1. (Project Proposal)

A EFFICIANT SOFTWARE MODEL FOR OLD AGE HOME CARE SYSTEM

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Background Study: -

The aging population on a worldwide scale necessitates creative solutions for affordable and efficient elder care. Conventional approaches face challenges such as increasing resident demands, staffing shortages, poor communication, fragmented data, and social isolation. A technological revolution is required to address these problems:

•   Optimize care efficiency via automating routine activities, optimizing workflows, and facilitating data-driven decision-making.

•   Improve communication by giving residents, employees, and families access to a safe forum for in-the-moment exchanges.

•   Integrate resident data: Bring together behavioral, activity, and health data to create individualized care plans and proactively recognize concerns.

•   Encourage social participation through organizing group activities, building relationships, and preventing isolation.

Project Objective: -

Develop an "Old Age Home Care System" (OAHCS) that leverages technology to address these challenges and:

- **Improve resident care quality:** Personalized approaches, timely interventions, and proactive health monitoring.
- **Enhance communication:** Efficient interactions, reducing anxiety and improving care coordination.
- **Empower staff:** Optimized workflows, data-driven insights, and reduced administrative burden.

- **Reduce social isolation:** Increased engagement, connection opportunities, and improved mental well-being for residents.
- **Enhance operational efficiency:** Optimized staff scheduling, resource allocation, and informed decision-making.

Target Users: -

- **Residents:** Individuals residing in old age homes, regardless of their physical or cognitive abilities.
- **Care Staff:** Nurses, aides, and other care providers responsible for residents' well-being.
- **Family Members:** Relatives and loved ones who want to stay connected and involved in residents' lives.

Proposed Solution: -

The Old Age Home Care System (OAHCS) will comprise the following key features:

- **Mobile App:** Residents and families can access information, request assistance, communicate with staff, and participate in activities.
- **Wearable Devices:** Track vital signs, activity levels, and location data for proactive health monitoring and fall detection.
- **Staff Dashboard:** Provides real-time resident updates, care task management, and data-driven insights.
- **Secure Communication Platform:** Enables instant text, audio, and video communication between residents, staff, and families.
- **Interactive Entertainment System:** Offers personalized games, activities, and social interaction opportunities.

Benefits: -

- **Resident Benefits:** Personalized care, timely interventions, reduced anxiety, improved well-being, and increased connection with loved ones.
- **Staff Benefits:** Streamlined workflows, data-driven decision-making, reduced workload, and enhanced communication.
- **Family Benefits:** Real-time information, improved communication, and peace of mind knowing about resident well-being.
- **Operational Benefits:** Optimized resource allocation, cost savings, data-driven insights, and improved decision-making.

Basic Functionalities: -

- User-friendly mobile app with customizable interfaces for residents and families.

- Secure connection between wearables and the system for real-time health data monitoring.

- Staff dashboard with intuitive data visualization and task management tools.

- Secure communication platform with encryption and privacy features.

- Interactive entertainment system offering various activities and social features.

Evaluation: -

The project will be evaluated based on:

- **Resident satisfaction:** Surveys, interviews, and engagement metrics to assess the impact on resident well-being and satisfaction.

- **Staff performance:** Efficiency improvements, reduction in error rates, and staff feedback on workflow optimization.

- **Operational efficiency:** Cost savings, reduced administrative burden, and improved resource utilization.

- **Technical functionality:** System usability, reliability, security, and scalability.

Conclusion: -

The Old Age Home Care System (OAHCS) offers a comprehensive and data-driven approach to address the challenges in old age home care. By optimizing care delivery, fostering communication, promoting resident well-being, and improving operational efficiency, this project has the potential to significantly impact the lives of residents, staff, and families.

2. (Process Model)

Analysis regarding the nature and environment of the software to develop and selecting the best suitable method to develop the software:

For our project, we have chosen the Scrum process model. Scrum is an Agile framework that prioritizes iterative and incremental development. It aligns well with our project's characteristics, which involves the development of an augmented reality navigation software for visually impaired with a focus on accessibility features. In Scrum, the project is divided into time-boxed iterations called sprints, typically lasting 2-4 weeks, allowing us to deliver potentially shippable increments of the software regularly. This iterative approach is well-suited for accommodating evolving requirements, which is particularly important in an accessibility-focused project that may require adjustments based on user feedback. Scrum also promotes close collaboration within crossfunctional teams, fostering communication and collaboration, which is crucial for addressing complex accessibility needs. The prioritization of functional requirements based on their priority levels aligns with Scrum's emphasis on delivering the most valuable features early, ensuring that high-priority accessibility features are addressed first. Additionally, Scrum provides flexibility in reprioritizing work based on user feedback, which is essential in delivering an accessible product. The Scrum process model allows for continuous testing, validation, and adjustments as needed, ensuring that the software meets the highest accessibility standards. Regularly scheduled Sprint Reviews and Retrospectives enable us to gather user feedback and improve the software iteratively, enhancing its accessibility and overall functionality.

Arguments based on the analysis:

- ☐ Iterative Approach for Evolving Accessibility Requirements: Scrum's iterative approach allows for flexibility in accommodating evolving accessibility requirements throughout the development process.
- ☐ Regular User Feedback for Validation: Scrum incorporates regular user feedback, aligning with the need for constant validation of accessibility features, ensuring they meet user needs effectively.
- ☐ Accessibility Prioritization Flexibility: Scrum's prioritization flexibility enables early and consistent focus on accessibility, ensuring it receives the attention it deserves from the outset of the project.
- ☐ Continuous Testing for Accessibility Features: Scrum's emphasis on continuous testing facilitates ongoing validation and adjustment of accessibility features, ensuring they meet standards and requirements throughout the project lifecycle.
- ☐ Effective Risk Management: Scrum's incremental delivery model allows for better risk management by identifying issues early and addressing them promptly, reducing the likelihood of costly errors compared to other models.
- ☐ Adaptability to Changing Regulatory Requirements: Scrum's adaptability is crucial in projects with changing accessibility regulations, ensuring the team can respond quickly and adjust priorities to remain compliant.
- ☐ Cross-Functional Collaboration for Accessibility Complexities: Scrum's emphasis on cross-functional collaboration fosters a team environment where accessibility complexities can be addressed effectively, leveraging the diverse expertise of team members.
- ☐ Frequent Deliveries for Rapid Accessibility Improvements: Scrum's regular increments ensure that users benefit quickly from accessibility enhancements, providing tangible improvements throughout the project rather than waiting until the end for delivery, as in plan-driven methods.

Evidence to support the arguments:

1. Iterative Approach for Evolving Accessibility Requirements:

Evidence: Studies have shown that iterative development methodologies like Scrum are better suited for accommodating changing requirements compared to traditional waterfall approaches. According to a study by Ambler and Lines (2012), iterative approaches lead to higher levels of customer satisfaction and project success due to their adaptability to changing requirements.

Reference: Ambler, S., & Lines, M. (2012). "Disciplined Agile Delivery: A Practitioner's Guide to Agile Software Delivery in the Enterprise." IBM Press.

2. Regular User Feedback for Validation:

Evidence: Research suggests that involving users early and frequently in the development process leads to better outcomes, including increased user satisfaction and improved usability. According to Nielsen (1993), involving users in iterative design processes leads to more usable products.

Reference: Nielsen, J. (1993). "Usability Engineering." Academic Press.

3. Accessibility Prioritization Flexibility:

Evidence: Agile methodologies like Scrum prioritize delivering value to users early and often. By incorporating accessibility into the prioritization process, teams can ensure that it is addressed from the beginning of the project. Research by Agile Alliance (2020) highlights the importance of prioritization in Agile development.

Reference: Agile Alliance. (2020). "The Agile Manifesto" [Online]. Available:

https://agilemanifesto.org/

4. Continuous Testing for Accessibility Features:

Evidence: Continuous testing is a core principle of Agile methodologies, enabling teams to identify and address issues early in the development process. According to a study by Gartner (2019), continuous testing practices lead to higher-quality software and faster timeto-market.

Reference: Gartner. (2019). "Continuous Testing Tools." [Online]. Available:

https://www.gartner.com/en/research/market-guides/continuous-testing-tools.

5. Effective Risk Management:

Evidence: Agile methodologies emphasize frequent delivery of working software, enabling teams to identify and mitigate risks early in the development process. Research by Larman and Vodde (2008) highlights the benefits of Agile practices in risk management.

Reference: Larman, C., & Vodde, B. (2008). "Scaling Lean & Agile Development:

Thinking and Organizational Tools for Large-Scale Scrum." Addison-Wesley.

6. Adaptability to Changing Regulatory Requirements:

Evidence: Agile methodologies like Scrum emphasize adaptability and responsiveness to change. According to the Agile Alliance (2020), Agile principles prioritize responding to change over following a plan, making it well-suited for projects with evolving regulatory requirements.

Reference: Agile Alliance. (2020). "The Agile Manifesto." [Online] Available:

https://agilemanifesto.org/

7. Cross-Functional Collaboration for Accessibility Complexities:

Evidence: Collaborative Agile practices, such as daily stand-up meetings and crossfunctional teams, have been shown to improve communication and collaboration. Research by Dikert et al. (2016) found that Agile teams with cross-functional members were more effective in addressing complex problems.

Reference: Dikert, K., Paasivaara, M., & Lassenius, C. (2016). "Challenges and Success Factors for Large-Scale Agile Transformations: A Systematic Literature Review." Journal of Systems and Software, 119, 87-108.

8. Frequent Deliveries for Rapid Accessibility Improvements:

Evidence: Agile methodologies prioritize delivering value to users in small, incremental releases. Research by Conboy and Fitzgerald (2004) found that Agile teams deliver software more frequently and with higher customer satisfaction compared to traditional methods.

Reference: Conboy, K., & Fitzgerald, B. (2004). "Toward a Conceptual Framework of Agile Methods Adoption in Practice." Proceedings of the 25th International Conference on Information Systems (ICIS).

Project Role Identification and Responsibilities:

Scrum, as an agile project management framework, relies on five distinct roles to ensure project success: Project Manager, Product Owner, Scrum Master, Development Team and Quality Assurance Team.

Here's how these roles would translate to "Old Age Home" project:

Project Manager: (Afzalul Abid Nazir)

- Oversees the entire software development process from start to finish.
- Plans the project, including defining scope, setting timelines, and allocating resources.
- Executes the project plan, ensuring tasks are completed according to schedule and quality standards.
- Manages resources effectively, including personnel, budget, and technology.
- Monitors progress and identifies any potential risks or issues that may impact project delivery.
- Takes proactive measures to address challenges and keep the project on track.
- Facilitates communication and collaboration among team members and stakeholders.
- Acts as a liaison between different stakeholders, ensuring alignment of goals and expectations.
- Provides leadership and guidance to the project team, fostering a positive and productive work environment.
- Ensures that the project delivers the intended outcomes within the specified timeframe and budget.

Product Owner: (Estiyak Rubaiat)

- Represents the stakeholders (residents, families, staff) and their needs.
- Prioritizes and manages the product backlog, a list of desired features and improvements.
- Defines acceptance criteria for each backlog item.
- Participates in Sprint Planning and Reviews, providing feedback and guidance.
- Ensures the project delivers value to stakeholders.

Quality Assurance (QA) Team: (Afzalul Abid Nazir, Estiyak Rubaiat & Jahir Uddin Mohammad Babar)

- Conducts thorough testing at each stage of software development to ensure quality standards are met.
- Implements test plans and strategies to effectively evaluate software functionality and performance.
- Identifies and documents defects, inconsistencies, and deviations from requirements.
- Collaborates with developers and other stakeholders to understand the root cause of issues and facilitate resolution.
- Participates in reviews and inspections to provide feedback on software design and code quality.
- Validates that software meets specified requirements, user needs, and acceptance criteria.
- Maintains comprehensive test documentation, including test cases, test scripts, and test reports.
- Utilizes testing tools and automation frameworks to streamline testing processes and improve efficiency.
- Monitors and reports on the progress of testing activities, highlighting any risks or concerns.

Scrum Master: (Jahir Uddin Mohammad Babar)

- Ensures the team follows Scrum principles and practices.
- Facilitates Scrum ceremonies (Sprint Planning, Daily Scrum, Sprint Review, Retrospective).
- Removes impediments for the team, enabling smooth workflow.
- Coaches the team on self-organization and continuous improvement.
- Protects the team from distractions and external interference.

Development Team: (Saiful Islam & Mohammad Rakib)

- Cross-functional: Possesses diverse skills to develop and deliver the product increment (project deliverables within a sprint).
- Self-organizing: Plans, estimates, and assigns work within the sprint.
- Delivers a "done" increment each sprint, meeting acceptance criteria.
- Participates actively in Scrum ceremonies, sharing progress and challenges.
- Continuously improves their processes and practices through retrospectives.

Additional Considerations for Old Age Home Project:

- Stakeholder involvement: Depending on the specific project, some residents or families may be actively involved as stakeholders. The Product Owner can represent their needs and ensure their voices are heard.
- Team composition: The Development Team could include diverse professionals like caregivers, activity directors, maintenance staff, and IT specialists, depending on the project scope exclamation.

- Sprint length: Consider adjusting sprint length based on project complexity and stakeholder feedback. For example, shorter sprints might be beneficial for rapid experimentation and feedback cycles.

3. (SRS)

Introduction

Purpose

This Software Requirements Specification (SRS) document outlines the requirements for the "Old Age Home Care System" (OAHCS), aimed at addressing the challenges faced by old age homes in providing efficient care to their residents. This document specifies the functional and non-functional requirements, as well as project development constraints, for the development of OAHCS.

Document Conventions

This document follows standard conventions for SRS documentation. Functional requirements are prioritized as High, Medium, or Low, and each requirement statement has its own priority. Non-functional requirements are quantifiable measures and are also prioritized accordingly.

Intended Audience and Reading Suggestions

This document is intended for developers, project managers, testers, and stakeholders involved in the development and deployment of the OAHCS. It contains an overview of the system, detailed requirements, and specifications. Readers are suggested to start with the overview sections and proceed to sections relevant to their roles.

Project Scope

The OAHCS aims to provide a comprehensive software solution for old age homes, focusing on optimizing care delivery, enhancing communication, reducing social isolation, and improving operational efficiency. This system will encompass various functionalities to address the diverse needs of residents, staff, and families while adhering to regulatory and operational constraints.

References

[1] Alvarez, M., et al. (2020). "Technological Innovations in Elder Care: A Systematic Review." Journal of Aging & Social Policy, 32(4), 373-392.

[2] Smith, J., et al. (2019). "Improving Communication in Long-Term Care Facilities: A Review of Interventions." The Gerontologist, 59(6), e731-e742.

[3] Johnson, K., et al. (2018). "Integration of Resident Data in Old Age Homes: Opportunities and Challenges." Journal of Nursing Management, 26(5), 504-512.

[4] Chen, L., et al. (2021). "Interactive Entertainment Systems for Old Age Home Residents: A Systematic Review." International Journal of Environmental Research and Public Health, 18(2), 697.

Overall Description

Product Perspective

The OAHCS is a standalone system designed specifically for old age homes to streamline operations, enhance communication, and improve resident care. It may interact with existing systems for data exchange and integration purposes.

Product Features

1. Resident care management
2. Communication platform
3. Staff management
4. Health monitoring
5. Activity Planning

These features collectively support the overarching goals of enhancing resident care, staff efficiency, and operational effectiveness.

User Classes and Characteristics

Users include residents, care staff, and family members. Residents may vary in physical and cognitive abilities. Staff may include nurses, aides, and administrative personnel.

Operating Environment

The OAHCS operates on standard hardware platforms and is compatible with common operating systems. It may require internet connectivity for certain features.

Design and Implementation Constraints

Constraints may include regulatory policies, hardware limitations, interfaces with existing systems, and security considerations. Design conventions and programming standards may also influence implementation.

User Documentation

User documentation components may include user manuals, online help, and tutorials. The format and standards for user documentation will be defined during the development process.

Assumptions and Dependencies

Assumptions include availability of necessary hardware and software components, adherence to regulatory requirements, and cooperation from stakeholders. Dependencies may include third-party components and external services.

System Features

System Feature 1: Resident Care Management

3.1.1 Description and Priority

The system shall allow for the registration, profile management, and health record maintenance of residents.
Priority: High

3.1.2 Stimulus/Response Sequences

❖ Users add new residents to the system.

❖ Users update resident profiles with relevant information.

❖ Users record health information for residents, including vital signs and medication records.

❖ System responses include:

● Validation of user input for accuracy and completeness.

● Storage of resident data in the system database.

● Retrieval of resident information when requested by authorized users.

3.1.3 Functional Requirements

➢ **REQ-1:** The system shall provide a user-friendly interface for adding new residents.

➢ **REQ-2:** The system shall allow for the updating of resident profiles, including personal information and medical history.

System Feature 2: Staff Management

3.2.1 Description and Priority

The system shall facilitate staff scheduling, task assignment, and communication among care team members.
Priority: High

3.2.2 Stimulus/Response Sequences

❖ Staff members input shift schedules into the system.

❖ Staff members receive task assignments from the system.

❖ Staff members communicate with each other via the system's messaging feature.

❖ System responses include:

● Updating schedules with new input from staff members.

● Notifying staff members of assigned tasks.

● Delivering messages between staff members in real-time.

3.2.3 Functional Requirements

➢ **REQ-3:** The system shall generate automated staff schedules based on predefined rules and staff availability.

➢ **REQ-4:** The system shall allow for the assignment of care tasks to staff members, with notification of assigned tasks.

System Feature 3: Communication Platform

3.3.1 Description and Priority

The system shall provide communication tools for residents, staff, and family members to facilitate social interaction and information exchange.

Priority: Medium

3.3.2 Stimulus/Response Sequences

❖ Users initiate messages, announcements, and event invitations within the system.

❖ Users respond to messages, announcements, and event invitations received within the system.

❖ System responses include:

- Delivering messages to intended recipients.

- Sending event reminders to users.

- Notifying users of new announcements within the system.

3.3.3 Functional Requirements

➢ **REQ-5:** The system shall support secure messaging between residents, staff, and authorized family members.

➢ **REQ-6:** The system shall allow for the creation and dissemination of announcements and event invitations to residents and staff.

System Feature 4: Health Monitoring

3.4.1 Description and Priority

The system shall enable the monitoring of residents' health status and vital signs, with alerts for abnormal readings.
Priority: High

3.4.2 Stimulus/Response Sequences

❖ Health data is inputted by staff or automatically collected from monitoring devices.

❖ The system analyzes the data.

❖ The system triggers alerts for abnormal readings.

❖ Staff respond to alerts by:

- Assessing residents' conditions.

- Providing appropriate care.

3.4.3 Functional Requirements

➢ **REQ-7:** The system shall support the input and storage of residents' health data, including vital signs, medication records, and health assessments.

➢ **REQ-8:** The system shall provide real-time alerts to staff for abnormal health readings, with detailed information and recommended actions.

System Feature 5: Activity Planning

3.5.1 Description and Priority

The system shall facilitate the planning and coordination of recreational activities and events for residents.
Priority: Medium

3.5.2 Stimulus/Response Sequences

- ❖ Staff input activity schedules.
- ❖ Residents sign up for participation.
- ❖ The system confirms registrations.
- ❖ The system sends reminders.
- ❖ The system tracks attendance.

3.5.3   Functional Requirements

- ➢ **REQ-9:** The system shall maintain a calendar of scheduled activities, including descriptions, dates, times, and locations.
- ➢ **REQ-10:** The system shall allow residents to sign up for activities through the user interface.

External Interface Requirements

User Interfaces

The user interface shall be intuitive and user-friendly, following standard design conventions. Sample screen images and layout constraints will be provided in the user interface specification.

Hardware Interfaces

The system shall be compatible with standard hardware components, including computers, tablets, and smartphones. Specific hardware requirements will be detailed in the hardware interface specification.

Software Interfaces

The system shall integrate with existing software components, such as databases and communication tools. Detailed specifications for software interfaces will be provided in the software interface documentation.

Communications Interfaces

The system shall support various communication protocols, including email, web browser, and network server communications. Security and encryption standards will be adhered to for all communication interfaces.

Other Nonfunctional Requirements

Performance Requirements

The system shall be responsive and scalable, capable of handling multiple users simultaneously. Response times shall be optimized for efficient user interaction.

Safety Requirements

The system shall prioritize resident safety and confidentiality. Access controls and encryption mechanisms will be implemented to ensure data security and privacy.

Security Requirements

The system shall implement robust security measures to protect against unauthorized access and data breaches. User authentication and encryption standards will be employed to safeguard sensitive information.

Software Quality Attributes

The system shall adhere to high standards of usability, reliability, and maintainability. Testing procedures will be implemented to verify software quality attributes.

Other Requirements

Additional requirements may include database specifications, internationalization requirements, and legal compliance. Specific requirements not covered. Elsewhere in the SRS will be documented accordingly.
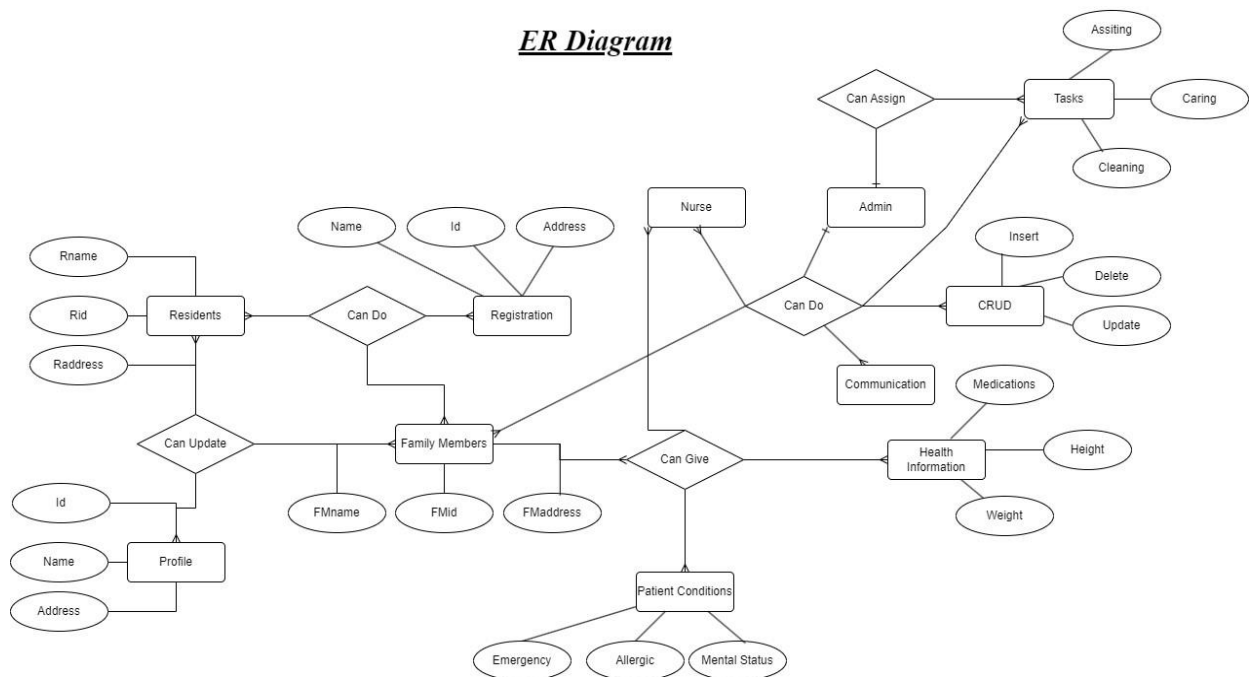
Appendix A: Glossary

A glossary of terms used in the SRS will be provided for reference.

Appendix B: Analysis Models

Analysis models, such as data flow diagrams and entity-relationship diagrams, may be included to illustrate system architecture and design.

4. (DIAGRAMS)

ER DIAGRAM

ER Diagram

USE CASE DIAGRAM
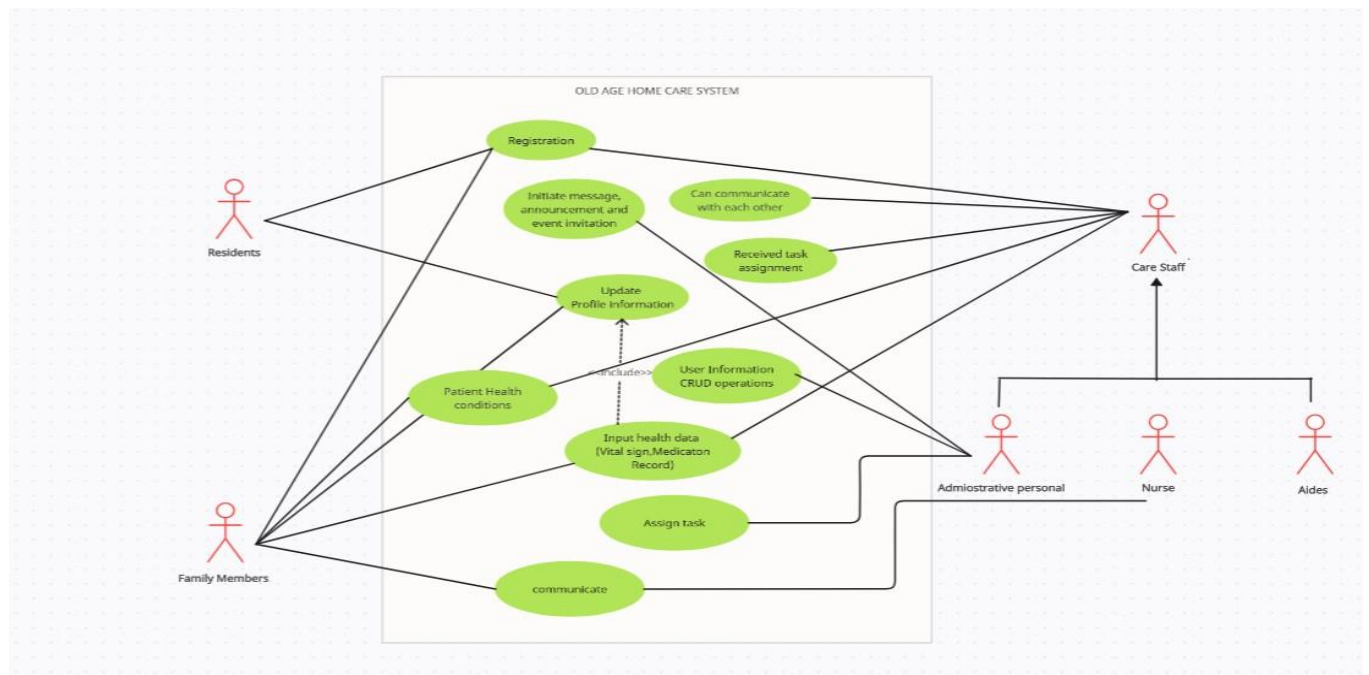
CLASS DIAGRAM

SEQUENCE DIAGRAM

ACTIVITY DIAGRAM

Registration

Admin Verification — No

yes

Registration Sucessful

Admin can do

task update

crud operation

Management System give

Health information

Patient Conditions

Qualityful Nurse

Qualityful Nurse

Family Members can receive

Can Update

Profile Update

Residents
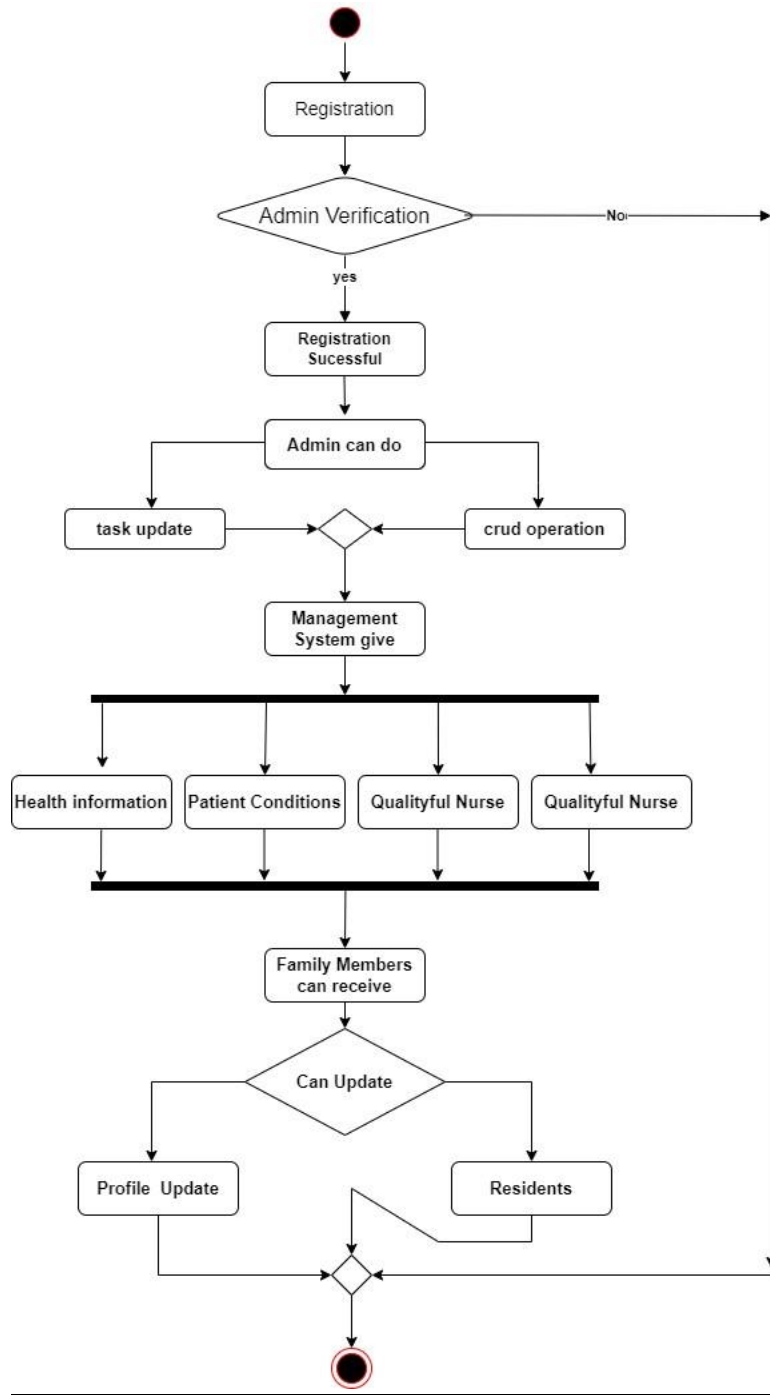
STATE DIAGRAM

5. (UI DESIGN)

Starting (Sign-in & Sign-up) Page:

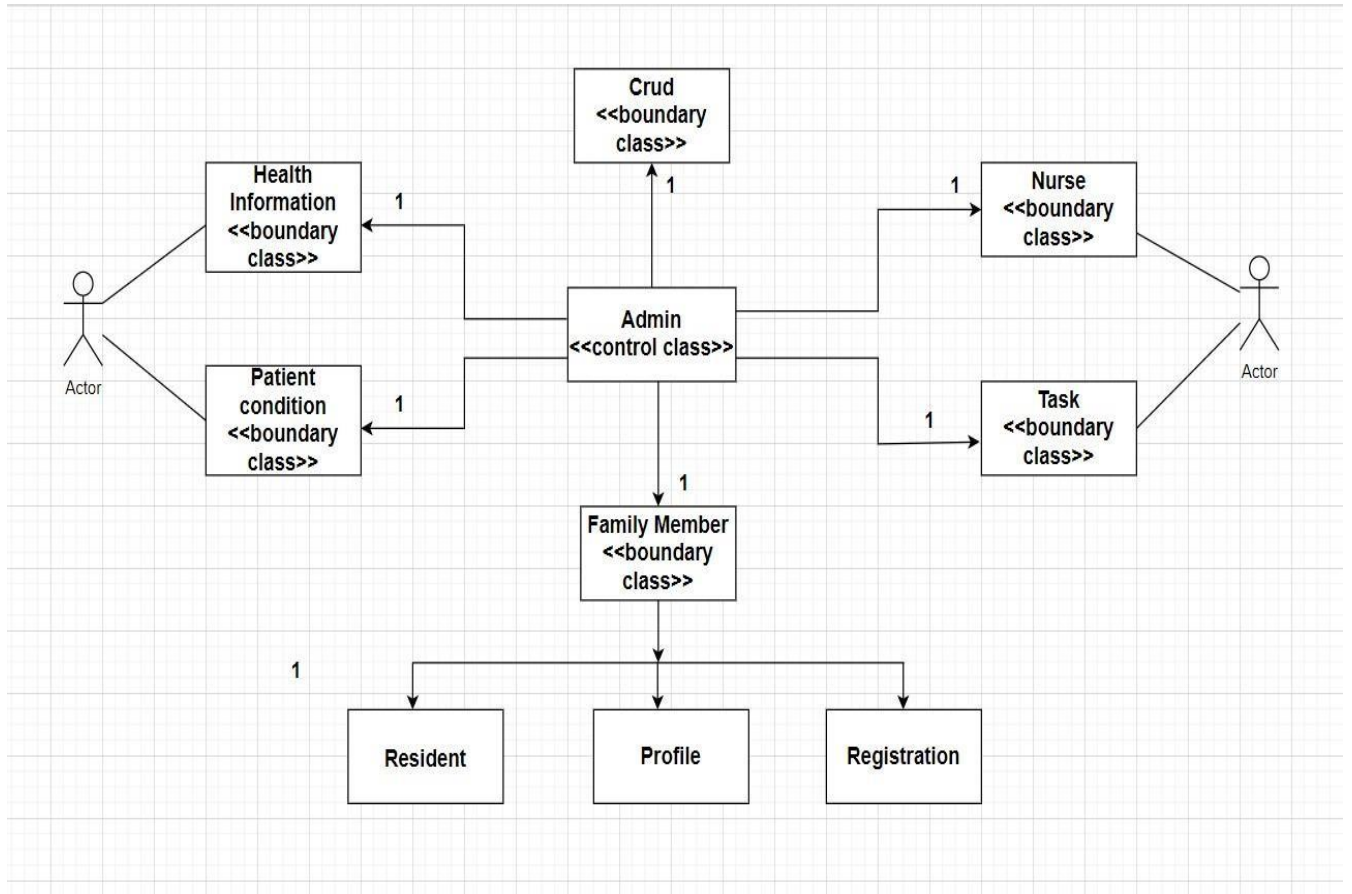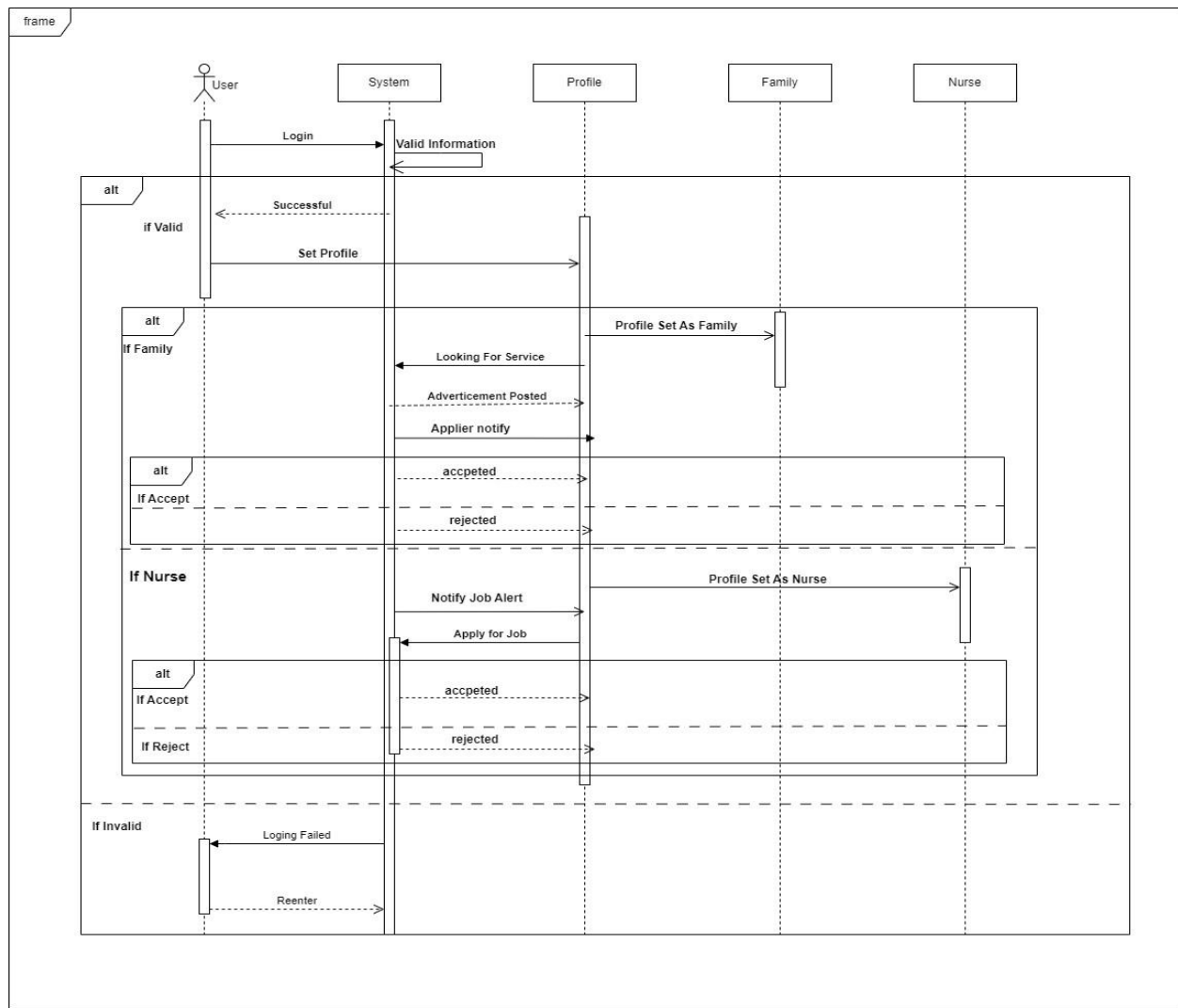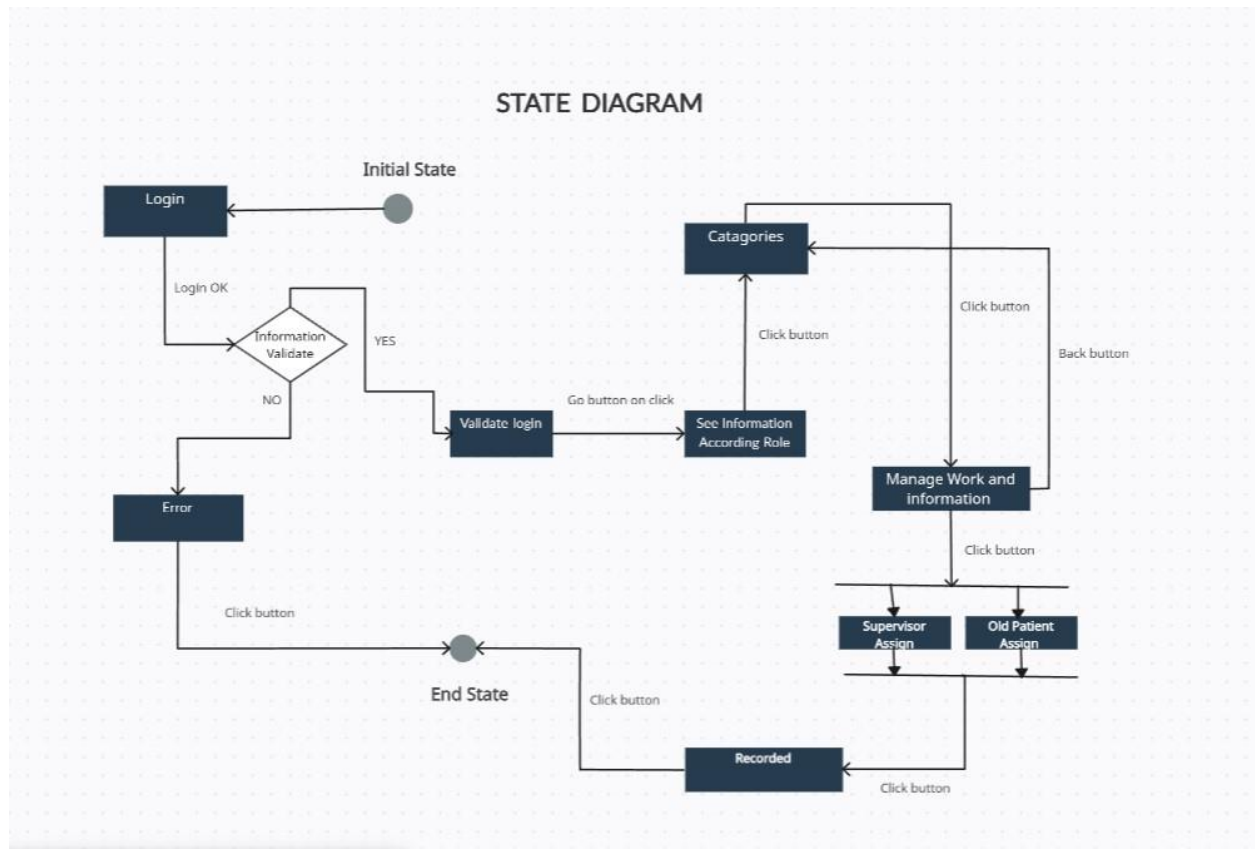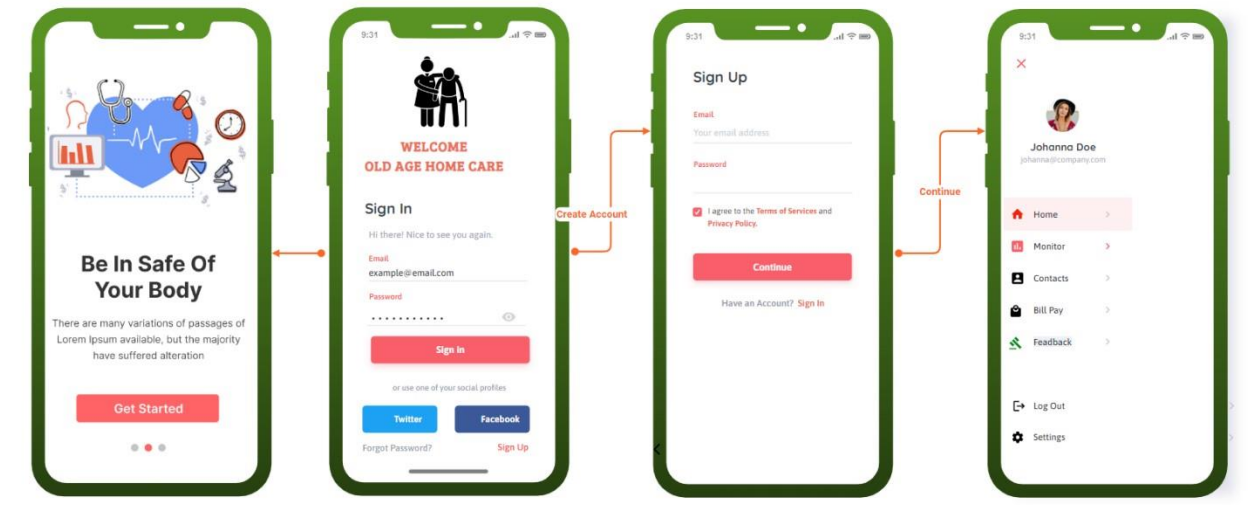The provided image depicts a webpage or application interface showcasing a sign-up page for an "Old Age Home Care" service. The design features sections for users to input their email address and password, with optional checkboxes to agree to the Terms of Service and Privacy Policy.

There are two prominent buttons labeled "Sign Up" and "Sign In," indicating options for creating a new account or accessing an existing one. Additionally, users have the choice to sign in using their social media profiles such as Twitter or Facebook.

The interface warmly greets users with a "Hi there! Nice to see you again," implying a personalized user experience or recognition of returning visitors. Furthermore, there's a distinct "Monitor" option, presumably leading to features related to monitoring the well-being or activities of elderly individuals in a care setting.

The design adopts a clean and simplified aesthetic with a white background, complemented by blue and grey text, and prominent blue buttons, consistent with the branding of the "Old Age Home Care" service.

Home Page:

The picture displays a digital monitor interface for patient Johanna Doe, with the current time being 9:31 AM. The interface includes several tabs such as Patient Info, Health, Check Up, and Pill Reminder.

In the Health tab, there is information about Johanna's blood pressure (xx/x), oxygen level (spO2: XX), and BMI (XX.). The Check Up tab shows an appointment date of March 24, 2024, and a doctor's details section to input information.

The Pill Reminder tab displays today's pills, which include a white tablet to be taken before breakfast, a blue capsule to be taken during the day, and eye drops to be taken before bedtime.The picture shows a digital monitor interface for a patient named Johanna Doe. The interface displays various tabs such as Patient Info, Health, Check Up, and Pill Reminder.

In the Health tab, there are details about Johanna's blood pressure (xx/x), oxygen level (spO2: XX), and BMI (XX.). The Check Up tab shows an appointment date of March 24, 2024, and a doctor's details section to input information.

In the Pill Reminder tab, there is a list of today's pills, including a white tablet to be taken before breakfast, a blue capsule to be taken during the day, and eye drops to be taken before bedtime.

Please note that the information provided in the context is not related to the picture. The picture is a digital monitor interface for a patient named Johanna Doe, and the information in the context is about a different patient named John Doe. However, the information in the context is still relevant to the picture, as it provides an example of how the interface might be used to input and display information about a patient's health and medication.

Monitor Page:

The picture displays a digital monitor interface for patient Johanna Doe, with the current time being 9:31 AM. The interface includes several tabs such as Patient Info, Health, Check Up, and Pill Reminder.

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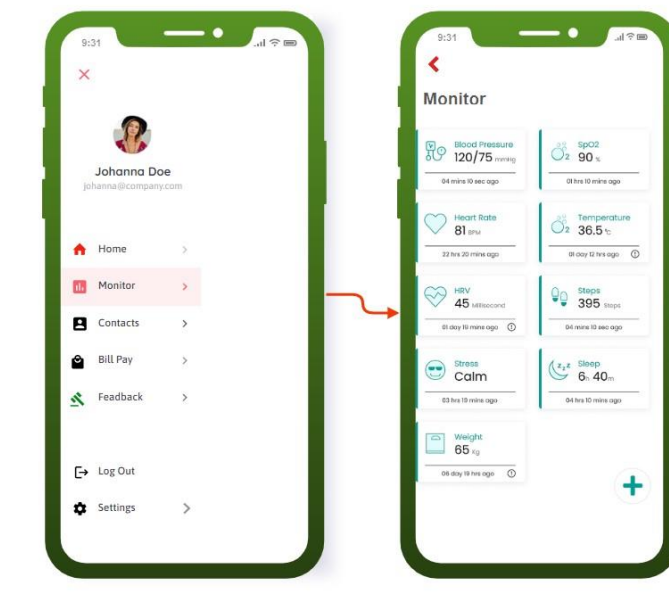
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The given picture is a screenshot of a health monitoring dashboard or application. The title of the page displays "Johanna Doe Monitor Page: johanna@company.com." The page is divided into several sections:

1. **Clock (9:31)**: On the top left corner, the current time is displayed as 9:31.

2. **User Information**: On the top right corner, there's a picture of a person, indicating the user's profile.

3. **Monitor** section:
   - **Blood Pressure**: The user's recent blood pressure reading is shown as 120/75 mmg, with the last update 4 minutes and 10 seconds ago.
   - **SpO2**: The user's recent blood oxygen saturation is displayed as 2 90%, with the last update 1 hour and 10 minutes ago.
   - **Heart Rate**: The user's recent heart rate reading is 81 BPM, with the last update 22 hours and 20 minutes ago.
   - **Temperature**: The user's recent temperature is displayed as 2 36.5%, with the last update 1 day and 12 hours ago. o **HRV**: The user's heart rate variability reading is 45 second, with the last update 1 day and 19 minutes ago.
   - **Steps**: The user's recent step count is 395 stops, with the last update 4 minutes and 10 seconds ago.
     o   **Stress**: The user's recent stress level is "Calm," with the last update 3 hours and 19 minutes ago.
   - **Sleep**: The user's recent sleep duration is 6 40m, with the last update 4 hours and 10 minutes ago.

Other UI elements include the "Bill Pay" button, the "Feedback" button, and a settings button with a weight indicator showing 65kg. The user seems to have access to additional features or settings on the page. The given picture is a screenshot of a health monitoring dashboard or application. The page is divided into several sections:

1. **Clock (9:31)**: On the top left corner, the current time is displayed as 9:31.

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   - **Heart Rate**: The user's recent heart rate reading is 81 BPM, with the last update 22 hours and 20 minutes ago.

- o **Temperature**: The user's recent temperature is displayed as 2 36.5%, with the last update 1 day and 12 hours ago. o **HRV**: The user's heart rate variability reading is 45 second, with the last update 1 day and 19 minutes ago.

- o **Steps**: The user's recent step count is 395 stops, with the last update 4 minutes and 10 seconds ago. o **Stress**: The user's recent stress level is "Calm," with the last update 3 hours and 19 minutes ago.

- o **Sleep**: The user's recent sleep duration is 6 40m, with the last update 4 hours and 10 minutes ago.

Other UI elements include the "Bill Pay" button, the "Feedback" button, and a settings button with a weight indicator showing 65kg. The user seems to have access to additional features or settings on the page.

The "Log Out" button is located at the bottom right corner of the page, allowing the user to log out of the application.

Contact Page:
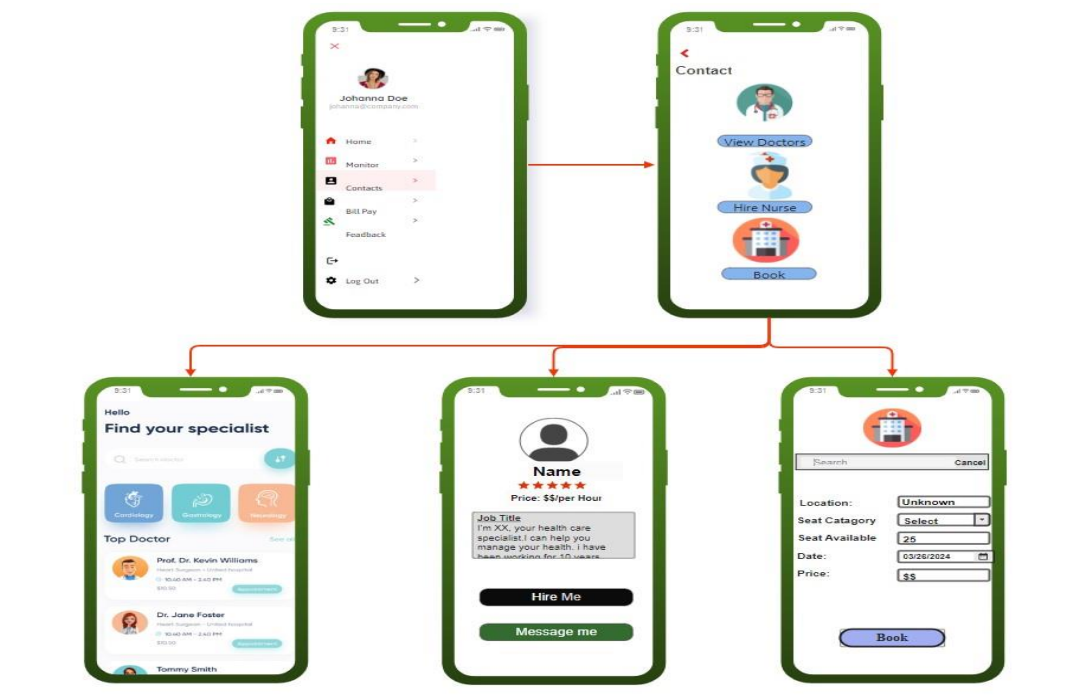
The picture is a screenshot of a health care service website. At the top, there is a title "Welcome to United Hospital" and a search bar with options to search for a doctor, cardiology, top doctor, gastrology, and neurology. Below the search bar, there are two doctor profiles for Prof. Dr. Kevin Williams and Dr. Jane Foster, both of whom are heart surgeons at the United hospital. Their schedules, prices, and appointment availability are listed.

There is a clock displaying the time as 9:31. Below the doctor profiles, there are options to contact, view doctors, hire a nurse, and book. The contact section has a form to enter a name, price per hour, job title, location, and a button to hire or message.

To the right, there are options to monitor, go to the contacts, bill pay, G+, and feedback. The top right corner has a profile picture and a log out button. The bottom right corner has a contact page with information. The picture also has a blue color scheme, and several sections are highlighted by borders.The picture is a screenshot of a health care service website. It displays a search bar with options to search for a doctor, cardiology, top doctor, gastrology, and neurology. Below the search bar, there are two doctor profiles for Prof. Dr. Kevin Williams and Dr. Jane Foster, both of whom are heart surgeons at the United hospital. Their schedules, prices, and appointment availability are listed.

To the right, there are options to monitor, go to the contacts, bill pay, G+, and feedback. The top right corner has a profile picture and a log out button. The bottom right corner has a contact page with information. The website also has a blue color scheme, and several sections are highlighted by borders.

To book an appointment, you can select a doctor profile, enter your name, price per hour, job title, location, and message. Then, click on the "Book" button to book the appointment. If you need to cancel the appointment, you can click on the "Cancel" button.

To view more doctors, you can click on the "View Doctors" button. To hire a nurse, you can click on the "Hire Nurse" button.

To contact the health care service, you can click on the "Contact" button and fill out the form with your name, price per hour, job title, location, and message. Then, click on the "Hire Me" or "Message Me" button to send your message.

To monitor your health, you can click on the "Monitor" button. To go to the contacts, you can click on the "Contacts" button. To bill pay, you can click on the "Bill Pay" button. To go to G+, you can click on the "G+" button. To provide feedback, you can click on the "Feedback" button.

To log out of the website, you can click on the "Log Out" button in the top right corner. To view the contact

page, you can click on the "Contact Page" button in the bottom right corner.

Bill-Pay Page:
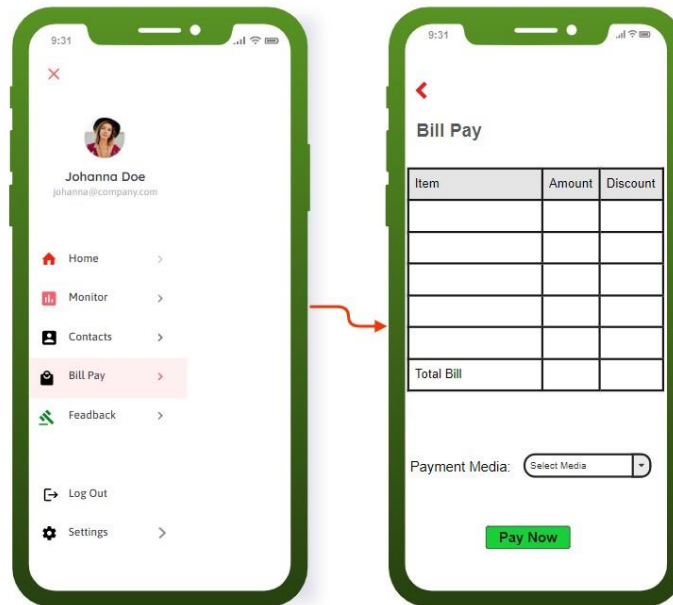
The above page is a bill pay page with a focus on a specific transaction for a "Home Monitor" item. The page is currently displaying the time as 9:31 AM.

At the top of the page, there are options to "Bill Pay," "Contacts," "Feedback," and "Settings." Below this, there is information about the current transaction, which includes the payee's name (Johanna Doe), her email address (johanna@company.com), and the item (Home Monitor).

There is also a field for an amount discount, but it currently shows a value of 0, indicating no discount has been applied.

At the bottom of the page, there are options to choose the "Payment Media" and a "Pay Now" button to proceed with the transaction. The "Total Bill" amount is not displayed on the page, so it is unclear what the total cost of the transaction is.

Overall, this page is designed to allow users to review and confirm the details of their bill pay transaction before completing the payment.The "Payment Media" section allows the user to choose the method of payment for the transaction. The options are "Select Media" and "Pay Now."

The "Select Media" option allows the user to choose from a list of available payment methods, such as credit card, debit card, or bank transfer.

The "Pay Now" button is used to confirm the transaction and proceed with the payment process.

The "Settings" option allows the user to access additional settings and preferences related to the bill pay page.

The "Log Out" option allows the user to end their current session and return to the login page.

The "Feedback" option allows the user to provide feedback or report any issues they may have encountered during their bill pay transaction.

The "Contacts" option allows the user to view the contact information for the payee, which is Johanna Doe and her email address (johanna@company.com).

The "Bill Pay" option allows the user to initiate a new bill pay transaction or return to the main bill pay page.

The "Total Bill" amount is not displayed on the page, so it is unclear what the total cost of the transaction is. However, the user can review the transaction details, such as the payee's name, email address, and the item being purchased (Home Monitor), before proceeding with the payment process.

Feedback Page:
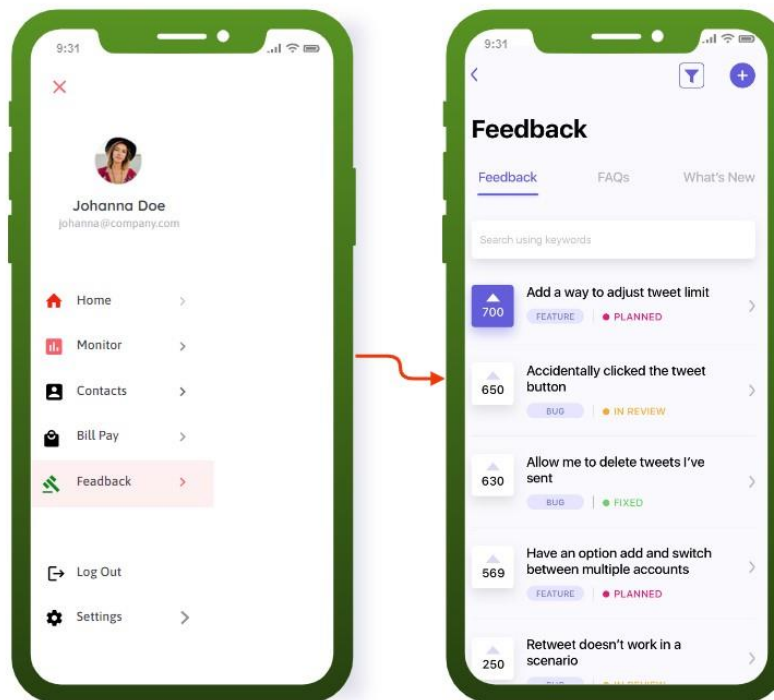
The picture is a screenshot of a feedback page, containing a list of user-submitted feedback and suggestions for improving a product or service. The page is divided into several sections:

1. **Feedback:** This section displays the username of the person who provided the feedback (Johanna Doe) and the time of the submission (9:31).

2. **Feedback + Feedback FAQs What's New:** These are navigation links or tabs that allow the user to switch between different pages or sections.

3. **Search using keywords:** This field allows users to search for specific feedback or topics within the list.

4. **Home il . Monitor Contacts 700:** These are likely navigation links or tabs as well.

5. **Add a way to adjust tweet limit (FEATURE LANNED):** This is a suggestion for a new feature, which is currently in the "planned" stage.

6. **Accidentally clicked the tweet button (650 button BUG IN REVIEW):** This is a bug report, indicating that a user accidentally clicked the tweet button. The bug is currently in the "in review" stage.

7. **Bill Pay:** This is a navigation link or tab.

8. **Log Out Settings:** These are likely additional navigation links or tabs.

9. **Allow me to delete tweets I've BUG FIXED:** This is a bug report, indicating that a user wants to be able to delete their own tweets. The bug is marked as "fixed."

10. **Have an option add and switch between multiple accounts (FEATURE PLANNED):** This is a suggestion for a new feature, which is currently in the "planned" stage.

11. **Retweet doesn't work in a 250 scenario:** This is a bug report, indicating that retweets are not functioning correctly in a specific scenario. There is no status indicated for this bug.

The page appears to be a platform for users to submit feedback, suggestions, and bug reports for a product or service. The list of items on the page is organized by type (e.g., feature requests, bug reports, navigation links) and indicates the status of each item.

Setting Page:
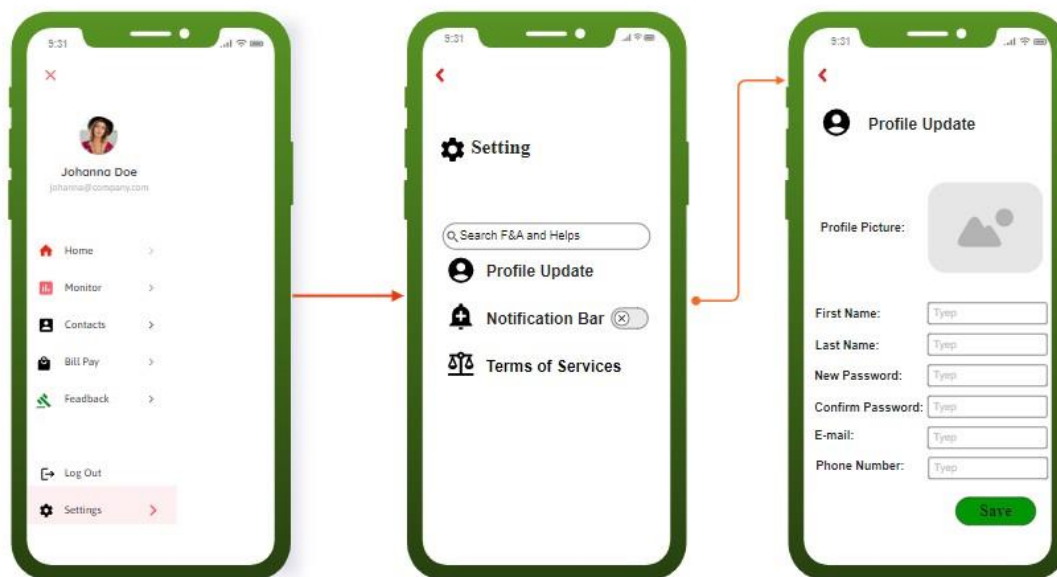
The picture is of a settings page on a device, likely a computer or laptop. The page is divided into two main sections.

The left section contains several options under the "Setting" heading, including "Home", "l. Monitor", "Contacts", "Bill Pay", "Feedback", "Q Search F&A and Helps", "Profile Update", "Notification Bar", and "598 Terms of

Services". There is also a "Log Out" option and an icon with a shield symbol, which is likely for settings related to the device's security or privacy.

The right section of the page is labeled "Profile Update" and contains several fields for updating the user's profile information. These fields include "Profile Picture", "First Name", "Last Name", "New Password", "Confirm Password", "E-mail", and "Phone Number". There is also a "Save" button at the bottom of this section, which likely allows the user to save any changes they have made to their profile information.

The current values for the "First Name", "Last Name", "E-mail", and "Phone Number" fields are all "Tyep", which appears to be a typo as it is repeated in each field. The "New Password" and "Confirm Password" fields are both filled with "Tyep" in the given context. However, the "Type" value in the "Confirm Password" field is likely another typo has context menuComposeParagraph.

Log-Out Page:
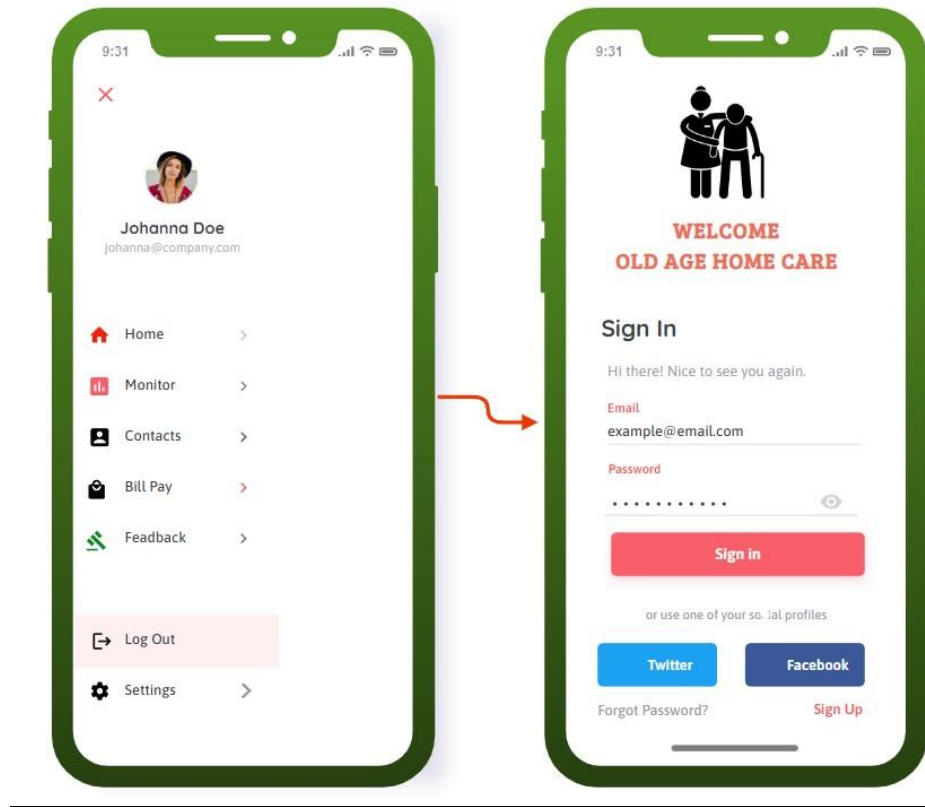
The picture appears to be a screenshot of a webpage or application interface, specifically a log-in page for a service called "OLD AGE HOME CARE". The page displays a header with the name of the service, followed by a space for entering an email address and a password. The email address example@email.com is already entered in the email field. There is also a "Sign in" button and an option to sign in using a "so. Lal" profile. The page also has links to Twitter, Forgot Password, and Facebook, which may be for additional sign-in methods or account recovery.

At the top of the page, there is a time stamp (9:31) and a location indicator (il ✗), as well as a user's name (Johanna Doe) and email address (johanna@company.com). There is also a menu bar with options for Home, Monitor, Contacts, Bill Pay, Feedback, Log Out, and Settings. Based on the context, it seems that the user is currently on the Log-Out Page. The picture is a screenshot of the log-in page for the "OLD AGE HOME CARE" service. The page has a header with the service name, a space for entering an email address and a password, and a "Sign in" button. The email address "example@email.com" is already entered in the email field. The page also provides options to sign in using a "so. Lal" profile, and links to Twitter, Forgot Password, and Facebook for additional sign-in methods or account recovery.

The user's name is Johanna Doe, and their email address is johanna@company.com. The location indicator is "il ✗", and the time stamp is "9:31". The menu bar at the top of the page has options for Home, Monitor, Contacts, Bill Pay, Feedback, Log Out, and Settings. The user is currently on the Log-Out Page.

6. (Test Cases)

Project Name: Old Age Home Care.	Test Designed by: Jahidul Haque Fahad
Test Case ID: FR_10	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Settings Session Test	Test Execution date:
Test Title: Verify Settings action	
Description: Test application settings page	
Precondition (If any): User must have a android phone connected with internet .	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left 3. Go to settings page. 4. Select what you want to change or set.	Action: Update Profile.	All the information will be Update	As Expected	Pass

Post Condition: User can make any change or set something new. All the changed and new data will be saved into the users database.

Project Name: Old Age Home Care.	Test Designed by: Babar
Test Case ID: FR_11	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Contact Session	Test Execution date:

Test Title: Contact Information Check

Description: Test application Contact page

Precondition (If any): User must have a android phone connected with internet.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left 3. Go to the contact page 4. Enter View Doctor	Find your specialist	Doctor's all details	As Expected	Pass

Post Condition: The data collected from Hospital management.

Project Name: Old Age Home Care.	Test Designed by: Jahidul Haque Fahad
Test Case ID: FR_12	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Low	Test Executed by:
Module Name: Feedback Session	Test Execution date:
Test Title: User Feedback	
Description: Test application Feedback page	
Precondition (If any): User must have a android phone connected with internet.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left. 3. Go to the Feedback page.	Feedback	All user Feedback	As Expected	Pass

Post Condition: All the Feedback information already recorded into the database.

Project Name: Old Age Home Care.	Test Designed by: Jahidul Haque Fahad
Test Case ID: FR_13	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Log out Session	Test Execution date:

Test Title: Verify Log out action

Description: Test application Log Out page

Precondition (If any): User must have a android phone connected with the internet.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left 3. Click Log Out	Action: Log Out.	All the information Erase Temporary. When we will login Again information will be back.	As Expected	Pass

Post Condition: The data is already recorded into the database.

Project Name: Old Age Home Care.	Test Designed by: Mohammad Rakib
Test Case ID: FR_1	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Home Navigating from any page	Test Execution date:
Test Title: Verify home navigation from any page	
Description: Test application home navigating page	
Precondition (If any): User must have a android phone connected with internet	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Go to any page in the application. 3. Click on three dots on the top left. 4. Click on home page button.	User: Milton Age:68 years Heath tab Check up tab Medication tab Location tab Todays task: Go for walk 1.2km	Home page appeared.	As Expected	Pass

Post Condition: User can come to home page from any of the page of the application.

Project Name: Old Age Home Care.	Test Designed by: Mohammad Rakib
Test Case ID: FR_2	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Login Session	Test Execution date:

Test Title: Verify log in with valid username and password
Description: Test application login page
Precondition (If any): User must have valid username & password

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left. 3. Go to profile page. 4. Go to account page. 5. Go to login page. 6. Enter username. 7. Enter password. 8. Click on log in button.	Username: rakib087 Password: 1445	Log in successful	As Expected	Pass

Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.

Project Name: Old Age Home Care.	Test Designed by: Estiyak Rubaiat
Test Case ID: FR_3	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Sign up Session	Test Execution date:
Test Title: Verify sign up action	
Description: Test application sign up page	
Precondition (If any): User must have a android phone connected with the internet.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left. 3. Go to profile page. 4. Go to account page. 5. Go to Sign up page. 6. Enter E-mail. 7. Enter password. 8. Click on sign up button	E-mail: estiyak087@gmail.com Password: estiyak1234	Sign up successful.	As Expected	Pass

Post Condition: User can sign up with this E-mail. All the information will be recorded into the database and used for logging in into the application. All the data used with this account will be recorded into the database.

Project Name: Old Age Home Care.	Test Designed by: Estiyak Ruabaiat
Test Case ID: FR_4	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Low	Test Executed by:
Module Name: Location Session	Test Execution date:

Test Title: Add live location

Description: Test application location page

Precondition (If any): User must have an android phone. The phone needs to be connected with Wi-Fi or Data Connection and the location setting must be turned ON.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left. 3. Go to the home page. 4. Enter location section. 5. Click on direction button	Location: Kuril, Dhaka.	Location found and generated the possible ways successfully.	As Expected	Pass

Post Condition: Location will be displayed on phone screen. All the information related to the location will also be displayed to the assign nurse and their relatives. All the locations related information will be recorded into the database.

Project Name: Old Age Home Care.	Test Designed by: Afzalul Abid Nazir
Test Case ID: FR_5	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Check Up panel Session	Test Execution date:
Test Title: Verify check up action	
Description: Test application check up session	
Precondition (If any): User must have an android phone. The phone needs to be connected with Wi-Fi or Data Connection and the location setting must be turned ON.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on three dots on the top left. 3. Go to the home page. 4. Enter check up section	Appointment date :24.04.2024 Doctor details: Abid Hasan ID:450-345 (Internal Medicine)	Doctor details with appointment date displayed	As Expected,	Pass

Post Condition: The data is also recorded into the database with doctor details ,appointment date and patient info.

Project Name: Old Age Home Care.	Test Designed by: Saiful Islam
Test Case ID: FR_6	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Medication Session	Test Execution date:

Test Title: Verify medication panel action

Description: Test application Medication page

Precondition (If any): User must have an android phone. The phone needs to be connected with Wi-Fi or Data Connection.

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Go to Home page. 3. Enter Medication section.	Today Pill: White tablet (Before breakfast) Blue Capsule (Before dinner) Eye drop: Before bedtime	All the todays pill intake information showed successfully	As Expected	Pass

Post Condition: User see also the pill name by taping into the pill list view .

Project Name: Old Age Home Care..	Test Designed by: Afzalul Abid Nazir
Test Case ID: FR_7	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): Medium	Test Executed by:
Module Name: Health Session	Test Execution date:
Test Title: Verify Health session action	
Description: Test application Health page	
Precondition (If any): User must have an android phone .The phone needs to be connected to Wi-Fi or Data Connection.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Application. 2. Click on the three dots option. 3. Go to the Home page. 4. Click on Health section button.	Blood Pressure: 180/70 Pulse: 58 spO2: 98% BMI:25	Blood Pressure: 180/70 Pulse: 58 Your pressure is so high. Please contact with your doctor or call your any relative immediately.	As Expected	Pass

Post Condition: User can see his/her health condition and can take necessary steps. The data of the user's health will be recorded into the database and according to the recorded data the software will call any of his/her relative immediately.

Project Name: Old Age Home Care.	Test Designed by :Saiful Islam
Test Case ID: FR_8	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Monitor Page Testing Session	Test Execution date:
Test Title: Verify monitor page testing session action	
Description: Monitor Page Testing Session action	
Precondition (If any): User must have a android phone connected. The phone needs to be connected to Wi-Fi or Data Connection and the location setting must be turned ON.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open application. 2. Click on the three dot of the corner of the application. 3. Tap on the Monitor section	Blood Pressure: 180/70 Pulse: 58 spO2: 98% BMI:25 Sleep:6H 40M Weight:65kg Walk:8000steps Run:1.2km	Shows information of the users about his health and his daily activity	As Expected	Pass

Post Condition: All the details of collected information are uploaded into the database instantly.

Project Name: Old Age Home Care.	Test Designed by: Babar
Test Case ID: FR_9	Test Designed date: 15/04/2024
Test Priority (Low, Medium, High): High	Test Executed by:
Module Name: Bill Pay Session	Test Execution date:
Test Title: Verify bill pay action	
Description: Test bill pay action	
Precondition (If any): User must have a android phone The phone need to be connected with Wi-Fi or Data Connection.	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open application. 2. Go to Home page. 3. Tap on three dot of the top corner. 4. Tap on Bill Pay section	Item: Food Amount:100tk Discount:15tk Item: Medicine Amount:250tk Discount:25tk Total Bill:310tk	Item information with specific item bill displayed	As Expected	Pass

Post Condition: The bill payment data are uploaded into the database instantly. User can see the invoice

7 & 8. (RISK ESTIMATION, WBS, PROJECT ESTIMATION, TIME CHART, EVA & RESOURCES ALLOCATION)

Worked Banced Structure

AR BASED NAVIGATION FOR VISUALLY IMPAIRED — LEVEL 1

LEVEL 2

1.1 Project Management
- Planning
- Cost & Schedule management
- Scope management
- Task management
- Project office administration
- Risk management

1.2 System Engineering
- Technical Planing
- Technical Supervision
- Business requirements definition
- System architecture & top level design
  - Class diagram
  - Usecase diagram
  - Sequence diagram
  - State chart diagram
  - Activity diagram
  - User interface

1.3 Software
- Software design
  - Software requirement specification
  - Software work package definition
  - Software prototyping
  - Software unit detailed design
- Software Build
  - Software unit coding
  - Software unit debugging
- Unit testing
  - Unit test planning
  - Unit test case preparation
  - Unit test conduct
  - Unit test records

1.4 Hardware
- Hardware requirement planning
- Hardware system definition
- Hardware component selection
- Hardware unit/component test

1.5 Deliverables Management
- Deliverable tracking
- Deliverables product and packaging
- User and training guide packaging

1.6 System Test
- Security testing
- System integration testing
- Acceptance testing
- Defect classification ,tracking & metrices
- Module & subsystem testing

1.7 Support Services
- Development environment setup
- Configuration management
- Quality assurance
- Internal product liaison
- Team technical training

1.8 Installation
- Installation planing
- User support documentation
- User communications &training
- Installation management & coordination
- Installation testing and verification
- Installation performance monitoring

Project Estimation

Project Tyep: Organic

$p = 1.05$

$T = 0.38$

Coefficient = 2. 4

SLOC = 6000

PM = Coefficient<Effort Estimation> *(SLOC/1000)P = 2.4*(6000/1000)^1.05

   = 15.74

DM = 2.05*(PM)^T

   = 2.05(16) 0.38

   = 7.16

ST = PM/DM

   =2.19

   ≈3

Timeline Chart

	Pregame					sprint 1					sprint2					sprint 3					sprint4					postgame		

Task:Person	1	2	3	4	5	6	7	8	9	10	11	12	13	12	15	16	17	18	19	20	21	22	23	24	25	26	27	28
A: Andy	■	■																										
B: Andy			■	■	■																							
C: Dev						■					■					■					■							
D: Dev							■					■					■					■						
E: Dev								■	■				■	■	■			■	■				■	■				
F: Bob										■					■					■					■			
G: Andy																										■	■	
H: Bob																												■
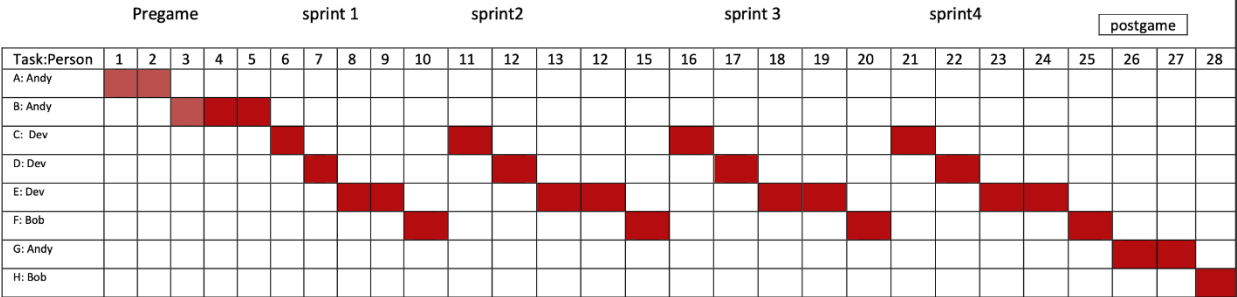
A: Planning
B: Setup environment
C: Analysis
D: Design
E: Coding
F: Testing
G: Integration testing
H: System testing
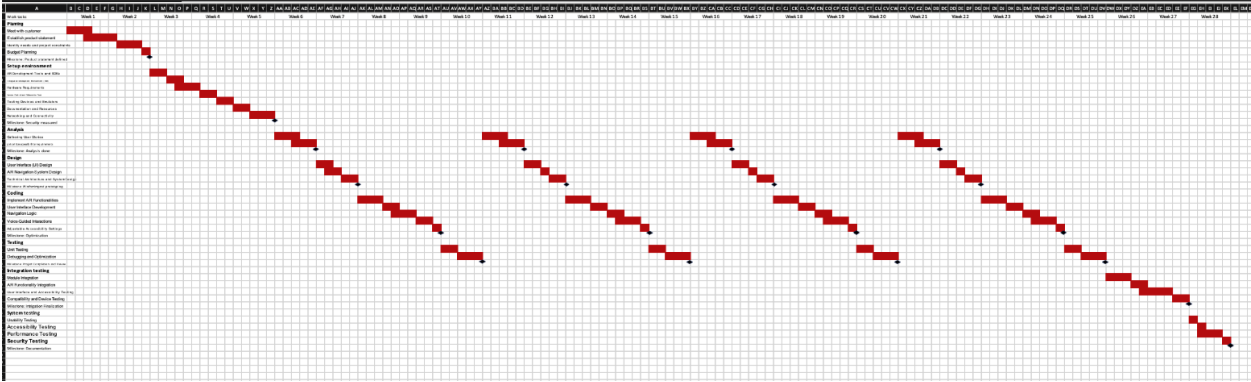
RESOURCES ALLOCATION:

Resource	Segments	Description
Human Resources	Caregivers	Trained professionals responsible for providing daily assistance to residents, including personal care, medication management, and companionship.
	Nurses	Qualified healthcare professionals who administer medical treatments, monitor residents' health, and coordinate with doctors.
	Administrative Staff	Handle day-to-day operations, such as scheduling, billing, and resident admissions.
	Therapist	Provide emotional support, therapy sessions, and assistance with social activities to enhance residents' well-being.
Environment Resources	Physical Facilities	Comfortable living spaces with amenities such as bedrooms, common areas, dining rooms, and recreational areas.
	Equipment	Mobility aids like wheelchairs, walkers, and lifts, as well as medical equipment such as blood pressure monitors and oxygen tanks.
	Supplies	Daily necessities like bedding, toiletries, cleaning supplies, and medical supplies such as bandages and medications.
Software Resources	Management	Comprehensive software solutions designed specifically for managing old age home care facilities. These systems often include features for scheduling staF shifts, tracking residents' medical records, managing billing and payments, and facilitating communication among staF members and with residents' families.
	E-Health Record	Electronic health record (EHR) systems track medical histories, treatments, and appointments. Billing software manages financial transactions, including invoicing residents or handling insurance claims. Communication platforms facilitate internal staF communication and allow families to stay updated on their loved one's well-being.

Earned Value Analysis

Schedule weeks = 15.74 * 4 = 62.96 = 63
Effort estimated = 63 * 5 = 315 person-day
Total task = 51
EVA conduct date: 1/05/2024
8 tasks have been completed but the project schedule indicates that 11 tasks should have been completed in that time.

Task	Planned effort		Actual effort
1	11.0	12.5	
2	12.0		14.0
3	15.0		12.5
4	9.0	ACWP	10.0
5	BCWP — 6.8		5.0
6	14.0	BCWS	15.0
7	8.0		10.0
8	7.0		6.5
9	13.0		
10	5.6		
11	8.6		

So here,
BAC = 315
・ BCWP =82.8
BCWS = 110
ACWP = 85.5
SPI = BCWP/BCWS = 82.8/110 = 0.753
SV=BCWP-BCWS = 82.8-110 = -27.2 person-day
CPI = BCWP/ACWP = 82.8/85.5 = 0.968
CV = BCWP-ACWP = 82.8-85.5 = -2.7 person-day

% Schedule for completion = BCWS/BAC
$$= 110/315$$
$$= 0.349\%$$
[% of work schedule to be done at this time]

% Complete = BCWP/BAC
$$= 82.8/315$$
$$= 0.262\% \quad [\% \text{ of work completed at this time}]$$

Risk Estimation

Risks	Category	Probability	Impact
Size estimated might be lower thanexpectation	PS	55%	2
Number of users might be higher than expectation	PS	25%	3
Larger number of users than planned	PS	35%	3
Less reuse than planned	PS	70%	2
Deviation from define software development process	PR	40%	2
Delivery might exceed deadline	BU	45%	2
Funding will be lost	CU	40%	1
Project budget might exceed expectation	CU	40%	1
Unavailability of necessary tools	DE	70%	1
Personnel shortfalls	ST	20%	4
Developing the wrong software functions	TE	5%	1
Developing the wrong user interface	TE	5%	1
Late changes to requirements	BU	30%	3
Development technically too difficult	ST	10%	2
Security Vulnerabilities	TE	30%	2
Inexperienced Staff	ST	35%	2
Important staff are present on development site parttime	ST	10%	4
Interface design might not be user friendly	DE	25%	3
Ethical Dilemma	BU	30%	2
Evolving Landscape	CU	40%	4