Sri Lanka Institute of Information Technology

Optical Management System

Project Proposal Documentation

INFORMATION TECHNOLOGY PROJECT (IT2080)
2024

GROUP ID: ITP24R_B1_W01

1.	Kojithan P. Y	IT22264220	077 910 8836	it22264220@my.sliit.lk
2.	Sarmitha S	IT22637482	071 096 4869	it22637482@my.sliit.lk
3.	A.W.D.S.M. Aluthwaththa	IT22267290	078 987 0688	it22121288@my.sliit.lk
4.	Ahamed M.U.N	IT22197900	075 651 2666	it22197900@my.sliit.lk
5.	Venushan T	IT22082824	075 085 3407	it22082824@my.sliit.lk
6.	AJH Ahamed	IT22117328	075 067 8678	it22117328@my.sliit.lk
7.	Baskaran V	IT22172600	070 576 0922	it22172600@my.sliit.lk
8.	Nishara T	IT22223876	077 639 0720	it22223876@my.sliit.lk

Contents

Introduction…….
- Client and company background…….
- Problem and motivation……....
- Aim and objectives……

System overview……

Functional requirements……
- Optometrist and Prescription Management…….....
- Digital Library for Eye Health Resources ……
- Appointment Management System…….…….
- Product Management System…….……
- Customer Management……..…
- Customer Support System……
- Order Management System…….
- Payment portal……

Non-functional requirements…….....

Technical requirements…….....

Literaturereview…….....

Methodology…….....

Tools and technologies……

Gantt chart…….

Work breakdown structure…….

References…….....

Introduction

Client and company background

The customers can visit to our site and search product details, doctor details and channeling schedule. Our business is dedicated to offering complete and cutting-edge solutions that optimize and improve the work processes of eye care specialists and our company focusing on ease of use, flexibility, and client pleasure, we see a day when eye care practitioners around the globe enjoy increased productivity and superior quality of eye care. Our goal is to lead the world in optical management technology, enabling eye care specialists to provide outstanding treatment with precision, efficiency, and individual attention. Optical Management Systems that help optometrists run their practices smoothly, improve patient outcomes and of optical technology. It is designed to offer a range of features to meet the specific needs of eye care professionals, including:

Customer management

Centralizes customer data for effective customer relationship management and simple access.

Appointment management

Simplifies appointment scheduling and tracking to maximize time and resource efficiency.

Optometrist and prescription management

Oversees patient prescriptions and optometrist information to provide precise eye care.

Product management

Organizes and tracks optical products, ensuring accurate inventory management.

Order management

Handles customer orders, tracking products and order statuses for seamless transactions.

Payment portal

Provides a secure platform for initiating and tracking payment transactions.

Customer support system

Efficiently logs, tracks, and resolves customer support inquiries or issues.

Digital library management system

Maintains and arranges a digital library of materials for quick access and use.

We make sure that, in a changing healthcare environment, our solutions adapt to the changing needs of eye care providers. Our company places a high value on establishing enduring relationships with its clients. Our customer support team is committed to providing timely assistance, training, and updates to maintain the seamless running of our Optical Management System since we recognize the special problems faced by eye care professionals. Our company is dedicated to revolutionizing the optical sector by utilizing creativity, dependability, and a thorough comprehension of the difficulties encountered by eye care practitioners. Our Optical Management System allows vision care professionals to concentrate on what really matters giving their patients the best possible eye care.

Problem and motivation

Problems:

1. Communication Challenges: There is no effective mechanism for smooth communication between optometrists, staff, and customers. This leads to misunderstandings, missed appointments, and dissatisfaction among customers.
2. Lack of Service Information: Customers are not adequately informed about the services offered by the optical center, such as eye exams, prescription management, and available eyewear options. This results in poor customer awareness and limited utilization of the center's services.
3. Difficulty in Appointment Scheduling: Customers face challenges in scheduling appointments for eye exams and consultations with optometrists. There is no system in place to check optometrists' availability or allow customers to book appointments according to their preferences.
4. Manual Management Processes: The management of customer records, optometrists' schedules, and employee details relies heavily on manual record-keeping. This leads to inefficiencies, errors, and difficulties in maintaining accurate data.
5. Lack of Comprehensive Feedback Mechanism: While some feedback is received from customers, there is no structured mechanism to collect and analyze overall feedback. This results in the inability to address issues effectively and make informed decisions for improving services.
6. Complexity in Administrative Tasks: Administrative tasks such as employee registrations, managing schedules, and handling financial transactions are cumbersome and prone to errors. This complexity creates challenges in managing the operational aspects of the optical center.

Motivation:

The Optical system aims to address these challenges and streamline operations within the optical center through automation and technological integration. The motivation behind the Optical system includes:

1. Improving Efficiency: By automating workflows and reducing manual processes, the Optical system enhances operational efficiency within the optical center. This allows staff to focus on delivering high-quality eye care services rather than administrative tasks.
2. Enhancing Customer Experience: Through improved communication channels and streamlined appointment scheduling, the Optical system enhances the overall customer experience. Customers can easily access information about services, schedule appointments at their convenience, and receive timely updates.
3. Facilitating Information Accessibility: The system provides comprehensive information about optical services, eyewear options, and appointment availability to customers, enabling them to make informed decisions regarding their eye care needs.
4. Enabling Data-Driven Decisions: With a structured feedback mechanism in place, the Optical system enables the collection and analysis of customer feedback. This valuable data allows the optical center to identify areas for improvement and make informed decisions to enhance service quality.
5. Simplifying Administrative Tasks: By digitizing employee and customer records, managing schedules, and automating financial transactions, the Optical system simplifies administrative tasks. This reduces errors, saves time, and enhances overall operational efficiency.

Aims and Objectives

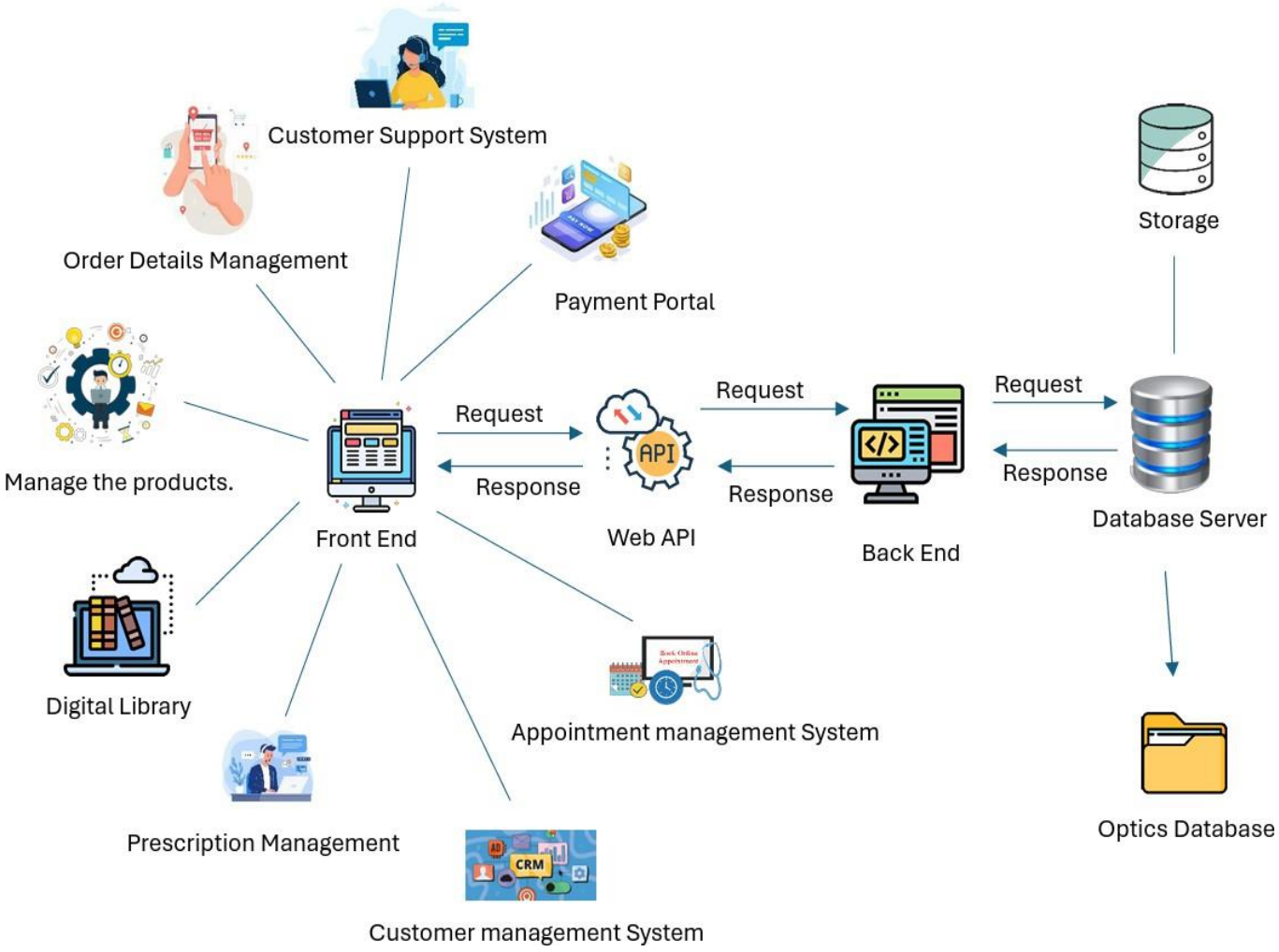
Aims:

- To develop a comprehensive optical management system that streamlines the operations of optometrists and improves the overall efficiency of eye care services.
- To create a user-friendly platform that enhances communication between optometrists, administrators, and customers.
- To provide a centralized system for managing appointments, prescriptions, customer records, and product inventory in optical shops.
- To facilitate better decision-making by generating reports and insights based on optometrists' information and customer data.
- To enhance customer satisfaction by providing easy access to prescription details, appointment scheduling, and product information.

Objectives:

- Develop separate logins for administrators and optometrists to manage their respective tasks efficiently.
- Implement a user-friendly interface for optometrists to view their profile, appointments, and apply for leaves.
- Create an appointment management system for scheduling and updating appointment details.
- Develop a prescription management system for optometrists to examine customers, add prescriptions, and manage prescription history.
- Design a digital library management system for uploading, viewing, and updating eye health resources.
- Implement a product management system for managing product details, orders, and inventory in optical shops.
- Create a customer management system for handling customer details, orders, and engagement.
- Develop a customer support system for managing E-Tickets and FAQs.
- Implement a payment portal for customers to make payments and view their payment details.
- Generate reports based on optometrists' information, customer data, and daily payments for better decision-making.

System overview



We divided our system into 8 components (or subsystems) as Appointment management System, Prescription Management, customer management System, Customer Support System, Digital Library, Order Details Management, Payment Portal, Manage the products. All the above-mentioned components are connected to the front end of the system. Web API is going to be implemented using Rest API along with Express JS. Web API acts as the bridge that connects the front end and back end of the system. The backend of the system is going to be implemented using Node JS. The process of backend is going to be implemented using the data collected by Json objects which are retrieved from MongoDB. MongoDB is the database server of the system. All the records and data of the system are going to be stored in the Optical management database. The system is going to be hosted in external storage.

Functional Requirements of the System

- ## Prescription Management

1. Allow to Search:

ability to search for specific information within the system, such as customer records, or prescriptions, using search filters or keywords.

2. Allow to mark attendance & apply leave:

Optometrists should also have the capability to apply for leave through the system, specifying the leave type, duration, and reason.

3. Allow optometrist to upload prescription:

Optometrists should have the functionality to upload prescriptions for customers, including details such as contact lens specifications (lens power, base curve, diameter), eyeglass prescriptions, and any other relevant information.

4. Allow system send alerts when optometrist uploaded prescription successfully.

5. Allow optometrist to view, read and update when needed.:

Optometrists should have full access to view, read, and update prescriptions they have uploaded. This includes the ability to modify prescription details, correct errors, or update information as necessary.

6. Allow system send alert to customer when prescription uploaded.

7. Allow customer view prescription and use that:

Customers should have the capability to utilize their prescriptions for ordering eyewear, purchasing contact lenses, or other relevant purposes as needed.

- ## Digital Library

1. Admin Resource Management:

Admins have full control over the digital library, allowing them to upload eye health-related resources, update their visibility status, or remove them as needed. Admin can categorize resources based on their type, such as articles, books, videos, or images, ensuring easy navigation and organization within the library.

2. User Resource Interaction:

Users have the ability to browse and view resources available in the digital library. Users can also contribute to the library by uploading their own eye health-related resources, enriching the collection and fostering knowledge sharing among community members.

3. Resource Classification:

Resources are systematically categorized according to their type, whether they are articles, books, videos, or images, allowing users to quickly identify and access the content they are interested in.

4. Admin Resource Reporting:

Admins have access to comprehensive reports detailing the available resources within the digital library. Reports also highlight any gaps or areas where additional resources are needed, helping admins make informed decisions about resource development and acquisition.

5. Search Functionality:

Users, including admins and regular users, can easily search for specific articles or other resources within the library by their name or relevant keywords. The search functionality enhances user experience and facilitates quick access to desired content.

- **Appointment management**

1. User Registration:

Users can create accounts by providing necessary information such as their full name, email address, and password. The registration process ensures that users have personalized access to appointment scheduling and management features.

2. Preferred Doctor Selection:

Users should have the option to select their preferred doctors when scheduling appointments. This feature allows users to choose healthcare providers they trust or have established relationships with, enhancing the patient experience.

3. Appointment Scheduling:

Users should be able to choose convenient dates and times for their appointments through an intuitive scheduling interface. The system should display available slots based on the selected doctor's availability, ensuring efficient use of time and resources.

4. Reason for Appointment:

Users should be able to specify the reason for their appointment or any specific concerns they may have. Providing this information helps healthcare providers better prepare for the appointment and address patients' needs effectively.

5. Appointment Management:

Users should have access to a dashboard where they can view and manage their scheduled appointments. This feature allows users to track upcoming appointments, review appointment details, and make necessary changes.

6. Appointment Rescheduling and Cancellation:

The system should allow users to reschedule or cancel appointments if needed, with proper notification to both the clinic and the user.
Users should be able to easily modify their appointment schedules to accommodate changes in their availability or circumstances.

7. Doctor Availability Management:

Doctors should have the ability to set their availability schedules within the system.
This feature enables doctors to define their working hours, days off, and other scheduling preferences, ensuring accurate appointment booking.

- **Product Management System**

1. Allow the manager to create and edit product details (price, name, and description).
2. Allow the manager to create new promotions and discounts when the users needed (in special seasons).

3. Allow the manager to view a comprehensive overview of all products.:

Managers have access to a comprehensive overview of all products available in the store. This overview provides valuable insights into inventory levels, product performance, and potential areas for improvement.

4. Allow the user to view detailed information about the products:

This includes product specifications, features, and pricing details, helping users make informed purchasing decisions.

5. Allow the user to search for optical products.:

Users can search for optical products using search filters or keywords. This feature enhances user experience and facilitates quick and efficient product discovery.

6. Display new promotions and discounts when the users need them (in special seasons).

7. Allow the product manager to generate the final product management report according to the available products:

Product managers can generate the final product management report, providing insights into inventory levels, sales performance, and trends, to support informed decision-making and strategic planning.

- **Customer Management**

Customers can fill out the customer registration form to self-register in the system. The customer can input their password, phone number, email address, and first and last names and they can edit their details.

1. User Authentication and Authorization:

Implement secure user authentication mechanisms.
Define roles and permissions to control access levels for different users.

2. Customer Information Management:

Capture and store basic customer details (name, contact information, address).
Allow for the addition, modification, and deletion of customer records.

3. Data Security and Compliance:

Ensure data security measures are in place, including encryption and regular data backups.

4. Notification and Alerts:

Provide notification features for events like register, editing details, order confirmations and shipping updates, appointment reminder.

5. Integration with Other Systems:

Integrate with other systems such as Appointment Management, Product Management, Order details Management, Payment Portal, and Customer Support System.

- **Customer Support System**

1. Create E-Tickets:

Customers can create E-Tickets to report issues or seek assistance.
They provide details about their concerns and submit the ticket for resolution.

2. Read E-Tickets:

Customers can view their submitted E-Tickets to track their progress and status.

3. View Ticket Responses:

Customers can view responses from the admin regarding their E-Tickets.
This helps customers stay informed about the progress and resolution of their inquiries.

4. Contact Admin via Hotline:

Customers have the option to contact the admin directly using a hotline for urgent matters or additional assistance.

Admin Functionality:

5. Respond to E-Tickets:

Admins can respond to E-Tickets submitted by customers, helping or addressing their concerns. They ensure timely and appropriate responses to maintain customer satisfaction.

6. Update E-Ticket Status:

Admins have the authority to update the status of E-Tickets based on their progress.
Status updates may include 'In Progress', 'Resolved', or 'Closed' to reflect the current state of the ticket.

7. Create and Customize FAQs:

Admins can create and customize FAQs to address common customer inquiries or concerns.
FAQs provide valuable information to customers and help them find answers to their questions quickly and efficiently.

8. Delete E-Tickets:

Admins can delete E-Tickets once they have been resolved or completed.
Deleting resolved tickets helps maintain a clutter-free and organized ticketing system.

- **Order details Management.**

The Order Management System facilitates seamless interaction between customers and the website, allowing for efficient browsing, selection, and purchase of products.
Customers can register securely, browse through detailed product information, and modify their orders as needed before finalizing their purchase. Admins have visibility into all orders placed on the website, enabling them to monitor order status, track inventory levels, and manage the fulfillment process effectively. Confirmation emails sent to customers provide transparency and reassurance, enhancing their overall shopping experience and satisfaction.

1. Register with Valid Details:

Customers can register on the website by providing valid details such as name, email address, and password. The registration process ensures that only legitimate users can access the website's features and place orders.

2. View Detailed Product Information:

Customers can view detailed information about a selected product on the order detail page. This includes product specifications, features, pricing, and available colors or variations.

3. Modify Order Details:

Before proceeding to checkout, customers can modify details of the selected product in their order. They can adjust parameters such as quantity, color, or size to match their preferences or requirements.

4. Receive Confirmation Emails:

After successfully placing an order, customers receive confirmation emails containing details of their purchase. This confirmation email serves as a receipt and provides customers with assurance that their order has been successfully processed.

Admin Functionality:

5. View List of Orders:

Admins have access to a dashboard where they can view the list of orders placed on the website. Order details such as product(s), quantity, total amount, and status are displayed for easy monitoring and management.

.

- **Payment Portal**

1. Select Payment Method:

Customers can select their preferred payment method from available options during the checkout process.

2. Receive Bill:

After completing the payment, customers receive a bill or payment confirmation that includes details of the transaction.

3. Manage Bank Card Details:

Customers can add, edit, and delete their bank card details for future transactions.

Manager:

4. Search Payments:

Managers can search for payments using transaction IDs or customer names to retrieve specific transaction details.

5. Generate Customer Payment Report:

Managers can generate a comprehensive payment report that outlines payments made by customers daily.

Admin:

6. View Payment Reports:

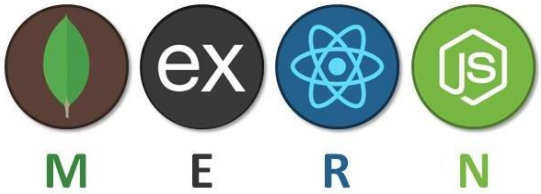
Admins can view the payment reports generated by managers to gain insights into daily payment activities.

Non-Functional Requirements of the System

- Functionality:
    - The system must meet the functional requirements of the users, which may include specific features or capabilities that the system must have to meet the needs of the user.
- Performance:
    - The system must be able to perform its intended functions in a timely and efficient manner, with fast response times and minimal downtime.
- Scalability:
    - The system must be able to scale to handle increasing amounts of data, users, or transactions without sacrificing performance or stability.
- Reliability:
    - The system must be reliable and able to operate continuously without failure or unexpected downtime.
- Security:
    - The system must be secure and protect user data and sensitive information from unauthorized access or attack.
- Compatibility:
    - The system must be compatible with other systems or software that the user may use, with the ability to exchange data or integrate with other systems, as necessary.
- Usability:
    - The system must be easy to use and navigate, with an intuitive interface that is accessible to users with varying levels of technical expertise.
- Accessibility:
    - The system must be accessible to users with disabilities or other special needs, with features that make it possible for all users to access and use the system.
- Maintainability:
    - The system must be maintainable, with the ability to update or modify the system as necessary to fix bugs, add features, or improve performance.
- Cost:
    - The system must be cost-effective, with a reasonable cost that is commensurate with the value that it provides to the user.

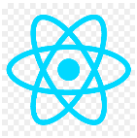
Technical Requirements of the System

We use MERN stack for developing our web application. MERN is a combination of 4 technologies: MongoDB, Express JS, React JS, and Node JS.



MongoDB is a document database used to build highly available and scalable internet applications. With its flexible schema approach, it's popular with development teams using agile methodologies [13].

Express is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications [14].



React is a declarative, efficient, and flexible JavaScript library for building user interfaces [15].

Node JS is a single-threaded, open-source, cross-platform runtime environment for building fast and scalable server-side and networking applications [16].

Apart from MERN Stack we use the following tools and technologies in our project.

Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control [17].

GitHub is a code hosting platform for version control and collaboration. It lets us work together on projects from anywhere.

Literature Review

Based on the provided functions and comparison with optical-related websites (I CARE, vision care, Hilco vision, sunglasses, Fashioned eyewear), here's a literature review for an optical management system:

Functions	I CARE	vision care	Holovision	Yes glasses	Fashion eyewear
Optometrist and Prescription Management	☑	☑	☑	☒	☑
Digital Library	☑	☑	☒	☑	☒
Appointment management	☑	☑	☑	☒	☑
Manage the products.	☑	☑	☑	☑	☑
Customer Management	☑	☑	☑	☑	☑
Customer Support System	☑	☑	☒	☑	☑
Order details Management.	☑	☑	☑	☑	☑
Payment Portal	☑	☑	☑	☑	☑

Optometrist and Prescription Management:

All surveyed optical-related websites offer optometrist and prescription management functionality except sunglasses. This feature allows customers to manage their prescriptions online and ensures accurate prescription fulfillment by eyewear providers.

Digital Library:

holovision and Fashion eyewear lack a comprehensive digital library, unlike I CARE, vision care, and eyeglasses. A digital library is essential for displaying a wide range of eyewear products, facilitating customer browsing and selection.

Appointment Management:

I CARE, vision care, and Fashion eyewear include appointment management capabilities, while eyeglasses lacks this functionality. Appointment management allows customers to schedule appointments for eye exams, fittings, or consultations, improving customer convenience and resource utilization.

Product Management

All surveyed optical-related websites offer product management functionality, enabling eyewear providers to efficiently manage their inventory, update product information, and showcase new arrivals or promotions effectively.

Customer Management:

All surveyed optical-related websites have customer management functionality, allowing eyewear providers to maintain customer records, track purchase history, and provide personalized services, thereby fostering customer loyalty.

Customer Support System:

Hilco vision lacks a customer support system, while all other surveyed optical-related websites offer this functionality. A robust customer support system is crucial for addressing customer inquiries, resolving issues, and providing timely assistance throughout the purchasing process.

Order Details Management:

All surveyed optical-related websites offer order details management functionality, allowing customers to track their orders, view order history, and manage shipping and billing information, thereby enhancing transparency and facilitating a smooth ordering experience.

Payment Portal:

All surveyed optical-related websites provide a payment portal, enabling secure and convenient online transactions, ensuring payment security, and offering multiple payment options to accommodate customer preferences

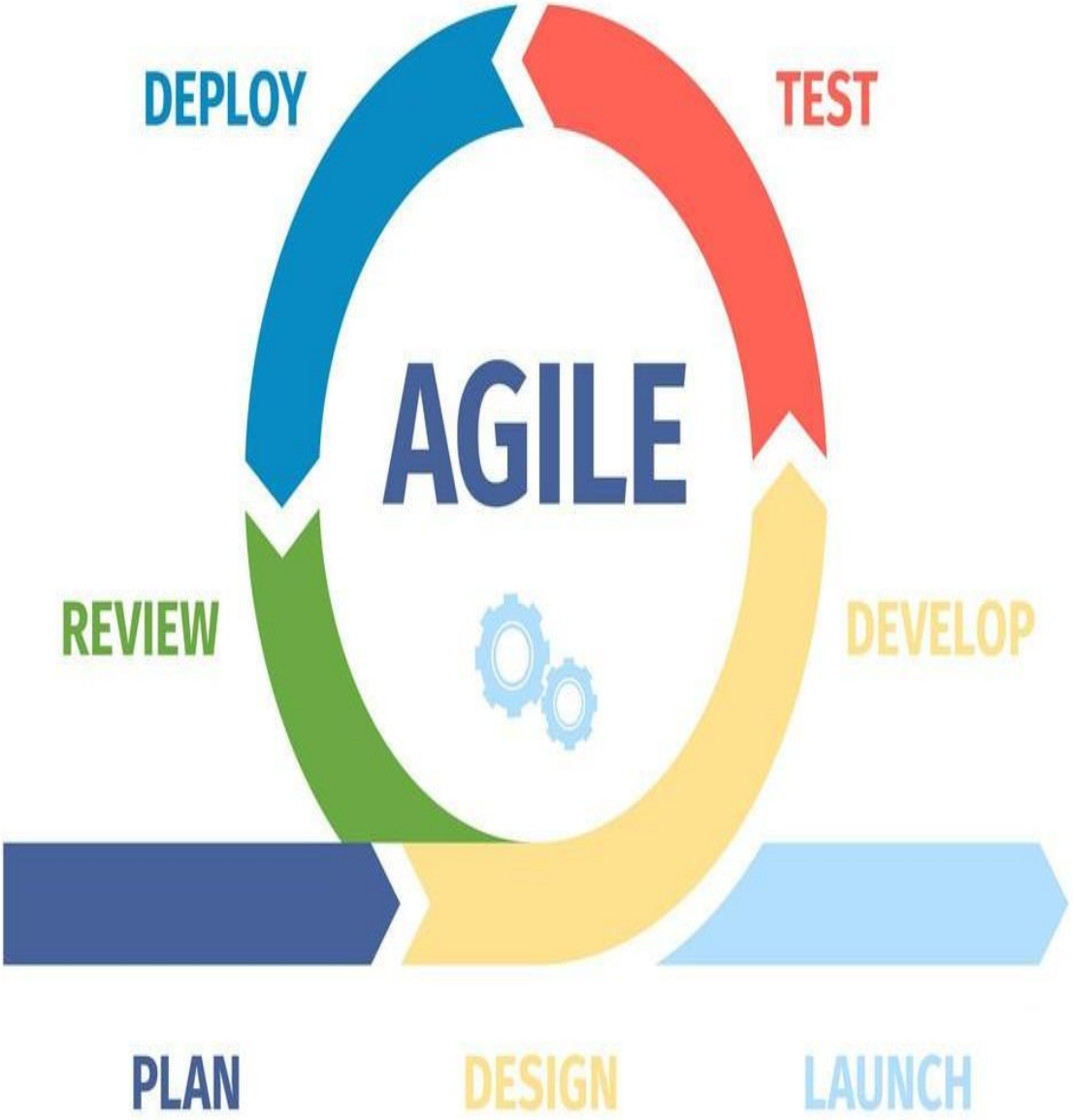
Methodology

Methods: Agile Software Engineering Methodology

Agile Software Engineering Methodology is an iterative and flexible approach to software development that focuses on delivering high-quality, functional software incrementally while embracing change throughout the development process. The Agile Manifesto, a set of guiding principles for Agile methodology, values:

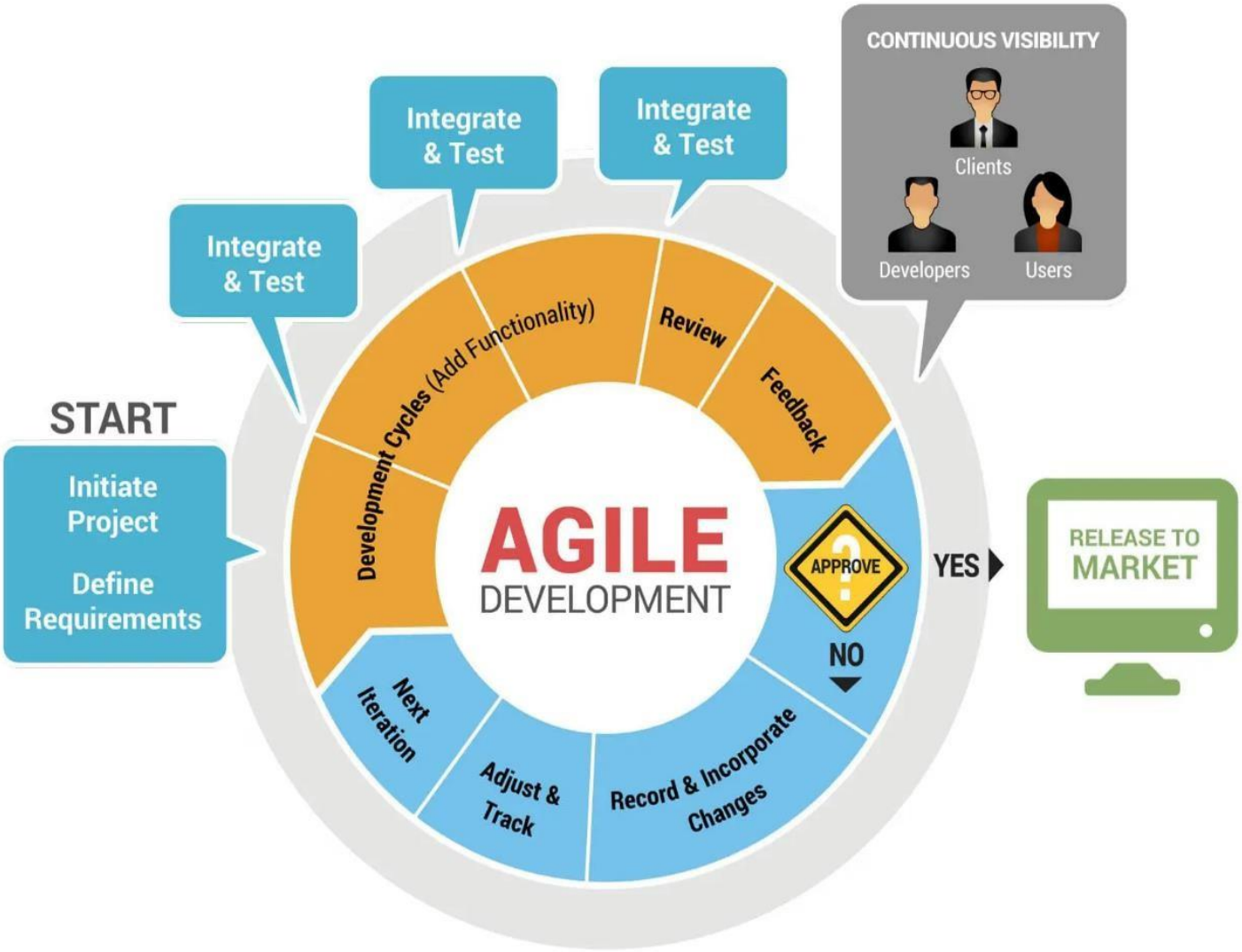
• Individuals and dialogue about processes and tools: This principle emphasizes the importance of communication and collaboration between team members, rather than relying solely on processes and tools.
• Working software over comprehensive documentation: Agile teams prioritize working software over detailed documentation because they believe the software is the most important outcome.
• Collaboration with customers rather than contract negotiations: Agile teams prioritize collaboration with customers to ensure that the software they are developing meets their needs and requirements.
• Respond to change rather than follow a plan: Agile teams recognize that software development is an iterative process and that requirements can change over time. They prioritize flexibility and adaptability in responding to these changes.

Agile methodology is often used in software development because it allows teams to be more responsive to changing requirements and priorities. Instead of following a rigid plan, Agile teams work in short iterations or sprints, typically lasting one to four weeks, during which they prioritize and complete a set of tasks or user stories. Each sprint involves planning, executing, and reviewing a set of development tasks, and aims to deliver a working software increment that can be tested and validated by customers.
Agile teams also emphasize frequent communication and collaboration between team members, including the customer or end user, to ensure that everyone is working towards the same goals and that the product meets the customer's needs.
Some popular agile methodologies include Scrum, Kanban, and Extreme Programming (XP). Each of these approaches has its own unique set of practices and tools, but all share a commitment to flexibility, collaboration, and iterative development. In this project we use Kanban as our development methodology


DEPLOY
TEST
AGILE
REVIEW
DEVELOP
PLAN
DESIGN
LAUNCH

Reasons for selecting Agile Methodology.

- Customer Satisfaction: Agile places a strong emphasis on customer involvement throughout the development process. By regularly soliciting feedback and incorporate- Ing customer priorities, teams can ensure that the final product meets customer expect- stations and delivers value, ultimately leading to higher levels of customer satisfaction.
- Flexibility and Adaptability: Agile methodologies offer flexibility to accommodate changes in requirements, priorities, and market conditions. This adaptability allows teams to respond quickly to customer feedback and evolving business needs, resulting in a more responsive and customer-centric development process.
- Improved Collaboration and Communication: Agile promotes close collaboration among cross-functional teams, including developers, testers, designers, and business stakeholders. By fostering open communication and collaboration, agile methodology- gies help ensure that everyone is aligned with project goals and can work together ef- fictively to deliver high-quality software.
- Increased Transparency and Visibility: Agile methodologies provide transparency into the progress of the project through tools like burndown charts, task boards, and regular status updates. This transparency enables stakeholders to track progress, identify potential risks, and make informed decisions about project priorities and direction.
- Enhanced Quality: Agile practices such as continuous integration, test-driven develop- open, and regular feedback loops contribute to higher-quality software. By testing and validating features early and often, teams can identify and address issues sooner, resulting in fewer defects and a more robust final product.
- Faster Time to Market: Agile emphasizes delivering working software in small, incemental releases. This iterative approach enables teams to deliver value to customers more frequently, reducing time to market compared to traditional waterfall methods where large portions of the software are delivered all at once after a lengthy development cycle.
- Enhanced Quality: Agile practices such as continuous integration, test-driven development, and regular feedback loops contribute to higher-quality software. By testing and validating features early and often, teams can identify and address issues sooner, resulting in fewer defects and a more robust final product.
- Empowerment of Teams: Agile empowers teams to take ownership of their work and make decisions collaboratively. By giving teams the autonomy to self-organize and continuously improve their processes, agile methodologies can boost morale, motivation, and productivity.


CONTINUOUS VISIBILITY
Clients
Developers
Users
Integrate & Test
Integrate & Test
Integrate & Test
START
Initiate Project
Define Requirements
Development Cycles (Add Functionality)
Review
Feedback
AGILE
DEVELOPMENT
APPROVE
YES
NO
RELEASE TO MARKET
Next Iteration
Adjust & Track
Record & Incorporate Changes

Gantt chart

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
1	Requirement Analysis												
2	Planning												
3	UI/UX Design												
4	Database Designing												
5	Frontend Development												
6	Creating Database												
7	Backend Development												
8	Testing												
9	Launch												

We initiated the data collection process even before the semester commenced, and it took us two weeks from the official start date to finalize our requirement analysis and documentation phase. Fortunately, we managed to gather all necessary information seamlessly. Subsequently, in the second and third weeks, we devoted our time to project planning, and by the fourth week, we commenced the UI design phase, achieving commendable progress thus far and eagerly anticipating the next project phase.

During the fifth week, we resolved to dedicate one week to the database design phase. While immersed in this phase, we recognized the need to incorporate additional features, particularly in the second layer, to enhance database complexity, a crucial endeavour that demands our ongoing attention.

Simultaneously, coding commenced in the fifth week and will persist for the subsequent six weeks, facilitating project completion by the end of the seventh week. Anticipation mounts as we prepare to delve into coding during the ninth week, eagerly embracing the opportunity to explore various development tools and deepen our coding skills.

Upon entering the eleventh week, following rigorous testing, we will launch the web application. The application will remain accessible throughout the ensuing twelve-week period following the testing phase.

Work breakdown structure (work distribution)

	Student ID and Name with initials	**Tasks**
	Sarmitha S IT22637482	Optometrist and Prescription Management
	Baskaran V IT22172600	Digital Library for Eye Health Resources (Digital library Management System)
	A.W.D.S.M. Aluthwaththa IT22267290	Appointment Management System
	Venushan T IT22082824	Product Management System
	Ahamed M.U.N IT22197900	Customer Management
	Nishara T IT22223876	Customer Support System
	Kojithan P. Y IT22264220	Order Management System
	Ahamed M.U.N IT22197900	Payment portal

References

We utilized a lot of references in order to make this project a success. This project is being built with the JAVASCRIPT language with React and Node js. As a result, we were required to learn these languages and libraries. For learning these things, we referred lot of web sites. There are names of YouTube channels that we are referred.

• https://www.youtube.com/watch?v=yCWc91uwWPg
• https://www.youtube.com/watch?v=LXJOvkVYQqA
• https://youtu.be/aJVDEF7ROoI
• https://www.youtube.com/channel/UCWv7vMbMWH4-V0ZXdmDpPBA

When we stuck in our project, we referred some web site also,

• https://www.udemy.com/
• https://stackoverflow.com/
• www.tutorialspoint.com
• https://da-14.com/blog/its-high-time-reactjs-ten-reasons-give-it-try
• https://reactjs.org/
• www.w3schools.com

Appendix

Figure 1 - System Diagram

A graphical representation of a system, showing the various components and their relationships. The system diagram typically includes various components, such as inputs, processes, outputs, feedback, and control mechanisms. Inputs are the data or materials that are fed into the system, and outputs are the results or products that are produced by the system.

Table 1 - Literature Review

An essential component of research or project that provides a comprehensive analysis of existing knowledge on a given topic.

Figure 2 - Gantt Chart

Tool for project management that provides a visual representation of a project schedule and helps to ensure that the project is completed on time.

Figure 3 - Agile Methodology

Agile software engineering methodology is an iterative and incremental approach to software development that emphasizes flexibility, collaboration, and customer satisfaction.