -

SaaS (Software-as-a-Service) refers to a software delivery model where applications are hosted by a provider and made available to customer over the internet. A visitor app could be designed as a SaaS Application , allowing businesses or organizations to manage their visitor registration process through a cloud-based platform . This could offer benefits such as ease of use , scalability and the ability to access the application from any device with an internet connection. It also provides an efficient way for businesses to manage and track their visitors.

One of the main advantages of a visitor app as a SaaS application is that it eliminates the need for businesses to maintain their own hardware and software infrastructure . This means that businesses do not need to worry about server maintenance , software updates , or backups , as all of this is handled by the SaaS provider .

Additionally , SaaS applications typically offer flexible pricing models , which can be cost-effective solutions for small and medium-sized businesses. They can pay for the service on a monthly or annual basis , depending on their needs.

Overall , a visitor app as a SaaS application can provide businesses with a streamlined and cost-effective solution for managing their visitors, while also offering the flexibility and convenience of cloud-based software.

8.2 SaaS Platform -

A SaaS(software as a service) platform is a cloud-based software system that provides a variety of services to its users,typically through a web browser or API. A SaaS platform is different from a single SaaS Application in that it offers multiple applications or services on a single platform , often with a common user interface and shared data.

A SaaS platform can be used by businesses to manage a range of functions , such as customer relationship management , human resources , accounting, and project management . It can also offer tools for developers to build , test , and deploy their own applications.

Examples of popular SaaS platform includes :

1. Amazon Web Services (AWS) : A cloud computing platform that offers a range of services , including computing,storage and databases.

2. Microsoft Azure : A cloud computing platform that offers a range of services,including computing,storage and analytics.
3. Salesforce Platform : A platform for building custom enterprise applications and integrations with salesforce CRM.
4. Google Cloud Platform : A cloud computing platform that offers a range of services including computing , storage and machine learning.

SaaS platforms are often chosen by businesses for their scalability , ease of use , and cost-effectiveness. By using a SaaS platform, businesses can reduce the need for in-house IT infrastructure and maintenance , while also gaining access to a range of tools and services.

8.3 Why to use SaaS platform-

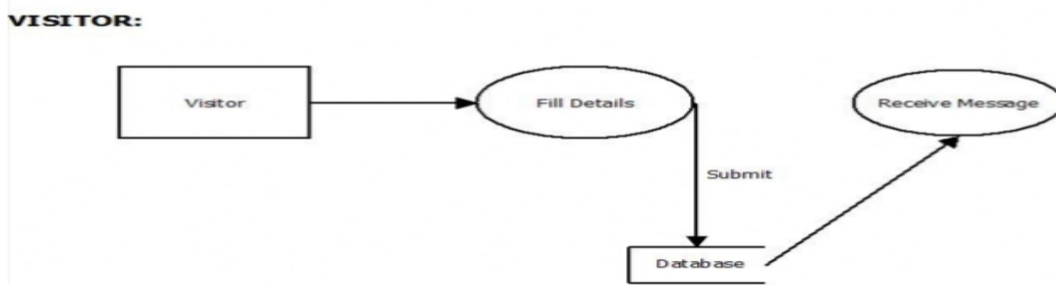
There are several reasons why businesses may choose to use SaaS platforms for their software needs :

1. Cost Savings : SaaS platform are typically more cost-effective than traditional software applications because they are subscription-based , which means businesses can avoid the upfront costs associated with purchasing and maintaining traditional software.
2. Accessibility : SaaS platforms are accessible from anywhere with an internet connection , making them convenient for businesses with remote workers or multiple locations.
3. Scalability : SaaS platforms can be easily scaled up or down based on user demand , allowing businesses to quickly adjust to changes in their operations.
4. Maintenance-free: Since the software is hosted by the provider , maintenance , updates and security are all handled by the provider , freeing up businesses from these tasks.
5. Integration : SaaS platforms are often designed to integrate with other business systems, making it easy to connect and share data across different applications.
6. Flexibility : SaaS platforms offer businesses the flexibility to choose the features and services they need , allowing them to customize their software solutions to meet their specific needs.

Overall, SaaS platforms can provide businesses with significant cost and time savings,increased accessibility , scalability , integration capabilities , and flexibility , making them an attractive option for businesses of all sizes and industries.

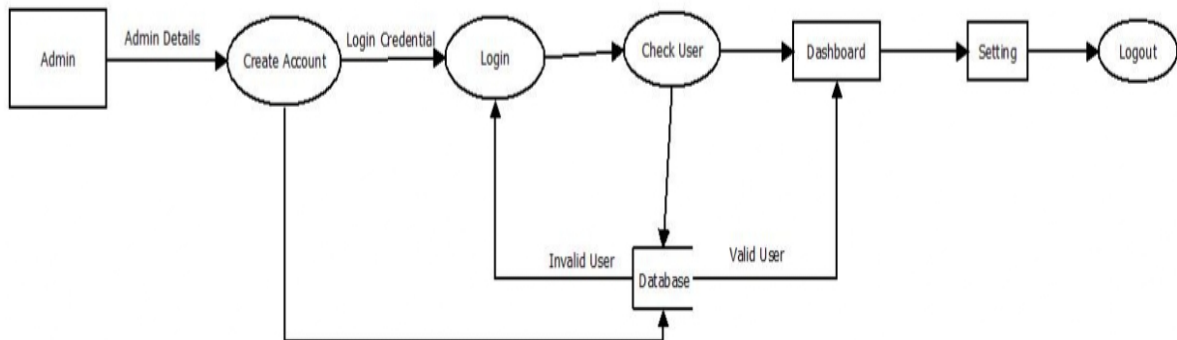
FLOW DIAGRAM OF VISITOR APP

9.1 Flow Diagram of Visitor Persona -



9.2 Flow Diagram of AdminPersona -

ADMIN:



DESIGN AND IMPLEMENTATION OF VISITOR APP

10.1 Design And Implementation -

1. Admin Persona

- The first page of the Visitor App consists of 2 options . The first one is Admin , and the second one is Visitor . From here , we have to select that how we want to use this application , means we want to use application as an Admin or as a Visitor .

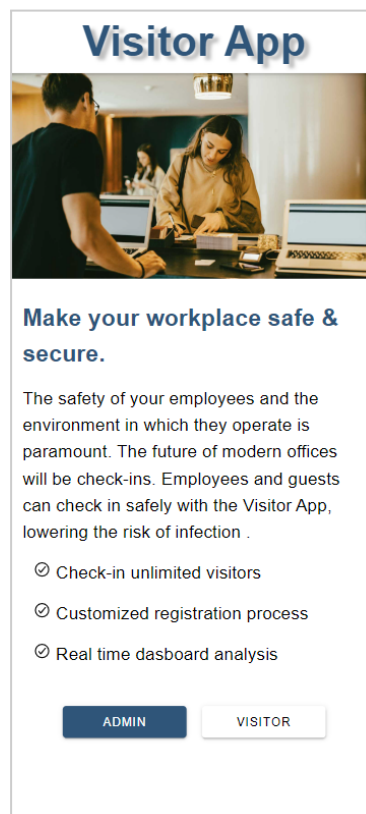
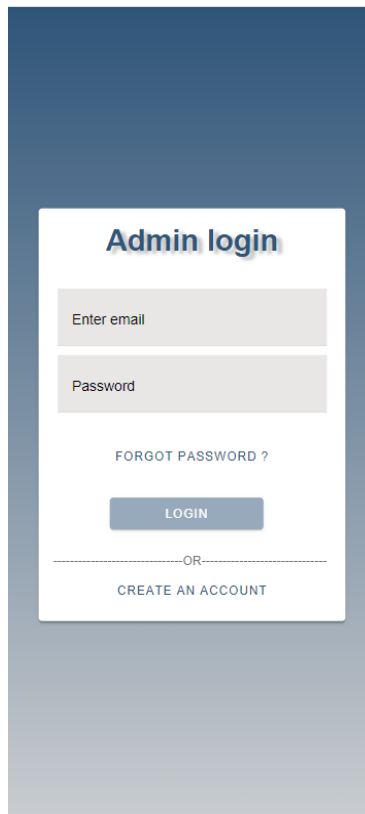


Figure 10.1

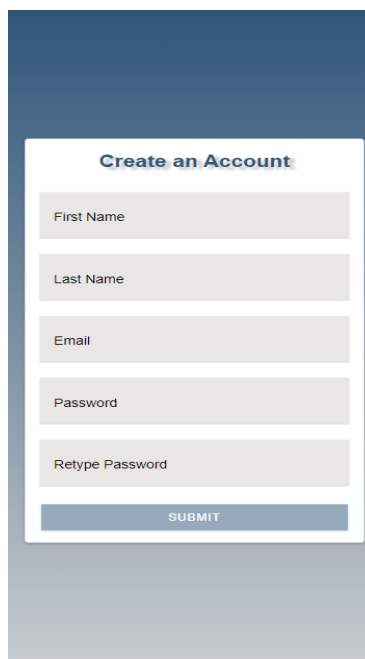
- If user , selects on the Admin button , then he/she will be redirected to the Admin login page , if he/she is a registered user then he/she can login to this application and use the features of the application.



The image shows a mobile application interface for an admin login page. The page has a dark blue header and a light blue footer. The main content area is white and contains the following elements: a title "Admin login" in bold blue text; a text input field labeled "Enter email"; a text input field labeled "Password"; a link "FORGOT PASSWORD ?" in blue text; a blue button labeled "LOGIN"; a horizontal line with "OR" in the center; and a link "CREATE AN ACCOUNT" in blue text.

Figure 10.2

- If the Admin is not already registered , then he/she will register himself/herself firstly in the application then he/she can be able to use the Application by logging into the application.



The image shows a mobile application interface for a "Create an Account" page. The page has a dark blue header and a light blue footer. The main content area is white and contains the following elements: a title "Create an Account" in bold blue text; a text input field labeled "First Name"; a text input field labeled "Last Name"; a text input field labeled "Email"; a text input field labeled "Password"; a text input field labeled "Retype Password"; and a blue button labeled "SUBMIT".

Figure 10.3

- If Admin forgots his/her password then, we have a forgot password option in the Admin login page , from where Admin can resets his/her password and change his/her

password. Firstly he/she has to enter the registered email , he/ she will receive an otp on their email and then will be able to reset their password .

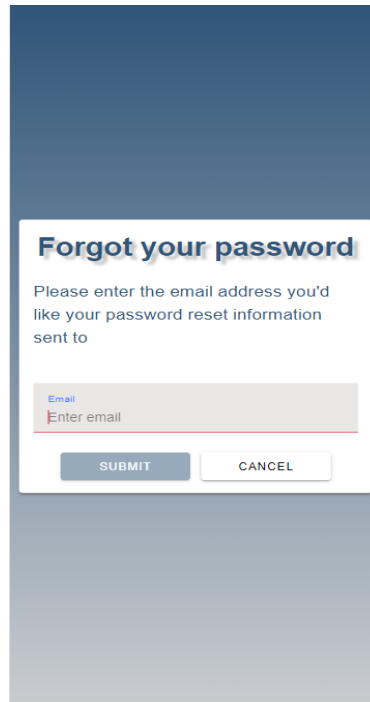


Figure 10.4

- After entering the email , Admin gets redirected to the forgot password page where he/she will type otp received from the email and can enter new password .

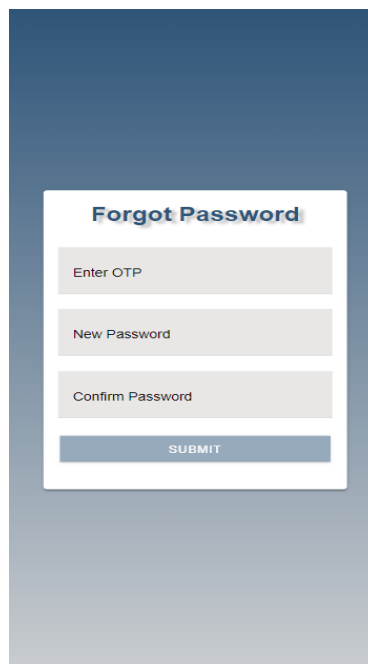


Figure 10.5

- After changing the password , now he/she can login to the application
- After logging into the application , the admin dashboard is to be displayed , here Admin can be able to see the visitor count , that how many visitors have visited the

organization in a day or month or in a year . Data is also displayed in graphical format



Figure 10.6

➤ Admin can see the list of visitors who have visited his / her organization .

First Name	Last Name	Contact Number	Email
hhhhh	hhh	9999999999	aa@gmail.c
gggggggggggg	gggggggg	5555555555	h@gmail.co
fff	fff	5555555555	d2@gmail.c
eee	eeee	0000000000	a@gmail.co
Damini	Dogra	7689866405	damini@gn
Ashwani	TYagi	0000000000	xyz121@gr
Samridhi	Choudhary	9874778484	sammy@gr

Figure 10.7

Email	VisitAddress	Date
aa@gmail.com	1 jhhhh	2023-04-20T10:11:10.000Z
h@gmail.com	1 fffff	2023-04-20T10:13:02.000Z
d2@gmail.com	1 jj	2023-04-20T10:13:24.000Z
a@gmail.com	1 sddd	2023-04-20T11:19:34.000Z
damini@gmail.com	1 h.no.23 lane no. 1,1/c east extn trikuta nagar jam	2023-04-26T07:23:54.000Z
xyz121@gmail.com	2 gukl;	2023-05-08T07:37:49.000Z
sammy@gmail.com	1 dddfff	2023-05-08T08:18:52.000Z

Figure 10.8

- In the Visitor List , Admin can search the person through name , contact or email by using search bar .

First Name	Last Name	Contact Number	Email
hhhhh	hhh	9999999999	aa@gmail.c
ggggggggggg	ggggggg	5555555555	h@gmail.co
fff	fff	5555555555	d2@gmail.c
eee	eeee	0000000000	a@gmail.co
Damini	Dogra	7689866405	damini@gm
Ashwani	TYagi	0000000000	xyz121@gr
Samridhi	Choudhary	9874778484	sammy@gm

Figure 10.9

Email	VisitAddress	Date
aa@gmail.com	1 jhhhh	2023-04-20T10:11:10.000Z
h@gmail.com	1 fffff	2023-04-20T10:13:02.000Z
d2@gmail.com	1 jj	2023-04-20T10:13:24.000Z
a@gmail.com	1 sddd	2023-04-20T11:19:34.000Z
damini@gmail.com	1 h.no.23 lane no. 1,1/c east extn trikuta nagar jam	2023-04-26T07:23:54.000Z
xyz121@gmail.com	2 gukl,	2023-05-08T07:37:49.000Z
sammy@gmail.com	1 dddffff	2023-05-08T08:18:52.000Z

Figure 10.10

- There are many other features inside the settings of the Admin , for example:

Settings
Update Profile
Update Password
About
Log Out

Figure 10.11

1. Admin can change his / her profile .

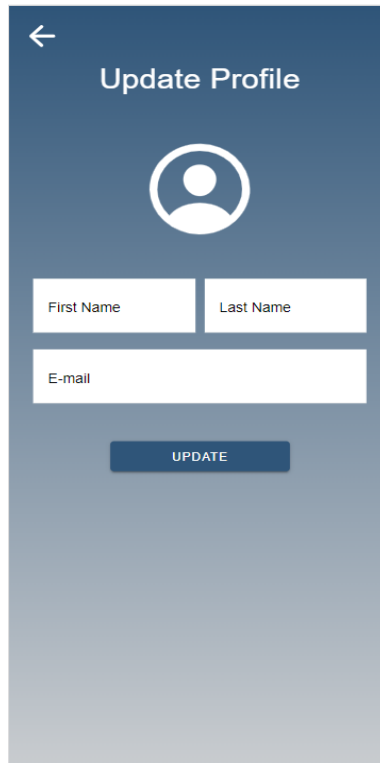


Figure 10.12

2. Admin can update his/her password as well .

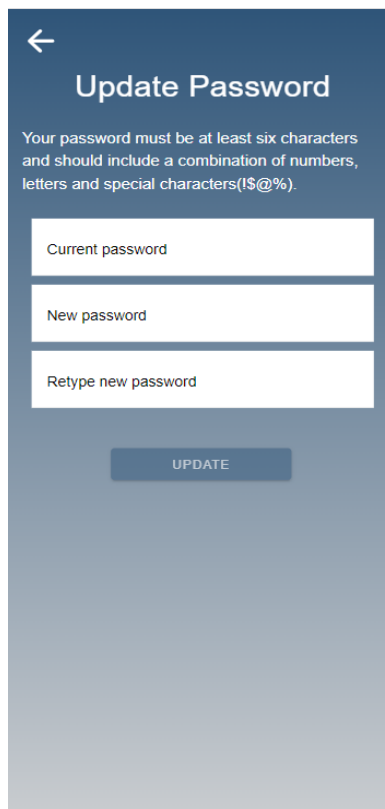


Figure 10.13

3. About page is also present in the settings .

Figure 10.14

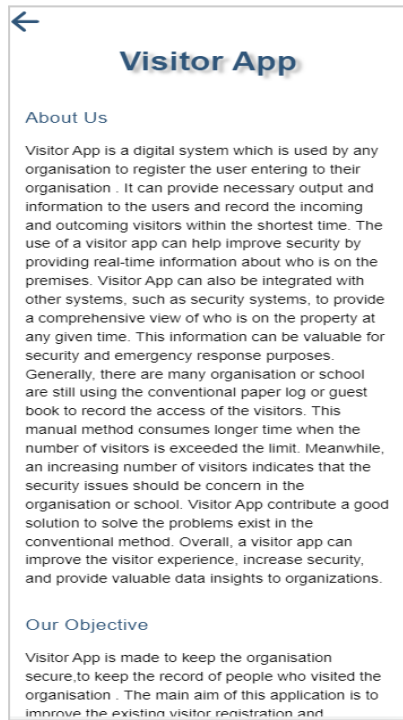
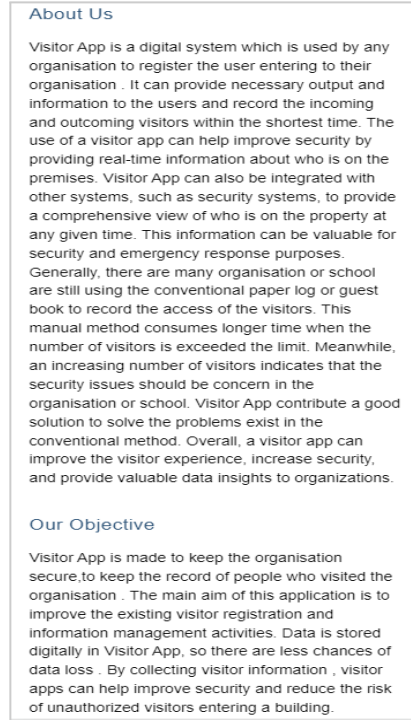


Figure 10.15



4. Admin can logout his/her account from the settings.

2. Visitor Persona

➤ Visitor has to fill the visitor form before entering the organization.

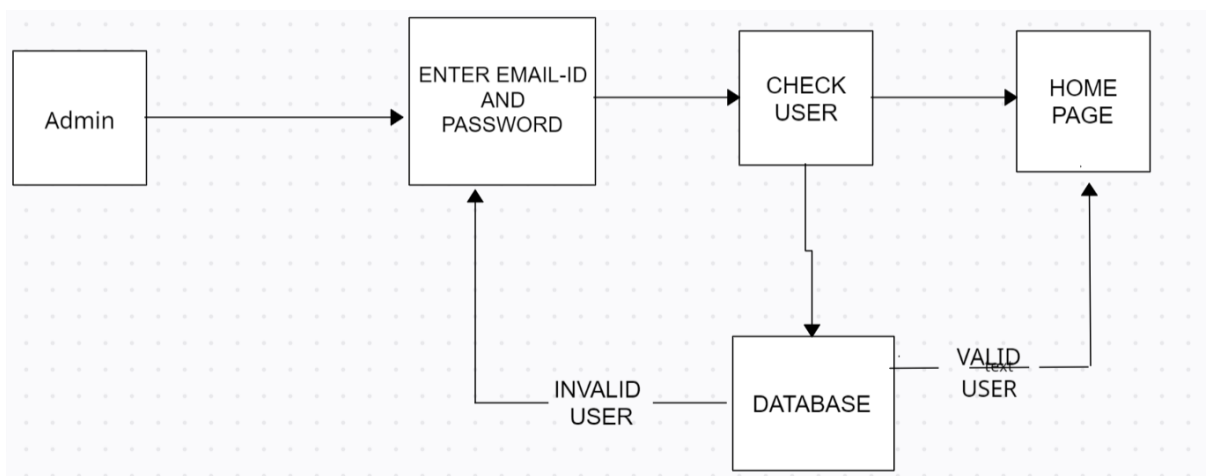
Figure 10.16

DFD OF VISITOR APP

11.1 0(zero) level DFD -



11.2 1(one) level DFD -



BENEFITS OF VISITOR APP

12.1 Benefits of Visitor App as a SaaS(Software as a Service) Application -

Visitor apps have become increasingly popular in various industries, and many companies are now offering them as a Software-as-a-Service (SaaS) application. There are several benefits of offering a visitor app as a SaaS application, including:

1. **Scalability:** SaaS applications are highly scalable, which means they can easily handle a large number of users and data. Visitor apps, especially those used in large venues or events, require a high level of scalability to handle the influx of visitors and data.
2. **Easy Implementation:** SaaS applications can be implemented quickly and easily without requiring complex hardware or software installation. This means that businesses can get their visitor app up and running quickly, without the need for expensive infrastructure or technical expertise.
3. **Accessibility:** SaaS applications are accessible from anywhere with an internet connection, which makes them ideal for visitor apps. Visitors can access the app from their mobile devices, and businesses can access the data and analytics from anywhere with an internet connection.
4. **Lower Cost:** Offering a visitor app as a SaaS application can be cost-effective for businesses, as they do not need to invest in hardware or software infrastructure. Instead, they pay a subscription fee for access to the app, which can be more cost-effective in the long run.
5. **Continuous Improvement:** SaaS applications are continuously updated and improved, which means that businesses can benefit from new features and functionalities without having to invest in costly upgrades or updates.
6. **Security:** SaaS applications offer high levels of security, which is crucial for visitor apps that handle sensitive visitor data. SaaS providers invest heavily in security measures, such as data encryption, firewalls, and user authentication, to ensure that their applications are secure.

In conclusion, offering a visitor app as a SaaS application offers several benefits for businesses, including scalability, easy implementation, accessibility, lower cost, continuous improvement, and security. These benefits make SaaS visitor apps an attractive option for businesses looking to provide seamless and personalized experiences to their visitors.

Conclusion and Future Scope

13.1 Future Scope -

The project has much scope both in present as well as future . The scope of this project is visitor authentication .

In the future, visitor can also have the access to use this application . In future, Biometric can also be introduced in this application.

In future, there will be a request approval and rejection feature. With the proposed software of database space manager ready and fully functional the client is now able to manage and hence run the entire work in a much better , accurate and error-free manner.

13.2 Benefits of the proposed Visitor App -

Admin has the record of all the visitors who have visited the organization . This system gives an easy approach to find the detailed information for any visitor .

This system is also helpful to maintain the record of visitors .

Visitor app also ensures the security of the organization .

13.3 CONCLUSION -

In conclusion , the Visitor App as a SaaS application is a valuable tool for organizations seeking to improve their visitor management process. The Visitor App provides numerous benefits , including enhanced security , streamlined check-in process, real-time visitor tracking , cost-effectiveness , and improved visitor experience . The visitor app can be customized to meet the specific needs of an organization and can be integrated with existing security systems to provide a comprehensive security solution. By using the Visitor App, organizations can ensure safety and security of their premises while providing a seamless visitor experience .

The reason for choosing agile methodology for visitor app is that it offers a flexible and efficient approach to develop high-quality visitor apps. The methodology emphasizes collaboration , flexibility and responsiveness to changing requirements , which are crucial for the success of visitor app development .

By breaking down the development process into small,manageable chunks , and prioritizing the features that will deliver the most value to users , Agile can help ensure that the app is built in a way that is both flexible and adaptable Additionally,the Agile methodology places a strong emphasis on collaboration and communication between team members , which can help ensure that everyone is working towards the same goals and that any issues are identified and addressed early on in the development process.

Overall , while there may be some challenges associated with adopting an Agile approach to app development , the benefits can be significant , and it may be worth considering for teams looking to build high-quality , user - centric visitor apps.

1. The Visitor App developed using Ionic-angular fully meets the objective of the system for which it was developed . The application has reached the steady-state where all the bugs have been eliminated . The application is operated at a high-level of efficiency and all the persona associated with the system understand its advantage . The system solves the problem it was intended to solve .
2. A hybrid mobile application for the organization is presented . The application offers reliability , time savings and easy control.
3. In conclusion, the visitor app is a powerful solution that addresses the need for an efficient and comprehensive platform for managing visitor data . The app's integration with Ionic-Angular , Node.js and MySql provides a secure and scalable platform that is well-suited to meet the needs of the organizations .
4. The app's features such as admin authentication , admin profiles , visitor management provide a comprehensive set of tools for managing visitor data.

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