Project Report on

E-INSURANCE MANAGEMENT SYSTEM

at

WEBKNIGHT INFOSYSTEM

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U.V. PATEL COLLEGE OF ENGINEERING

11/05/2024

C E R T I F I C A T E

T O W H O M S O E V E R I T M A Y C O N C E R N

This is to certify that Mr. /Ms. DARSHAN SHAMJIBHAI VASOYA student of **B.Tech. Semester VIII (Information Technology)** has completed his/her full semester on site project work titled "**E-INSURANCE MANAGEMENT SYSTEM**" satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Mehsana in the year 2023-2024.

Sign:

College Project Guide

Prof. Satish K. Maurya

Sign:

Dr. Devang Pandya,

HOD, Information Technology

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WEBKNIGHT INFOSYSTEM

Date : 02-05-2024

TO WHOM IT MAY CONCERN

This is to certify that Mr. Darshan Shamjibhai Vasoya, a student of Ganpat University (UVPCE), is presently engaged in an internship within the field of E-Insurance Management System.

Internship Details:

Intern's Name: Darshan Shamjibhai Vasoya

College: Ganpat University (UVPCE)

Internship Duration: Ongoing

Field of Internship: E-Insurance Management System

Remarks:

We commend Mr. Darshan Shamjibhai Vasoya for his dedication and contribution to the project. His enthusiasm and commitment have been valuable to the team.

Dhaval Prajapati

Project Manager

ACKNOWLEDGEMENT

We take this occasion to thank God, almighty for blessing us with his grace and taking our endeavour to a successful culmination. We extend our sincere and heartfelt thanks to our esteemed guide, **Mr. Dhaval Prajapati** for providing us with the right guidance and advice at the crucial junctures and for showing us the right way. We extend our sincere thanks to our respected head of the division **Mr. Dhaval Prajapati**, for allowing us to use the facilities available. We would like to thank the other faculty members also, at this occasion. Last but not the least, we would like to thank friends for the support and encouragement they have given us during the course of our work.

Thank you

ABSTRACT

Our aim is “Customers want to be able to buy online insurance with confidence”. According to business experts the news came that the entire insurance industry will be adopted by the e-commerce. So, the peoples those who still referring offline insurance to make them understandable, easily adoptable about online insurance our research will help them. For a new generation of working professionals, online insurance is the bridge that connects the digital age and the challenges of adult life. With internet access is rising and a young generation of working middle class professionals reaching the cusp of adult life, online insurance business is gathering momentum. Our research reveals that, while of course there are significant variations in customer attitudes and behaviours around the globe, driven by the diverse economic, demographic, competitive and regulatory environments, there are some underlying themes that are remarkably consistent. Listen to the voice of the customer.

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CHAPTER 1 - INTRODUCTION

Our wide spectrum of articles that have been included in this edition touch on business, regulatory and accounting aspects that are currently topical and the subject matters of many debates. We explore the future of micro insurance, the challenges brought about by the implementation of Combine portal and its impact on the consolidation principles applied to insurance cells.

This is an exciting and challenging time for insurers. Customer behaviour is changing rapidly. Technology, and in particular the growth of online and social media, is driving a fundamental shift in customer expectations in terms of how products are marketed, priced, sold and serviced, and how companies are perceived. Pure internet businesses have set new standards for customer-centricity and engagement that raise the performance bar for players in every retail business sector.

Customers want to be able to buy with confidence in both the non-life insurance and life and pensions sectors, Customers want products, and the purchasing process, to be simple and transparent so they can understand what they are buying. They want to build long-term relationships with insurance providers based on trust, and to have confidence that the products they are buying Are right for them and meet their needs.

So, to fulfil the requirements and need of the insurer we have developed one methodology which will attract the people. And the system will be a user friendly so all peoples who have knowledge about insurance or not they all will accept the insurance.

1.1 PROBLEM STATEMENT

The existing system of Insurance has lengthy procedure of getting a life insurance. Also, it may contain a chain of middle men.

If we want to buy a life insurance policy, we may select various ways. Either we should contact to bank, or we should contact an agent, or buy a policy online.

If we go to bank then 1st problem is where to enquire and how long is the procedure? And if we get perfect place then this will become very lengthy process as there are so many faults in this possibility.

Then, although we bought the policy then bank is not going to provide him service. We have to do all things. In that condition for our betterment only we have to do work.

If we call an agent then whether the agent is IRDA certified or not? This is a big problem. For their business these agents might be sells the policy in wrong way, in that, we, customer has to survive. It is not that all advisors are cheater but then also 90% advisors are not providing the proper knowledge. Sometimes advisors for their target or for achievements they do false promises to customer which makes customer away from insurance. 90% of agents are doing business within their circle. So, customers keep blind faith on advisors. Sometime advisors are not giving the proper service to customer. So, these are the problems with going this option.

The third option is online insurance. But in India online insurance is not as much as popular. Only educated peoples are doing online. There are two types of educated people first those who knows all online procedure but not ready to accept this. The reason behind that is they scared about online transaction and services. This is normal traditional way which has followed by industry since insurance funda came.

The problem which comes in front of us that is the entire industry is not centralized. This makes customer unreliable. Just take an example if there is one person, he has 10 different policies of 10 different companies and hi wants to monitor his all policies online. Then he has to visit all 10 different websites of respective company then do registration over there and fills information and then do login. Such that for all 10 websites he has to do this work which becomes hectic. There is no one roof solution. There is not proper comparison of products. There is not proper explanation online.

1.2 PURPOSE

The creation of an e-insurance website using PHP serves as a pivotal step in modernizing the insurance industry and adapting to the digital era. Firstly, such platforms significantly enhance accessibility by providing individuals with the ability to explore insurance options, obtain quotes, and purchase policies from any location with internet access. This accessibility not only caters to the evolving preferences of customers who prefer online interactions but also widens the reach of insurance services to individuals in remote areas or with limited mobility. By eliminating geographical barriers and reducing the need for physical visits to insurance offices, e-insurance websites make insurance products more readily available and convenient for a broader spectrum of the population.

Moreover, operating online substantially reduces operational costs for insurance companies. By automating various processes and minimizing the reliance on physical infrastructure, e-insurance platforms enable insurers to streamline their operations and allocate resources more efficiently. This cost-effectiveness can translate into offering more competitive rates for insurance products, thereby attracting more customers and expanding market share. Additionally, the savings realized from online operations can be reinvested into enhancing digital capabilities, improving customer service, or developing innovative insurance solutions tailored to evolving market needs.

Furthermore, e-insurance websites empower insurers with advanced data analytics capabilities, enabling them to gain deeper insights into customer behaviour, preferences, and risks. By leveraging data-driven insights, insurers can personalize offerings, tailor marketing strategies, and optimize risk management practices. This data-centric approach not only enhances customer satisfaction by delivering more relevant and customized insurance solutions but also enables insurers to mitigate risks more effectively, thereby ensuring long-term sustainability and competitiveness in the dynamic insurance landscape.

1.3 OBJECTIVE

Efficiency Enhancement: The primary objective is to streamline insurance processes by digitizing and centralizing tasks such as policy management, claims processing, and customer interactions. Through automation and optimization, the system aims to reduce administrative overhead, minimize errors, and expedite the issuance of policies and settlement of claims.

Customer Service Improvement: Another key objective is to enhance customer satisfaction and retention. By providing self-service portals and intuitive interfaces, the system enables policyholders to access their insurance information, make policy adjustments, and file claims online effortlessly. This seamless accessibility and convenience contribute to an enhanced overall customer experience, fostering greater loyalty and satisfaction.

Data-Driven Decision Making: The e-insurance management system seeks to empower insurers with data-driven insights to inform strategic decision-making. By capturing and analysing data on customer demographics, behaviours, and risk profiles, insurers can tailor their offerings more effectively, identify market trends, and proactively mitigate risks. This objective underscores the importance of leveraging technology to drive informed decisions and innovation within the industry.

Competitive Advantage: Creating the system also aims to provide insurers with a competitive edge in the rapidly evolving digital landscape. By embracing technological advancements and offering innovative digital solutions, insurers can differentiate themselves in the market, attract new customers, and retain existing ones. This objective aligns with the broader industry trend towards digital transformation and modernization.

1.4 TOOLS AND TECHNOLOGY

Microsoft Visual Studio

Language Used: PHP, HTML, CSS, JavaScript, jQuery

Database: MySQL Database

Bootstrap

XMAPP as a local host or server.

STAR UML for making diagram.

CHAPTER 2 - SCOPE

The scope of this project encompasses the design, development, and thorough testing of an online platform dedicated to the buying insurance easily. Additionally, the system will accommodate insurance services to the needs of customers and enhance their overall experience. This feature serves as a significant value addition, saving customers valuable time and fostering continued patronage of local insurance agency as opposed to exclusively opting for larger, centralized agencies.
Key components and functionalities within the project scope include:

1. Policy Management: Developing a platform for customers to browse, compare, purchase, and manage insurance policies online.
2. Claims Processing: Implementing functionalities for customers to file and track claims digitally, streamlining the claims settlement process.
3. Customer Service: Providing self-service portals, chat support, and informative resources to enhance customer experience and satisfaction.
4. Data Analytics: Integrating tools for analysing customer data to personalize offerings, identify market trends, and improve risk management strategies.
5. Security and Compliance: Ensuring robust cybersecurity measures and regulatory compliance to protect sensitive customer information and adhere to industry standards.
6. Mobile Accessibility: Optimizing the website for mobile devices to cater to users accessing insurance services on smartphones and tablets.
7. Integration with Insurer Systems: Connecting the website with internal insurer systems for seamless data exchange and operational efficiency.
8. Marketing and Outreach: Implementing strategies to attract and retain customers through targeted marketing campaigns and promotional activities.
9. Internationalization: Considering the potential for expanding the website's reach to international markets and accommodating multiple languages and currencies.

By encompassing these features, the project aims to revolutionize the insurance management system experience, making it convenient, efficient, and customer-centric.

2.1 OVERVIEW

This system revolves around the establishment and maintenance of a dedicated database to facilitate its operations. The database, which can be implemented using technologies such as RDBMS or online databases like Firebase, stores vital information about the insurance and supports server-side functionalities. The server processes are responsible for handling customer details and managing the policy to different locations as specified by customers.

Our insurance management system aims to provide a platform for given highly useful insurances directly to consumers' doorsteps at competitive prices. This platform comprises three core modules: one those customers who want to purchase insurance policy caters to, second one is that staff who always help for customers and aware the customers for insurance how policy useful in your future. at the end of the third one is the admin that can handle the users and staff, also they handle the policy and ticket. In the e-insurance website, everyday individuals access the platform online to browse insurance options, obtain quotes, purchase policies, and manage their accounts. Meanwhile, administrators oversee and manage the underlying database, handling tasks such as policy management, claims processing, and user account management to ensure smooth operations and optimal customer service.

The application, hosted on the customer's database (such as an RDBMS), retrieves and presents product information through a user-friendly interface based on user selections from the menu. These interactions and transactions continuously update the policy database as each transaction concludes.

CHAPTER 3 - FEASIBILITY STUDY

The feasibility study is a systematic evaluation that encompasses all potential avenues to address the problem at hand. Our objective is to formulate a solution that not only fulfils the current user requirements but also exhibits the flexibility necessary to accommodate future enhancements and adaptations in response to evolving needs.

This study serves as a condensed, high-level overview of the entire system analysis and design process. It begins with a clear definition of the problem at hand. Subsequently, we evaluate whether the proposed project is worth pursuing. Once we have a well-defined problem statement and a logical system model, we embark on a meticulous examination of alternatives.

The feasibility study for our insurance management system project comprises the following key aspects:

1. Market Analysis
2. Operational Feasibility
3. Technical Feasibility
4. Financial Feasibility
5. Risk Assessment

In conclusion, our feasibility study aims to provide a well-rounded assessment of the proposed Insurance management system project, taking into account operational, technical, financial, market analysis and risk assessment factors. This evaluation will guide our decision-making process and ensure that the project aligns with our objectives and the needs of policy buyers in the modern digital landscape.

3.1 MARKET ANALYSIS

Market analysis for an insurance management system (IMS) involves assessing the demand, competition, and growth potential within the insurance technology sector. It includes evaluating the current market landscape, identifying key players, and understanding customer needs and preferences. Additionally, analysing industry trends, such as the shift towards digitalization and automation, helps gauge the market's readiness for an IMS solution. Moreover, examining regulatory requirements and compliance standards specific to the insurance industry is essential for understanding the market's regulatory landscape. This analysis provides valuable insights into market opportunities, challenges, and potential niches for an IMS, guiding strategic decision-making and positioning within the competitive landscape.

Furthermore, market analysis involves identifying target customer segments, such as insurance companies of varying sizes and specialties, and assessing their requirements and pain points regarding insurance management. Understanding customer needs allows for the customization and tailoring of the IMS solution to address specific challenges and provide value-added features. Additionally, exploring pricing models, revenue streams, and potential partnerships or collaborations within the market ecosystem enables the formulation of a comprehensive go-to-market strategy. Ultimately, a thorough market analysis serves as the foundation for effectively positioning and marketing the IMS solution, ensuring alignment with market demands and maximizing its adoption and success within the insurance technology market.

3.2 OPERATIONAL FEASIBILITY

As our project consists of a website that has a very Simple Graphical User Interface. So, to use it a person need not be a highly technical person, even a common person can use it very easily. The person using our web website does not need to know any kind of programming language and also does not need to have technical knowledge. People belonging to any age group can use our website and website without any issues. Overall, our project is very much operationally feasible.

As the requirements of the project are not large and the objective of the project is well defined, well understood among the team members, and the schedule for the project is initially marked out, the project can be satisfactorily completed within the expected timeline. However, some issues may arise due to a lot of content but, they can be solved with proper planning and team efforts. Thus, the project is timely feasible.

3.3 TECHNICAL FEASIBILITY

The project is quite feasible technically as it can be implemented using the support and features provided by the programming languages and handy software tools which are easily available to user. Also, with the technical support of the books available, internet resources and internal staff the technical obstacles that are expected/unexpected could be resolved without much delay. Also, there is no special hardware involved in the system. Thus, the overall project is technically feasible.

The system is self-explanting and does not need any entire sophisticated training. A system has been built by concentrating on the graphical user interface concepts, the website can also be handled very easily with a novice uses. The overall time that a user needs to get trained is less than 15 minutes.

3.4 FINANCIAL FEASIBILITY

Since no special hardware is required for the system the direct or indirect cost required for the development and the deployment of the project is reduced. As our project consists of a web website it does not require any financial help. We will only need a web domain and nothing else. Hence, our project is financially very feasible.

In our website, it is built for the all the people. It is freely available to utilized. This website doesn’t have any monetary service to take the charges according to the usage, any user can access this website in freely. Every user can access this website.

3.5 RISK ASSESSMENT

In implementing an insurance management system (IMS), a thorough risk assessment is paramount to identify and mitigate potential threats to the project's success. Risks encompass various areas, including data security vulnerabilities, technological challenges, regulatory compliance issues, integration complexities, user adoption hurdles, and operational disruptions. Evaluating each risk's likelihood and impact enables stakeholders to prioritize mitigation strategies effectively. Strategies may involve implementing robust security measures, conducting extensive testing and quality assurance, staying updated with regulatory requirements, developing comprehensive integration plans, providing adequate user training and support, and establishing contingency plans for operational continuity. By proactively addressing identified risks, insurance companies can enhance the IMS's resilience, ensuring smoother implementation and sustained performance in managing insurance operations effectively.

3.6 STUDY OF A CURRENT SYSTEM

Studying a current insurance management system (IMS) involves analysing its features, functionalities, strengths, weaknesses, and overall performance. Firstly, examining the system's architecture, technology stack, and infrastructure provides insights into its scalability, flexibility, and reliability. Understanding how data is stored, processed, and secured within the system helps assess its robustness and compliance with regulatory requirements.

Additionally, evaluating the user interface and experience highlights usability issues, navigation challenges, and areas for improvement in enhancing user satisfaction and efficiency. Moreover, analysing the system's integration capabilities with external applications, databases, and third-party services identifies potential bottlenecks and opportunities for streamlining workflows and enhancing interoperability.

Furthermore, assessing the system's reporting and analytics capabilities sheds light on its ability to generate insights, track key performance indicators, and support data-driven decision-making processes. Understanding how the system handles policy management, claims processing, underwriting, and other core insurance operations provides insights into its effectiveness in managing insurance processes.

3.7 PROPOSED SYSTEM

The proposed insurance management system (IMS) represents a significant upgrade over the current system, addressing its limitations while introducing innovative features and functionalities to streamline insurance operations. At the heart of the proposed IMS lies a modular and scalable architecture, designed to adapt seamlessly to evolving business needs and technological advancements. This flexibility ensures that the system can grow alongside the business, accommodating changes in processes, regulations, and market demands without significant disruption. Moreover, the proposed IMS prioritizes user experience with an intuitive and user-friendly interface, featuring customizable dashboards, simplified workflows, and interactive data visualizations. These enhancements empower administrators and end-users to navigate the system effortlessly, access critical information, and perform tasks with minimal effort, ultimately boosting productivity and user satisfaction.

Furthermore, the proposed IMS incorporates robust security measures to safeguard sensitive data and ensure compliance with regulatory requirements. Advanced encryption, multi-factor authentication, and role-based access controls provide comprehensive protection against cyber threats and unauthorized access, instilling confidence in data security among users. Additionally, the system leverages advanced analytics and reporting capabilities to deliver actionable insights and data-driven decision-making. By harnessing predictive analytics algorithms, insurers can anticipate market trends, identify risks, and optimize business strategies proactively. Automated workflows for policy management, claims processing, and customer service further enhance operational efficiency, reducing manual errors and accelerating processes. Overall, the proposed IMS promises to revolutionize insurance management, delivering enhanced functionality, security, and usability to insurers and their stakeholders.

3.8 PROBLEM AND WEAKNESS OF CURRENT SYSTEM

In the existing traditional insurance policy buying process, several challenges and weaknesses prevail:

1. Lack of scalability and flexibility
2. Usability issues with outdated user interfaces
3. Inadequate security measures
4. Integration challenges hindering seamless data exchange
5. Difficulty adapting to changing business needs and technological advancements

3.9 FEATURES OF NEW SYSTEM

Our proposed insurance management system is designed to provide a user-friendly and efficient platform for buying insurance policy, offering the following notable features:

1. Modular and scalable architecture
2. Intuitive and user-friendly interface
3. Customizable dashboards and simplified workflows
4. Advanced security measures including encryption and multi-factor authentication
5. Seamless integration with external systems and applications
6. Enhanced analytics and reporting capabilities
7. Automated workflows for policy management and claims processing
8. Mobile accessibility for on-the-go access
9. Compliance with regulatory requirements
10. Continuous updates and support for future enhancements

These features collectively create a dynamic and user-centric insurance management system that aims to simplify the insurance policy buying process, enhance customer satisfaction, and provide flexibility and convenience for customers.

3.10 LITERATURE SURVEY

The response to online insurance products has amazed everyone. What started as a novelty product is being lapped up by the Indian consumers. The annual online sale projections of companies have been met in less than two months. The Indian Insurance regulator, IRDA, recently came up with an application to compare ULIP products (Unit Linked Insurance Product). So much so that the public sector life insurance giant LIC has plans for coming up with a game changing online term insurance product shortly.

We believe these trends suggest how the future of insurance is going to be in India. People are not just going online to check and compare insurance quotes because it is convenient, for growing number of Indians; it has now become a necessity. As with many sectors such as travel and retail, internet is now looking to transform the insurance sector in India.

The regulators, and the insurers, have been trying very hard to increase the insurance penetration in India. Despite that, insurance penetration (ratio of premium to GDP) is only 5.1% (IRDA Annual Report 2010-11), which is less than the world average. With nearly 50 insurers, each having multiple distribution channels, one hoped the insurance penetration would be better.

Comparing us with other countries with a more mature insurance market, one very clear difference is visible. Indian insurance has a very nascent online presence as compared with countries like the US, UK, Italy, Spain and Germany. Online insurance sales account for more than 30% of all sales in these countries compared to roughly 3% in India. The insurance industry there has seen a gradual shift from complete offline model to a more online, less offline, model. We think this is the way to go forward for the Indian insurance industry as well.

A country as big and diverse as ours has many challenges. One of the biggest challenges always, is to reach out to the maximum people at the lowest possible costs. Google is potentially reaching out to a large chunk of India's online population by providing customized searches in 10 Indian languages. Warren Buffet's Berkshire Hathaway recently opened its operations in India by 'not opening an office' – pure online model. They are selling motor and travel insurance through the internet and telephone, a model they have already proved to be highly successful. GEICO of US, a USD 28 billion company, is the 3rd largest auto insurer in that country.

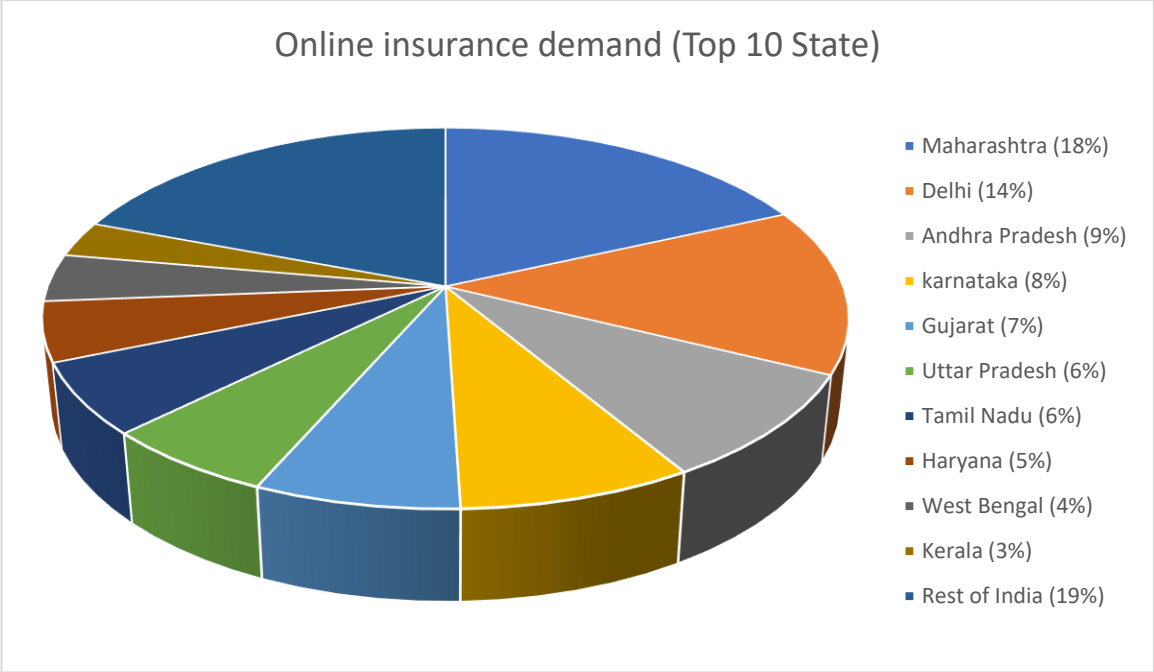
Online insurance may be a new and unchartered territory for many insurance shoppers in India; however, it seems to be the way forward. With only 10% of the population being online, the potential is huge. India is the 3rd largest market for Facebook and it expects the country to reach the 1st rank in a not-so-distant future. This growth of the internet, supported by the ever-increasing young population of this country, has fuelled the growth of many online trends. Ecommerce is a big success story. People have less time and an increased faith in products and services sold online.

We analyse insurance buying trends and behaviour of the insurance buyer. The study reveals some interesting and surprising outcomes that should be of interest to all the stakeholders in the Indian Insurance Industry. Some of key trends that we observed are summarized below

Online insurance demand state wise in India (Top 10 States)

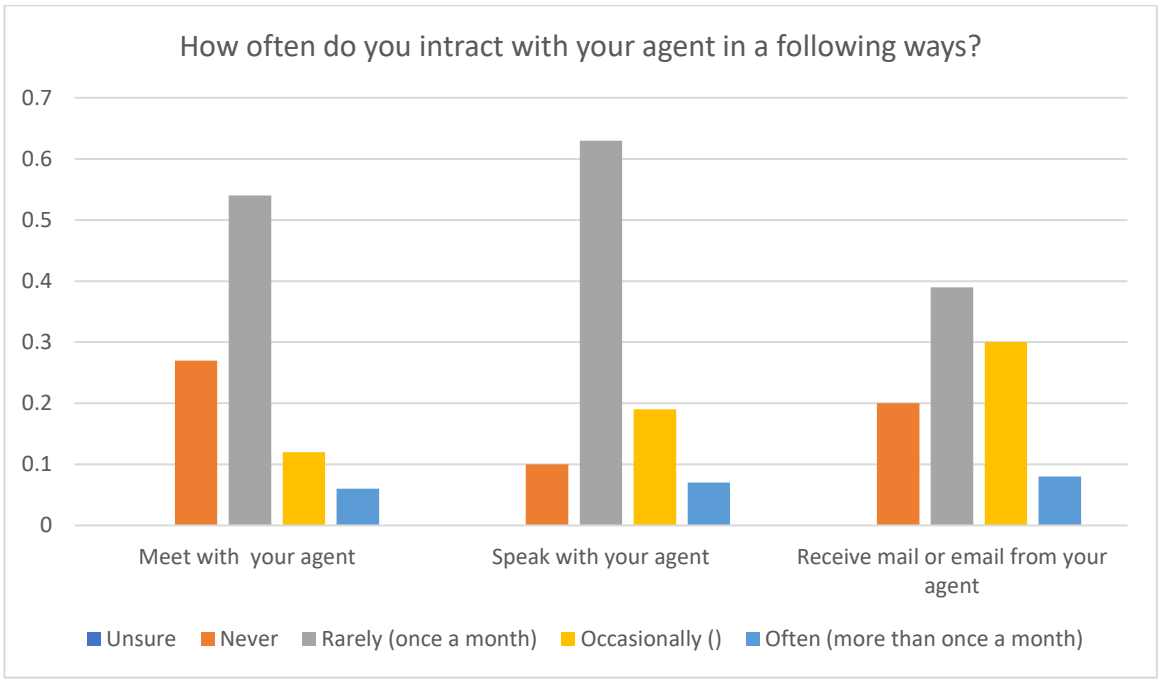
Insurance is not being trended necessarily from the areas with maximum population. Delhi shows a very high demand across the spectrum of products analysed although it ranks very low in terms of population as compared to the rest of the country.

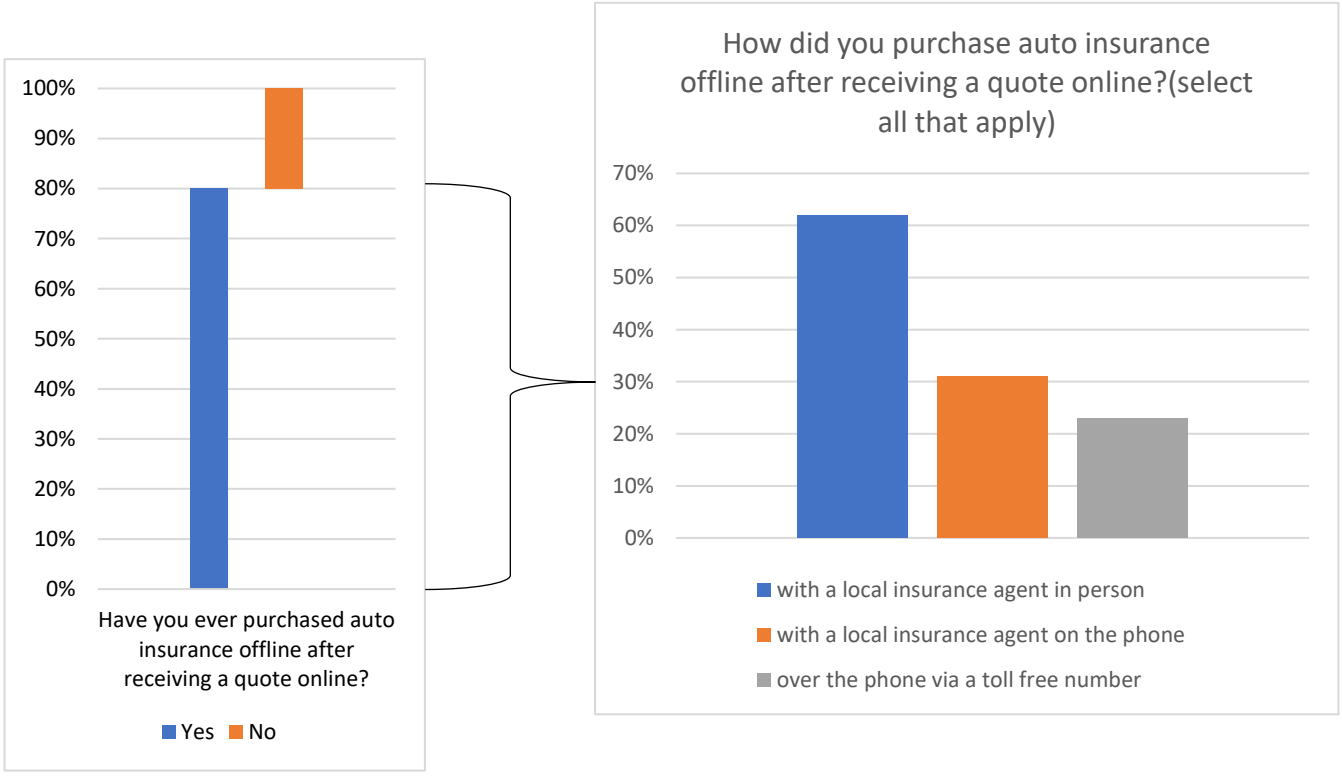
The top 10 Indian states account for 81% of the study sample. These states make up for 63% of the country's population. Maharashtra, which ranked 2nd on the Census 2011 ranking leads, in the online ranking with 18% of the total demand. Delhi surprises with its huge online demand. With only 1% of the country's population, it is ranked 2nd in its online demand. Uttar Pradesh, the most populated state of the country is a lowly 6th rank. Looking at the diversity across these states, one expects exciting trends if insurance products and their information is available to these regional visitors in the languages of their choice.



How many Consumers Purchase Offline after Quoting Online?

Although the Internet is becoming a popular method of purchasing auto insurance, many consumers still choose to purchase offline. Even consumers who feel comfortable quoting online still purchase through offline modes, with 80% of respondents who shopped online stating they then went offline to purchase. Of those who purchase offline after shopping online, 62% end up purchasing in person through a local agent and an additional 31% purchase with a local agent over the phone.





Survey of buying insurances How often do Consumers interact with their Agents?

For consumers who purchased their policy through a local agent, most interact with their agent a few times a year or less. The most common way consumers interact with their agents is speaking directly with them; with 89% indicating they do so at least a few times a year, compared to 72% who meet with their agent in person.

Survey about interaction with agents from above geography it is clear that, how people aware about online insurance. Why people not accepting the online insurance? Where the online insurance industry is lagging? For that we have studied all the websites of the insurance companies.

3.11 PROJECT PLANNNG

Month 1: Project Setup and Requirement Gathering

Week 1: Project Kick-off
- Define project objectives, scope, and constraints.
- Formulate a project plan with timelines and milestones.

Week 2: Requirement Gathering
- Conduct interviews or surveys with potential users to gather requirements.
- Identify core features and functionalities of the e-insurance management system.

Week 3-4: System Design and Planning
- Create a system architecture and database design.
- Develop wireframes or mock-ups to visualize the user interface.
- Define the technology stack and development tools to be used.

Month 2: Development and Testing

Week 1-2: Frontend Development
- Develop the user interface using HTML, CSS, and JavaScript.
- Implement basic functionality such as user authentication and navigation.

Week 3: Backend Development
- Set up the backend infrastructure using a web framework like Django or Flask (Python) or Express.js (Node.js).
- Implement core features such as user management, policy creation, and claims processing.

Week 4: Integration and Testing
- Integrate the frontend and backend components.
- Conduct unit testing and integration testing to ensure functionality and reliability.

Month 3: Refinement, Deployment, and Documentation

Week 1: Feature Refinement
- Gather feedback from peers or stakeholders and make necessary refinements to the system.
- Optimize performance and usability based on user testing.

Week 2: Deployment and User Training
- Deploy the e-insurance management system to a hosting platform such as Heroku or AWS.
- Provide user documentation and conduct training sessions for stakeholders.

Week 3: Finalization and Submission
- Perform final testing and bug fixing.
- Document the project including the development process, challenges faced, and lessons learned.
- Submit the completed e-insurance management system project along with documentation for evaluation.

During the project planning phase, the main focus is on defining the project's goals, objectives, scope, timeline, and resource requirements. This phase involves identifying key milestones and deliverables, which serve as benchmarks for project progress. Effective project planning establishes a solid foundation for successful execution by enabling efficient resource allocation and ensuring adherence to timelines.

CHAPTER 4 - SYSTEM REQUIREMENT STUDY

In this chapter, we will learn about the system requirement, specification and functionality.

4.1 PRODUCT DESCRIPTION

The insurance management system (IMS) is a comprehensive software solution designed to streamline and optimize insurance operations for insurance companies, brokers, and agents. This robust platform offers a wide range of features and functionalities to facilitate policy management, claims processing, customer service, and analytics.

Key Features:

Policy Management: The IMS allows users to efficiently manage insurance policies, including policy creation, modification, renewal, and cancellation. It provides tools for policy documentation, premium calculations, and coverage customization to meet the unique needs of policyholders.

Claims Processing: Streamline the claims handling process with the IMS, which includes features for claim registration, assessment, adjudication, and settlement. Automated workflows and real-time status updates improve efficiency and accuracy, reducing claim processing times and enhancing customer satisfaction.

Customer Relationship Management (CRM): The IMS incorporates CRM capabilities to manage customer interactions, track communication history, and maintain customer profiles. Agents can access comprehensive customer information, preferences, and communication channels to provide personalized service and support.

Analytics and Reporting: Gain valuable insights into insurance operations with robust analytics and reporting tools. The IMS enables users to analyse key performance indicators (KPIs), track trends, and generate customizable reports to support data-driven decision-making and strategic planning.

Security and Compliance: Ensure data security and regulatory compliance with advanced security measures built into the IMS. Features such as encryption, access controls, and audit trails protect sensitive information and help organizations comply with industry regulations and data privacy laws.

Integration Capabilities: Seamlessly integrate the IMS with other systems and applications, such as CRM platforms, accounting software, and third-party data sources. APIs and data connectors facilitate data exchange and interoperability, enabling a unified view of insurance operations.

Benefits:

Improved Efficiency: Automate manual tasks, streamline workflows, and reduce administrative overhead with the IMS, leading to increased operational efficiency and productivity.

Enhanced Customer Service: Deliver exceptional customer service with personalized interactions, quick response times, and efficient claims processing, resulting in higher customer satisfaction and retention.

Better Decision-Making: Utilize advanced analytics and reporting capabilities to gain insights into insurance performance, identify opportunities for improvement, and make informed business decisions.

Increased Compliance: Ensure compliance with regulatory requirements and industry standards, minimizing legal risks and reputational damage.

Scalability and Flexibility: The IMS is scalable and flexible to accommodate growth and changes in business needs, providing a future-proof solution for insurance organizations of all sizes.

The software covers the following point while keeping in mind user's requirement-:

- Fast online access of information about various Products.
- Search Products by keywords like functional area, experience and also by initials of the Product's name.
- Administrator will maintain the database and perform all process.

4.2 USER CHARACTERISTICS

In our system, there will be three types of users.

ADMINISTRATOR | USERS | STAFF

1. **Admin Module:**

a) Dashboard: In this section, the admin can see all the details in brief.
b) Insurance Category: In this section, the admin can manage categories (add and update).
c) Insurance Subcategory: In this section, the admin can manage the subcategory (add and update).
d) Insurance Policy: In this section, the admin can manage the insurance policy (add and update policy).
e) User Detail: In this section, the admin can manage all user details.
f) Policy Holders: In this section, the admin can manage all insured policies. Admin can view the policy on the basis of status (pending policy, approved policy, and disapproved policy). Admin also can approve the pending policy.
g) Tickets: In this section, the admin can view details of issues raised by the user and can also update remarks on particular tickets or assign them to staff.

2. **Staff Module:**

a) Dashboard: In this section, staff can see all the details based on him/her in brief.
b) Policy Holders: In this section, staff can view insurance policy status.
c) Tickets: In this section, staff can view details of tickets assigned to him/her.

3. **User Module:**

a) Insurance: In this section, the user can apply for a policy and check whether his policy is approved or rejected.
b) Ticket: In this section, the user can raise tickets against any to complain and see the status of his/her ticket User can also update his/ her profile, change the password, and recover the password.

Users	Access Privileges	
Administrator	Manage Users Manage Policy Manage Orders	Manage Staff Manage category Manage Ticket
Users	Registration Login View Policy Generate Ticket	Apply Policy Edit Profile Search Policy
Staff	View Policy View category View ticket	View users Manage user Ticket Chat with User

Table 1: User Characteristics Table

4.3 HARDWARE AND SOFTWARE REQUIREMENTS

Developer Side Requirements	Client-Side Requirements
Main Software Used: • Platform: Microsoft Visual Studio • Operating System: Windows 10 or above • Database: MySQL Database **Language:** • Frontend: HTML, CSS, JavaScript, jQuery • Backend: PHP, MySQL • XAMPP Server **Hardware Requirements:** • Computer/Laptop • With Minimum RAM of 4 GB • External Hard Drive 512 GB for Backup. • Internet Connectivity required. • Mouse and Keyboard	• Android Mobile • Laptop/Computer • Internet connectivity Required • RAM of 4 GB for good performance

Table 2: Hardware and Software requirement Table

4.4 TOOLS AND TECHNOLOGY USED

This website Development is possible with a couple of software and development kits to support the software and execution, they are as follows,

Microsoft Visual Studio

Visual Studio Code is a free, lightweight but powerful source code editor that runs on your desktop and on the web and is available for Windows, macOS, Linux, and Raspberry Pi OS. It comes with built-in support for JavaScript, TypeScript, and Node.js and has a rich ecosystem of extensions for other programming languages (such as C++, C#, Java, Python, PHP, and Go), runtimes (such as .NET and Unity), environments (such as Docker and Kubernetes), and clouds (such as Amazon Web Services, Microsoft Azure, and Google Cloud Platform).

Aside from the whole idea of being lightweight and starting quickly, Visual Studio Code has IntelliSense code completion for variables, methods, and imported modules; graphical debugging; linting, multi-cursor editing, parameter hints, and other powerful editing features; snazzy code navigation and refactoring; and built-in source code control including Git support. Much of this was adapted from Visual Studio technology.

Visual Studio Code proper is built using the Electron shell, Node.js, TypeScript, and the Language Server Protocol, and is updated on a monthly basis. The many extensions are updated as often as needed. The richness of support varies across the different programming languages and their extensions, ranging from simple syntax highlighting and bracket matching to debugging and refactoring. You can add basic support for your favourite language through Text Mate colorizers if no language server is available.

The code in the Visual Studio Code repository is open source under the MIT License. The Visual Studio Code product itself ships under a standard Microsoft product license, as it has a small percentage of Microsoft-specific customizations. It’s free despite the commercial license.

FRONT END DETAILS

Front End tool is used for give a Graphical user interface to system. By this we can make a system user friendly and more capable. I have chosen PHP as front-end tool. Because it is an Open-Source Technology, freely available and more familiar with any type of database.

HTML, CSS, JAVASCRIPT, jQuery are utilized to implement the frontend.

HTML (Hyper Text Markup Language)

HTML stands for Hypertext Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between web pages. A markup language is used to define the text document within the tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g. HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text.

CSS (Cascading Style Sheets)

Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page. It describes how a webpage should look: it prescribes colours, fonts, spacing, and much more. In short, you can make your website look however you want. CSS lets developers and designers define how it behaves, including how elements are positioned in the browser.

While html uses tags, CSS uses rulesets. CSS is easy to learn and understand, but it provides powerful control over the presentation of an HTML document.

JAVASCRIPT

JAVASCRIPT is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client-side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. Java Script is used to create popup windows displaying different alerts in the system like “User registered successfully”, “Product added to cart” etc.

jQuery

Incorporating jQuery into the insurance management system (IMS) enhances its functionality and user experience by providing a streamlined approach to JavaScript development. Leveraging jQuery's concise syntax and extensive library of plugins simplifies tasks such as DOM manipulation, event handling, and AJAX requests, enabling developers to build dynamic and interactive features more efficiently. Additionally, jQuery's cross-browser compatibility ensures consistent performance across different platforms, while its modular architecture and vast plugin ecosystem offer flexibility and extensibility to meet specific project requirements. By tapping into jQuery's community-driven support and rich documentation, developers can accelerate development timelines and create a more engaging and intuitive user experience within the IMS.

BACKEND DETAILS

Back-end part of a system is more important because it controls all the internal process of a system. I have chosen MySQL database as back end. Because it is word’s Most Capable relational database and provide more security than others.

ABOUT PHP:

PHP: Hypertext Preprocessor is a widely used, general-purpose scripting language that was originally designed for web development to produce dynamic web pages. For this purpose, PHP code is embedded into the HTML source document and interpreted by a web server with a PHP processor module, which generates the web page document. As a general-purpose programming language, PHP code is processed by an interpreter application in command-line mode performing desired operating system operations and producing program output on its standard output channel. It may also function as a graphical application. PHP is available as a processor for most modern web servers and as standalone interpreter on most operating systems and computing platforms.

PHP stores whole numbers in a platform-dependent range. This range is typically that of 32-bit signed integers. Unsigned integers are converted to signed values in certain situations; this behaviour is different from other programming languages. Integer variables can be assigned using decimal (positive and negative), octal, and hexadecimal notations. Point numbers are also stored in a platform-specific range. They can be specified using floating point notation, or two forms of scientific notation. PHP has a native Boolean type that is similar to the native Boolean types in Java and C++. Using the Boolean type conversion rules, non-zero values are interpreted as true and zero as false, as in Perl and C++. The null data type represents a variable that has no value. The only value in the null data type is NULL. Variables of the "resource" type represent references to resources from external sources. These are typically created by functions from a particular extension, and can only be processed by functions from the same extension; examples include file, image, and database resources. Arrays can contain elements of any type that PHP can handle, including resources, objects, and even other arrays. Order is preserved in lists of values and in hashes with both keys and values, and the two can be intermingled. PHP also supports strings, which can be used with single quotes, double quotes, or heredoc syntax.

Why PHP?

PHP is one of the most popular server-side scripting languages running today. It is used for creating dynamic Webpages that interact with the user offering customized information. PHP offers many advantages; it is fast, stable, secure, easy to use and open source (free).

- User friendly
- GUI
- Separation of work (designing & coding)
- Written once run anywhere
- PHP API

Why MySQL?

MySQL is the world's most popular open-source database software, with over 100 million copies of its software downloaded or distributed throughout its history. With its superior speed, reliability, and ease of use, MySQL has become the preferred choice for Web, Web 2.0, SaaS, ISV, Telecom companies and forward-thinking corporate IT Managers because it eliminates the major problems associated with downtime, maintenance and administration for modern, online applications.

Many of the world's largest and fastest-growing organizations use MySQL to save time and money powering their high-volume Web sites, critical business systems, and packaged software — including industry leaders such as Yahoo!, Alcatel-Lucent, Google, Nokia, YouTube, Wikipedia, and Booking.com.
The flagship MySQL offering is MySQL Enterprise, a comprehensive set of production-tested software, proactive monitoring tools, and premium support services available in an affordable annual subscription.

MySQL is a key part of WAMP (Window, Apache, MySQL, PHP), the fast-growing open-source enterprise software stack. More and more companies are using WAMP as an alternative to expensive proprietary software stacks because of its lower cost and freedom from platform lock-in.

XAMPP Server

XAMPP is an open-source software developed by Apache Friends. XAMPP software package contains Apache distributions for Apache server, MariaDB, PHP, and Perl. And it is basically local host or a local server. This local server works on your own desktop or laptop computer. The use of XAMPP is to test the clients or your website before uploading it to the remote web server. This XAMPP server software gives you a suitable environment for testing MYSQL, PHP, Apache, and Perl projects on the local computer.

The full form of XAMPP is X stands for Cross-platform, (A) Apache server, (M) MariaDB, (P) PHP, and (P) Perl. The Cross-platform usually means that it can run on any computer with any operating system.

CHAPTER 5 - Process Model

This system comprises several essential components, each contributing to a seamless and efficient policy experience. The primary components include user registration, user login, policy browsing, ordering, and the ability to view order history and details.

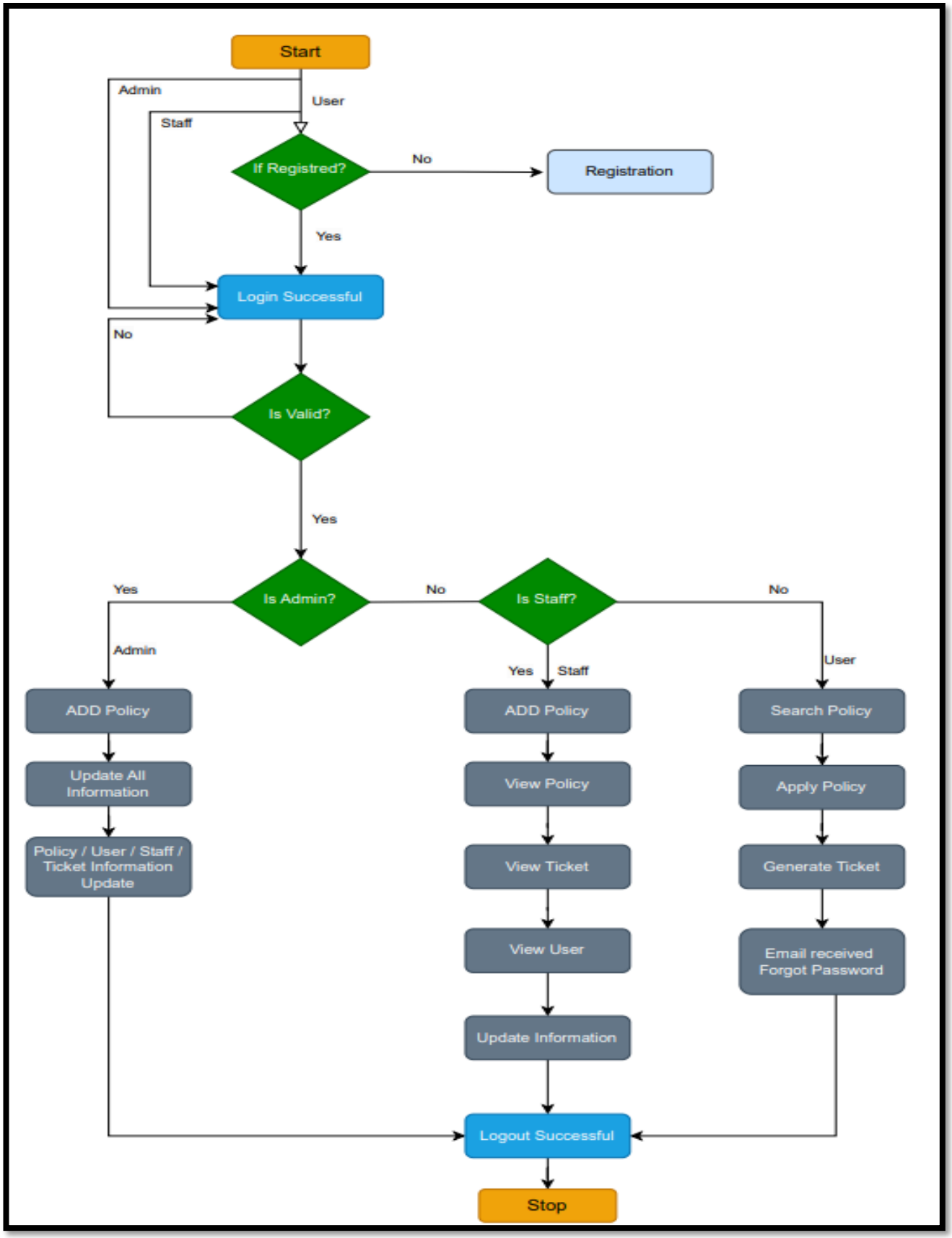


Fig 1. System Flow Chart

5.1 SYSTEM ARCHITECTURE

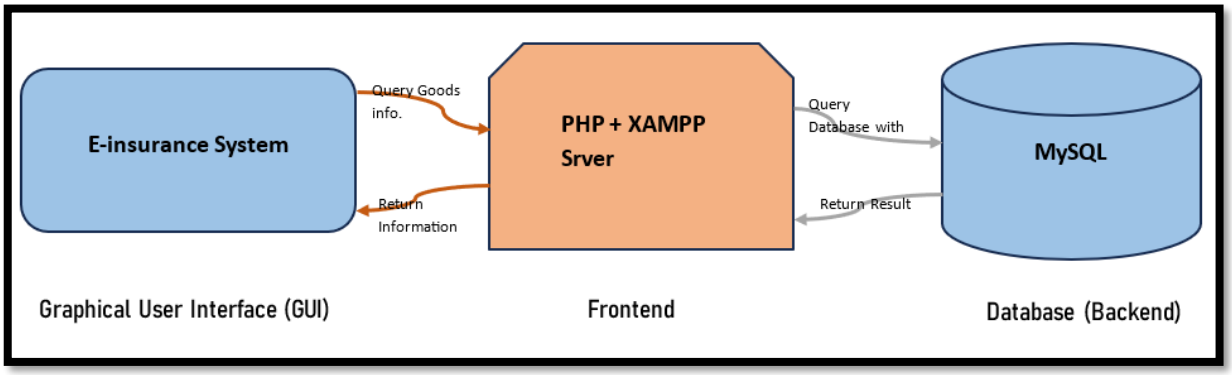


Fig 2. System Architecture

The system architecture for our e-insurance management system platform is structured into three core components: the Graphical User Interface (GUI), the front end, and the back end. This architecture outlines the fundamental flow of processes within the system.

1. Graphical User Interface (GUI):
   - The GUI serves as the user-facing interface, providing a visually intuitive and interactive experience for customers and users.
   - It includes features such as browsing policy, user registration, and sign-in functionalities.
   - Users interact with the GUI using visual elements like icons and buttons, eliminating the need for command-line interactions.

2. Front End - PHP & XAMPP:
   - PHP and XAMPP server technologies constitute the front-end of the system.
   - When a user performs actions like viewing, apply or chatting with staff, the front end processes these requests.
   - The front end communicates with the back-end database to retrieve necessary data.
   - The results obtained from the database are sent back to the front end, which subsequently delivers them to the GUI for display.

3. Back End - MySQL Database:
   - The back end of the system houses a MySQL database that contains critical information related to user, policy, and staff.
   - When a user initiates specific actions or queries, such as applying for policy or retrieving transaction history, the query is directed to the back-end database.
   - The database processes the query and retrieves the relevant data from a vast pool of information.
   - Additionally, the database is responsible for maintaining and providing access to historical data, including past orders and transactions.

CHAPTER 6 - SYSTEM DESIGN

System design is the solution for the creation of a new system. This phase focuses on the detailed implementation of the feasible system. Its emphasis on translating design. Specifications to performance specification. System design has two phases of development.

- Logical design
- Physical design

The logical design involves conceptualizing the system architecture, components, and their interactions without considering specific implementation details. Architects focus on defining the system's structure, behaviour, and functionality based on the requirements gathered during the analysis phase. This includes designing the data model, identifying modules and their functionalities, and establishing relationships between system components. Logical design ensures that the system meets business objectives and can accommodate future changes or enhancements.

On the other hand, physical design involves translating the logical design into a tangible implementation by specifying the hardware, software, and infrastructure required to support the system. Architects consider factors such as performance, scalability, availability, and security when designing the physical infrastructure. This includes selecting appropriate technologies, platforms, and tools for the frontend, backend, and database components. Physical design also involves defining deployment strategies, configuring servers, setting up networking infrastructure, and ensuring system reliability and maintainability.

Together, logical and physical design form the foundation of the e-insurance management system, ensuring that it is well-structured, efficient, and capable of meeting the needs of insurers, agents, and policyholders. Logical design lays the conceptual groundwork, while physical design translates these concepts into practical implementation details, resulting in a robust and scalable system architecture.

6.1 REQUIREMENT ANALYSIS

Requirement analysis involves gathering and documenting stakeholder needs to define the functional and non-functional requirements of a system. This process ensures that the system effectively addresses user expectations and business objectives. Functional requirements specify what the system should do, such as user authentication and policy management, while non-functional requirements define system qualities like security and performance. Collaboration with stakeholders and thorough analysis of requirements are essential for successful system development.

6.1.1 Functional Requirements:

User Functional Requirements:

a) Registration and Authentication:

- Users should be able to register for an account by providing necessary details.
- They should be able to log in securely using their credentials.

b) Policy Browsing and Purchasing:

- Users should be able to browse available insurance policies with details such as coverage, premium, and terms.
- They should be able to select and purchase policies online, providing required information and payment details.

c) Claims Filing:

- Users should have the ability to file insurance claims online, providing necessary documentation and details of the incident.

d) Policy Management:

- Users should be able to view their purchased policies, including coverage details, premium payments, and renewal dates.
- They should be able to request changes to their policies, such as updating personal information or adding beneficiaries.

e) Communication:

- Users should have access to communication channels for contacting support or requesting assistance regarding their policies or claims.

Staff Functional Requirements:

a) Policy Management:

- Staff members should be able to create new insurance policies, specifying details such as coverage, premium rates, and terms.
- They should be able to update existing policies, including premium adjustments or policy modifications.

b) Claims Processing:

- Staff members should be able to review and process insurance claims submitted by users, verifying documentation and assessing eligibility for payouts.
- They should have the ability to update claim statuses, communicate with users, and initiate claim settlements.

c) User Management:

- Staff members should have access to user management features, including account activation, deactivation, or password resets.
- They should be able to view user profiles, update contact information, and manage user permissions.

d) Reporting and Analytics:

- Staff members should be able to generate reports on policy sales, claims processing metrics, user demographics, and other key performance indicators (KPIs) for decision-making and analysis.

Admin Functional Requirements:

a) System Configuration:

- Admins should have the ability to configure system settings and parameters, such as default policy templates, payment options, and notification preferences.

b) User and Role Management:

- Admins should be able to manage user accounts and roles, including creating new staff accounts, assigning roles, and revoking access as needed.
- They should have the authority to define permissions and access levels for different user roles.

c) Audit and Compliance:

- Admins should be able to monitor system activities, access logs, and audit trails to ensure compliance with regulatory requirements and internal policies.
- They should have the ability to generate compliance reports and conduct audits as necessary.

d) System Maintenance:

- Admins should be able to perform routine maintenance tasks, such as database backups, software updates, and system health checks.
- They should have access to tools and utilities for troubleshooting and resolving system issues.

6.1.2 Non-Functional Requirements:

1. Security:

- The system should ensure data confidentiality, integrity, and availability.
- Secure encryption should be used for sensitive data transmission and storage.
- Role-based access control should restrict unauthorized access to system resources.

2. Performance:

- The system should be responsive and capable of handling concurrent user requests without significant delays.
- Response times for key operations such as policy browsing, claim filing, and report generation should meet predefined benchmarks.

3. Usability:

- The user interface should be intuitive, user-friendly, and accessible across devices.
- Clear navigation, informative feedback messages, and error handling should enhance the user experience.

4. Scalability:

- The system should be designed to scale horizontally or vertically to accommodate increasing user load or data volume.
- Load balancing and caching mechanisms should be employed to distribute workload efficiently.

5. Reliability:

- The system should be reliable and available 24/7 with minimal downtime for maintenance or upgrades.
- Fault tolerance mechanisms should ensure graceful degradation and recovery in case of system failures.

6. Regulatory Compliance:

- The system should comply with relevant regulations and industry standards for data protection, privacy, and financial transactions.
- Audit trails and logging should facilitate compliance auditing and regulatory reporting.

6.2 UML DIAGRAM

6.2.1 USE CASE DIAGRAM:

USER:

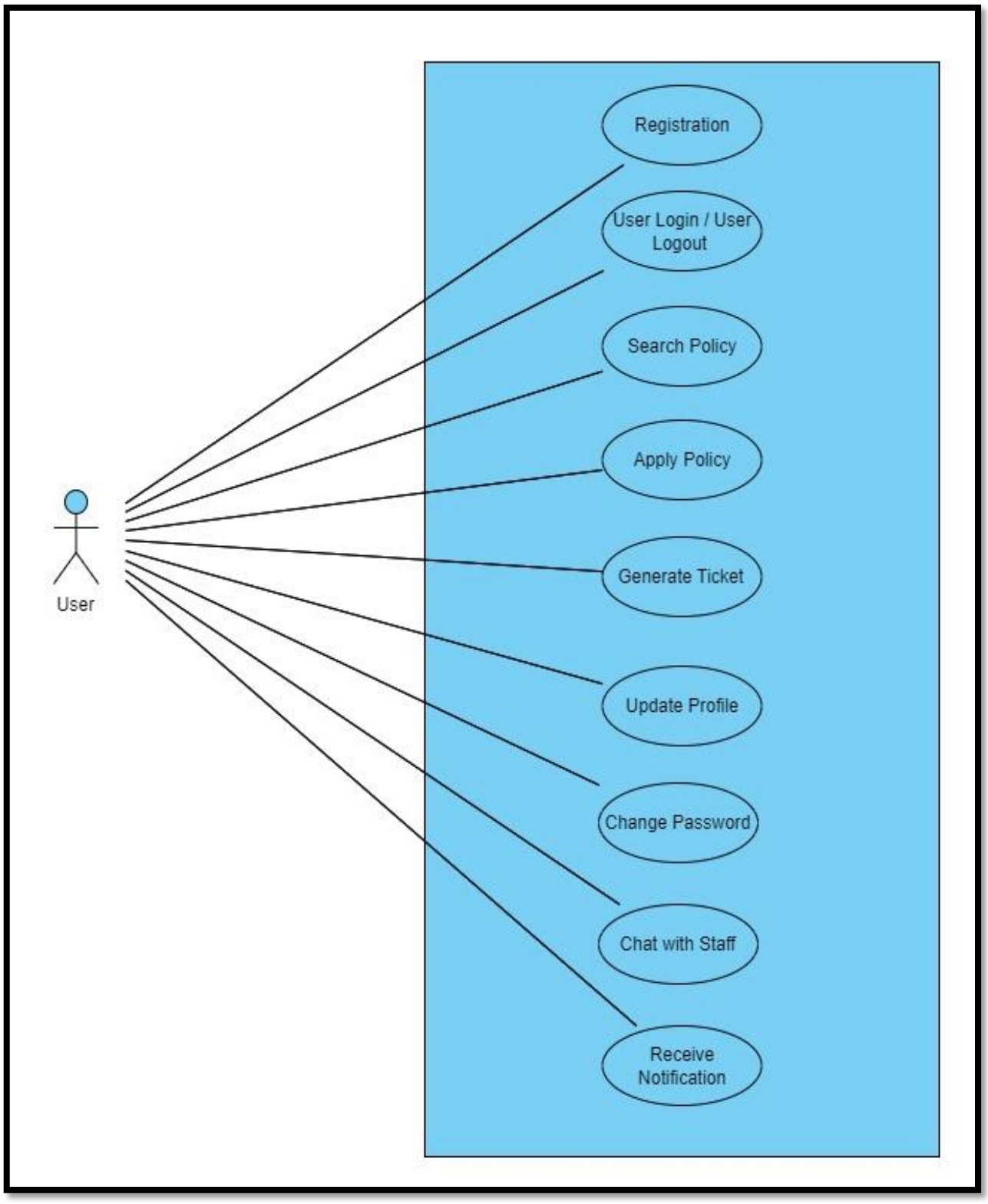


Fig 3. Use Case Diagram (User)

STAFF:

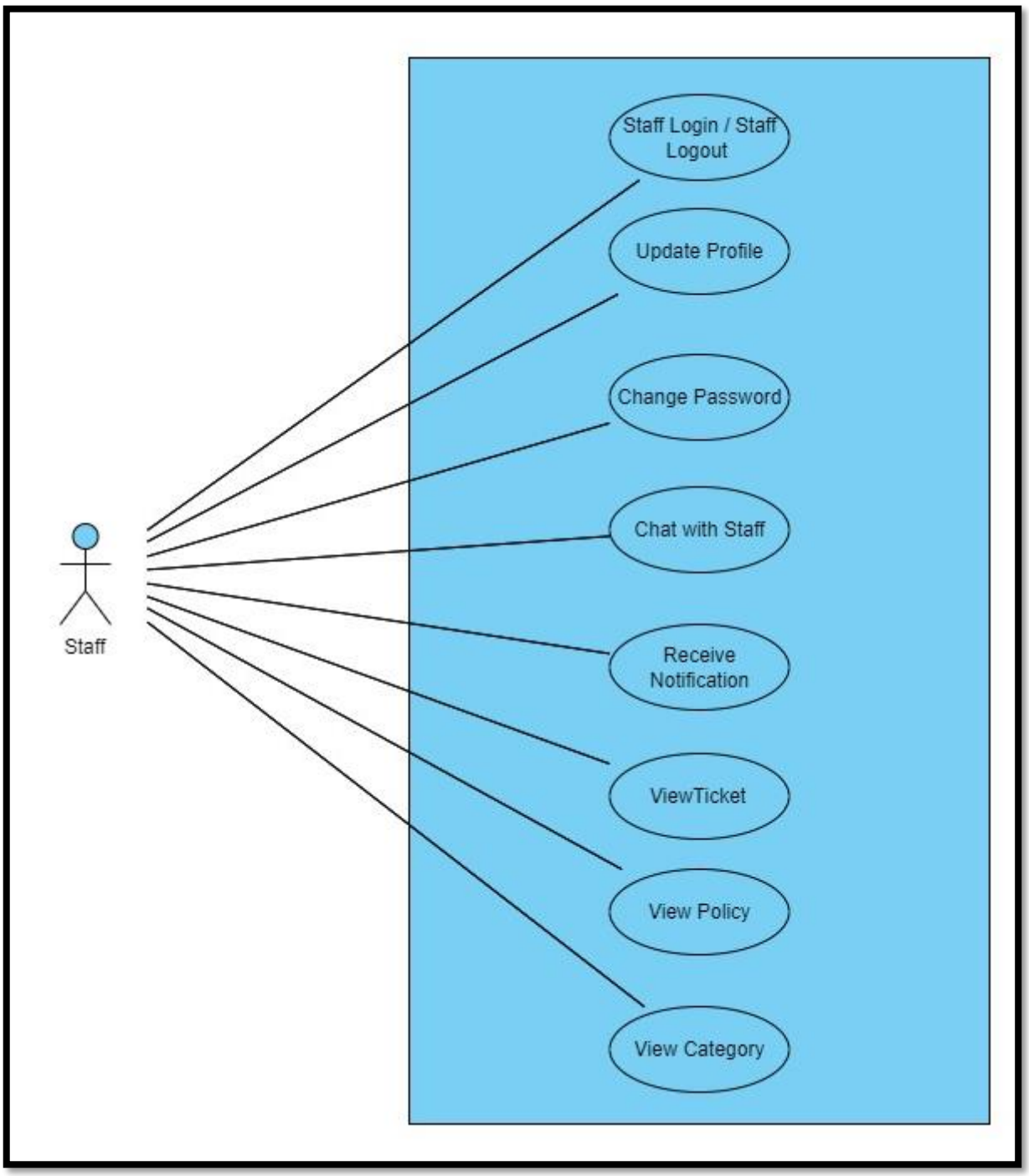


Fig 4. Use Case Diagram (Staff)

ADMIN:

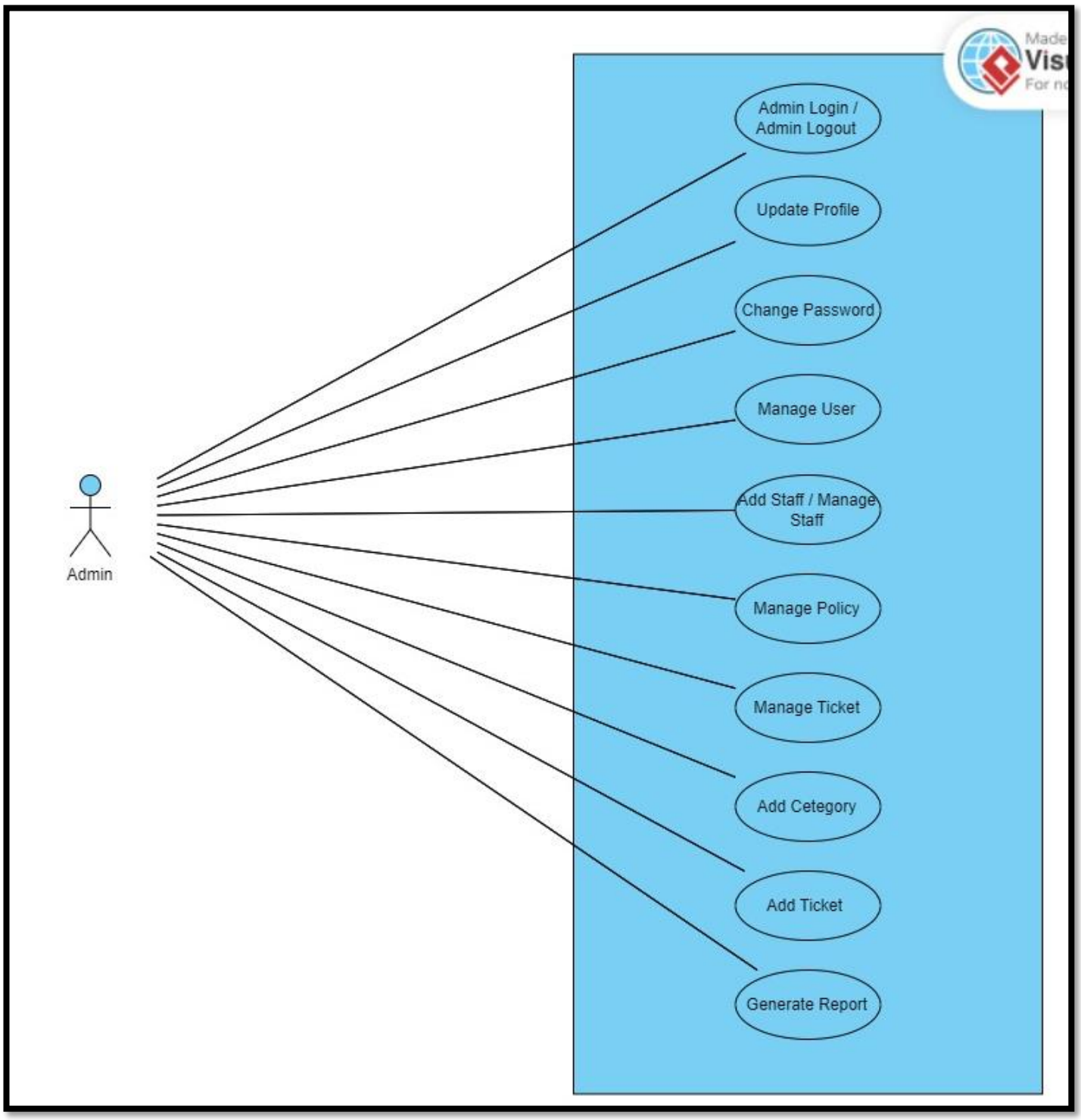


Fig 5. Use Case Diagram (Admin)

6.2.2 CLASS DIAGRAM

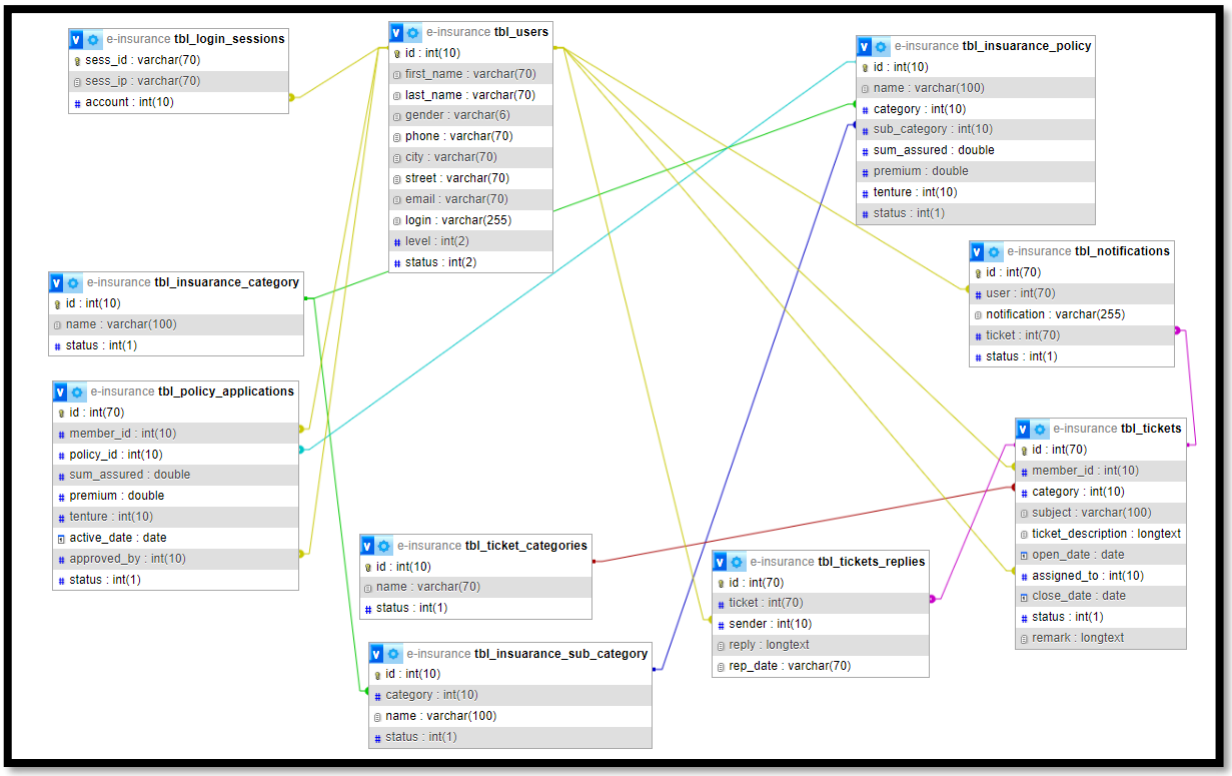


Fig 6. Class Diagram

6.2.3 ACTIVITY DIAGRAM

USER:

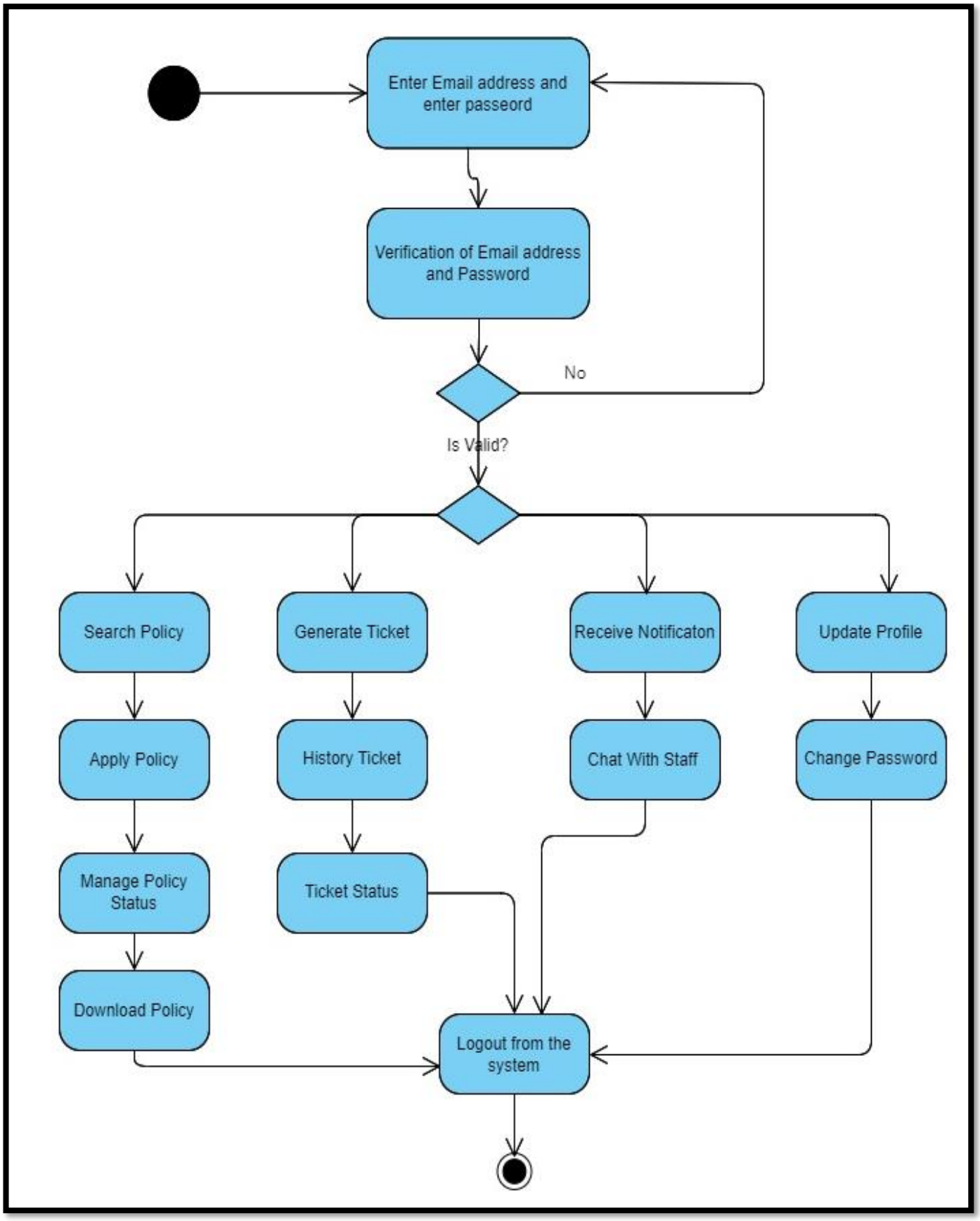


Fig 7. Activity Diagram (User)

STAFF:

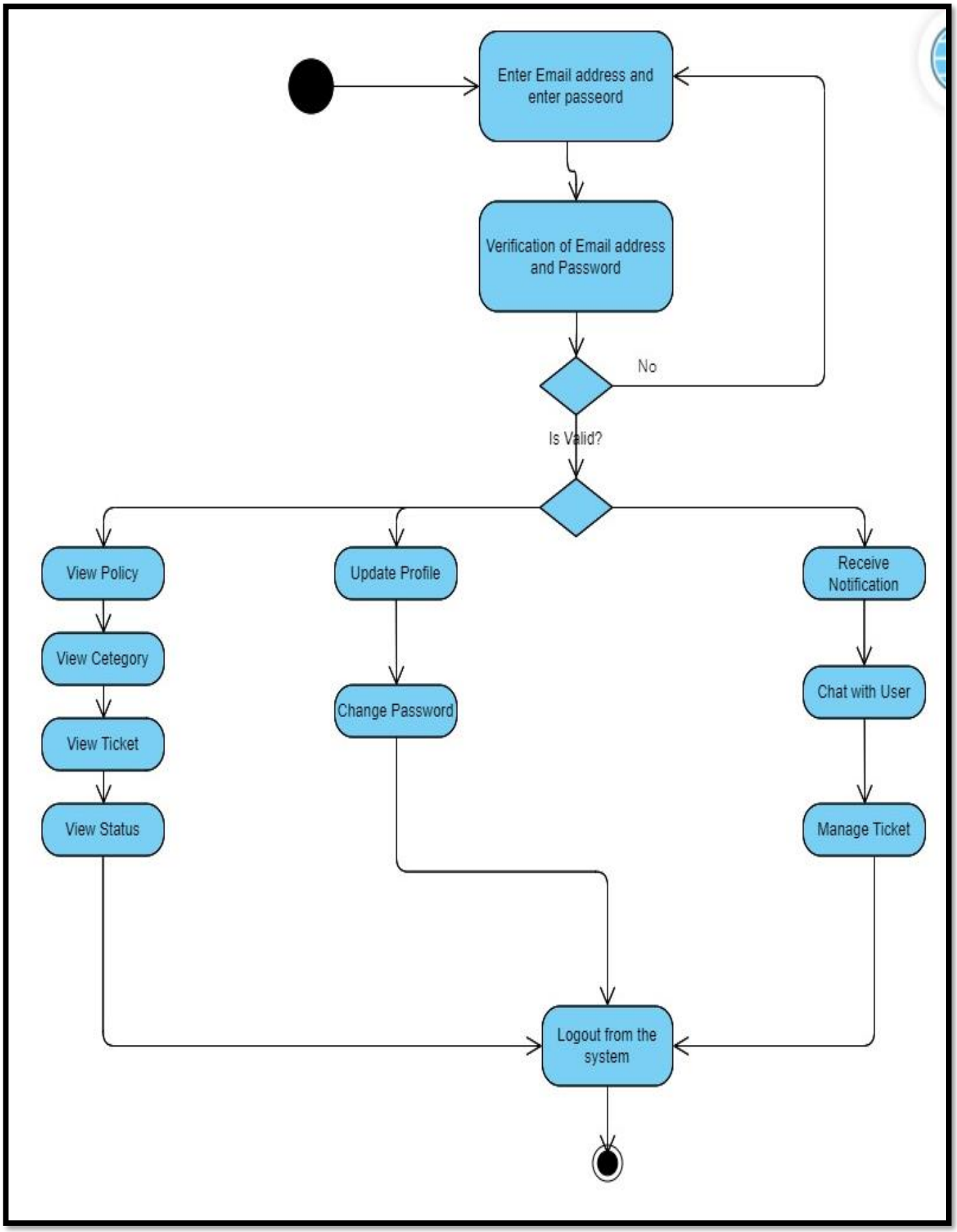


Fig 8. Activity Diagram (Staff)

ADMIN:

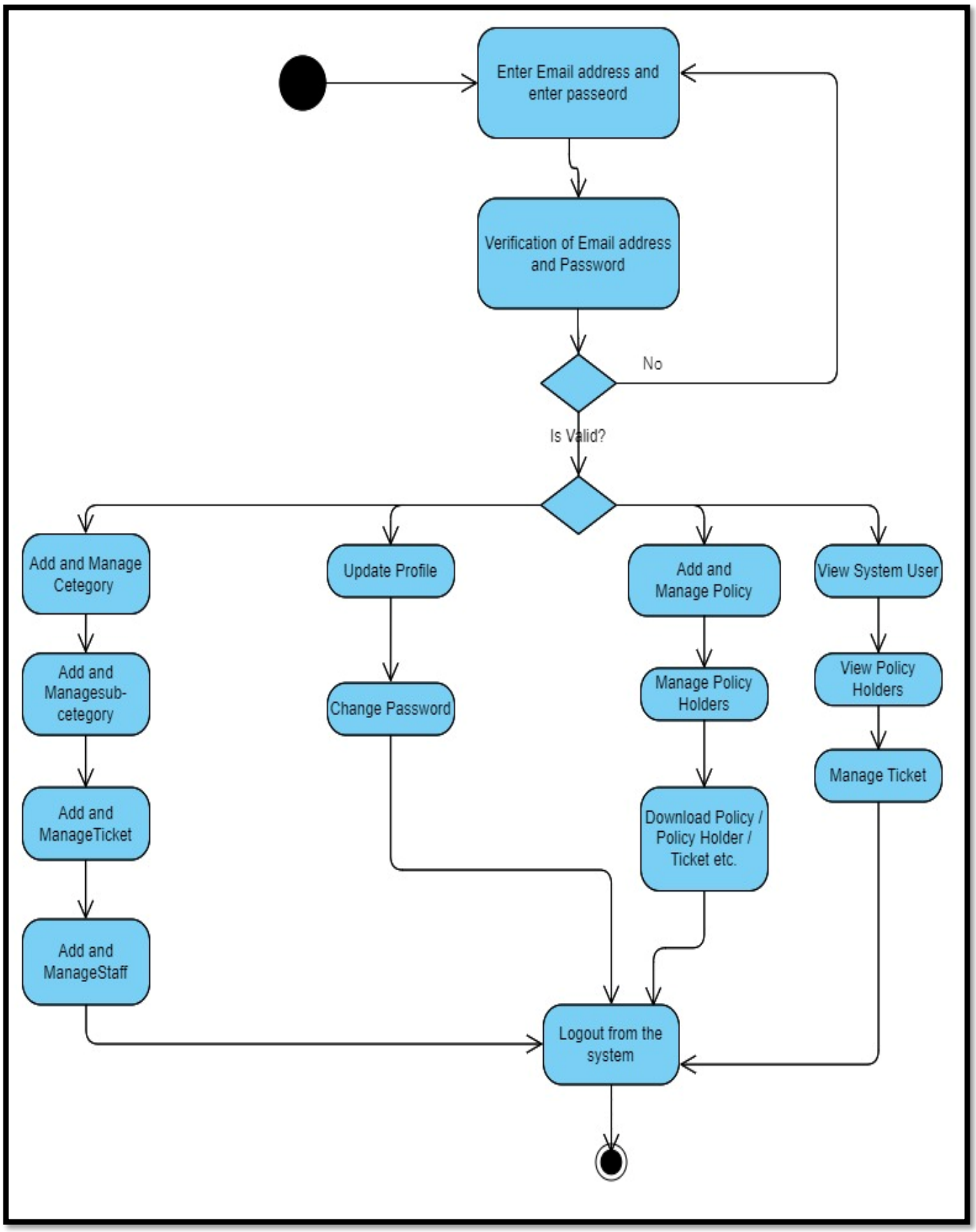


Fig 9. Activity Diagram (Admin)

6.2.4 SEQUENCE DIAGRAM

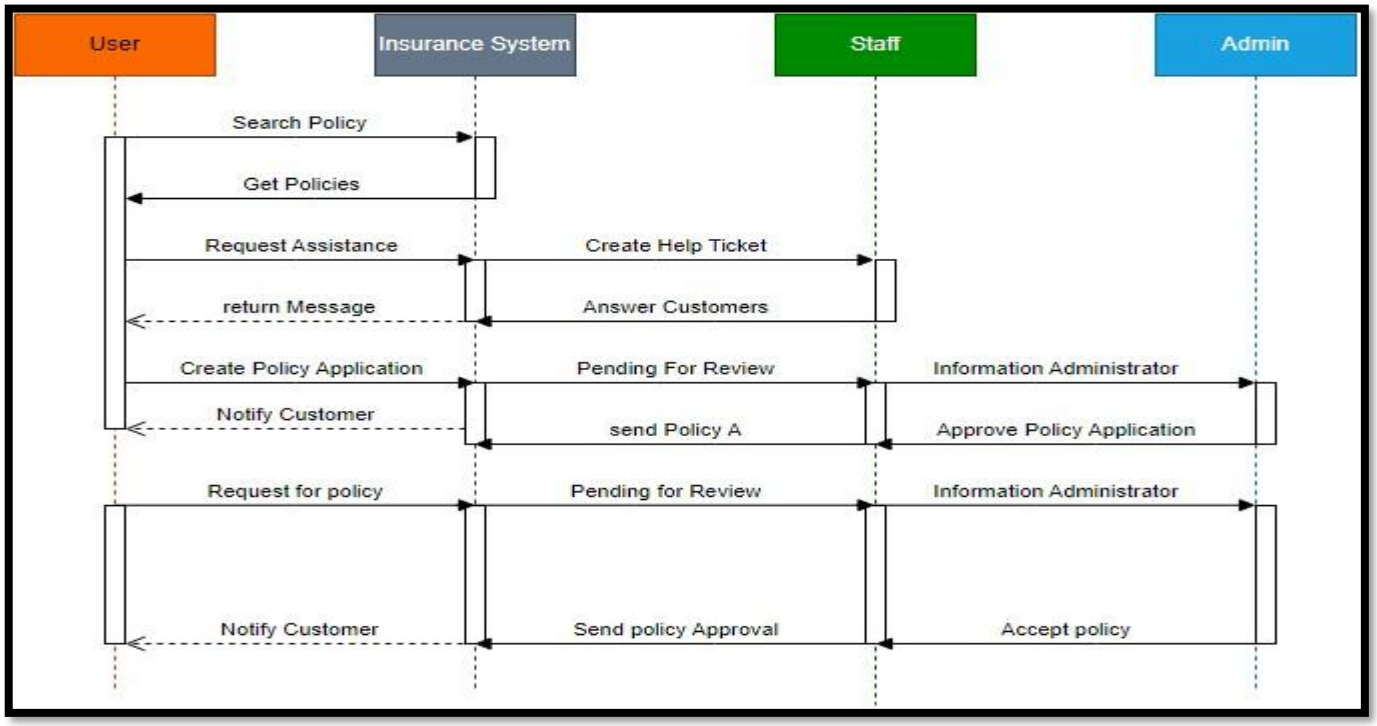


Fig 10. Sequence Diagram

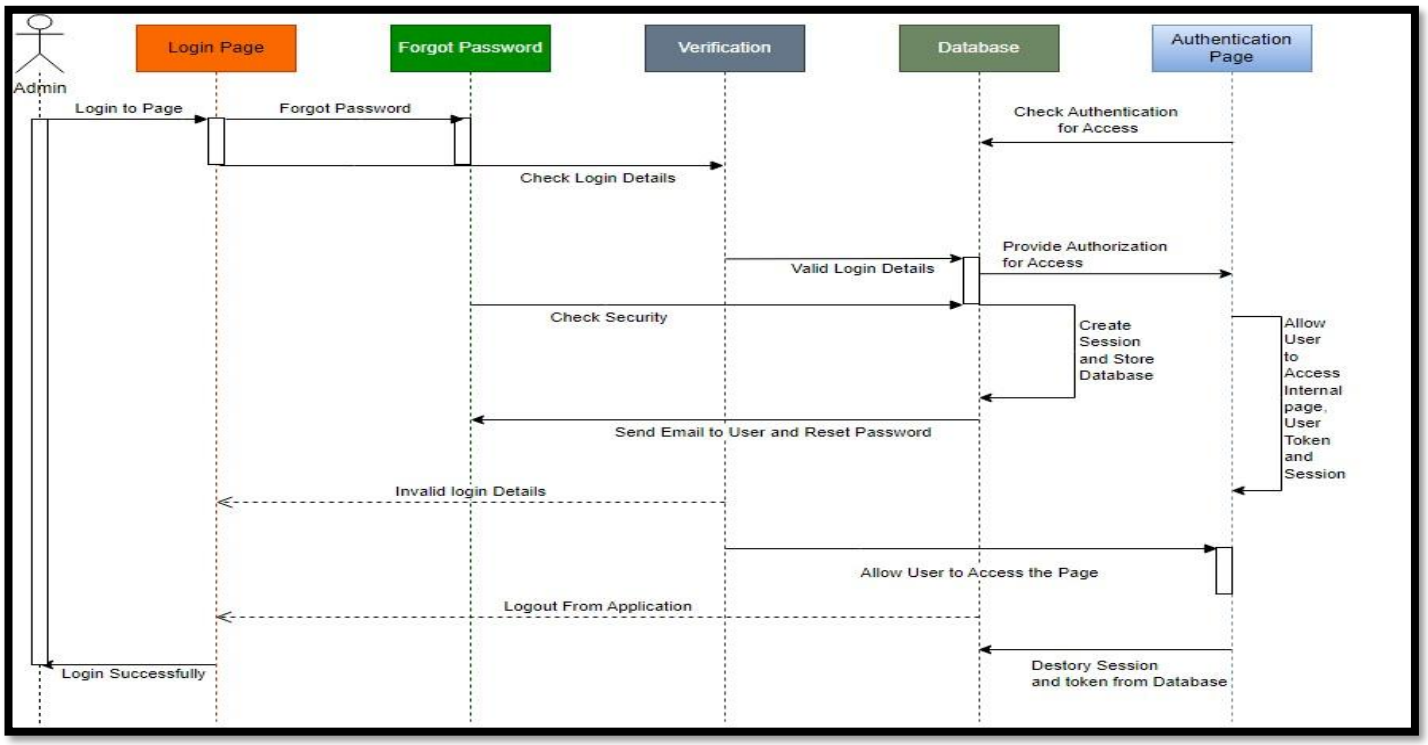


Fig 11. Sequence Diagram (Admin)

Above diagram represents Sequence Diagram of the project which is a type of interaction diagram because it describes how—and in what order—a group of objects works together. A sequence diagram specifically focuses on lifelines, or the processes and objects that live simultaneously, and the messages exchanged between them to perform a function before the lifeline ends.

6.2.5 ER DIAGRAM

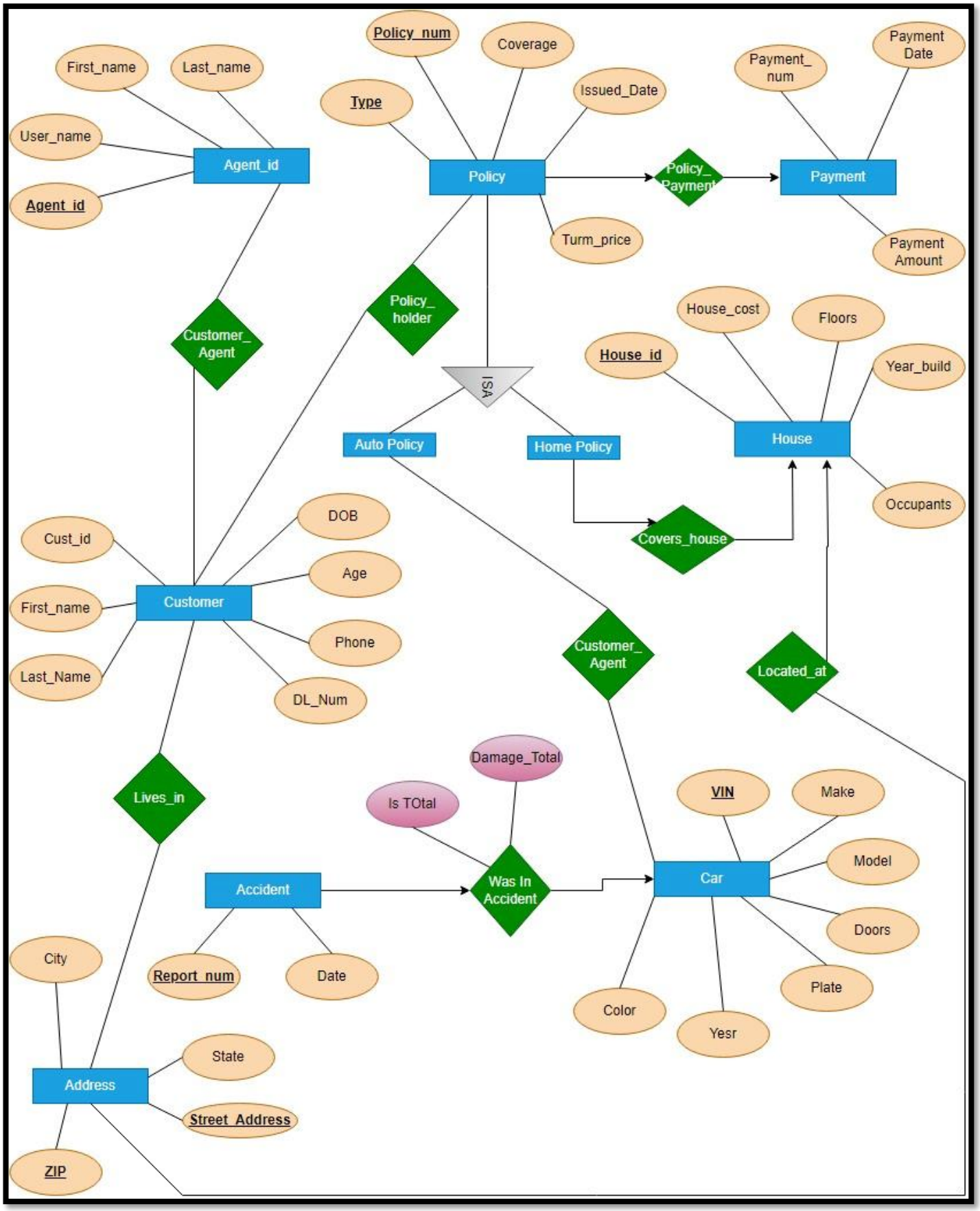


Fig 12: ER Diagram

ER diagram show all the relationships between entity sets stored in the database. It illustrates the logical structure of the database. It helps to visualize how data is connected in general ways.

CHAPTER 7 - DATABASE DESIGN

A database design is a collection of stored data organized in such a way that the data requirements are satisfied by the database. The general objective is to make information access easy, quick, inexpensive and flexible for the user. There are also some specific objectives like controlled redundancy from failure, privacy, security and performance. A collection of relative records makes up a table. To design and store data to the needed forms database tables are prepared. Two essential settings for a database are:

- Primary key: - The field that is unique for all the record occurrences.
- Foreign key: -The field used to set relation between tables.
- Normalization is a technique to avoid redundancy in the tables.

7.1 DATA FLOW DIAGRAM (DFD)

A thorough explanation is provided for the example data flow diagram for online Insurance management system. This example emphasizes the three DFD levels (DFD Levels 0, 1, and 2).

DFD Level 0 E-Insurance Management System

The context diagram is an alternative name for the Level 0 DFD Diagram for online Insurance management system. Users, the main process, and data flow make up its parts. Also, the project concept is demonstrated using the single process visualization.

DFD Level 0 shows the entities that interact with a system and defines the border between the system and its environment. This diagram also depicts the online Insurance management system at a high level.

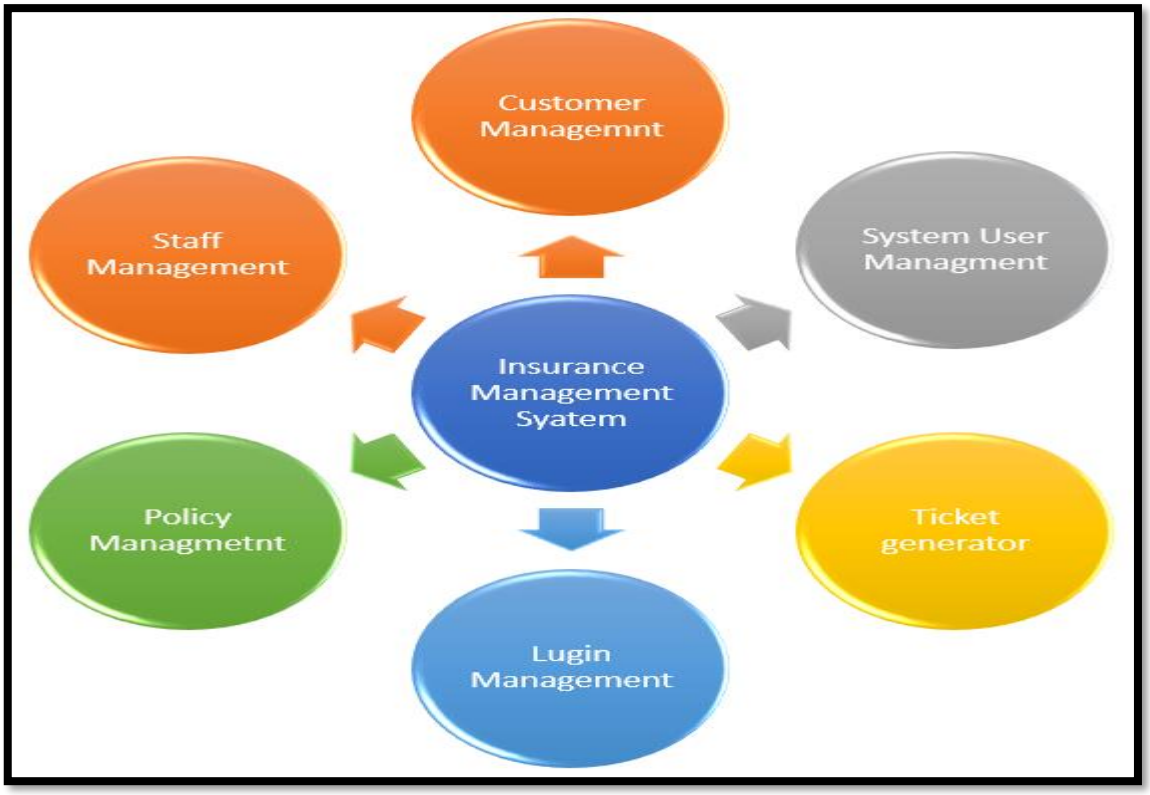


Fig 13: DFD Level 0 Diagram

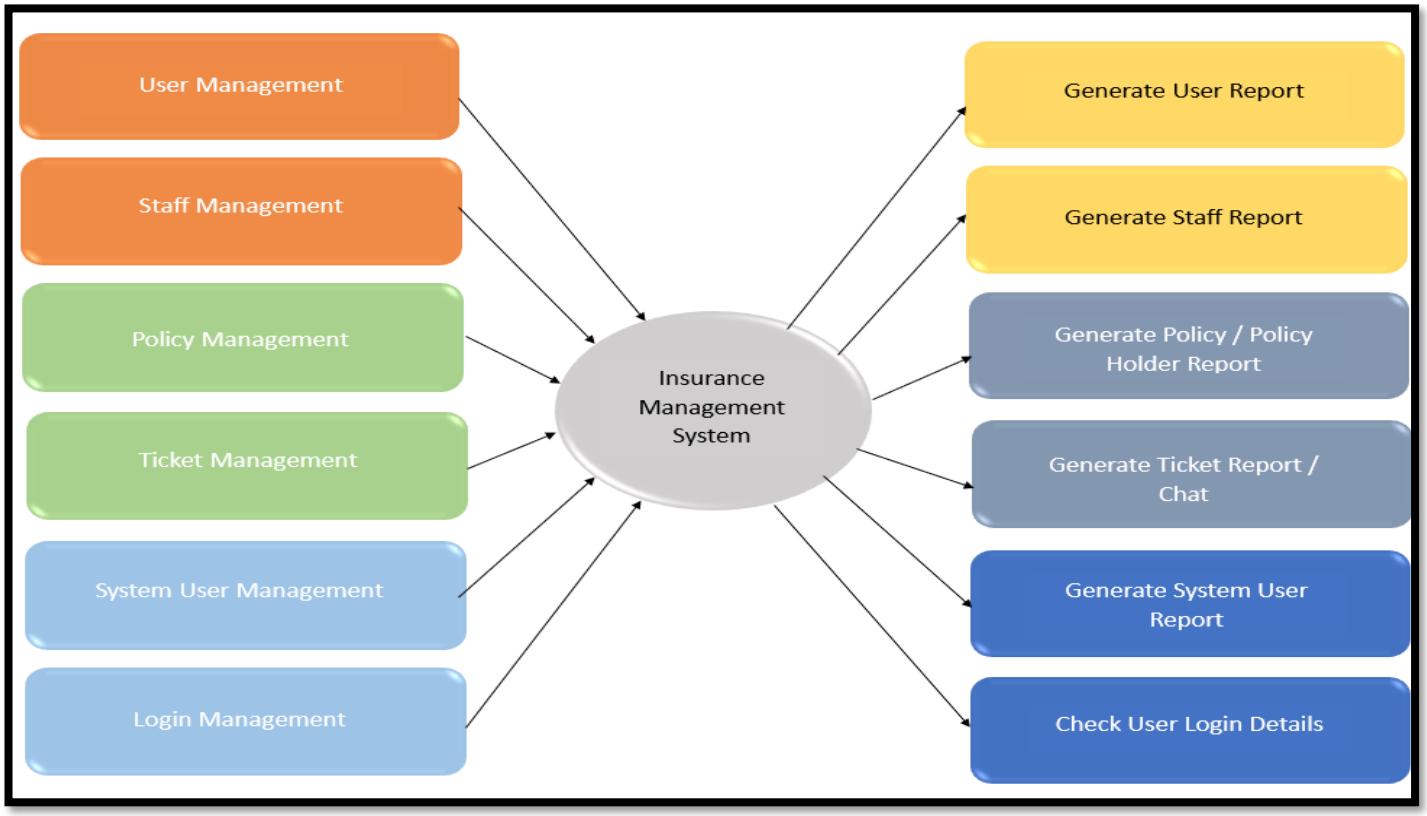


Fig 14: DFD Leve l Diagram

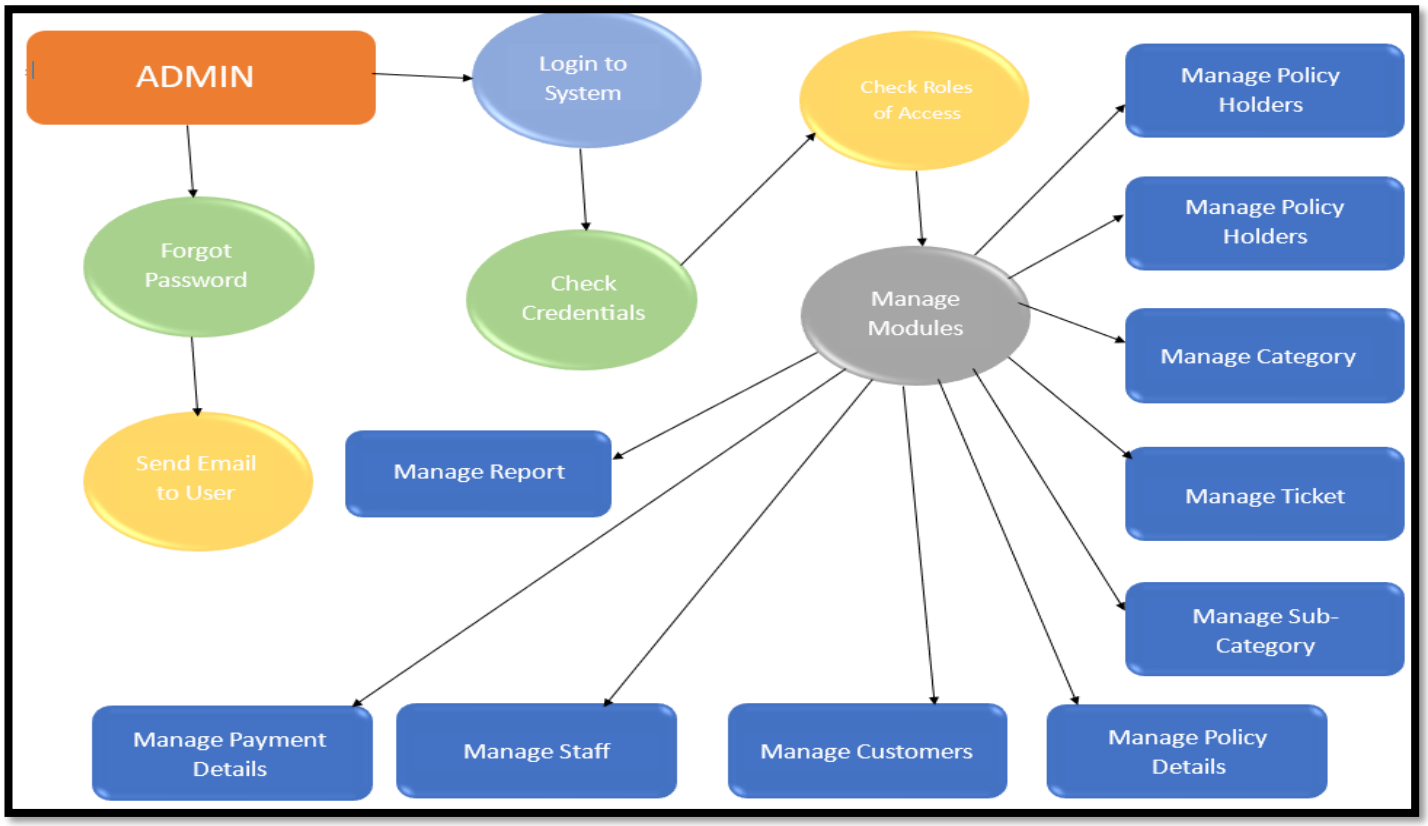


Fig 15: DFD Leve l Diagram

Above Data Flow Diagram, explains the overall structure of the system. It shows how and what types of services the client chooses and the amount of admin interaction in it.

7.2 DATABASE DICTIONARY

Tbl_ Country:

Column	Type	Null	Default
Country code (Primary)	Char (3)	No	
Country name	Varchar (200)	No	
Code	Char (2)	Yes	Null

Table 3: Data Dictionary (Country)

Tbl_ Category:

Column	Type	Null	Default
Id (Primary)	Int (10)	No	
Name	Varchar (100)	No	
Status	Int (1)	No	1

Table 4: Data Dictionary (Category)

Tbl_ Policy:

Column	Type	Null	Default
Id (Primary)	Int (10)	No	
Name	Varchar (100)	No	
Category	Int (10)	No	
Sub-category	Int (10)	No	
Sum-assured	Double	No	
Premium	Double	No	
Tenture	Int (10)	No	
Status	Int (1)	No	1

Table 5: Data Dictionary (Policy)

Tbl_ Sub-category:

Column	Type	Null	Default
Id (Primary)	Int (10)	No	
Category	Int (10)	No	
Name	Varchar (100)	No	
Status	Int (1)	No	1

Table 6: Data Dictionary (Sub-category)

Tbl_ Login:

Column	Type	Null	Default
Sess_Id (Primary)	Varchar (70)	No	
Sess_ip	Varchar (70)	No	
Account	Int (10)	No	

Table 7: Data Dictionary (Login Session)

Tbl_ Notification:

Column	Type	Null	Default
Id (Primary)	Int (70)	No	
User	Int (70)	No	
Notification	Varchar (255)	No	
Ticket	Int (70)	Yes	NULL
Status	Int (1)	No	0

Table 8: Data Dictionary (Notification)

Tbl_ Organization:

Column	Type	Null	Default
Name (Primary)	Varchar (100)	No	
Email	Varchar (60)	No	Dsvasoya2002@gmail.com
Phone	Varchar (60)	No	+919925177657
Phone_alt	Varchar (60)	Yes	+918401977657
City	Varchar (60)	No	Ahmedabad
Street	Varchar (100)	No	Viratnagar
Country	Varchar (70)	No	India
Currency	Varchar (6)	No	Rs.
Timezone	Varchar (60)	No	
Loo	Varchar (60)	No	Default.png
Iso	Varchar (5)	Yes	NULL
Side_bar	Varchar (70)	No	Sidebar-night
Header	Varchar (70)	No	Header_style_light
Sidebar_pos	Varchar (70)	No	Sidebar_pos_left
Sidebar_min	Varchar (70)	No	Sidebar_mini_off
Min_contant	Varchar (70)	No	Main-content-box
Page_header	Varchar (70)	No	Page-header-fixed
Color_theme	Varchar (70)	No	Bg-header-dark

Table 9: Data Dictionary (Organization)

Tbl_ Policy:

Column	Type	Null	Default
Id (Primary)	Int (70)	No	
Member_id	Int (10)	No	
Policy_id	Int (10)	No	
Sum_assured	Double	No	
Premium	Double	No	
Tenure	Int (10)	No	
Active_date	Date	Yes	NULL
Approved_by	Int (10)	Yes	NULL
Status	Int (1)	No	0

Table 10: Data Dictionary (Policy Applications)

Tbl_ Tickets:

Column	Type	Null	Default
Id (Primary)	Int (70)	No	
Member_id	Int (10)	No	
Category	Int (10)	No	
Subject	Varchar (100)	No	
Ticket_description	Lontext	No	
Open_date	Date	No	
Assign_to	Int (10)	Yes	NULL
Close_date	Date	Yes	NULL
Status	Int (1)	No	0
remark	longtext	Yes	NULL

Table 11: Data Dictionary (Tickets)

Tbl_Timezone:

Column	Type	Null	Default
Id	Int (255)	No	
Continet	Varchar (255)	No	
Timezone	Varchar (255)	No	
Pid (Primary)	Int (255)	No	

Table 12: Data Dictionary (Time zones)

Tbl_Users:

Column	Type	Null	Default
Id (Primary)	Int (10)	No	
First_name	Varchar (70)	No	Darshan
Last_name	Varchar (70)	No	Vasoya
Gender	Varchar (6)	No	Male
Phone	Varchar (70)	No	+91-9925177657
City	Varchar (70)	No	Ahmedabad
Street	Varchar (70)	No	Viratnagar
Email	Varchar (70)	No	Dsvasoya2002@gmail.com
Login	Varchar (255)	No	
Level	Int (2)	No	2
Status	Int (2)	No	1

Table 13: Data Dictionary (Users)

CHAPTER 8 - Implementation Details

- Algorithm and Flowchart of Implementation
- Actual Program Code (Important page only)

The main components of this system are registration, login, browsing of items, ordering and view history and order details. The users have to register themselves then only they will be able to buy goods. The registered members have to login first in order to purchase the goods. After that, the users(consumers) need to select the required goods. The order details and history of ordered items can be viewed as well by the consumers.

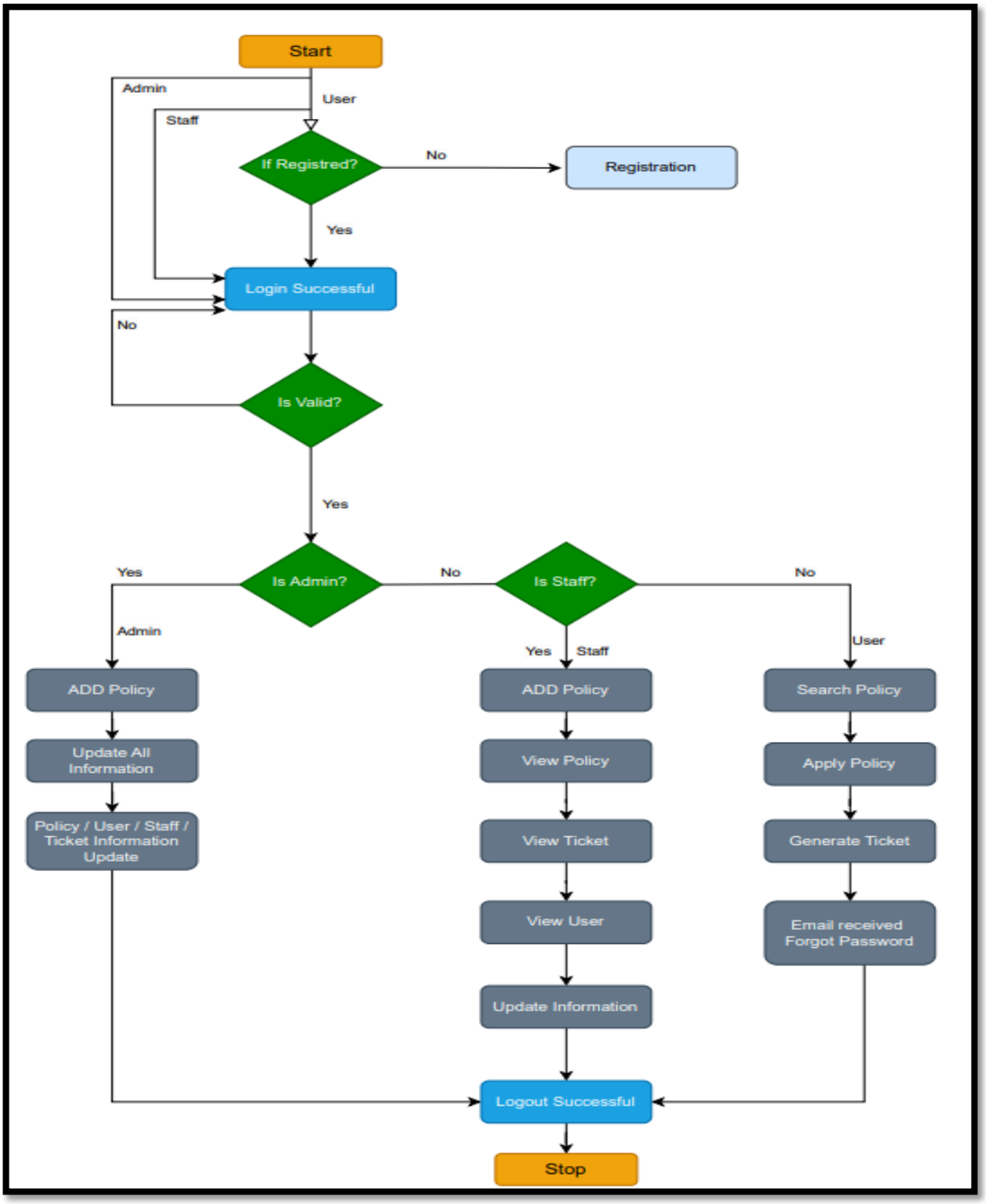


Fig 16. System Flow Chart

USER

REGISTER PAGE: New User can Register here.

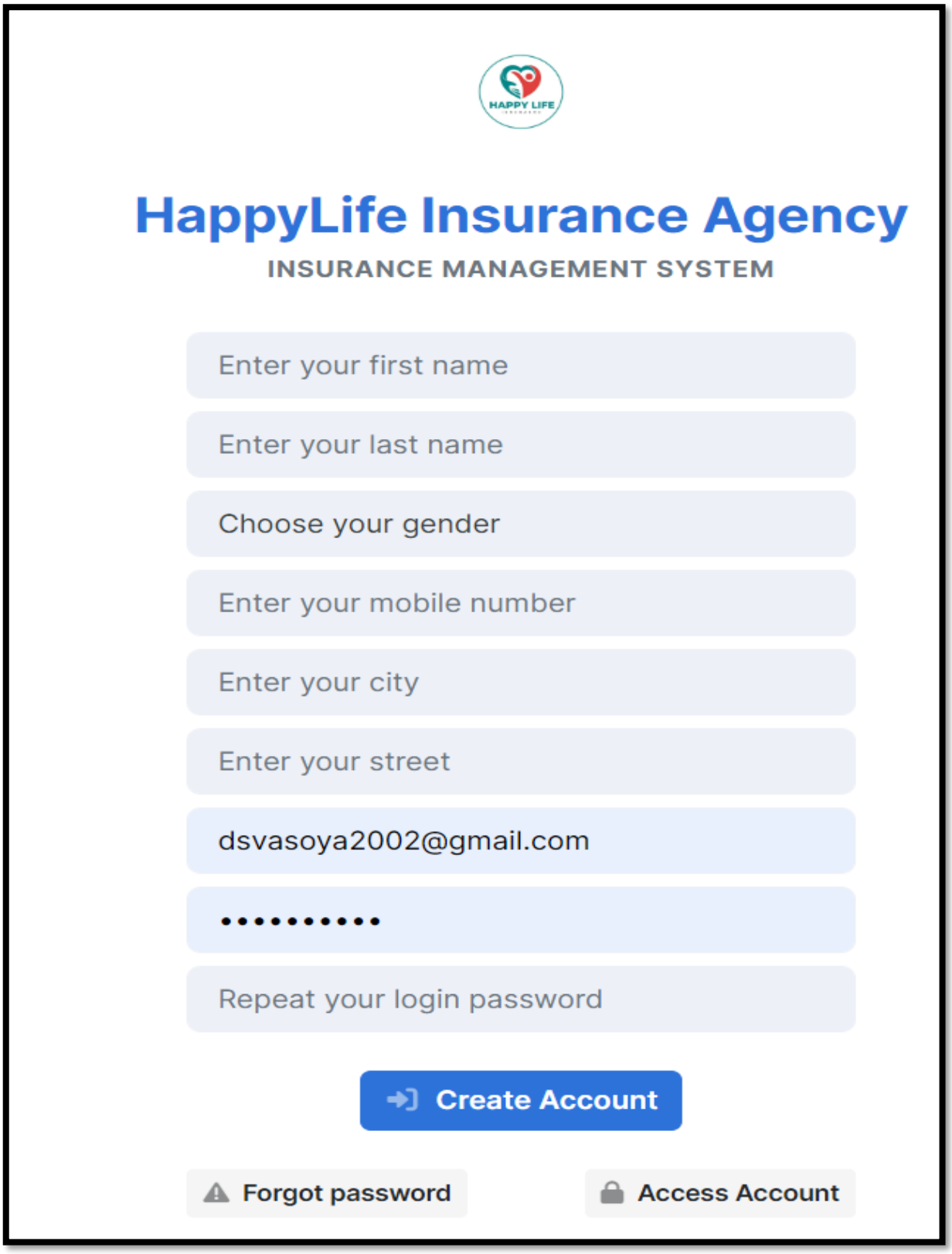


Fig 17. Register Page

LOGIN PAGE: Existing user can login here.

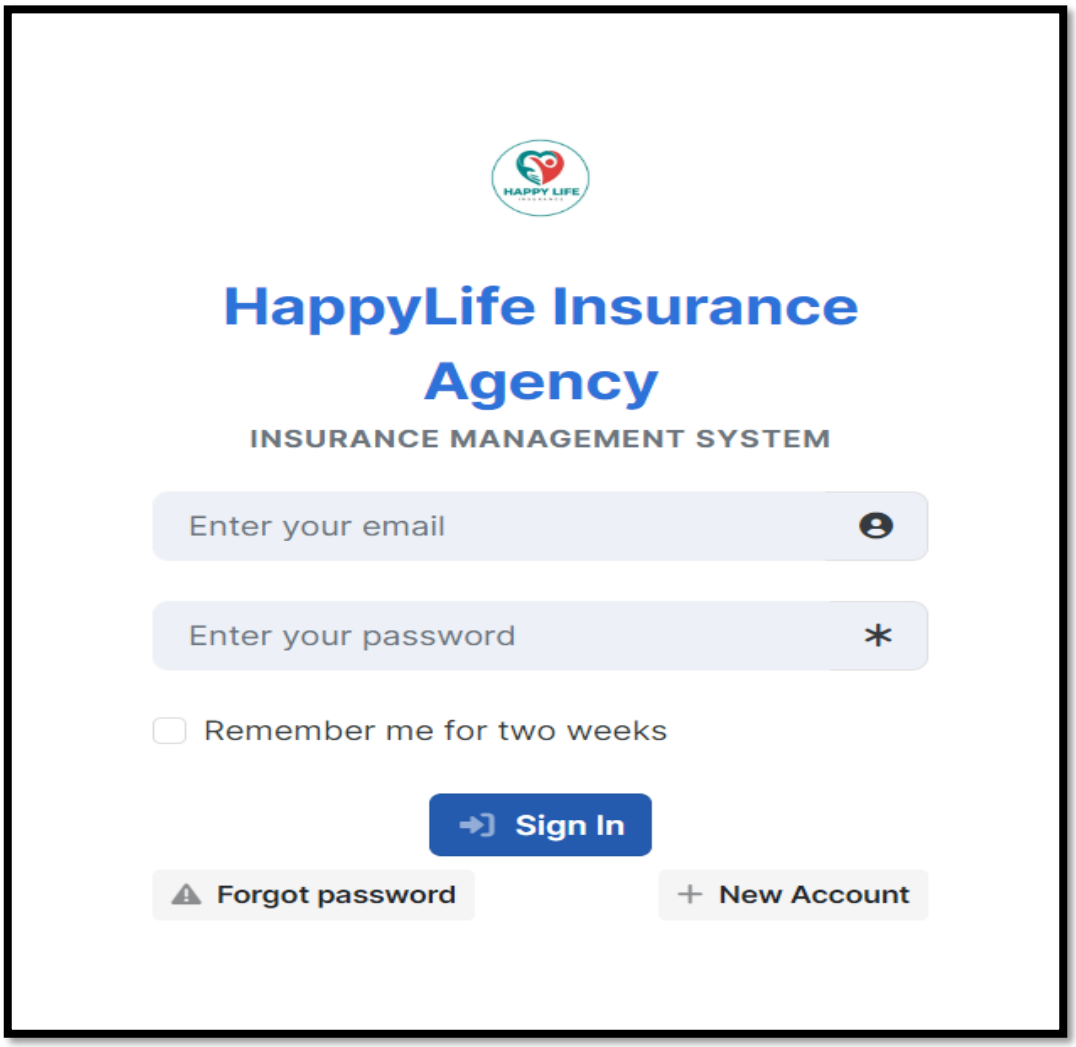


Fig 18. Login Page

DASHBOARD PAGE: User can see all the Details.

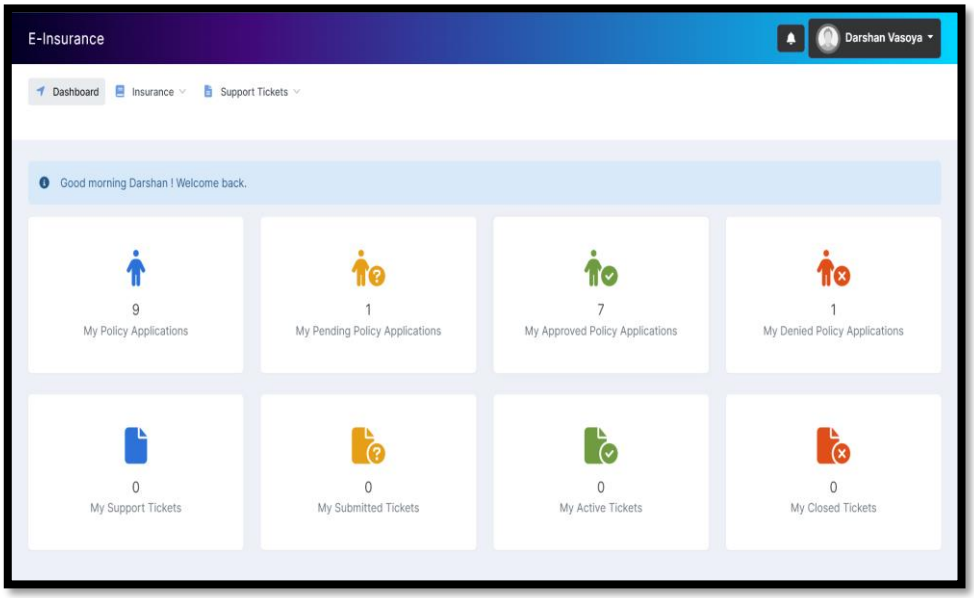


Fig 19. Dashboard Page (User)

NOTIFICATION PAGE: User can receive the notification.

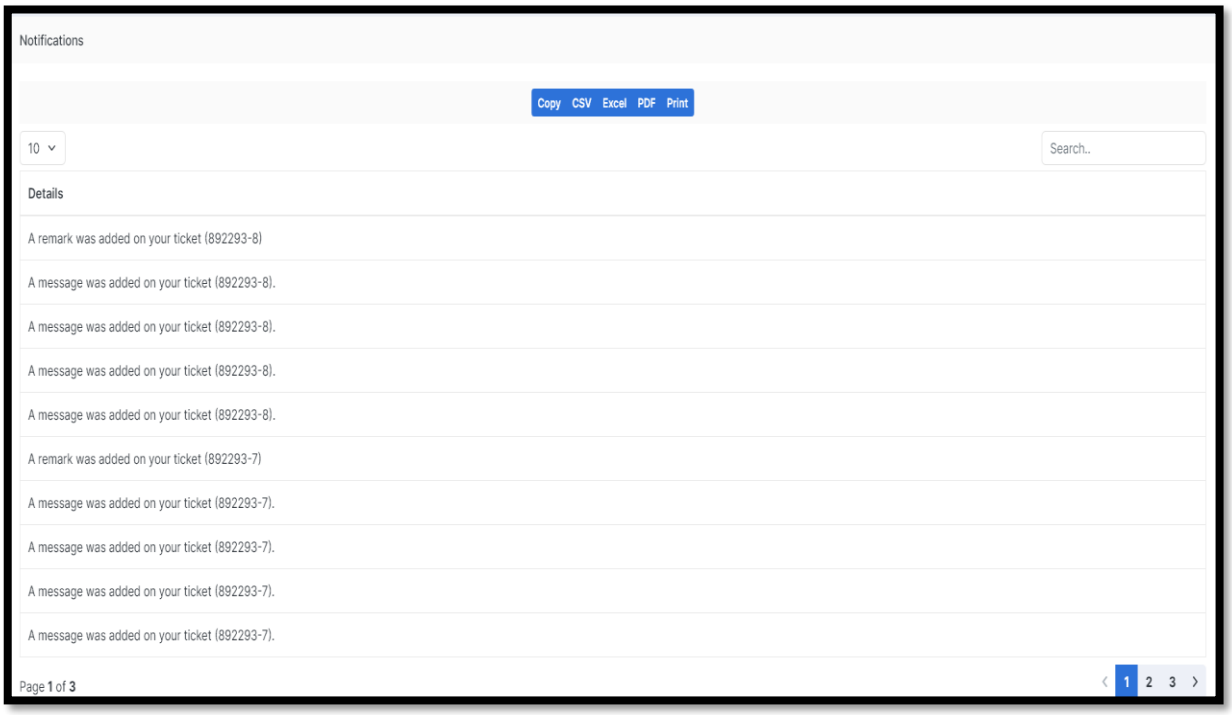


Fig 20. Notification Page (User)

POLICY PAGE: User can see all the Policy, which our website provided.

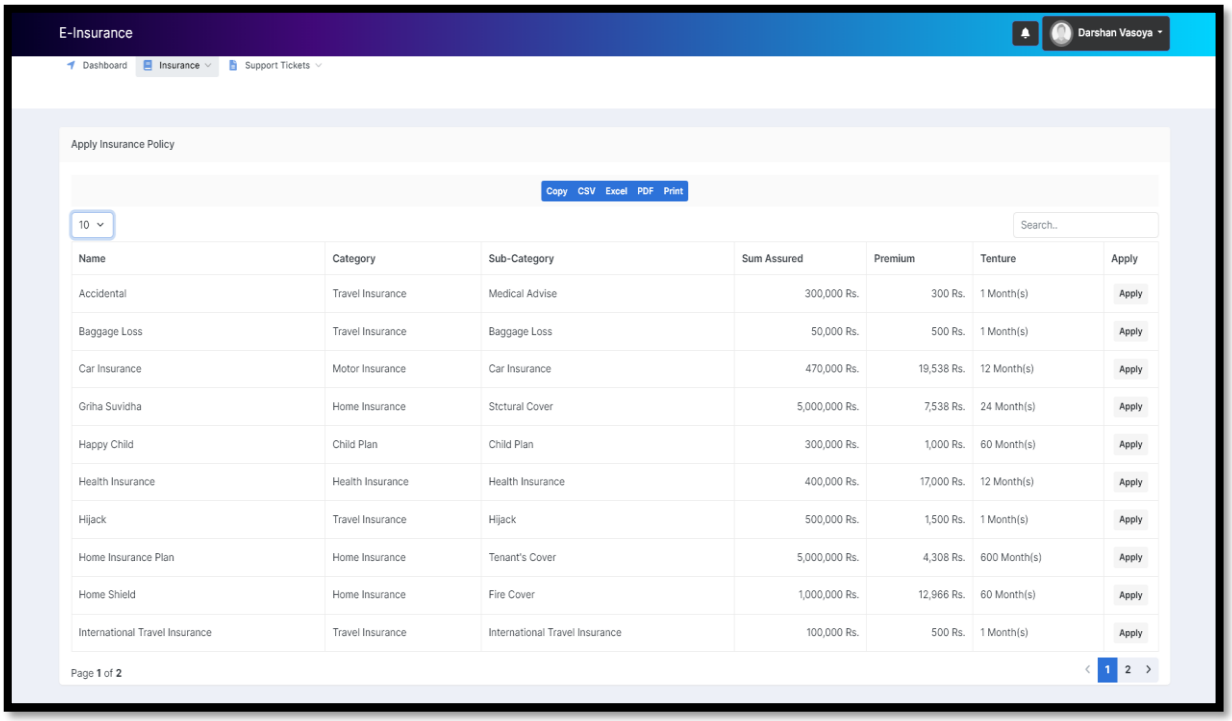


Fig 21. Policy Page

HISTORY PAGE: The page which describe about applied policy.

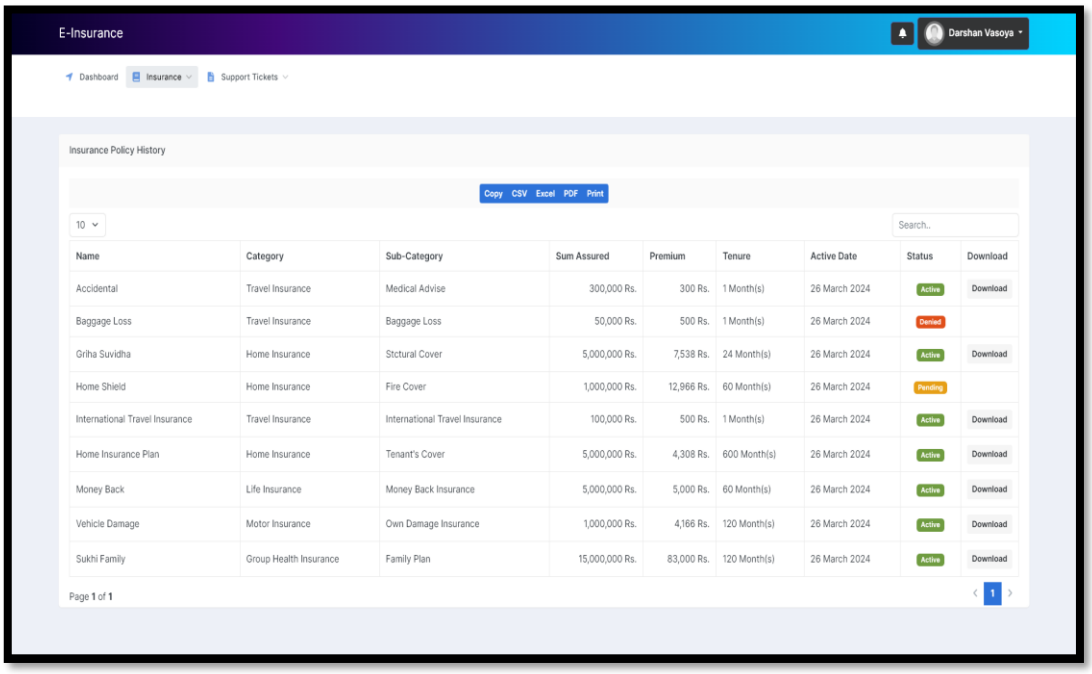


Fig 22. History Page

SUPPORT TICKET PAGE: Visitors and Registered user can contact website owners and administrator from here.

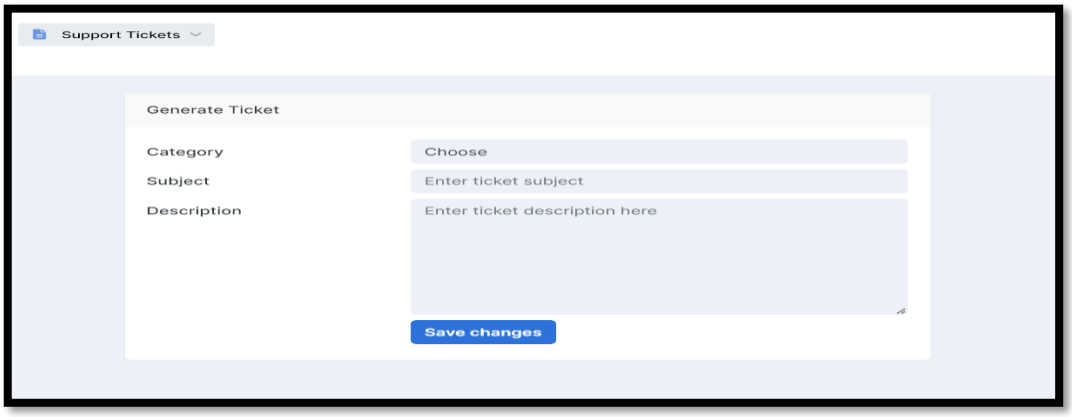


Fig 23. Support Ticket Page

TICKET HISTORY PAGE: The page can show the user query.

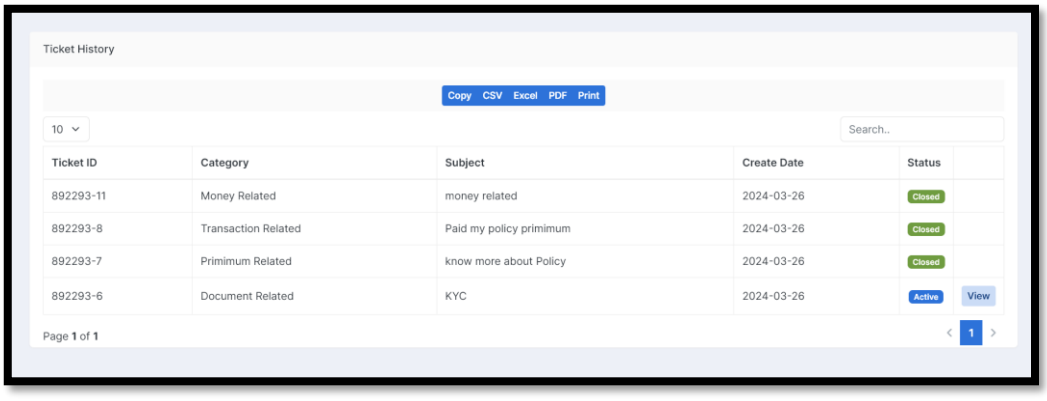


Fig 24. Ticket History Page

CHAT BOX PAGE: User can chat with the staff.

Fig 25. Chat Box Page

USER PROFILE &CHANGE PASSWORD PAGE: The page can show the details about user and also user can change the password.

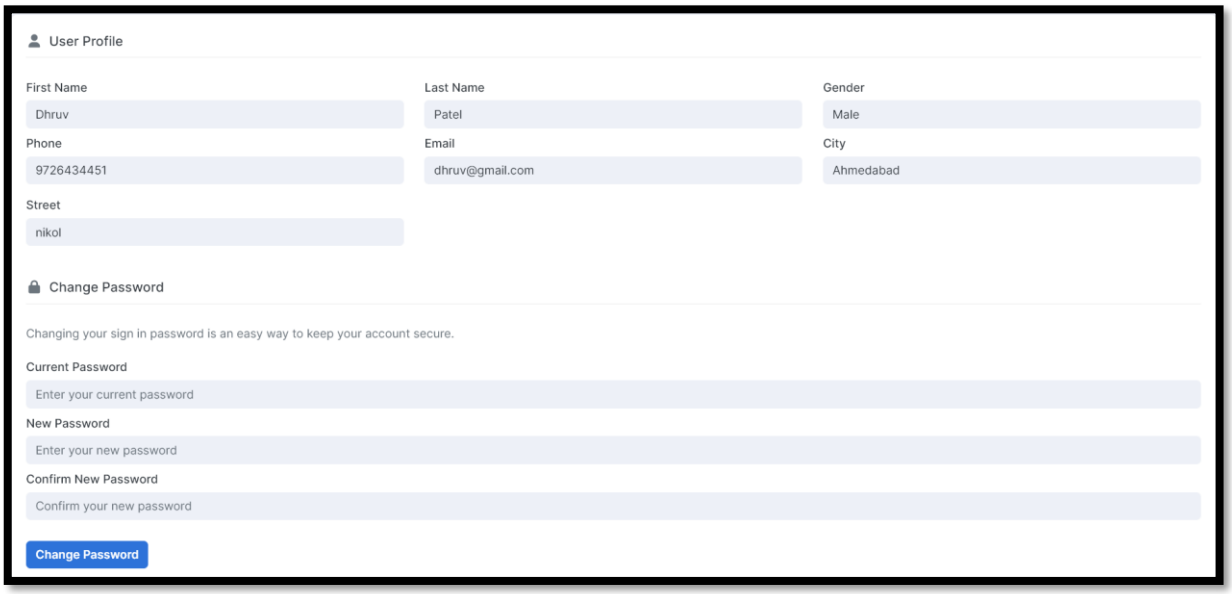


Fig 26. Update Profile (User)

STAFF

DASHBOARD PAGE: Staff can see all the Details.

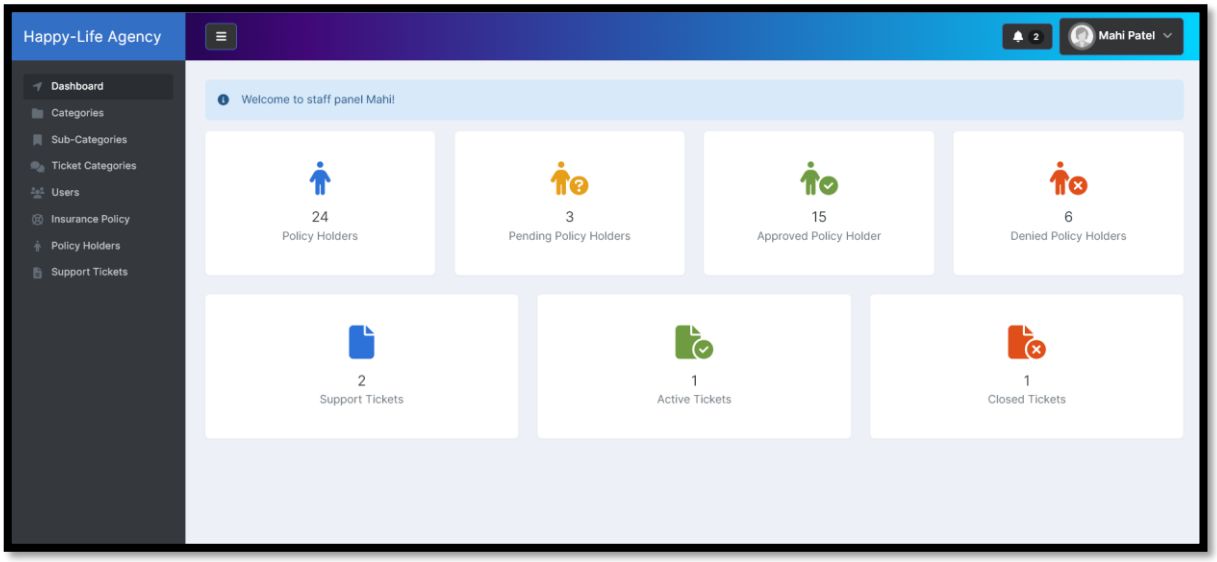


Fig 27. Dashboard Page (Staff)

NOTIFICATION PAGE: Staff can receive notification here.

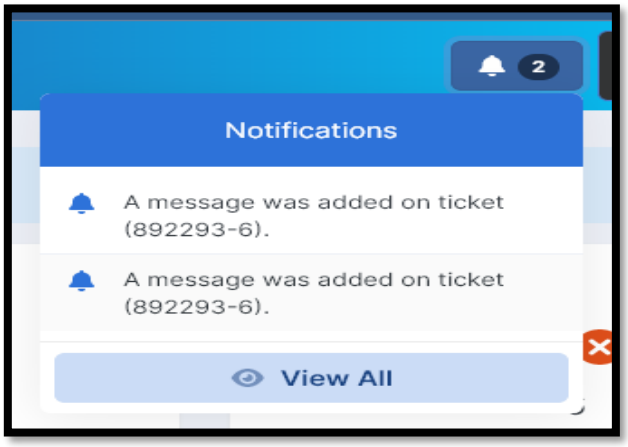


Fig 28. Notification Page (Staff)

SUPPORT TICKET PAGE: the page shows the user query.

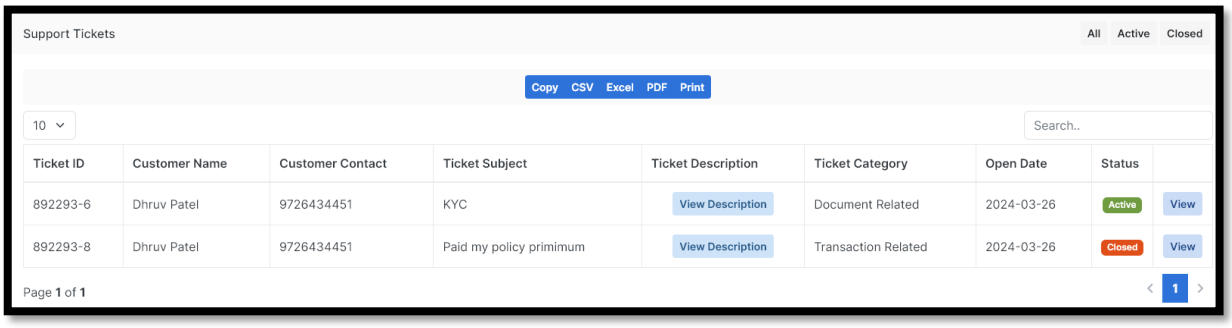


Fig 29. Support Ticket Page

STAFF PROFILE &CHANGE PASSWORD PAGE: The page can show the details about user and also user can change the password.

Fig 30. Update Profile (Staff)

POLICY HOLDER PAGE: The page gives the details about policy holders.

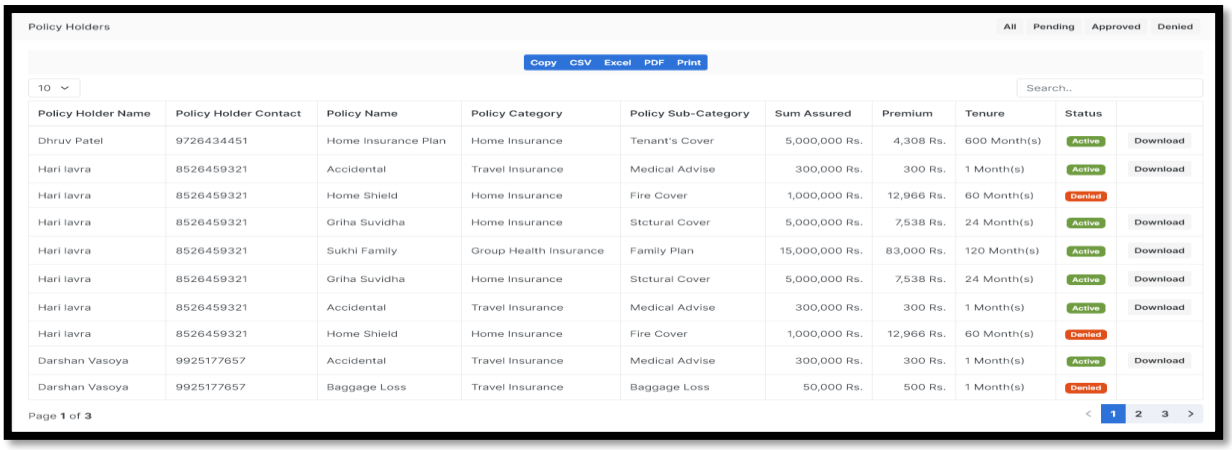


Fig 31. Policy Holder Page

CATEGORY & SUB-CATEGORY PAGE: Staff can show the which categories are active or not.

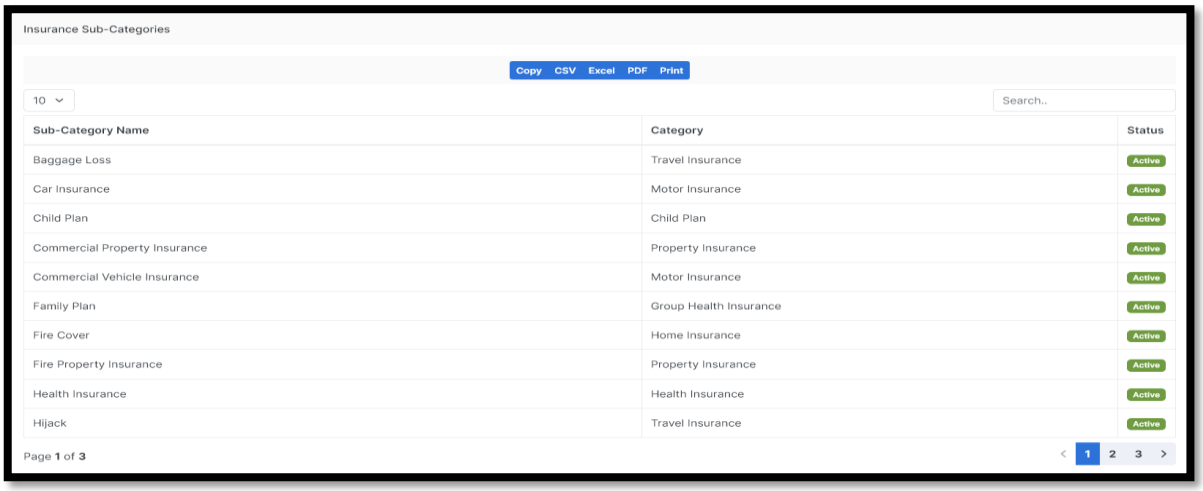


Fig 32. Category and Sub-category Page

ADMIN

DASHBOARD PAGE: The page from where admin can manage users, policy, orders, everything's.

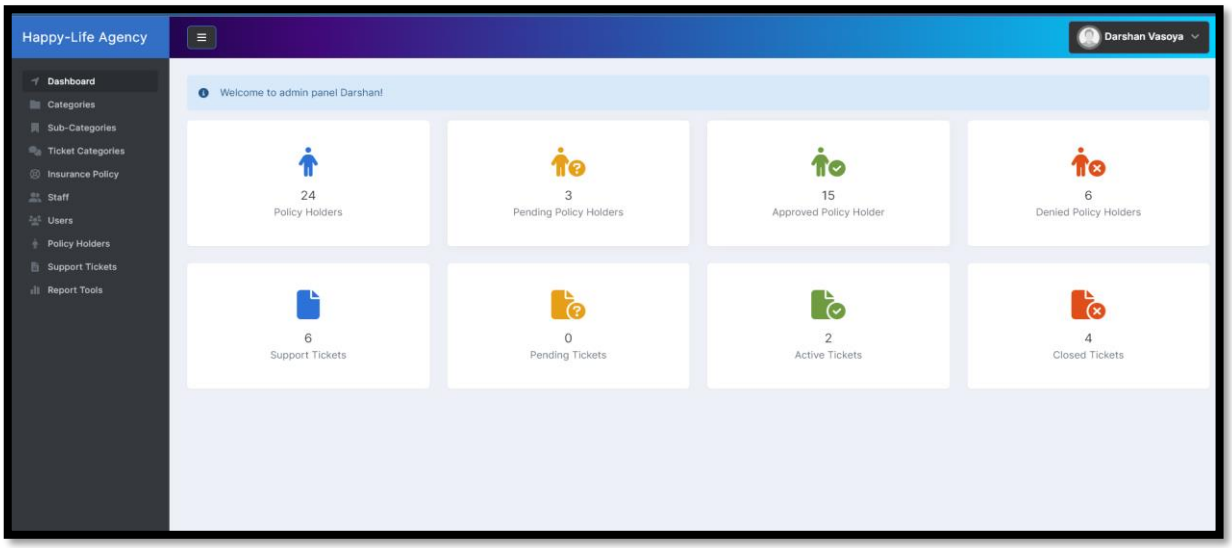


Fig 33. Dashboard Page (Admin)

ADD CATEGORIES PAGE: The page from where admin can add new category.

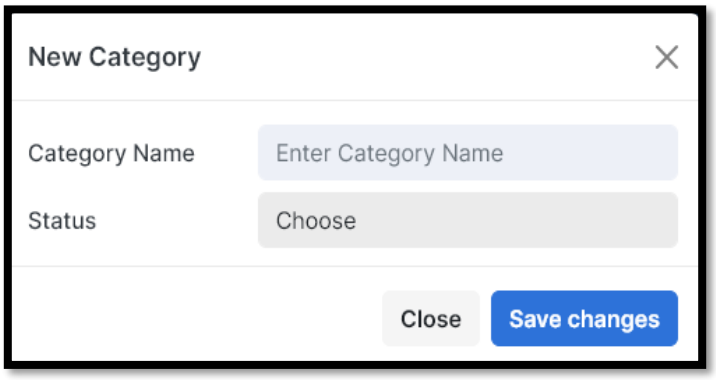


Fig 34. Add Category Page

EDIT SUB-CATEGORIES PAGE: The page from where admin can edit category and sub-category.

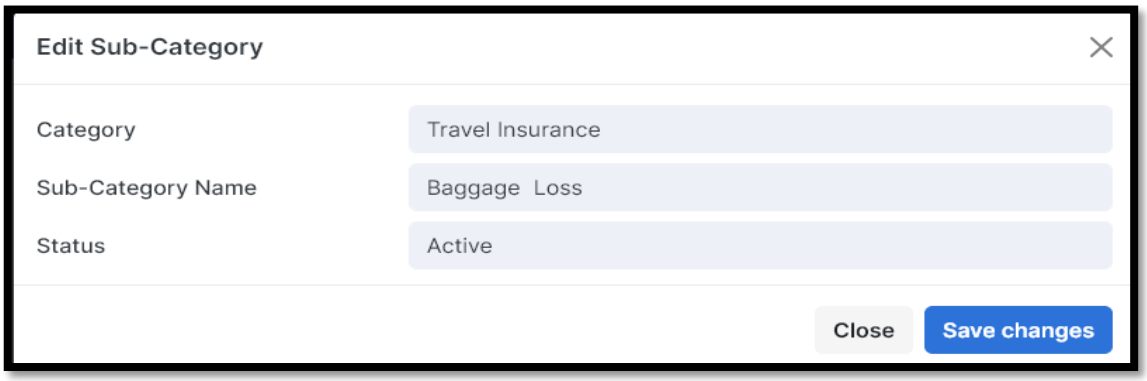


Fig 35. Add Sub-category

TICKET PAGE: The page from where admin can add new ticket.

Fig 36. Ticket Page

ADD POLICY PAGE: The page from where admin can add new Policy.

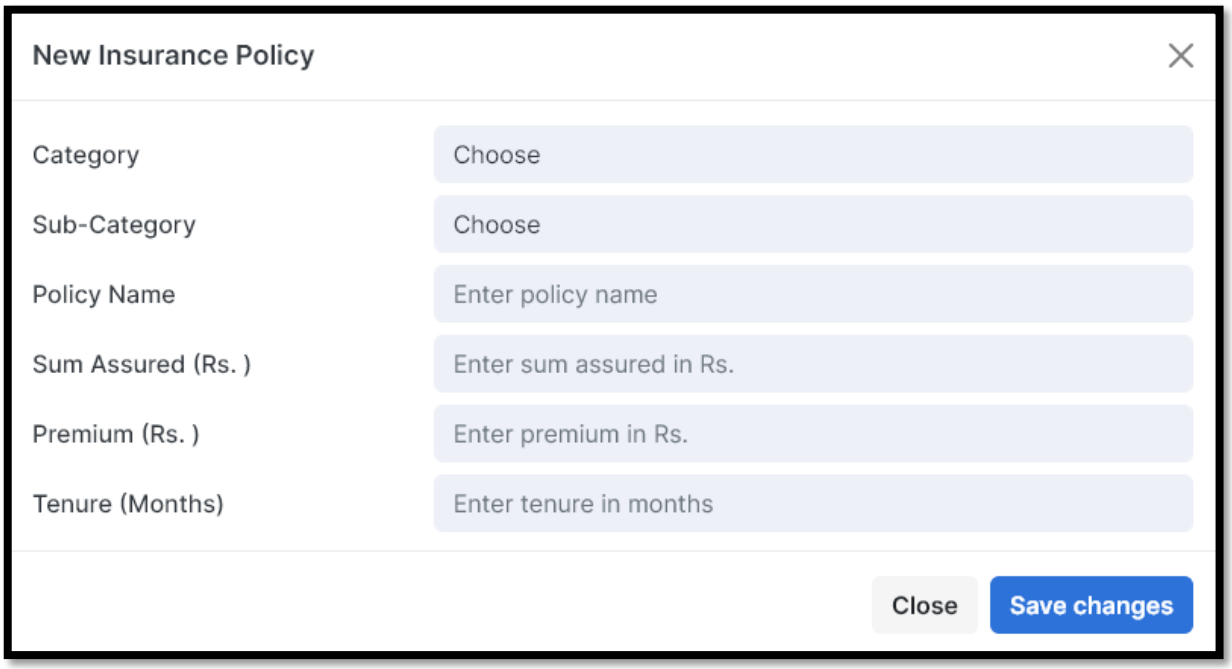


Fig 37. Add Policy Page

STAFF PROFILE &CHANGE PASSWORD PAGE: The page can show the details about user and also user can change the password

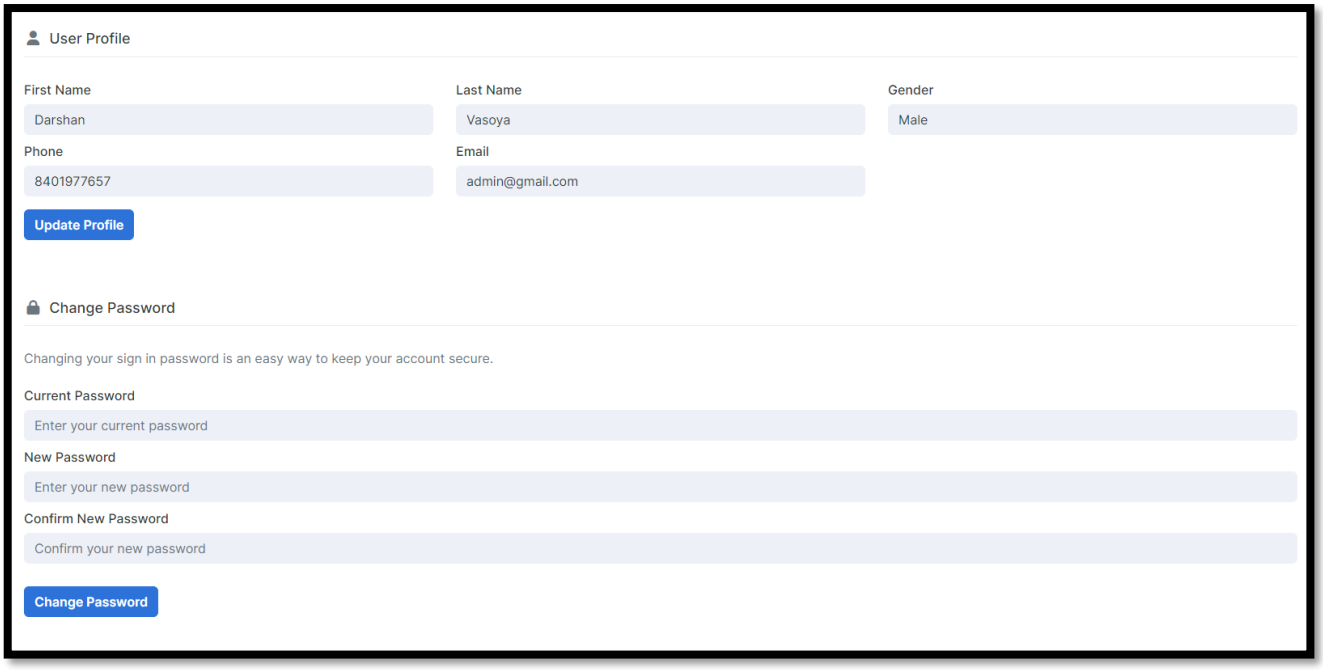


Fig 38. Update Profile (Admin)

EDIT POLICY PAGE: The page from where admin can edit policy.

Fig 39. Edit Policy Page

REPORT PAGE: Admin can generate the report by day, month or year.

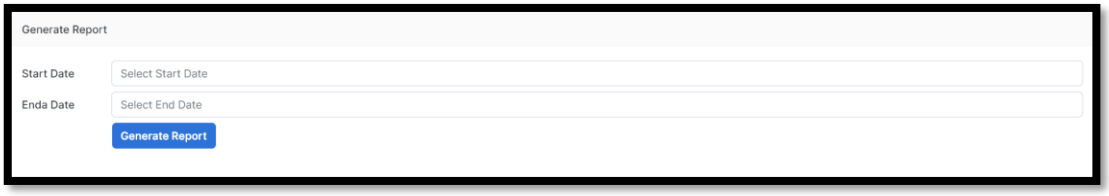


Fig 40. Report Page

STAFF PAGE: The page from where admin can view the staff.

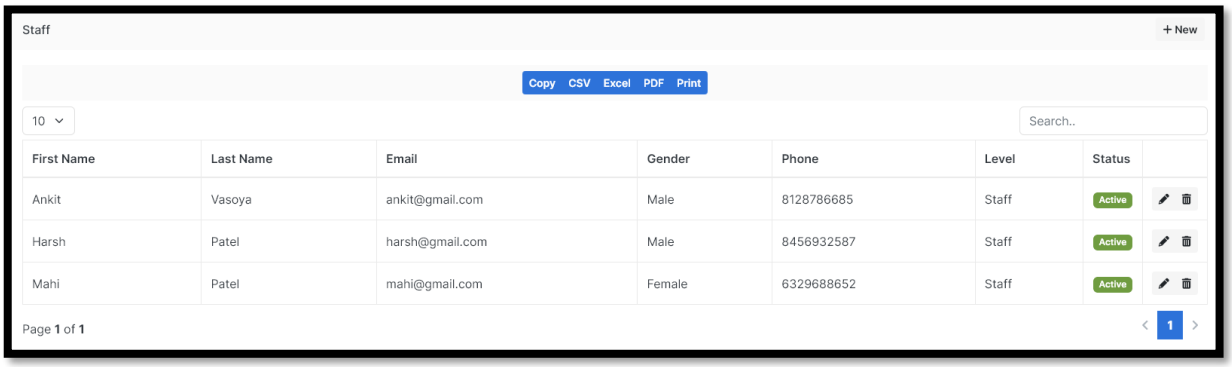


Fig 41. Manage Staff Page

SUPPORT TICKET PAGE: The page from where admin can view the user's query or ticket.

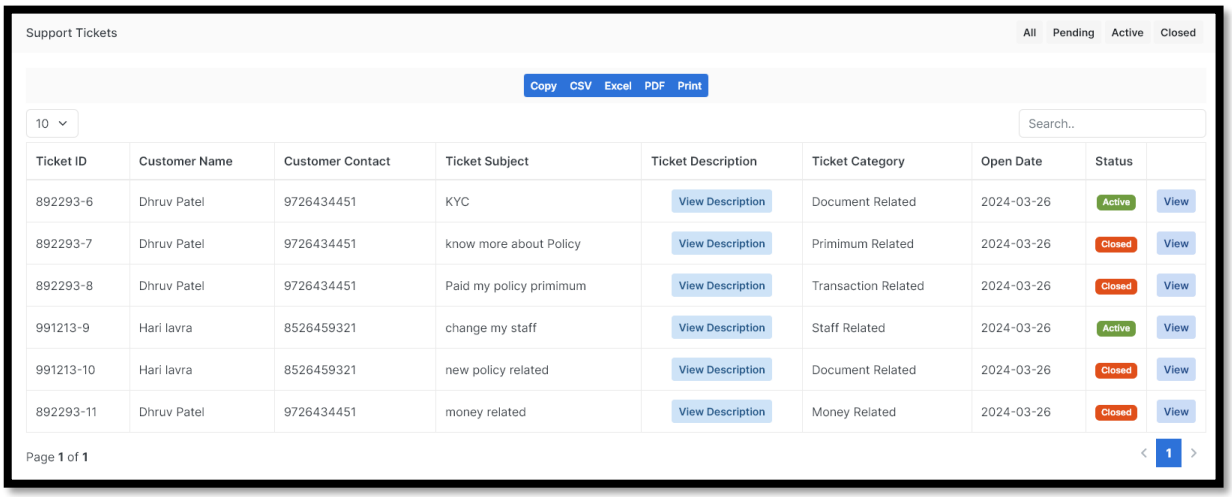


Fig 42. Support Ticket Page

TICKET HANDLE PAGE: admin can handle the query.

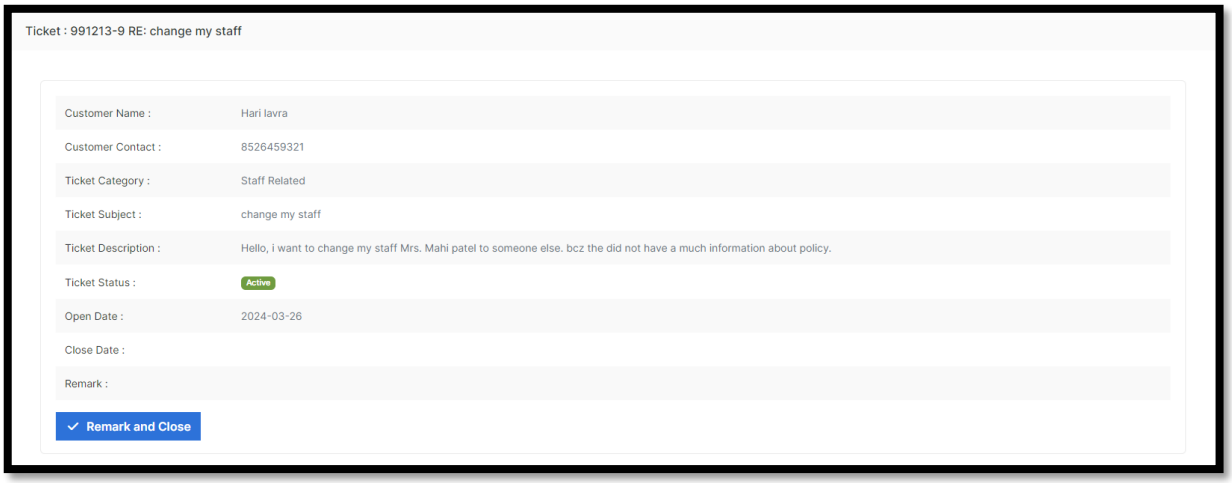


Fig 43. Ticket Handle Page

CHAPTER 9 - TESTING

9.1 INTRODUCTION

Testing is evaluation of the software against requirements gathered from users and system specifications. Testing identifies important defects, flaws, or an error in the application code that must be fixed. It also assesses the feature of a system. Testing assesses the quality of the product.

9.2 Level of Testing:

1. **Unit Testing:**
   Integration testing is basically a logical extension of unit testing. In simple words, two tested units are combined into a component and the interface between them is tested. It identifies problems that occur when different units are combined. The different modules of this project have undergone integration testing while being merged.

2. **Integration Testing:**
   Integration testing is basically a logical extension of unit testing. In simple words, two tested units are combined into a component and the interface between them is tested. It identifies problems that occur when different units are combined. The different modules of this project have undergone integration testing while being merged.

3. **System Testing:**
   System testing tests the behaviour of whole system as defined by the scope of the development project. It might include tests based on risks as well as requirement specifications, business process, use cases or other high-level descriptions of system behaviour, interactions with the operating systems and system resources. It is most often the final test performed to verify that the system meets the specification and its objectives. System testing has been performed at the completion of each feature and is still taking place to make improvements on the existing system.

9.3 Testing Report:

Customer Registration:

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the name is empty	Name	Name should not be empty	SUCCESSFUL
2.	If the Gender is empty	Gender	Gender should not be empty	SUCCESSFUL
3.	If the Mobile no is empty	Mobile no	Mobile should not be empty	SUCCESSFUL
4.	If the city is empty	City	City should not be empty	SUCCESSFUL
5.	If the street is empty	Street	Street should not be empty	SUCCESSFUL
6.	If the Email Id is empty	Email Id	Email Id should not be empty	SUCCESSFUL
7.	If the password is empty	Password	Password should not be empty	SUCCESSFUL
8.	If the entered password size is less than 8	Password	Password should contain more than 8 characters	SUCCESSFUL
9.	If the entered email Id and password is not valid	Email Id, Password	Entered Login credentials not valid	SUCCESSFUL
10.	If Email Id and password is valid	Email Id, Password	Logged in successfully	SUCCESSFUL

Table 14: Customer Registration Testing Table

Customer Login:

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the Email Id is empty	Email Id	Email Id should not be empty	SUCCESSFUL
2.	If the password is empty	Password	Password should not be empty	SUCCESSFUL
3.	If the entered Email ID and password is not valid	Email ID, Password	You have entered invalid Login credentials	SUCCESSFUL
4.	If the entered Email ID and password is valid	Email ID, Password	Logged in successfully	SUCCESSFUL

Table 15: Customer Login Testing Table

Admin Login:

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the Email Id is empty	Email Id	Kindly enter Email Id	SUCCESSFUL
2.	If the password is empty	Password	Kindly enter password	SUCCESSFUL
3.	If the entered Email Id and password is not valid	Email Id, Password	You have entered invalid Login credentials	SUCCESSFUL
4.	If the entered Email Id and password is valid	Email Id, Password	Logged in successfully	SUCCESSFUL

Table 16: Admin Login Testing Table

Staff Login:

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the Email Id is empty	Email Id	Kindly enter Email Id	SUCCESSFUL
2.	If the password is empty	Password	Kindly enter password	SUCCESSFUL
3.	If the entered Email Id and password is not valid	Email Id, Password	You have entered invalid Login credentials	SUCCESSFUL
4.	If the entered Email Id and password is valid	Email Id, Password	Logged in successfully	SUCCESSFUL

Table 17: Staff Login Testing Table

Change Password:

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If Existing password not entered	Existing Password	Existing Password should not be empty	SUCCESSFUL
2.	If new password not entered	New Password	New Password should not be empty	SUCCESSFUL
3.	If confirm password not entered	Confirm Password	Confirm Password should not be empty	SUCCESSFUL
4.	If existing password is incorrect	Existing Password	Failed to change password	SUCCESSFUL
6.	If confirm password is incorrect	Confirm Password	Failed to change password	SUCCESSFUL

Table 18: Change Password Testing Table

Password Recovery:

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If the Email Id is empty	Email Id	Email Id should not be empty	SUCCESSFUL
2.	If the Mobile no is empty	Mobile no.	Mobile no should not be empty	SUCCESSFUL
3.	If the password is empty	Password	Password should not be empty	SUCCESSFUL
4.	If the Confirm password is empty	Password	Password should not be empty	SUCCESSFUL
5.	If the entered Email ID and Mobile no is not valid	Email ID, Mobile no	You have entered Details not match.	SUCCESSFUL
6.	If the entered Email ID, Mobile no and password is valid	Email ID, Mobile no, Password	Recovery successfully	SUCCESSFUL

Table 19: Password Recovery Testing Table

CHAPTER 10 - LIMITATIONS

Although I have tried to do the best and try to do all the things that are possible in an Online System, but still the system contains some of the limitations. The reason of these limitations is the time constraints. Time is the major problem. I Have to deliver the project in a particular time period. That's way I have to leave Some of the topics that actually I want to cover, I am still working on this software and my next goal is to remove these limitations and develop a more efficient and elegant system.

Limitations of the System:

1. Complexity during Implementation: The transition to the new system may require significant time and resources for configuration, data migration, and training, potentially leading to temporary disruptions in operations.

2. Technical Glitches and Bugs: Despite thorough testing, the system may encounter technical issues such as software bugs or compatibility issues with existing hardware or software components, necessitating troubleshooting and updates.

3. Dependency on External Factors: The system's functionality may be impacted by external factors such as internet connectivity or third-party service availability, potentially affecting system reliability and performance.

4. Learning Curve for Users: Users accustomed to the old system may experience a learning curve when adapting to the new interface and workflows, potentially leading to temporary decreases in productivity and user satisfaction.

5. Ongoing Maintenance Requirements: The system will require regular maintenance, updates, and patches to address security vulnerabilities, ensure compatibility with evolving technologies, and optimize performance, adding to ongoing operational costs.

6. Scalability Challenges: As the user base or data volume grows, the system may encounter scalability challenges, potentially leading to performance degradation or the need for infrastructure upgrades to accommodate increased demand.

7. Cost Implications: Implementing and maintaining the new system may involve significant upfront and ongoing costs, including software licensing fees, hardware upgrades, training expenses, and IT support services.

8. Security Vulnerabilities: Despite robust security measures, the system may still be vulnerable to cyber threats such as hacking, malware, or data breaches if not adequately monitored and updated to address emerging threats.

9. Compatibility Issues: The new system may encounter compatibility issues with certain devices, browsers, or operating systems, potentially limiting accessibility and usability for some users.

10. Regulatory Compliance: Changes in regulatory requirements or industry standards may necessitate updates or modifications to the system to ensure ongoing compliance, potentially requiring additional resources and effort.

CHAPTER 11 - CONCLUSION

In conclusion, the proposed insurance management system (IMS) presents a promising solution to address the limitations of the current system and enhance insurance operations. With its modular and scalable architecture, intuitive user interface, and advanced security measures, the new system offers improved functionality, usability, and data protection. However, it is essential to acknowledge the potential challenges and limitations associated with implementing and maintaining the system, including complexity during implementation, technical glitches, scalability concerns, and ongoing maintenance requirements. Despite these challenges, the benefits of the new system, such as enhanced efficiency, better user experience, and compliance with regulatory standards, outweigh the drawbacks. With careful planning, diligent testing, and proactive management, the IMS has the potential to revolutionize insurance management, driving operational excellence and delivering value to insurers and their stakeholders.

11.1 Future Work:

1. Predictive Maintenance Strategies: Implement predictive maintenance strategies to anticipate and address potential system failures or performance issues before they occur, minimizing downtime and optimizing system reliability.

2. Artificial Intelligence Applications: Explore additional applications of artificial intelligence within the IMS, such as natural language processing for automated customer support, image recognition for claims processing, or chatbots for policy inquiries.

3. Real-time Data Analytics: Enhance the IMS's capabilities for real-time data analytics to enable faster decision-making, proactive risk management, and personalized customer interactions based on up-to-date information.

4. Digital Transformation Initiatives: Drive digital transformation initiatives within insurance organizations by leveraging the IMS as a catalyst for modernizing business processes, fostering innovation, and adapting to evolving customer expectations in the digital age.

5. Multi-channel Customer Engagement: Expand the IMS's capabilities to support multi-channel customer engagement strategies, including social media integration, email marketing automation, and omnichannel communication platforms to enhance customer interactions and brand loyalty.

6. Cloud Migration and Optimization: Explore opportunities for migrating the IMS to cloud-based infrastructure to improve scalability, flexibility, and cost-effectiveness, while optimizing performance, reliability, and security in cloud environments.

7. Gamification and Behavioural Economics: Incorporate gamification elements and behavioural economics principles into the IMS to incentivize desired user behaviours, increase engagement, and promote healthier insurance practices among policyholders.

8. Ethical and Social Responsibility Initiatives: Embed ethical considerations and social responsibility initiatives into the design and implementation of the IMS to promote ethical decision-making, diversity and inclusion, and corporate social responsibility within insurance organizations.

12. REFRENCES

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- https://pdfcoffee.com/online-insurance-management-system-pdf-free.html
- https://www.intellectsoft.net/blog/insurance-document-management-system/
- https://www.slideshare.net/AnuWord/insurance-management-system-111757758
- https://app.diagrams.net/
- https://www.youtube.com/results?search_query=insurance+website
- https://github.com/amitrajitbose/insurance-management-system/blob/master/Report.pdf
- https://www.google.com/search?sca_esv=a612d1282135f40a&sca_upv=1&sxsrf=ACQVn09egEe9xM-aWLqfbbcLkZiq-cc6yA:1713762050914&q=insurance+underwriting+process+flow+chart+activity+diagram+for+insurance+management+system&uds=AMwkrPtbW-X2bXUgPfDp2sBq387UEek_E9aI2LkOExXFAhfTPg53789dfuS1-JFbOewWo3Wxy5hoguJPTivUZSAqr8AZFH1vKGwDYZURPc6nDzWsRBqWG1DFmr6Jv_DtGU046XsfGJGB1vYQwsMSU0QCLp82NHfYcs8M1DKJGqcL4-NF6RXOhbqKXl4uY4E3kxjrPaCiIGksxTeVxHfhN7FqXlo4yJ5WtfUmC1xLQyugCeeYZhgC4mWWMBN7ePDDs087wfSLQOLqZAfKByOkq6K1n2qIPZNFN3I4GzcX3lKb1PbMgyUIjZ6N8CuEOXTfj3V6w6MPGBwrX6nlWabkHprSG7clnQ951kL5le9PIaPbyAZWFDqQ_Fo&udm=2&prmd=ivsnbmtz&sa=X&ved=2ahUKEwiWspiShdWFAxVAna8BHSZRCE0QtKgLegQIDRAB&biw=1536&bih=776&dpr=1.25
- https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SBAA1505.pdf
- https://www.scribd.com/doc/64236595/E-R-Diagram-for-Insurance-Company-1
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- https://www.freeprojectz.com/dfd/vehicle-insurance-management-system-dataflow-diagram

About Organization

Our Mission

At Web Knight Infosystem, our mission is to redefine digital success for businesses. With a relentless commitment to innovation, we strive to provide cutting-edge web solutions that not only meet but exceed our clients' expectations. Our passion for creativity and unwavering expertise drives us to craft bespoke online experiences that propel businesses to new heights in the digital landscape.

Our Vision

At WebKnight Infosystem, our vision is to shape the future of the digital world. We aspire to be at the forefront of technological innovation, driving businesses towards unparalleled success. Our commitment to excellence fuels our relentless pursuit of creating transformative web solutions that empower our clients. We envision a digital landscape where businesses thrive, and we are dedicated to leading the way with creativity, expertise, and unwavering dedication.

Our integrated IT solutions span across various crucial domains to empower businesses with comprehensive technological support. From Managed IT Services ensuring continuous support, maintenance, and monitoring, to strategic IT Consulting guiding digital transformation and infrastructure optimization, we provide a holistic approach to technology management. Our expertise extends to Software Development, where we design and develop tailored solutions to meet unique business requirements. We specialize in Web Development, crafting engaging websites, web applications, and e-commerce platforms to enhance online presence and drive growth. Additionally, our Mobile App Development services cater to both Android and iOS platforms, delivering seamless user experiences. With proficient IT Project Management, we oversee projects from inception to completion, ensuring efficient execution. Leveraging Business Intelligence tools, we provide actionable insights for informed decision-making. Our Digital Marketing Services focus on enhancing online visibility through SEO, SEM, and social media strategies, complemented by engaging content creation. Moreover, we offer IT Training and Workshops to empower employees and clients to leverage technology effectively. Through Social Media Management, Branding, and CRM solutions, we help businesses build strong customer relationships and establish a compelling brand identity in the competitive market landscape.

Our mobile app development services are designed to elevate your business by delivering cutting-edge solutions that prioritize seamless user experiences and maximum visibility and engagement. Whether it's iOS, Android, or cross-platform development, we tailor our services to meet your specific needs and target audience. Our expertise extends to UI/UX design, ensuring intuitive interfaces that captivate users. We provide comprehensive app prototyping, maintenance, updates, and rigorous testing to guarantee optimal performance and reliability. Additionally, our backend development capabilities and API integration ensure seamless connectivity and functionality. With a focus on security and encryption, we prioritize protecting your data and users' privacy. Trust us to transform your ideas into innovative and successful mobile applications.

About College

Ganpat University-U. V. Patel College of Engineering (GUNI-UVPCE) is situated in Ganpat Vidyanagar campus. It was established in September 1997 with the aim of providing educational opportunities to students from It is one of the constituent colleges of Ganpat University various strata of society. It was armed with the vision of educating and training young talented students of Gujarat in the field of Engineering and Technology so that they could meet the demands of Industries in Gujarat and across the globe.

The College is named after Shri Ugarchandbhai Varanasi Bhai Patel, a leading industrialist of Gujarat, for his generous support. It is a self-financed institute approved by All India Council for Technical Education (AICTE), New Delhi and the Commissionerate of Technical Education, Government of Gujarat.

The College is spread over twenty-five acres of land and is a part of Ganpat Vidyanagar Campus. It has six ultra-modern buildings of architectural splendour, classrooms, tutorial rooms, seminar halls, offices, drawing hall, workshop, library, well equipped departmental laboratories, and several computer laboratories with internet connectivity through 1 Gbps Fiber link, satellite link education centre with two-way audio and one-way video link. The superior infrastructure of the Institute is conducive for learning, research, and training.

The Institute offers various undergraduate programs, postgraduate programs, and Ph.D. programs.

Placement plays a key role in shaping the future of the students and keeping this in mind; the institute has forged healthy relations with the prominent industries. These tie-ups are mutually beneficial. The industries get a chance to employ the resources of the institute for their R & D. In turn they extend every help to the institute especially about providing hands-on training to the students. As part of this initiative, Incubation Centre/Start-up activities have also been developed.

Their dedicated efforts are directed towards leading our student community to the acme of technical excellence so that they can meet the requirements of the industry, the nation, and the world at large. We aim to create a generation of students that possess technical expertise and are adept at utilizing the technical 'know-hows' in the service of humankind.

They strive towards these Aims and Objectives:

1. To offer guidance, motivation, and inspiration to the students for well-rounded development of their personality.

2. To impart technical and need-based education by conducting elaborated training programs.

3. To shape and mould the personality of the future generation.

4. To construct fertile ground for adapting to dire challenges.

5. To cultivate the feeling of belongingness amongst the faction of engineers