447226

VISITOR MANAGEMENT

APROJECTREPORT

Submittedby

DAXESH TADVI

200410107127

Infulfillmentoftheawardofthedegreeof

BACHELOROFENGINEERING

in

ComputerEngineering

SARDARVALLABHBHAIPATELINSTITUTEOF TECHNOLOGY

GujaratTechnologicalUniversity,Ahmedabad

May2024-25

447226

SardarVallabhbhaiPatelInstituteofTechnology

SVITRoad,RajupuraVillage,Vasad,Anand,Gujarat 388306

CERTIFICATE

This is to certify that the project report submitted along with the project entitled **Visitor Management** has been carried out by **DAXESH B TADVI (200410107127)** under my guidance infulfillment for the degree of Bachelor of Engineering in **Computer Engineering**, 8th Semester of Gujarat Technological University, Ahmedabad during the academic year **2023-24**.

Rishi Patel
InternalGuide

Dr.NehaSoni
HeadoftheDepartment

447226

Bharti Soft Tech Private Limited
Innovation | Technology | Consulting

Date: 20 Apr, 2024

To Whomsoever It May Concern

This is to certify that **Daxesh Tadvi,** student of **Sardar Vallabhbhai Patel Institute of Technology** has successfully completed **three months** internship in our organization Bharti soft Tech Pvt Ltd.

The duration of this internship was from **19 Jan, 2024** to **20 Apr, 2024.**

His contribution for the project **Visitor Management using Node JS and React JS** has been reviewed and found to be satisfactory as per our requirements.

We wish him all the best for his future.

Best Regards,

For Bharti Soft tech Pvt. Ltd.

Akshesh Panchal
Director

447226

SARDARVALLABHBHAIPATELINSTITUTE OF TECHNOLOGY

SVITRoad,RajupuraVillage,Vasad,Anand,Gujarat 388306

DECLARATION

I hereby declare that the Internship report submitted along with the Internship entitled**Visitor Management** submitted infulfillment for the degree of Bachelor of Engineering in **Computer Engineering** to Gujarat Technological University, Ahmedabad, is a bonafide record of original project work carried out by me at **Bharti Soft Tech Pvt Ltd** under the supervision of **Mr.Pritamsinh Parmar**and that no part of this report has been directly copied from any students' reports or taken from any other source, without providing due reference.

Nameofthestudent

DAXESH TADVI

SignofStudent

ACKNOWLEDGEMENT

I extend my heartfelt gratitude to Bharti Soft Tech Pvt Ltd for providing me with the invaluable opportunity to undertake my internship with their esteemed organization. The experience I gained during my time at Bharti Soft Tech has been instrumental in shaping my professional growth and enhancing my skill set.

I would like to express my sincere appreciation to Mr. Pritamsinh Parmar, for their guidance, support, and mentorship throughout my internship. Their expertise and encouragement have been invaluable in helping me navigate the challenges and opportunities encountered during the internship period.

Furthermore, I am indebted to the entire team at Bharti Soft Tech for their cooperation, assistance, and willingness to share their knowledge and expertise with me. Their collaborative spirit created an enriching and conducive environment for learning and growth.

I am also deeply grateful to Rishi Patel from SVIT College for their unwavering support, guidance, and valuable insights throughout the internship process. Their mentorship and encouragement have been pivotal in helping me integrate classroom knowledge with real-world applications, enriching my learning experience.

I am also grateful to my professors and the faculty members of SVIT College for their continuous support, encouragement, and guidance throughout my academic journey. Their dedication to nurturing students' potential has played a significant role in my development.

Lastly, I would like to express my deepest gratitude to my family for their unwavering support, understanding, and encouragement. Their love and encouragement have been my source of strength and motivation.

This internship experience has been truly enriching and fulfilling, and I am grateful to all who have contributed to making it a success.

ABSTRACT

The Visitor Management System (VMS) with QR code scan is an innovative solution designed to streamline the process of visitor registration and enhance security within an organization. This project aims to develop a comprehensive system that efficiently manages visitors, employees, and company assets through a centralized platform.The system consists of two main components: the visitor management module and the administrative dashboard. The visitor management module facilitates the registration of visitors by generating unique QR codes for each visitor upon registration. These QR codes are then scanned upon entry, allowing for quick and accurate check-in and check-out procedures. Additionally, the module maintains a detailed log of visitor records, including their personal information, purpose of visit, and entry/exit timestamps.

The administrative dashboard provides authorized personnel, such as administrators and employees, with access to valuable insights and functionalities. Administrators can oversee the entire system, manage employee profiles, and generate reports on visitor traffic and asset utilization. Moreover, employees can utilize the dashboard to access their personal information, view upcoming appointments, and register visitors on behalf of their departments.

Furthermore, the system incorporates features for asset management, allowing administrators to track the allocation and usage of company assets. This includes maintaining an inventory of assets, tracking their movement within the organization, and generating reports on asset utilization and maintenance schedules.

Overall, the Visitor Management System with QR code scan and administrative dashboard offers a user-friendly and efficient solution for managing visitors, employees, and company assets. By implementing this system, organizations can enhance security measures, improve visitor experiences, and streamline administrative processes.

LISTOFFIGURES

LISTOFTABLES

LISTOFABBREVIATION

HTML - Hypertextmarkuplanguage

CSS - Cascading Style Sheet

PHP - HypertextPreprocessor

TABLEOFCONTENT

CHAPTER1:OVERVIEWOFTHECOMPANY

CompanyName	**:**	BHARTI SOFT TECH PVT LTD
Address	**:**	261, Makarpura GIDC, Makarpura, Vadodara,Gujarat(390010).
Contact Number	**:**	02656544312
E-mail	**:**	akeshesh,panchal@bcssarl.com

1.1 HISTORY

Bharti Soft Tech Pvt Ltd is a global technology and process driven software solutions company offering customer centric solutions. With knowledge and experience of the entire IT lifecycle, we help enterprises streamline core IT processes and augment their competitive advantage. Our Agile tools and DevOps processes create outcome-based and ROI-driven solutions for technology teams and enterprises.

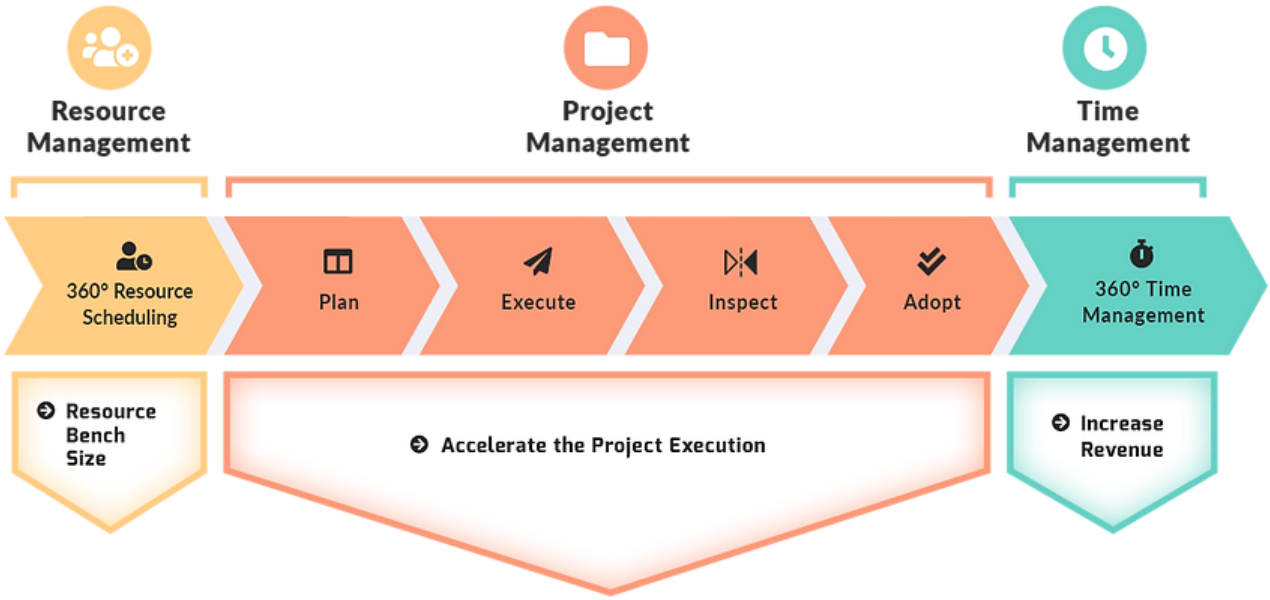
Drawing on the talents and insights of our people in offices around the world, we combine unparalleled experience, comprehensive capabilities across many industries and business processes, and fresh thinking to generate innovative solutions. BSPL offers superior quality and cost effective business solutions, employing cutting-edge technologies and the most exacting of quality standards.

Headquartered in Paris, Europe with two delivery centres in India and operations in U.S., Europe and Asia, we combine local presence and accountability with a global delivery capability.

1.2 VISION

Ourvisionistoprovideourcustomerswiththebestuniquesoftwaresolutions.Forthatwedo completeresearchontheneedsofthecustomerandtargetaudiencebeforestartingtheproject. We are determined in providing unique user experiences and delivering perfectly functional products while still maintaining proper coding ethics. We are continuously upgrading ourselves with the latest technologies and trends to meet demands of the market.

1.3 ORGANIZATIONALCHART



1.4 SERVICES

- Technology
- Hospitality
- Real Estate
- Travel and Tourism
- Retail and eCommerce
- Media and Publishing

CHAPTER2:LAYOUTOFPRODUCTION

2.1 PROJECTSCHEDULING

- ProjectSchedulingistheculminationofaplanningactivitythatisaprimarycomponentof so Web Application project management.
- Whencombinedwithestimationmethodsanyriskanalysis,scheduling,establishesaroad map for the project management.
- Schedulingbeginswiththeprocesscomposition.Thecharacteristicsoftheprojectareused to adapt an appropriate task set for the work to be done.
- Thetasknetworkis used to computethecritical project path, timelinechart, and avariety of project information.
- WhencreatingaWeb Applicationprojectschedule,theplannerbeginswithaset oftasks. Ifautomatedtoolsareused,theworkbreakdownisinputasatasknetworkortaskoutline. Effort, duration, and start date are then input for each task. In addition, tasks may be assigned to specific individuals.
- As a consequence of this input, a timeline chart, also called a Gantt chart is generated. A Timeline Chart can be developed for the entire project. Timeline Charts depict a part of a web application project schedule
- Allprojecttasksarelistedintheleft-handcolumn.Thehorizontalbarsindicatetheduration ofeachtask.Whenmultiplebarsoccuratthesametimeonthecalendar,taskconcurrency is implied. The diamonds indicate milestones, which indicate the place where our project reaches.

2.2 PROJECTDEVELOPMENTAPPROACH

2.2.1 IncrementalModel Design

The incremental build model is a method of software development where the model is designed, implemented and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance. Theproduct is defined as finished when it satisfies all of its requirements. This model combines the elements of the waterfall model with the iterative philosophy of prototyping

Followingisthepictorialrepresentationof IterativeandIncrementalmodel:

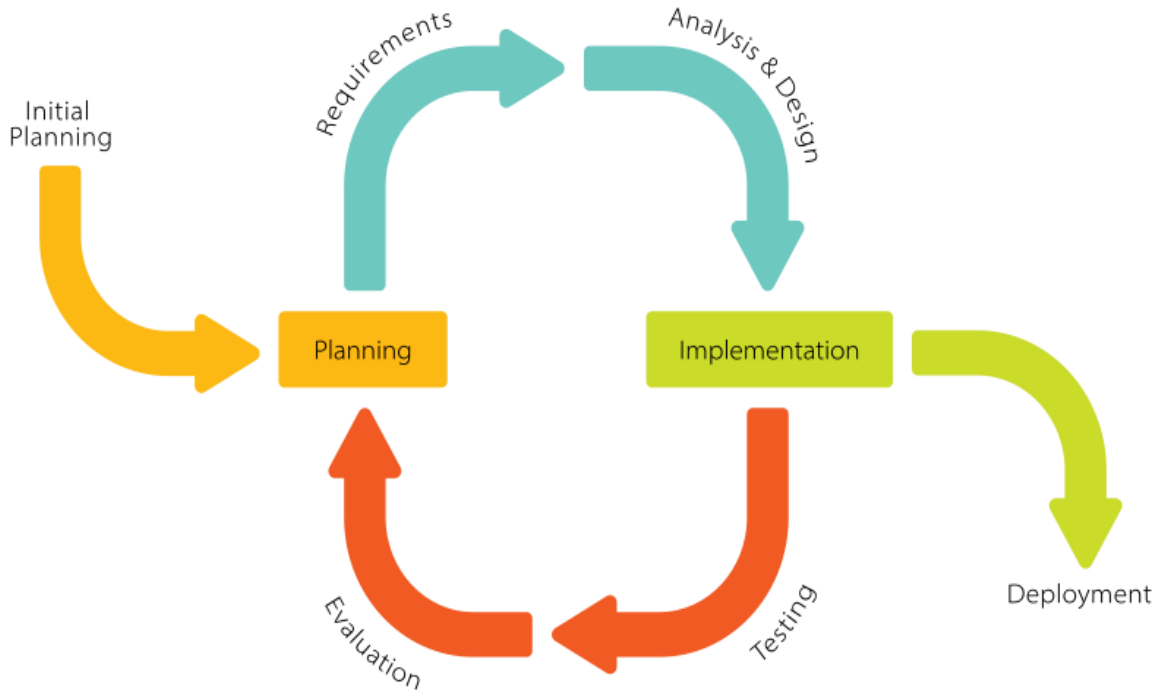


Fig.2.1IncrementalModel

Iterative and Incremental development is a combination of both iterative design or iterative method and incremental build model for development. "During software development, more thanoneiterationofthesoftwaredevelopmentcyclemaybeinprogressatthesametime."and "This process may be described as an "evolutionary acquisition" or "incremental build" approach." In the incremental model the whole requirement is divided into various builds. During each iteration,thedevelopmentmodulegoesthroughtherequirements,design,implementationand testing phases. Each subsequent release of the module adds function to the previous release. The process continues till the complete system is ready as per the requirement.
Thekeytosuccessfuluseofaniterativesoftwaredevelopmentlife-cycleisrigorousvalidation of requirements, and verification & testing of each version of the software against those requirements within each cycle of the model. As the software evolves through successive cycles, tests have to be repeated and extended to verify each version of the software

IterativeModel Application

Like other SDLC models, Iterative and incremental development has some specific applicationsinthesoftwareindustry.Thismodelismostoftenusedinthefollowingscenarios:
Requirements of the complete system are clearly defined and understood.

- Major requirements must be defined; however, some functionalities or requested enhancements may evolve with time.
- Thereis atime constraint.
- A new technology is being used and is being learned by the development team while working on the project.
- Resourceswithneededskillsetsarenotavailableandareplannedtobeusedoncontract basisforspecificiterations.
- Therearesomehigh-riskfeaturesandgoalswhichmaychangeinthe future.
- IntegrationandTesting:Alltheunitsdevelopedintheimplementationphaseareintegrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
- Deploymentofsystem:Oncethefunctionalandnonfunctionaltestingisdone,theproduct is deployed in the customer environment or released into the market.
- Maintenance:Therearesomeissueswhichcomeupintheclientenvironment.Tofixthose issuespatchesarereleased.Also,toenhancetheproductsomebetterversionsarereleased. Maintenance is done to deliver these changes in the customer environment.

CHAPTER3:INTRODUCTIONTOINTERNSHIP

3.1 INTERNSHIPSUMMARY

During my internship with the Visitor Management System, I engaged in comprehensive analysis, design, and development processes, contributing to the creation of efficient visitor management solutions using React.js. Collaborating with cross-functional teams, I participated in system architecture design, feature implementation, and quality assurance activities, ensuring seamless user experiences. By leveraging React.js along with other technologies such as HTML, CSS, and backend frameworks like Node.js, I played a key role in developing features including visitor registration, check-in/check-out procedures, and administrative functionalities. Through effective communication and teamwork, I ensured project alignment with objectives and timelines, while continuously seeking learning opportunities to enhance my technical skills and problem-solving abilities. This internship not only provided practical insights into software development processes but also prepared me for future roles in the technology industry.

3.2 PURPOSE

The purpose of visitor management is multifaceted, encompassing several key objectives. Firstly, it aims to enhance security within an organization by accurately tracking and monitoring visitor activity, thereby preventing unauthorized access and safeguarding employees, assets, and proprietary information. Additionally, visitor management systems ensure compliance with regulatory requirements related to visitor access and security, maintaining detailed records and adhering to data privacy standards. Moreover, these systems streamline the visitor registration process, automating data entry, generating visitor badges or QR codes, and providing self-service kiosks for expedited check-in. By offering a seamless and professional experience, organizations can improve the overall visitor experience, reduce wait times, and minimize administrative hassles. Furthermore, visitor management systems play a crucial role in emergency preparedness by facilitating efficient evacuation procedures and ensuring the safety and accountability of individuals within the premises. Lastly, by capturing and analyzing visitor data, organizations can gain valuable insights into visitor patterns, identify areas for improvement, and make informed decisions to optimize resource allocation and security measures.

3.3 OBJECTIVE

OurOBJECTIVEissimplytocertifyenhancementforallservicesweprovidetoourclientsas we have an uncanny ability to convert ideas to things, and eventually reality, which is the backbone to success!!

- Enhance the security within the organization
- Ensure compliance with regulatory requirements
- Streamline visitor registration processes
- Improve the overall visitor experience
- Capture and analyze visitor data for insights and decision-making

3.4 SCOPE

The scope of the Visitor Management System with QR code scan and administrative dashboard extends to encompass all aspects of visitor, employee, and asset management within the organization. It includes functionalities such as visitor registration, tracking, and reporting, along with features for employee access to personal information and scheduling. The administrative dashboard provides oversight of the entire system, allowing for management of employee profiles, generation of reports, and implementation of security measures. Additionally, the system facilitates asset management by tracking company assets and maintaining detailed records. Integration with existing systems and customization options ensure seamless communication and alignment with organizational needs. Overall, the scope encompasses a comprehensive solution designed to enhance security, efficiency, and accountability within the organization.

3.5 TECHNOLOGYANDLITERATUREREVIEW

3.5.1 TOOL

3.5.1.1 VisualStudio Code

Visual Studio Codeis afreewaresource-codeeditormadebyMicrosoftfor Windows, Linux, and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

3.5.1.2 XAMPP

XAMPPisoneofthewidelyusedcross-platformwebservers,whichhelpsdeveloperstocreate and test their programs on a local webserver. It was developed by Apache Friends, and its native source code can be revised or modified by the audience. It consists of Apache HTTP Server,MariaDB,andinterpretersforthedifferentprogramminglanguageslikePHPandPerl.

3.5.2 TECHNOLOGY

3.5.2.1 HTML5

- HTMLis thestandard markuplanguagefor creatingWeb pages.
- Itis averyeasyand simplelanguage.Itcanbeeasilyunderstood and modified.
- Itisvery easy tomakeaneffective presentationwithHTML because ithasalotof formatting tags.
- It is a markup language, so it provides a flexible way to design web pages along with the text.

- ItdescribesthestructureofaWeb page.
- Itconsistsof aseries of elements.

3.5.2.2 CSS3

CascadingStyleSheets(CSS)isastylesheetlanguageusedfordescribingthepresentationof a document written in a markup language such as HTML or XML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.CSS is designed to enable the separation of content and presentation, including layout, colors, and fonts.[3] This separation can improve content accessibility; provide more flexibility and control in the specificationofpresentationcharacteristics;enablemultiplewebpagestoshareformattingby specifying the relevant CSS in a separate .css file, which reduces complexity and repetition in the structural content; and enable the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

3.5.2.3 BOOTSTRAP

Bootstrapisafreeopen-sourcefront-enddevelopmentframeworkforthecreationofwebsites andwebapps.Designedtoenableresponsivedevelopmentofmobile-firstwebsites,Bootstrap provides a collection of syntax for template designs .As a framework, Bootstrap includes the basics for responsive web development, so developers only need to insert the code into a predefined grid system. The Bootstrap framework is built on Hypertext Markup Language (HTML), cascading style sheets (CSS) and JavaScript. Web developers using Bootstrap can build websites much faster without spending time worrying about basic commands and functions

3.5.2.4 PHP

PHP (Hypertext Preprocessor) is known as a general-purpose scripting language that can be usedtodevelopdynamicandinteractivewebsites.Itwasamongthefirstserver-sidelanguages thatcouldbeembeddedintoHTML,makingiteasiertoaddfunctionalitytowebpageswithout needing to call external files for data.

3.5.2.5 JAVASCRIPT

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side scriptsto interactwiththeuserandmakedynamicpages.Itisaninterpretedprogramminglanguagewith object-oriented capabilities.

3.5.2.6 REACT JS

React.js is a JavaScript library used for building dynamic user interfaces, favored for its component-based architecture. By breaking down the UI into reusable components, React simplifies development and maintenance. Its virtual DOM efficiently updates the actual DOM, enhancing performance. With support for server-side rendering and a vast ecosystem of tools, React enables the creation of fast, responsive web applications with ease.

3.5.2.7 NODE JS

Node.js is a runtime environment that allows developers to run JavaScript code outside of a web browser. It's commonly used for building scalable network applications, such as web servers and APIs. With its event-driven architecture and non-blocking I/O model, Node.js enables high-performance applications.

3.5.2.8 MATERIAL UI

Material-UI is a popular React UI framework that provides pre-designed components following Google's Material Design guidelines. It simplifies the creation of visually appealing and consistent user interfaces in React applications, offering a wide range of customizable components and styles.

3.5.2.9 MYSQL

MySQL is an open-source relational database management system widely used in web development. It provides a robust and scalable platform for storing and retrieving structured data, making it suitable for a variety of applications, from small websites to large-scale enterprise systems. When combined with Node.js and Sequelize, MySQL becomes part of a powerful stack for building data-driven web applications.

3.5.2.10 SEQUELIZE

Sequelize is an ORM (Object-Relational Mapping) library for Node.js that simplifies database interactions by abstracting SQL queries into JavaScript methods. It supports multiple database systems, including MySQL, PostgreSQL, and SQLite, allowing developers to work with databases using familiar JavaScript syntax and models.

3.6 INTERNSHIPPLANNING

- Projectplanningispartofprojectmanagement,whichrelatestousing schedules such as Gantt charts to plan and report progress within the project environment.
- Initially, the project scope is defined and the appropriate methods for completing the project are determined. Following this step, the durations for the various tasks necessaryto complete the work are listed and grouped into a work breakdown structure.
- Projectplanningisoften usedtoorganizedifferentareas ofa project,includingprojectplans,

workloads, and the management of teams and individuals.

3.6.1 InternshipDevelopmentApproachandJustification

First of all we learn about different technologies that we are going to use in our internship project.Thenwestartedcodinganddesigningpartofourproject.Afterthatwetesttheproject andmakesomemodificationsaccordingtotheirneeds.Atimelyreviewofthework'sprogress was conducted by the industry mentor.

Planning before anyactivityis verymuch important. And if it is planned nicely, then success is guaranteed. Project Management System has six major modules of Admin, Manage Application, Test Management, Process Management, Manage Comment, Reports. We analyzedtheoverallcomplexityofeachofthesemodulesanditwasfoundthattheprojectwill requireapproximately14weekstocomplete,soweplannedaccordingly.Wedecidedtofollow theSDLCi.e.SoftwareDevelopmentLifeCyclewhileplanningvariousphasesofourproject. This method consists of the following activities:

1. Determinationofsystem requirements
2. System Analysis
3. Designofsystem
4. Developmentof website
5. Testing
6. Implementationand Evaluation

3.6.2 InternshipEffortsandTime,CostEstimation

The estimated time, efforts and expenses for the internship were determined on a monthly basis.Hoursworkedeachdayareincluded.Internshavetoworkaminimum8hourseveryday. The job was completed as part of an internship, and the interns are not paid.

3.6.3 RolesandResponsibilities

Table3.1Rolesand ResponsibilitiesTable

Name	Role				
	Analysis	Designing	Coding	Testing	Documentation
Rishi	✔	✔	✔	✔	✔

3.7 InternshipScheduling

Table3.2Time-LineChart(Day-Wise)

DEVELOPMENT PHASE	90 DAYS					DURATION
	0-20	21-40	41-60	61-80	81-90	
Requirements Gathering & Analysis						5
Designing						8
Coding						46
Testing						3
Implementation						4
Documentation						Parallel
TotalDays	90Days					

CHAPTER4:SYSTEMANALYSIS

4.1 STUDYOFTHECURRENTSYSTEM SYSTEM

Thecurrent system works manuallyandit is verymuch time consuming

- Usersmust havebasicknowledgeof Computers&Internet.
- Usersshouldunderstandtheuseofall modules.
- Usersshould beawareof how to usethe system.
- Userscan easilyinteractwiththeproposed system.
- User should bealso beingawareof therunningprocess of thesystem

4.2 PROBLEMSANDWEAKNESSESOFTHECURRENTSYSTEM

- ItrequiresanInternet connection.
- Forgettingtotrackscheduleorbudgetchanges.
- Havingmoreguestattendeesthanyouhave planned.

4.3 REQUIREMENTOFTHENEWSYSTEM

A Visitor Management System must fulfill several key requirements to efficiently manage visitor processes within an organization. This includes enabling seamless visitor registration, check-in/check-out procedures, and real-time tracking of visitor movements. The system should feature an intuitive administrative dashboard for managing visitor information, as well as security features like badge printing and photo capture to ensure safety and compliance. Integration with existing systems, customization options, and scalability are essential for adapting to organizational needs and future growth. Additionally, the system should prioritize user-friendly interfaces, mobile accessibility, and compliance with data privacy regulations to enhance usability and security.

4.4 SYSTEMFEASIBILITY

Whenanewprojectisproposed,itnormallygoesthroughafeasibilityassessment.Feasibility study is carried out to determine whether the proposed system is possible to develop with available resources and what should be the cost consideration. The facts considered in the feasibility analysis were.

- TechnicalFeasibility
- EconomicFeasibility

4.4.1 Technical Feasibility

TechnicalFeasibilitydealswiththehardwareaswellassoftwarerequirements.Technologyis not a constraint to type system development. We have to find out whether the necessary technology, and the proposed equipment have the capacity to hold the data, which is used in the project, should be checked to carry out this technical feasibility.

Thetechnicalfeasibilityissuesusuallyraiseddurингthefeasibilitystageofinvestigation include these

- ThissoftwareisrunninginWindows2000OperatingSystem,whichcanbeeasily installed.
- ThehardwarerequiredisPentium-basedever.
- Thesystemcanbe expanded.

This feasibilitystudy presents tangible and intangible benefits from the prefect bycomparing thedevelopmentandoperationalcost.Thetechniqueofcostbenefitanalysisisoftenusedasa basisforassessingeconomicfeasibility.Thissystemneedssomemoreinitialinvestmentthan the existing system, but it can be justifiable that it will improve quality of service.

4.4.2 BehavioralFeasibility

This analysis involves how it will work when it is installed and the assessment of the managerial environment inwhichitisimplemented.Peopleareinherentlyresistanttochange andcomputers havebeen knowntofacilitate change. The new proposed system isverymuch useful to the users and therefore it will accept a broad audience from around the world.

4.4.3 Schedule Feasibility

In Schedule Feasibility Study mainly timelines/deadlines are analyzed for proposed projects whichincludeshowmanytimesteamswilltaketocompletethefinalprojectwhichhasagreat impactontheorganizationasthepurposeofprojectmayfailifitcan’tbecompletedontime.

4.4.4 EconomicFeasibility

Asystemthatcanbedevelopedandthatwillbeusedifinstalledmuststillbeagoodinvestment for the organization. Financial benefits must equal or exceed the costs. The financial and economic issues raised are as under:

- Noextracostis incurredfordevelopingthe system.
- Noextracostforthemodificationoradditionofsoftwareandhardwarewillrequireincase of future expansion of the current system.

- The company will be a profit if they implement this system because of the cost of implementation is nominal as compared to the profit they will be earning in terms of efficiency

4.5 PROCESSINNEW SYSTEM:

- Visitor Management System encompasses the methodical approach to overseeing and facilitating the management of visitors within a given space or establishment. This includes the efficient handling of check-ins, monitoring visitor movements, and ensuring a secure and seamless experience for all stakeholders involved.
- Visitors can conveniently access our Visitor Management System through our designated platform or application.
- The process of managing visitors entails administrative capabilities, allowing authorized personnel to perform tasks such as check-in, check-out, record maintenance, and data updates.
- Administrators possess the authority to not only initiate the booking process but also to modify, remove, and amend all records within the system, ensuring accurate and up-to-date information at all times.

4.6 FEATURESOFNEWSYSTEM:

- Usability: Theinterfaceshoulduseterms and concepts,whicharedrawnfromthe
- experienceof people who willmakemost of the system.
- Efficiency:Theportalmust provideeasyandfastaccesswithout consumingmore time.
- Readability: Users should never be surprised by the behavior of the system and it should also provide meaningful feedback when an error occurs so that the user can recover from the error.
- Accuracy: The user should require that data obtained from the database and stored in the database must be accurate.
- Theuserwants thedatastored in thedatabase must besecured and cannot beaccessedby unauthorized users.
- Maintainability:Userswantthatthesystemshouldbemaintainedeasilymeansthatifthere are some changes required in the system that can be done easily.

4.7 REQUIREMENTVALIDATION:

- Itis okaywithnot knowingthe computer. As thesystem is paper based.
- Therisk ofcorrupteddatais much less.
- Datalossislessofarisk,particularlyifrecordsarestoredinafire-proof environment.Problems with duplicate copies of the same records are generally avoided.

- Theprocessissimplifiedasyoudon'tneedtobefamiliarwithcomputeroperation

4.8 HARDWAREANDSOFTWAREREQUIREMENTS:

4.8.1 Hardware

4.8.1.1 ClientSide

- (Forbestperformance)AnyGUI-basedterminalhavingatleast800*600256-colors displays.
- 1024✕76832-bitrecommended.

4.8.1.2 ServerSide

- Supportedarchitecture:x84,x64(WindowsServer 2010)
- RAM: 96MB(256MB Recommended)
- 400MHzCPU (1.0GHz Recommended)
- 1GBof HardDisk space.

4.8.2 Software

- FrontEndTool: -VisualStudio
- BackEndTool: -MySQL7.1.6
- Server:- Xampp
- Browser:-Aboveinternetexplorer7,Microsoftedge,safari,chrome

CHAPTER5:SYSTEMDESIGN

5.1 SYSTEMDESIGN&METHODOLOGY:

5.1.1 Admin

- ItcanLoginintoSystem.
- ItcanmanageEmployees.
- ItcanmanageAssets.
- ItcanmanageCategory.
- Itcanmanage Visitors.
- Logout From the System

5.1.2 Visitor

- It will Scan QR Code
- Fill in the Registration Form

5.1.3 Employee

- It can Login into the System
- It Can View and Edit Details
- Logout From the System

5.2 DATABASEDESIGN:

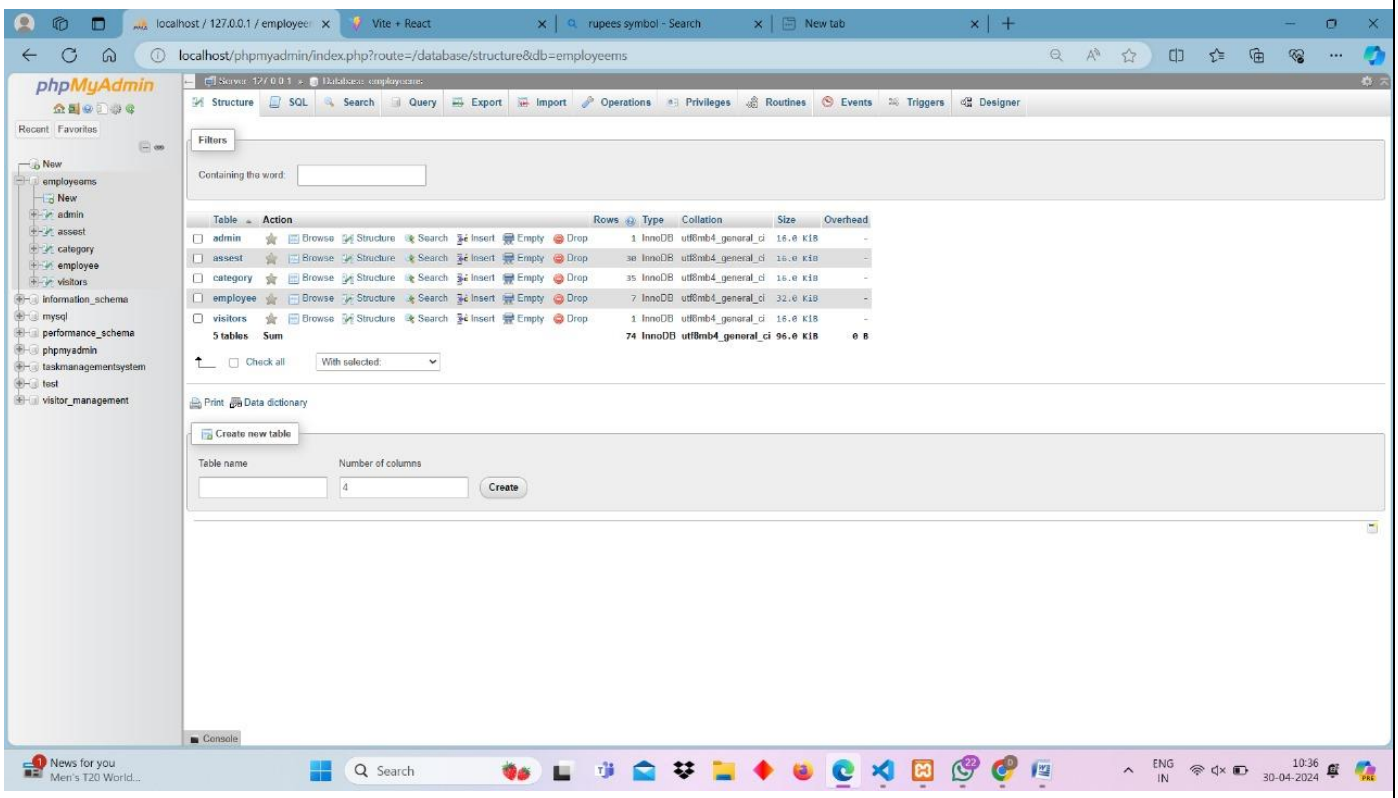


Fig.5.1Visitor ManagmentDatabase

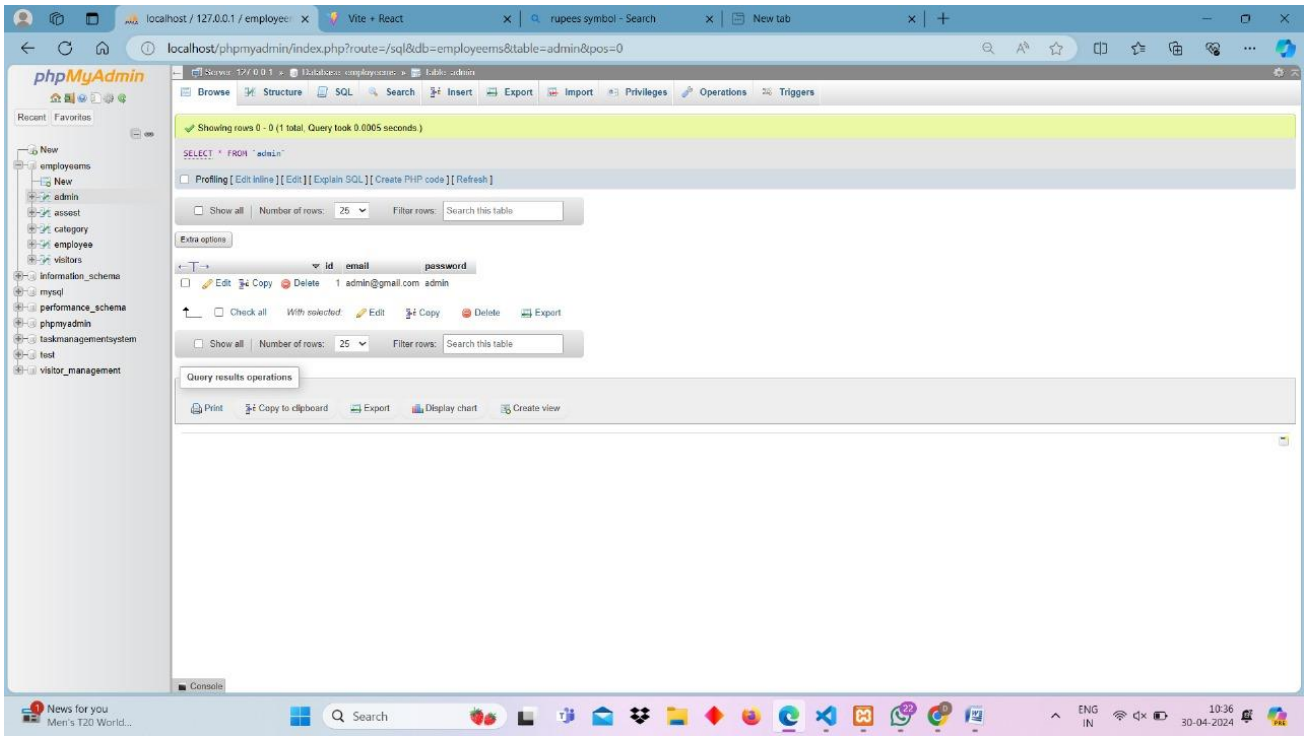


Fig.5.2Admin Database

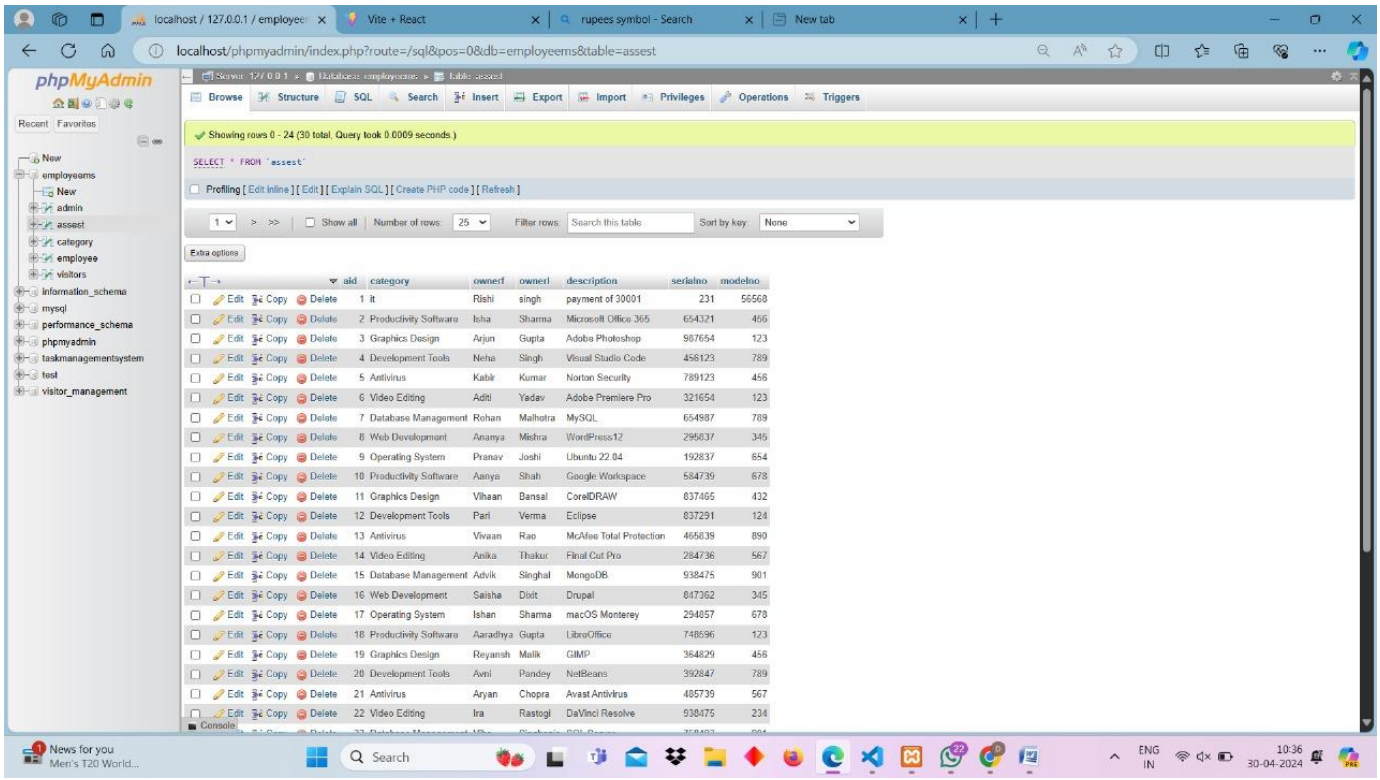


Fig.5.3AssetsTable

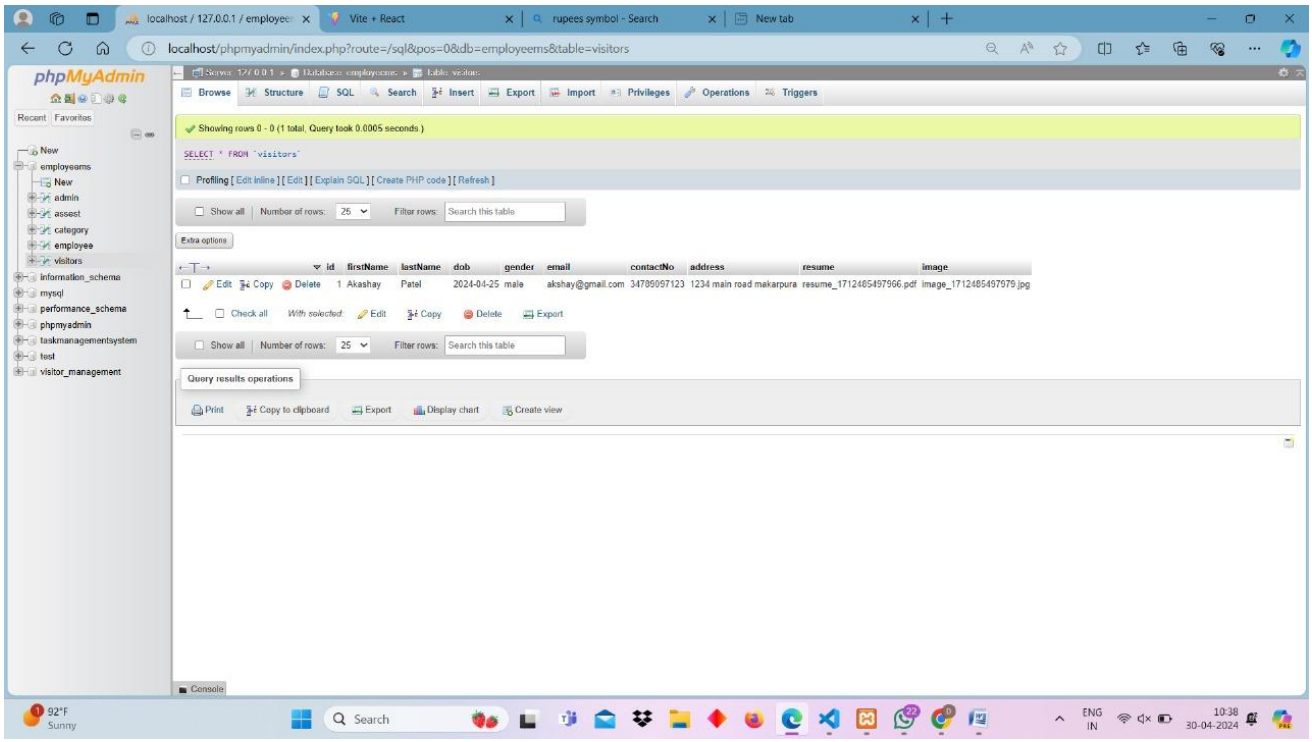


Fig.5.4Visitor Table

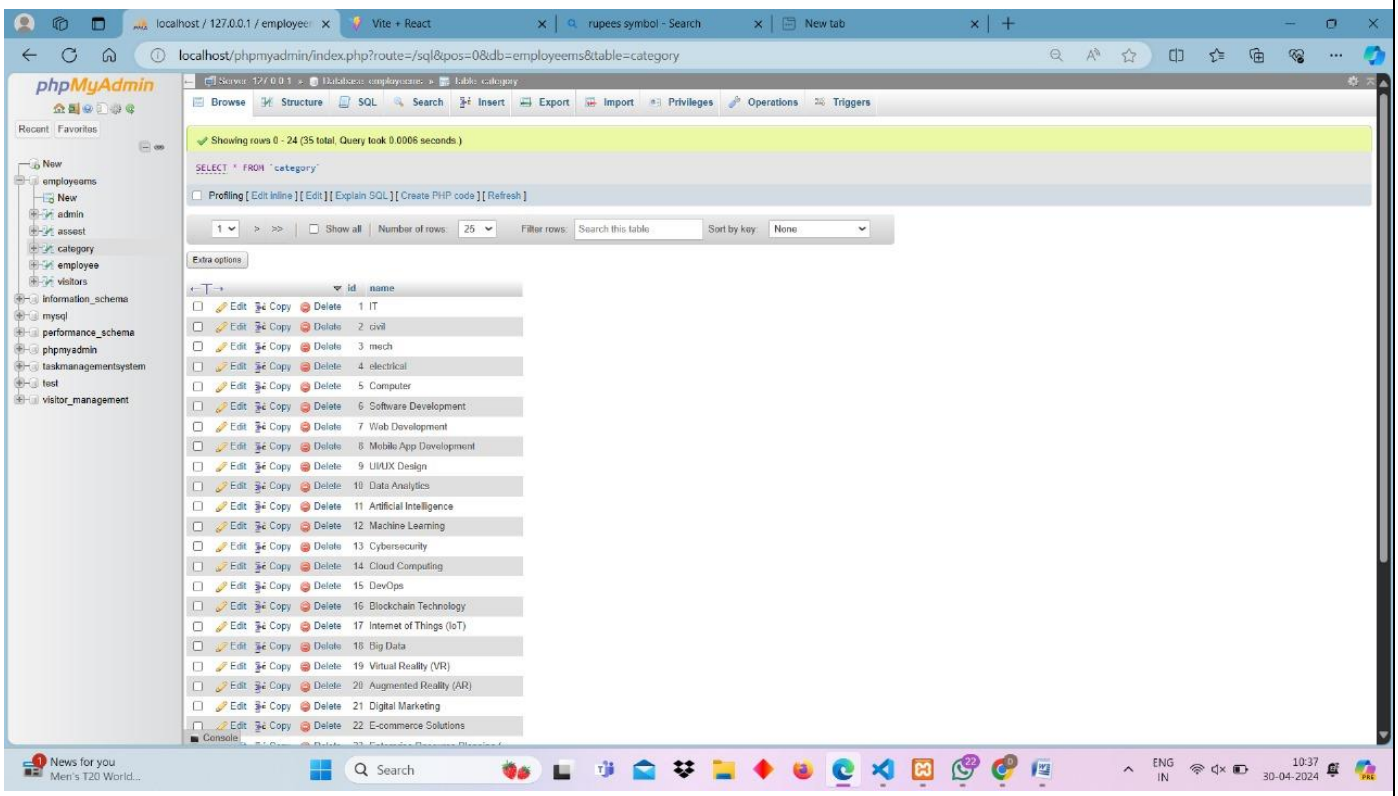


Fig.5.4Category Table

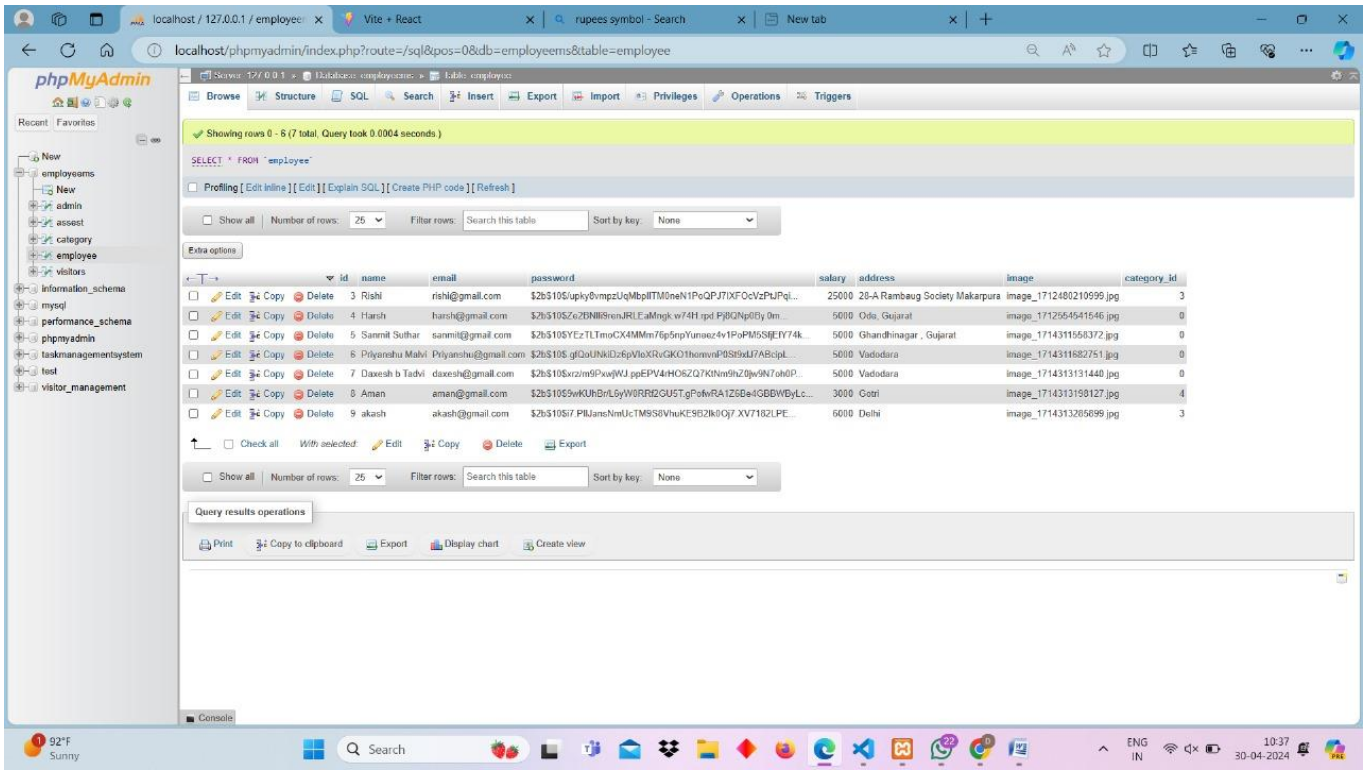


Fig.5.4Employee Table

5.3 USECASEDIAGRAM

Ausecasediagramis a graphicaldepictionofauser'spossibleinteractionswitha system

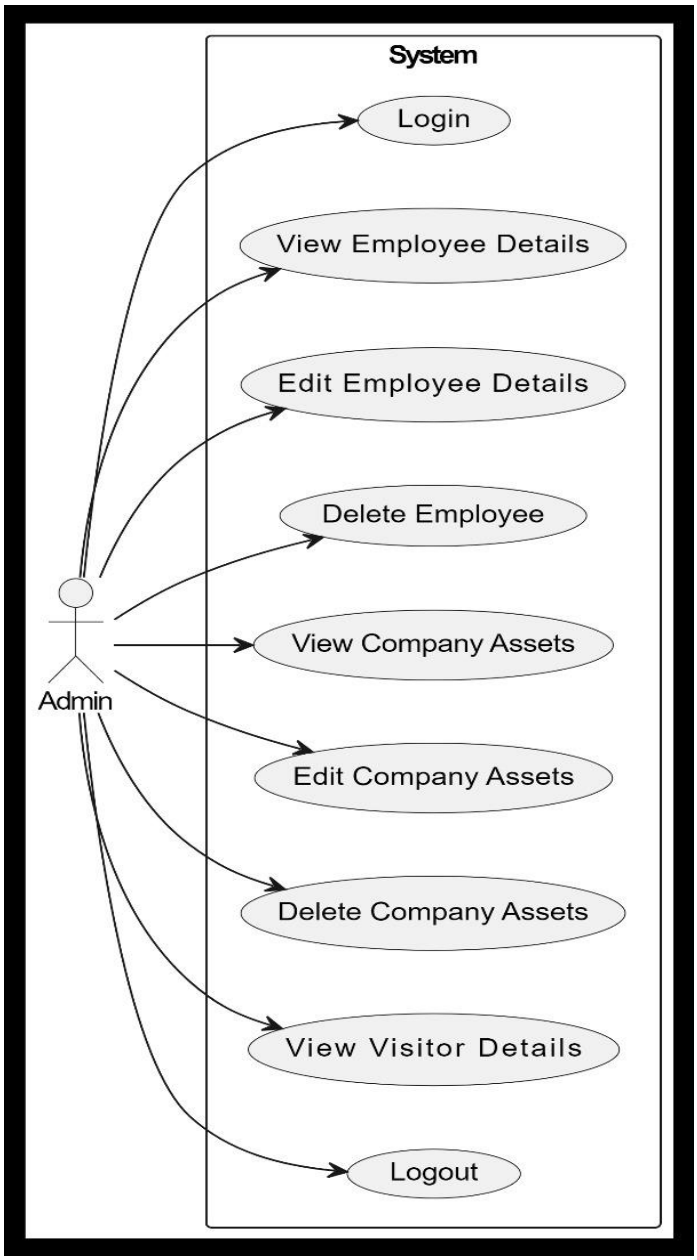


Fig.5.7Use Case(Admin)

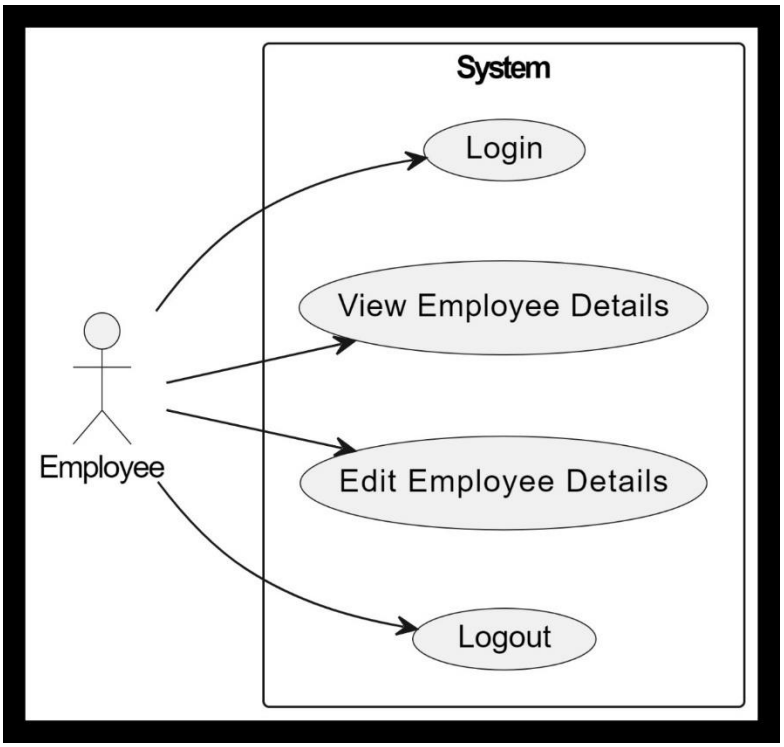


Fig.5.8Use Case(Client)

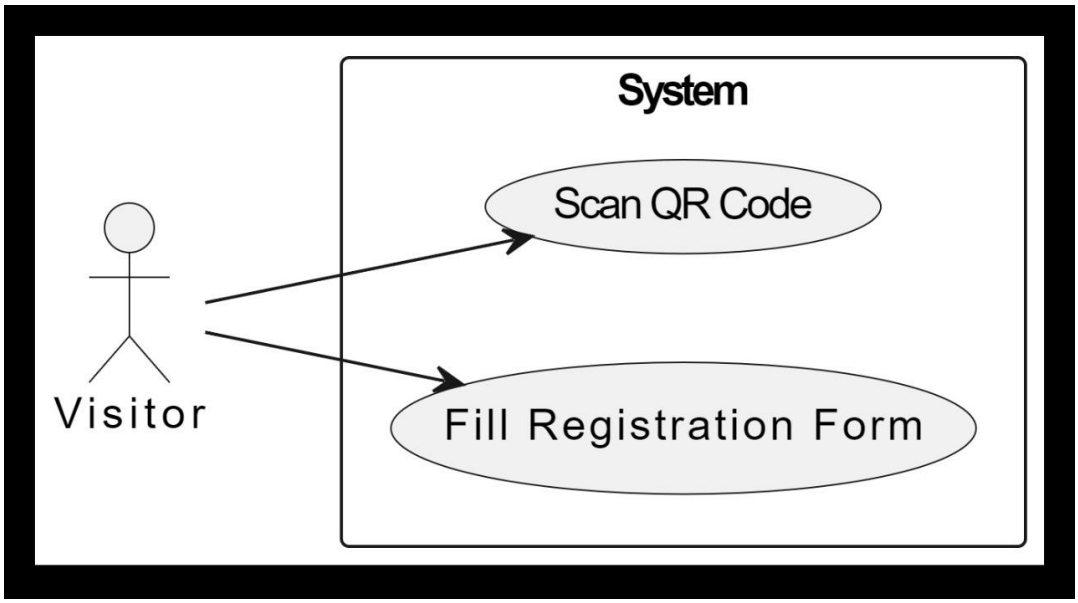


Fig.5.8Use Case(Visitor)

5.4 ACTIVITYDIAGRAM

Activitydiagramsaregraphicalrepresentationsofworkflowsofstepwiseactivitiesandactions with support for choice, iteration and concurrency

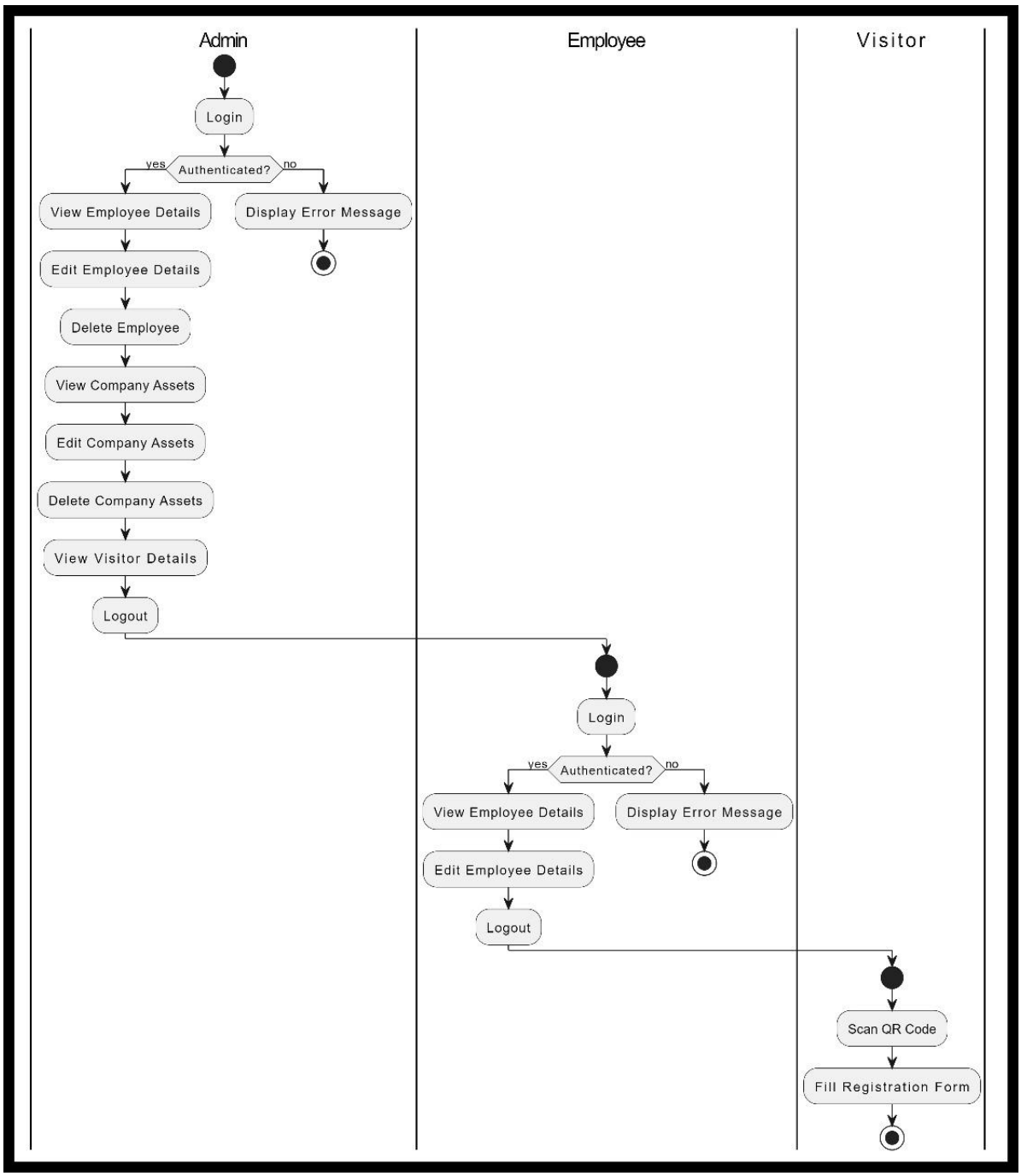


Fig.5.9ActivityDiagram

5.5 ER DIAGRAM

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

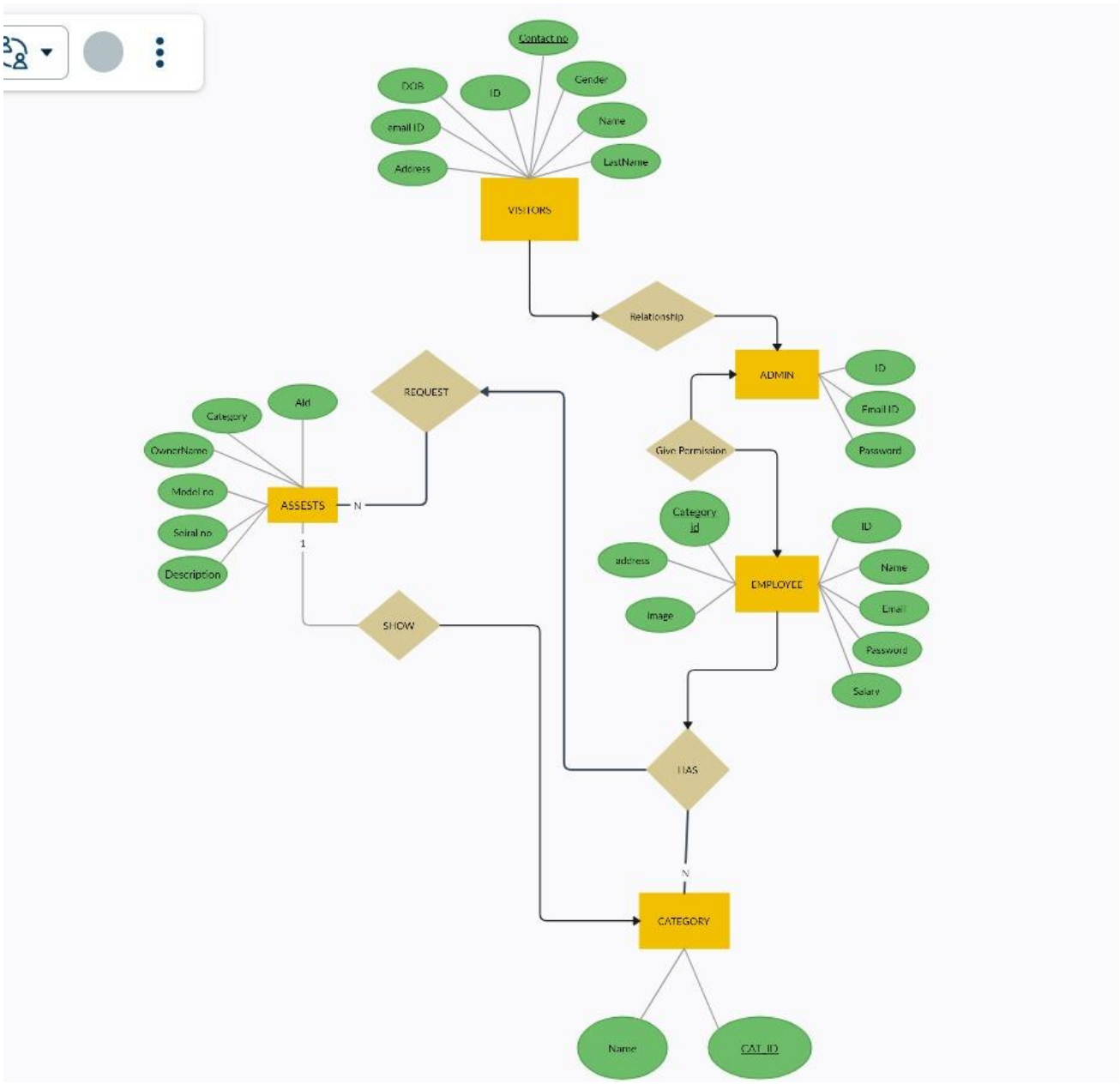


Fig.5.10ERDiagram

CHAPTER6:IMPLEMENTATION

6.1. TECHNOLOGIES&IMPLEMENTATIONENVIRONMENT

- Bootstrap is a front-end framework that provides a set of pre-built CSS and JavaScript componentsforcreatingresponsiveandmobile-firstwebpages,whilePHPisaserver-sidescripting language used for creating dynamic web pages.
- BootstrapcanbeusedwithPHPtobuilddynamicwebpagesbyintegrating PHPcodewith HTMLand Bootstrap's CSS and JavaScript components. Bootstrap and PHP can be used together to create dynamic, responsive websites with great user experience.
- You can use PHP to handle server-side processing and database and Bootstrap to handle thepresentationlayeranduserinterface.YoumustincludeBootstrap'sCSSandJavaScript files and use the appropriate Bootstrap classes and components in your code.
- PHP Bootstrap code implies making a bootstrapper that handles all the dynamic requests made to a server and applies the MVC system so that in the future you can change the functionality for each unique application or component without changing the whole. Bootstraphelpsyoutodesignwebsitesfasterandeasier,includingHTMLandCSS-based design templates.
- PHP Bootstrap templates make it less complicated for clients to construct complex and compelling web apps. PHP requires a local server to run PHP code.

6.1.1 LanguagesareUsed

- HTML5
- CSS3
- BOOTSTRAP
- JAVASCRIPT
- REACT JS
- NODE JS
- MATERIAL UI

6.1.2 Data Connectivity

- PHPDatabase Connection
- MySQLServer

6.2. MODULESPECIFICATION

The Visitor Management System module is designed to streamline visitor management within the campus environment. It offers features such as visitor registration with unique identifiers, efficient check-in and check-out processes, user-friendly dashboards for both visitors and administrators, integration with existing systems, robust security measures, analytics and reporting capabilities, and customization options. This module simplifies the event management process, ensuring security, efficiency, and satisfaction for all stakeholders while providing valuable data for real estate and future planning decisions.

6.2.1 Admin

- SecureLogin
- Dashboard
- Manageand ViewAssets
- Manageand ViewEmployees
- ManageandViewVisitors
- ViewEnquiry

6.2.2 Visitors

- Scan QR Code
- Fill the Registration Form
- Assistance

6.2.3 Employee

- Secure Login
- View Details
- Edit Details
- logout

6.3 RESULT/OUTCOMES

6.3.1 Admin Panel

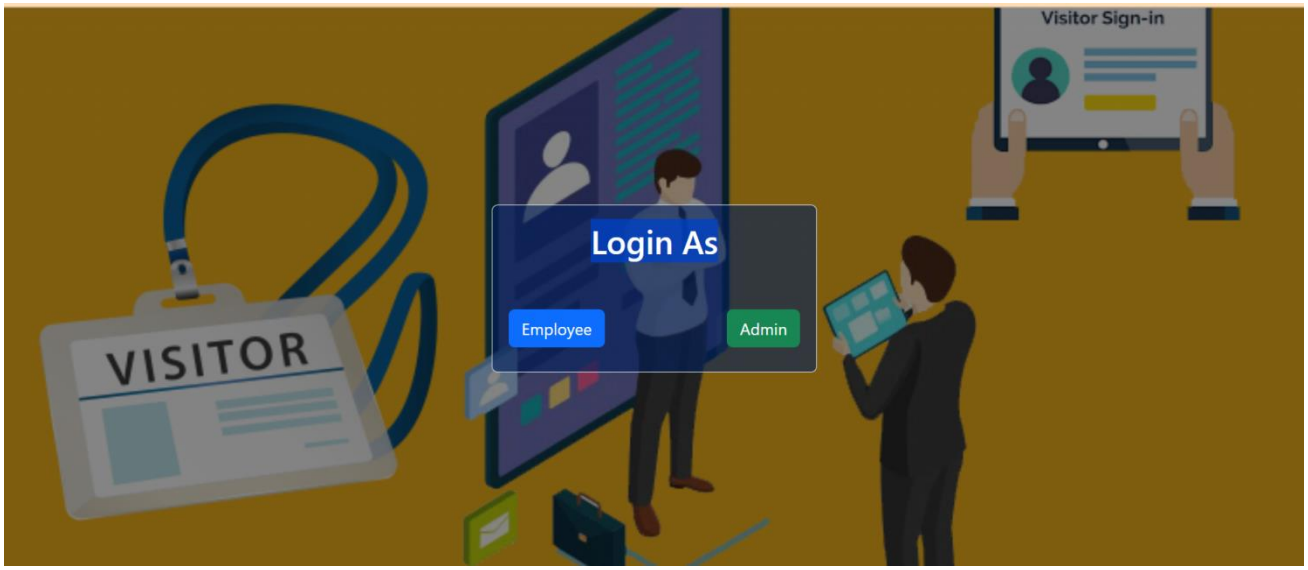


Fig.6.1Home Page

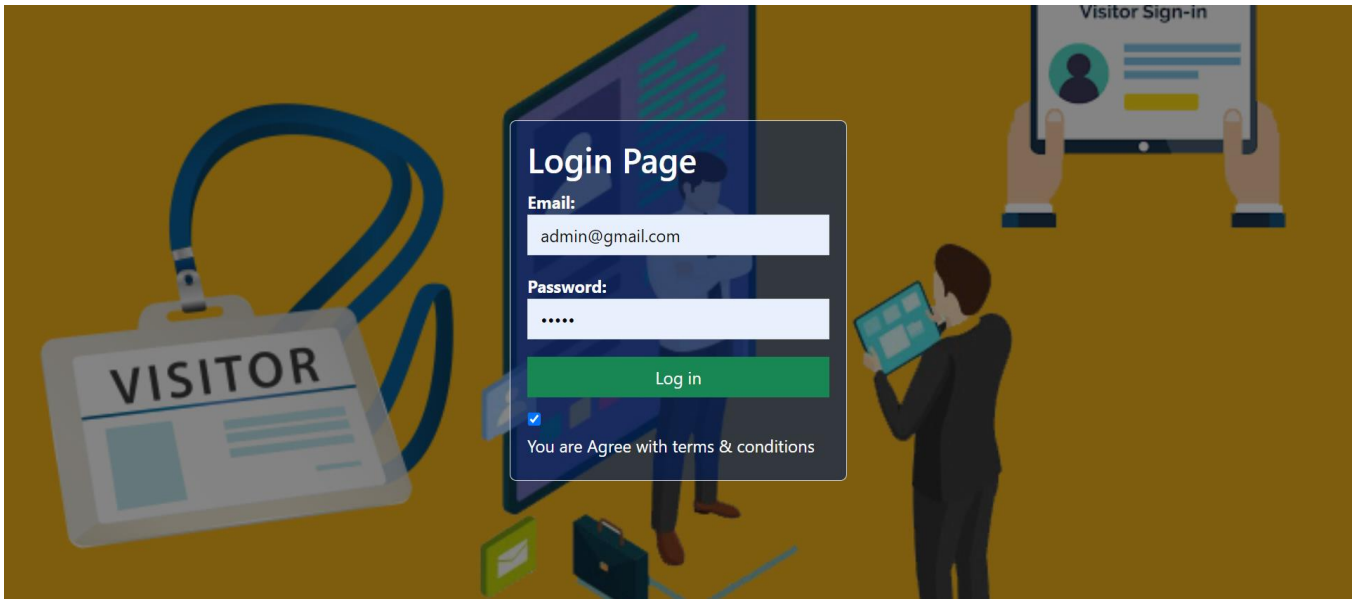


Fig.6.2AdminLogin

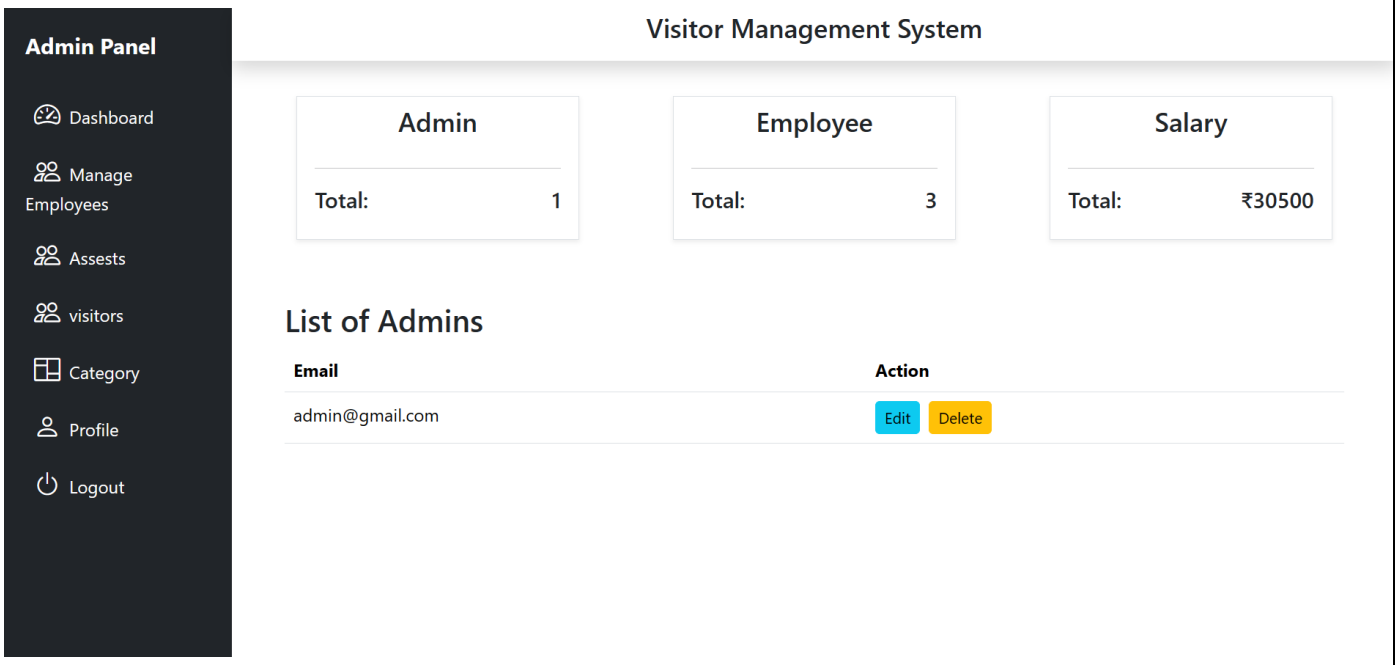


Fig.6.3Admin Dashboard

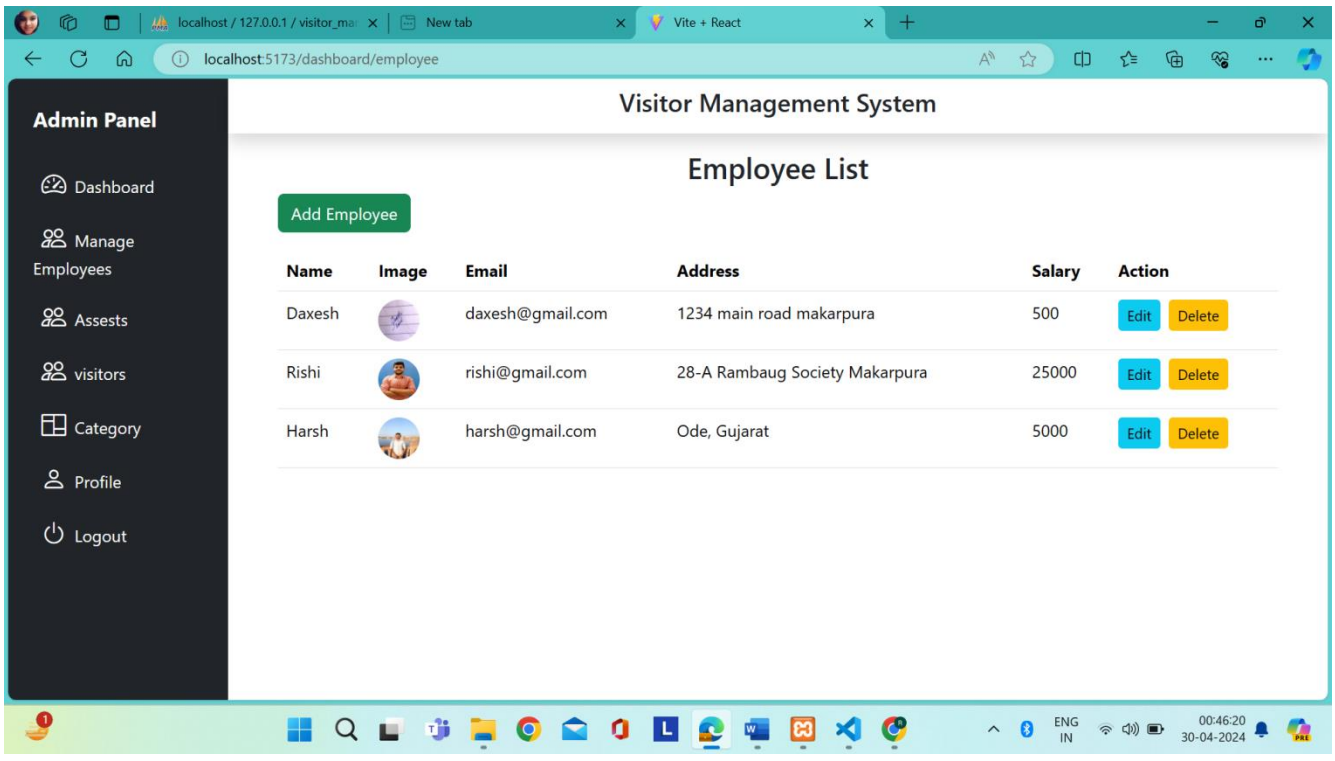


Fig.6.4View Employee

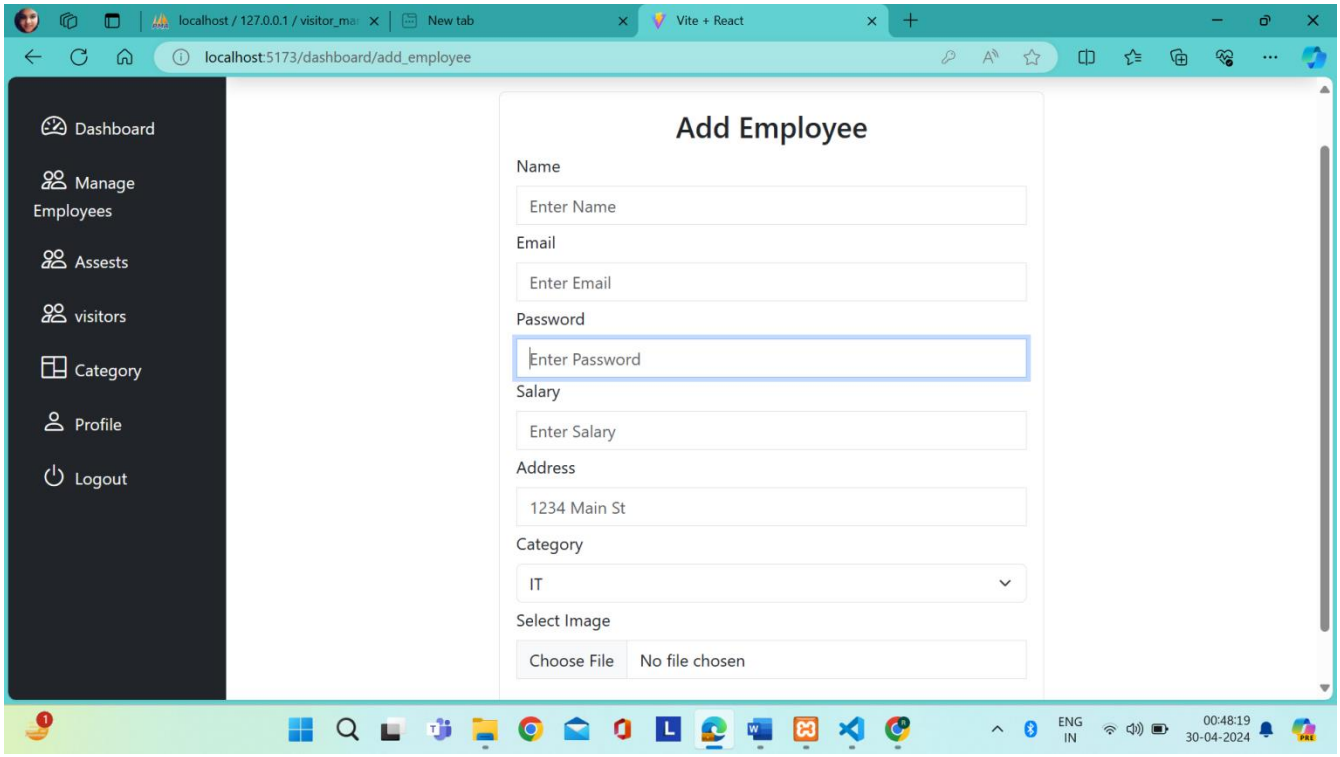


Fig.6.5 Add Employee

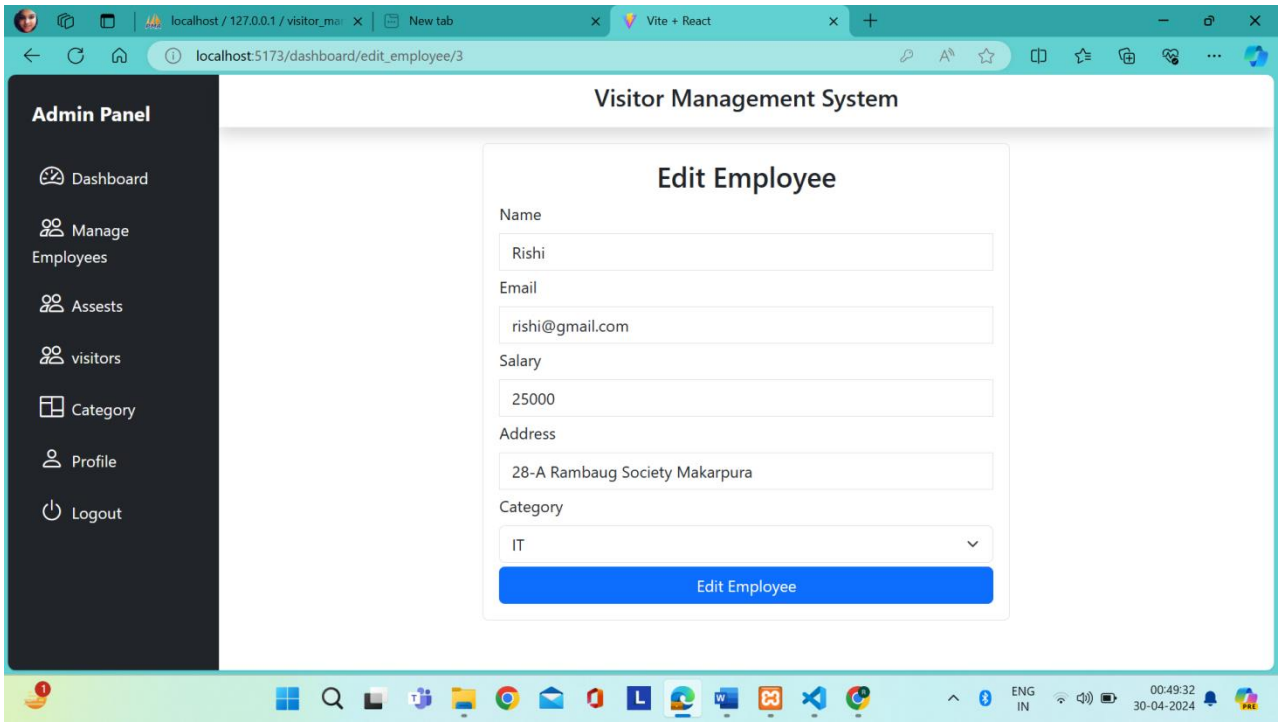


Fig.6.6Edit Employee

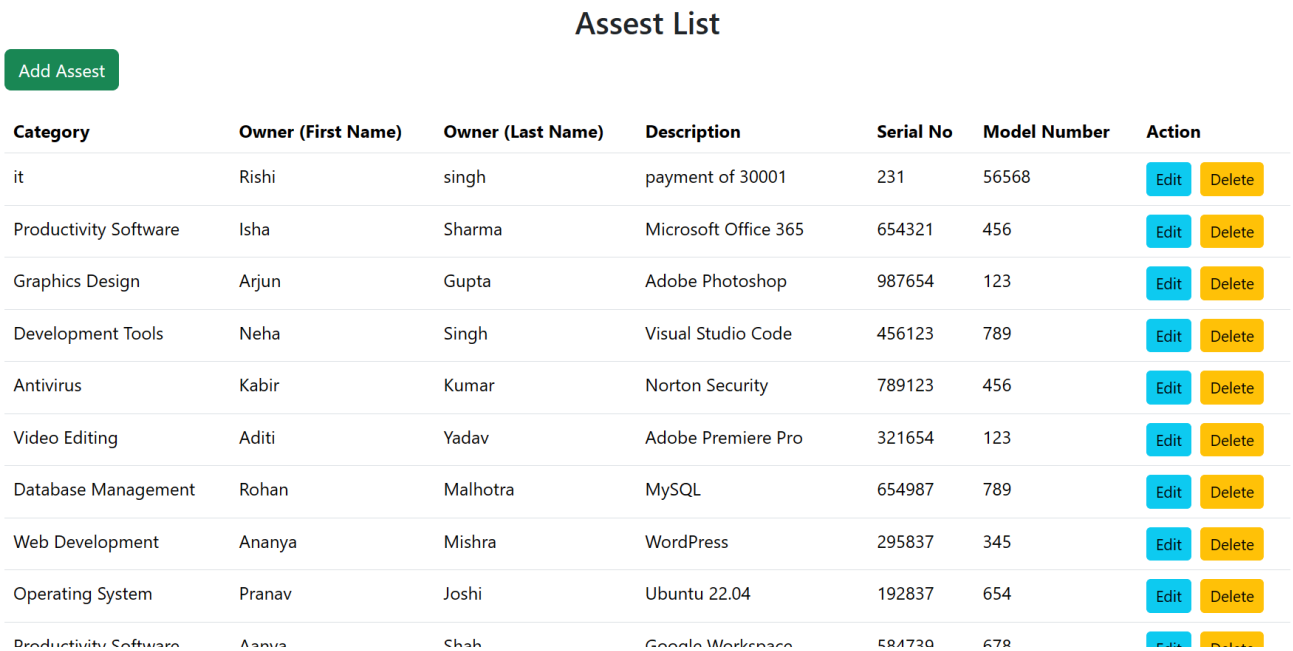


Fig.6.7View Assets

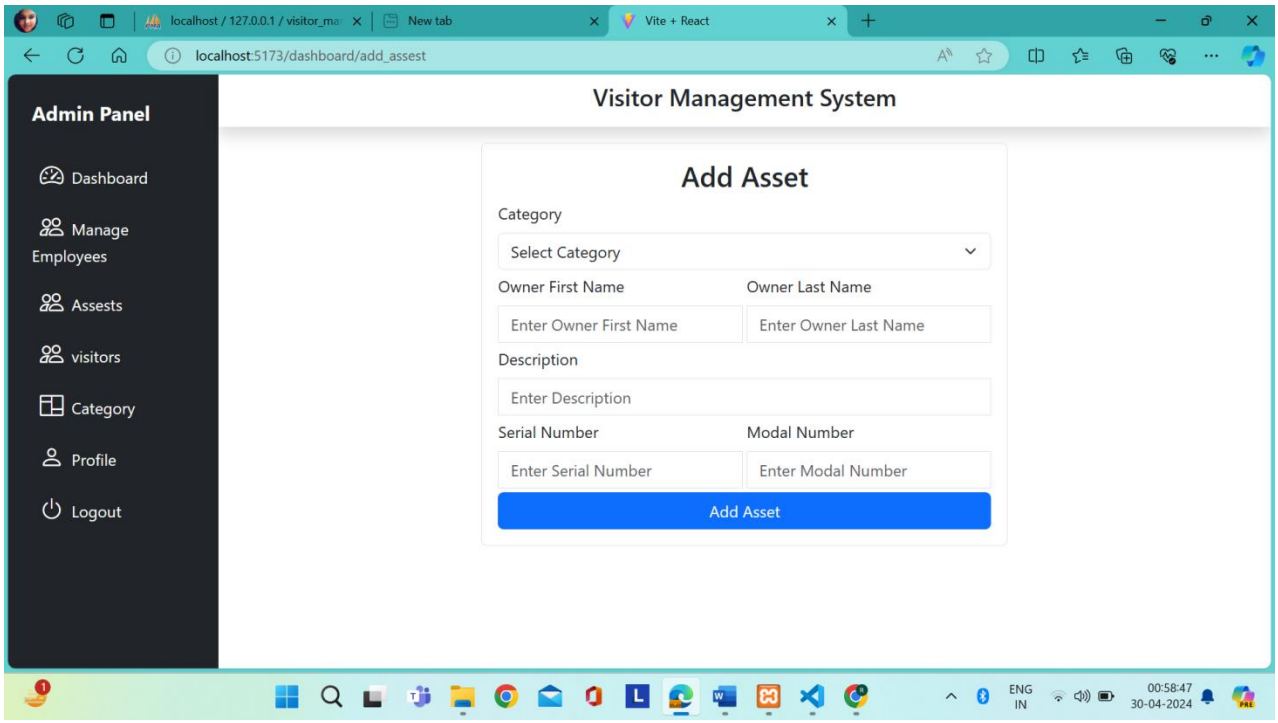


Fig.6.8 AddAssets Form

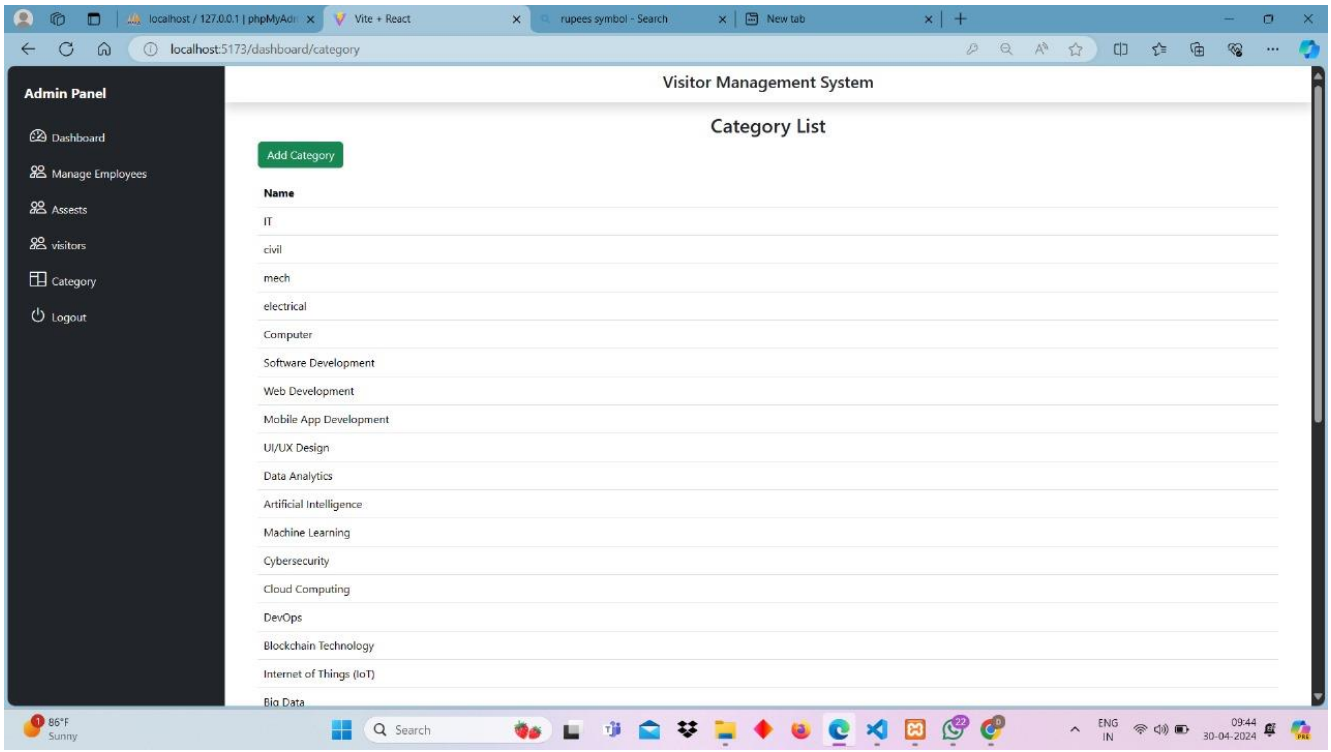


Fig.6.9Category

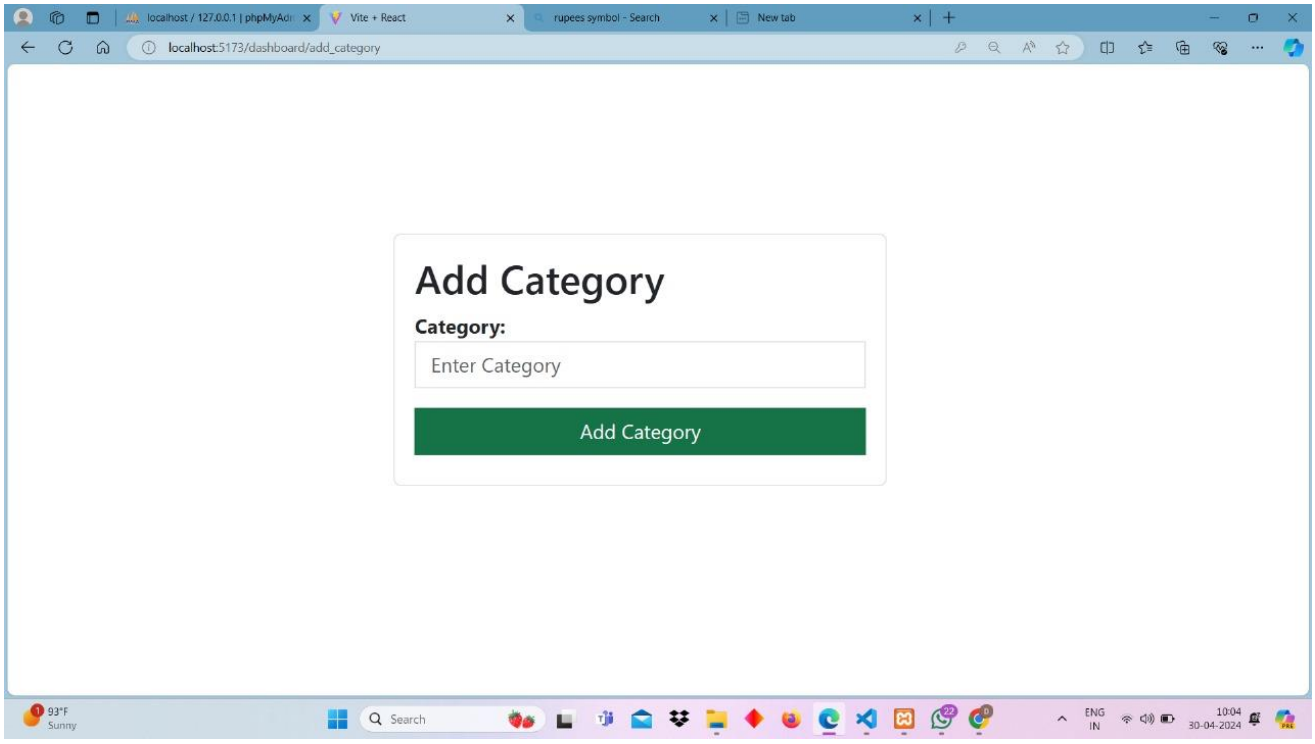


Fig.6.10Add Category

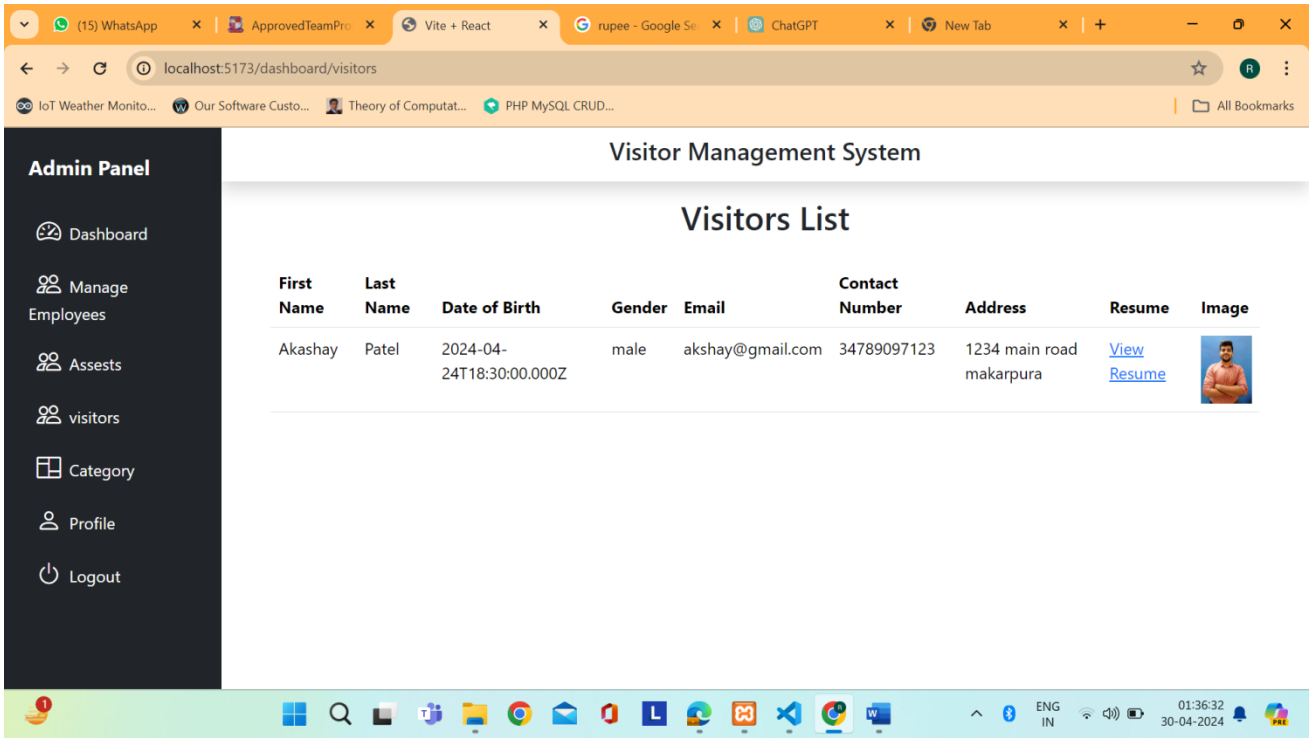


Fig.6.11Visitors List

6.3.2 Employee-Side Panel

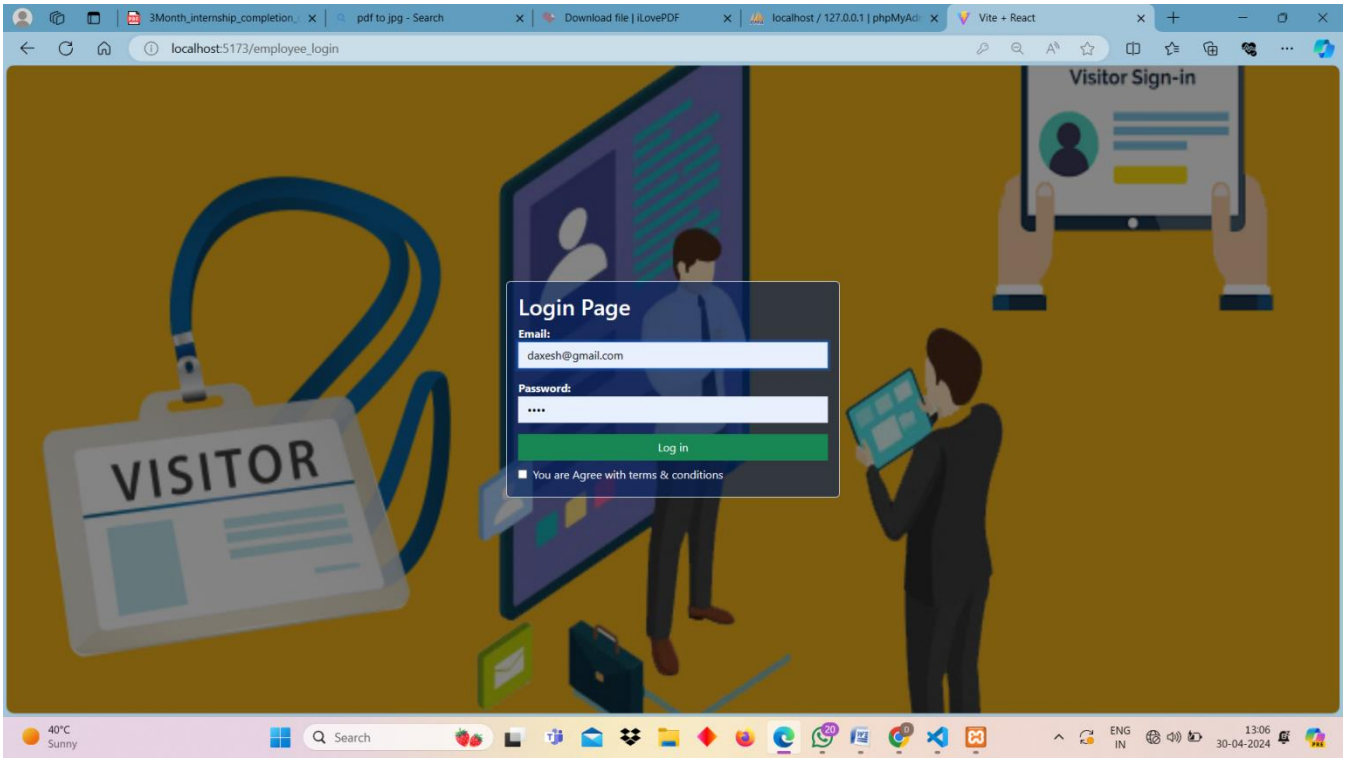


Fig.6.12 Employee login

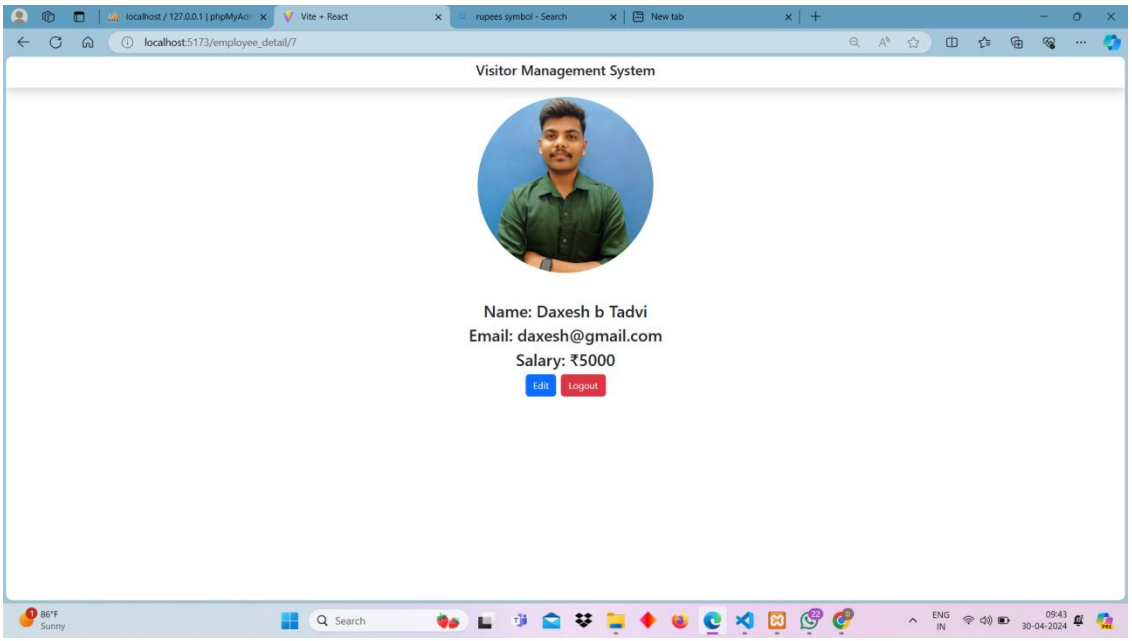


Fig.6.13Employee Page

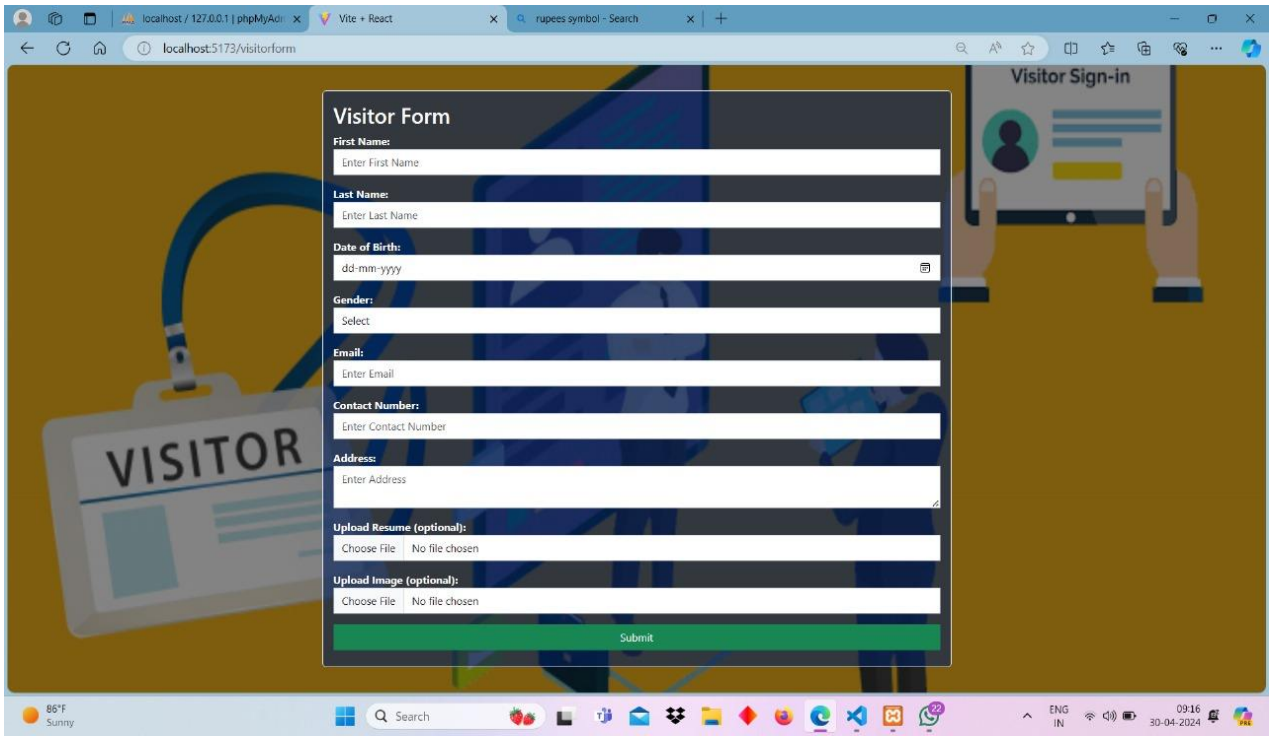


Fig.6.14Visitor Form

Fig.6.15QR CODE

6.4 RESULTANALYSIS

6.4.1 Interface

- User interface design creates an effective communication medium between a human and computer.
- Followingasetofinterfacedesignprinciples,designidentifiesinterfaceobjectsand actionsandthencreatesascreenlayoutthatformsthebasisforauserinterfaceprototype.
- We designed the user interface by applying an iterative process that draws on predefined design principles.

6.4.2 ParallelOperation

- Being a web-application, there will be many simultaneous accesses to the system. There are chances of the same data being modified / viewed at the same time.

6.4.3 Reliability Requirements

- Stability: Ensure consistent system performance and availability.
- Accuracy: Provide precise visitor data capture and reporting.
- Security: Implement robust measures to protect visitor information.
- Scalability: Handle varying levels of visitor traffic effectively.
- Redundancy: Incorporate backup systems to minimize downtime.
- Data Integrity: Safeguard data integrity and confidentiality.
- Compliance: Adhere to legal and regulatory requirements.
- User-Friendly: Offer an intuitive interface for ease of use.
- Support: Provide reliable technical assistance.
- Integration: Seamlessly integrate with existing systems.

6.4.4 Regularities Policy

- Thissystemcanworkwith Xampp7.2or higher.
- ItwillworkwithphpMyAdmin.

6.4.5 Hardware Limitation

- Thissystem workswith thehardwaredefined or higher.

6.4.6 Advantages

- Security Enhancement
- Efficiency Improvement
- Enhanced Experience
- Data Management
- Compliance Assurance
- Customization
- Integration
- Cost Savings

6.4.7 Limitation/Disadvantage

- Initial Setup Costs
- Privacy Concerns
- Limited Customization Options
- Integration Challenges
- Maintenance Requirements

CHAPTER7:TESTING

7.1 TESTINGPLAN

A test plan is the cornerstone of a successful testing implementation. The testing plan representstheoverallapproachtothetest.Inmanyways,thetestplanservesasasummaryof thetestactivitiesthatwillbeperformed.Itshowshowthetestswillbeorganized,andoutlines allofthetester'sneedsthatmustbemetinordertoproperlycarryoutthetest.Thegoaloftest planningisto establishthelistoftasksthat, ifperformed,willidentifyall oftherequirements that have not been met in the software. There are many standards that can be used for developingtestplans.Earlyinthedeploymentplanningphase,thetestingeffort,andidentifies the methodology that your team will use to conduct tests. It also identifies the hardware, software, and tools required for testing and the features and functions that will be tested. A well-rounded test plan notes any risk factors that jeopardize testing and includes a testing schedule. So, we can say that Test Planning details the activities, dependencies and effort required to conduct the system test.

7.2 TESTINGSTRATEGY

A test plan is the cornerstone of a successful testing implementation. The testing plan representstheoverallapproachtothetest.Inmanyways,thetestplanserves asasummaryof thetestactivitiesthatwillbeperformed.Itshowshowthetestswillbeorganized,andoutlines allofthetester'sneedsthatmustbemetinordertoproperlycarryoutthetest.Thegoaloftest planningisto establishthelistoftasksthat, ifperformed,willidentifyall oftherequirements that have not been met in the software. There are many standards that can be used for developingtestplans.Earlyinthedeploymentplanningphase,thetestingeffort,andidentifies the methodology that your team will use to conduct tests. It also identifies the hardware, software, and tools required for testing and the features and functions that will be tested. A well-rounded test plan notes any risk factors that jeopardize testing and includes a testing schedule. So, we can say that Test Planning details the activities, dependencies and effort required to conduct the system test.

7.2.1 TESTCASE

Atestcaseisadocument,whichhasasetoftestdata,preconditions,expectedresultsandpost conditions, developed for a particular test scenario in order to verify compliance against a specific requirement.

Test Case acts as the starting point for the test execution, and after applying a set of input values; the application has a definitive outcome and leaves the system at some end point or also known as execution post condition.

Table7.1 TestCaseTable

Sr.No.	TestCase	Status
1	Testfordatabaseconnectionifthedatagetscorrectlyenteredor not	Pass
2	TestofdifferentData Verification	Pass
3	TestforformValidation	Pass

CHAPTER8:CONCLUSION&DISCUSSION

8.1 OVERALLANALYSISOFPROJECTVIABILITIES

The internship certainlyprovided the author with insights into the live softwareprojects. The authorhasexperiencedfirst-handthechallengesofmanagingthemselves,theworkitself,and their co-workers. The author is satisfied with their internship.

8.2 PROBLEMSENCOUNTERED

8.2.1 DifficultyCommunicating

Incollectingprimarydata,itisreallyhardtogetcorrectinformationfrompeopleastheymight not feel comfortable or provide their false feeling.

Toobservethewholecorporation'sactivitiesandcomeupwithafruitfulresultrequiresahuge amount of time, so the time limit is another crucial limitation of this study.

Theinternshipproposalisconductedbasedonseveralsecondarydatawhichwererather inefficient or unreliable.

8.2.2 StruggleUnderstanding Things

The Internship project brings together many technologies and tools like Bootstrap, Visual Studio,SQL,PHP,HTML,CSS, React JS, Node JStoworktogether.Understandingallasonesystemtooksome time.

8.3 SUMMARYOFINTERNSHIP

Overall, the internship program at Bharti Soft Tech Pvt Ltd provided an invaluable opportunity for me to enhance and develop my skills in Technical, Communication, and Soft Skills. The experience was enriching, allowing me to gain insights into various aspects of visitor management system development. Bharti Soft Tech Pvt Ltd proved to be an exceptional company for internship, offering numerous benefits and advantages to interns. The company's treatment was equitable and professional, fostering a conducive learning environment. Throughout the internship, I had the privilege of learning from professionals across different departments, gaining insights into their work processes and client management strategies. I am particularly grateful to my mentor, Mr. Pritamsinh Parmar, for their guidance, support, and tutoring throughout the internship. Their expertise and mentorship helped me address weaknesses and navigate challenges effectively. Overall, the internship at Bharti Soft Tech Pvt Ltd was a valuable experience that significantly contributed to my professional growth and development.

8.4 LIMITATIONSANDFUTUREENHANCEMENT

8.4.1 Limitation

- Manual Visitor Registration: The system may still rely on manual visitor registration processes, lacking automated features for self-registration or online booking, which could result in inefficiencies and longer wait times.
- Limited Notification System: The system may lack a comprehensive notification system, preventing visitors from receiving email or SMS notifications after completing their check-in or check-out, potentially leading to missed appointments or confusion.

8.4.2 FutureEnhancement

In future enhancements for the Visitor Management System, integrating a mobile app for pre-registration and check-in, along with facial recognition technology, promises to enhance security and streamline visitor processes. Incorporating AI-powered analytics would provide valuable insights for decision-making, while IoT integration could optimize space usage. A virtual receptionist, multi-language support, and expanded reporting capabilities would further improve the visitor experience. Additionally, API integration, sustainability initiatives, and ongoing training would ensure the system remains adaptable and efficient in meeting evolving needs.

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