



PROJECT PROPOSAL

CLEANOPS.CA

BY TEAM NOVA

CAPSTONE PROJECT- WEB AND MOBILE APPLICATION
DESIGN AND DEVELOPMENT
LANGARA COLLEGE - SPRING 2024



WHERE DIGITAL INNOVATION MEETS
SEAMLESS HOUSEKEEPING

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About Cleanops

Project Summary

Background & Solution

Our Features

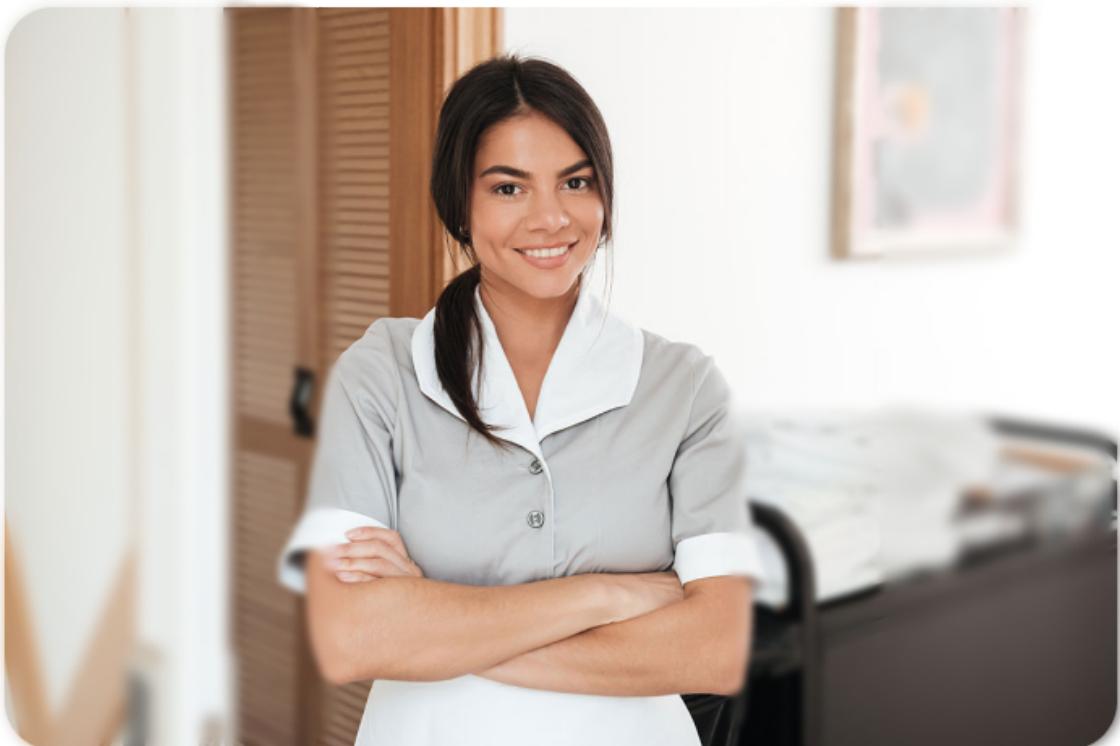
Business Model

Competitive Advantage

Project Timeline

Project Summary

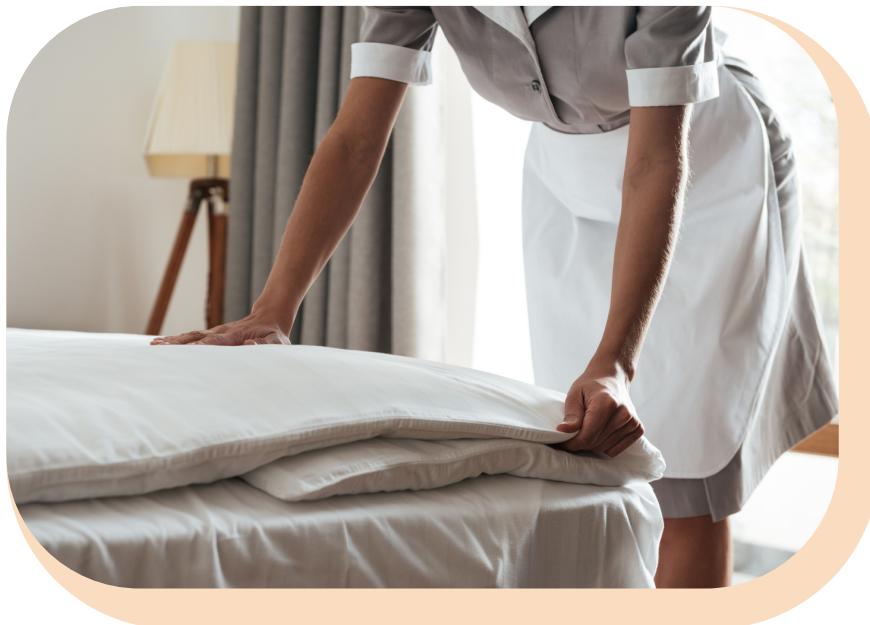
Say goodbye to the hassle of traditional paperwork and welcome the era of digital housekeeping with CleanOps, our mobile application designed to enhance staff engagement, streamline daily operations, and boost overall efficiency.



Background

Many housekeeping departments within the hospitality still rely on paper printouts and last-minute updates for room assignments, leading to slow processes, errors, and burned-out employees.

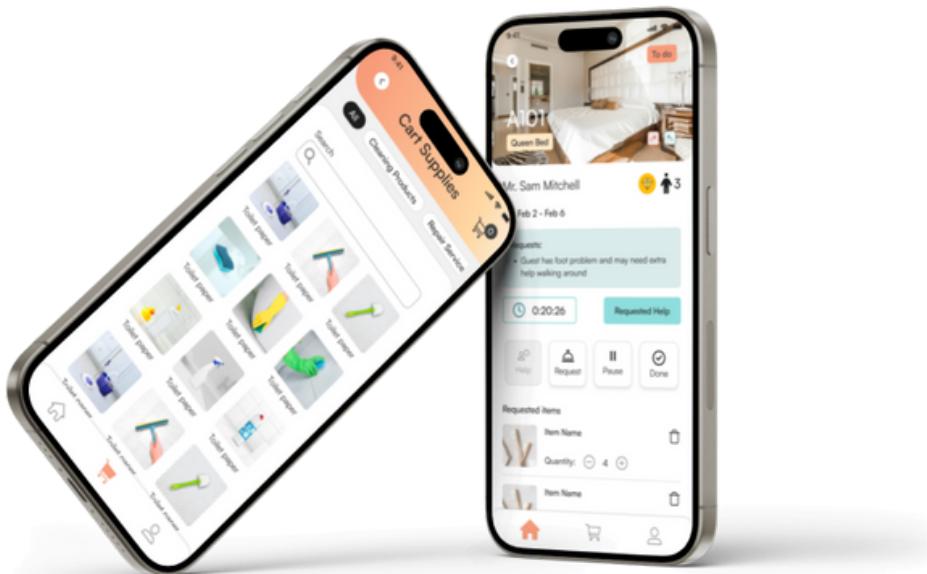
Consequently, both supervisors and housekeepers are burdened with significant manual tasks, including physically having to run around to coordinate with other departments.



Solution

Our mobile app provides a user-friendly interface for effectively managing housekeeping operations. It achieves this by creating a unique connection and communication channel between housekeepers and management. This channel allows them to coordinate and assign tasks and chores seamlessly.

Additionally, CleanOps aims to provide a simple and intuitive way for reporting task completion, requesting services, and managing compliance processes.



Our Features



Housekeeper Daily Task

Easily manage the cleanliness of your rooms and streamline daily operations with just a click. Need extra help or room supplies? Send requests instantly with the click of a button.



Staff Fidelity

Elevate your team's ability to monitor their performance, cultivating motivation and transparent evaluation across the department.



Manager Room Monitoring

Facilitate your team to stay on top of daily operations. Monitor multiple room statuses at the same time and remotely conduct virtual inspections.



Manager Supply Management

Stay on top of supply requests with real-time notifications. Swiftly approve hotel supplies in bulk and streamline task completion for your staff.

Business model



Target Market

Our target market includes hotels, resorts, and any business that could benefit from a system to organize and manage housekeeping services. We aim to appeal to establishments of all sizes, from boutique hotels to large-scale resorts.



Revenue Model

CleanOps operates on a yearly subscription-based model, offering tiered plans tailored to the needs of different types and sizes of businesses. This model gives businesses enough time to comprehend how our solutions can optimize their operations, while also fostering engagement, potentially elevating the likelihood of conversion.



Marketing Strategy

Our marketing strategy will involve targeted outreach to hotels and resorts businesses via digital channels, industry events, and hospitality partnerships, highlighting its role in boosting housekeeping efficiency and guest satisfaction.

Competitive Advantage

CleanOps stands out from competitors by focusing on the needs of housekeeping assistants. While other solutions prioritize scheduling and management, CleanOps enhances the day-to-day experience of frontline workers, ultimately leading to improved efficiency and satisfaction within the department.



Project Timeline

Week 1	Project Ideas / Sprint Setup
Week 2	Business Proposal, User flow, Information Structure
Week 3	Wireframes, Data model
Week 4	UX testing & revision, System Design
Week 5	Branding, Backend setup and configuration, React Components
Week 6	Mock-up/UI Prototype
Week 7	Mock-up/UI Prototype
Week 9	Alpha Bug Bash
Week 10	Marketing Materials
Week 11	Beta Bug Bash, Issue Tracker (RAID) report
Week 13	Final Output

Design Process

Market Research

User Persona

Information Architecture

Wireframes & mockups

Branding

Market Research

Market research involved interviewing three housekeepers working in Canada and Peru to understand their daily task routines, priorities, and the system they are currently using.

Their common pain points include:

1. Lack of real-time updates
2. Communication with multiple departments
3. Absence of performance tracking and shift transparency

These insights serve as valuable input for addressing challenges and enhancing operational efficiency in the housekeeping sector.

We then came up with our features to help solve these problems and created our userflow.



User Persona

Housekeeper



Goals

- Ensure timely and high-standard room cleanliness.
- Facilitate seamless communication with other departments.
- Prevent physical burnout among staff.

Challenges

- Managing a large number of cleaning tasks across multiple rooms.
- Dealing with unexpected issues or emergencies requests during cleaning operations.
- Balancing the workload to prevent overburdening certain team members.

" Keeping up with the physical demands and constant communication can be tough, but together, we'll find ways to manage them effectively! "

User Persona

Manager



Goals

- Enhance guest satisfaction by improving operational efficiency and service quality
- Streamline daily operation
- Reduce operational costs
- Stay updated with the latest trends and technologies in the hospitality industry to remain competitive.

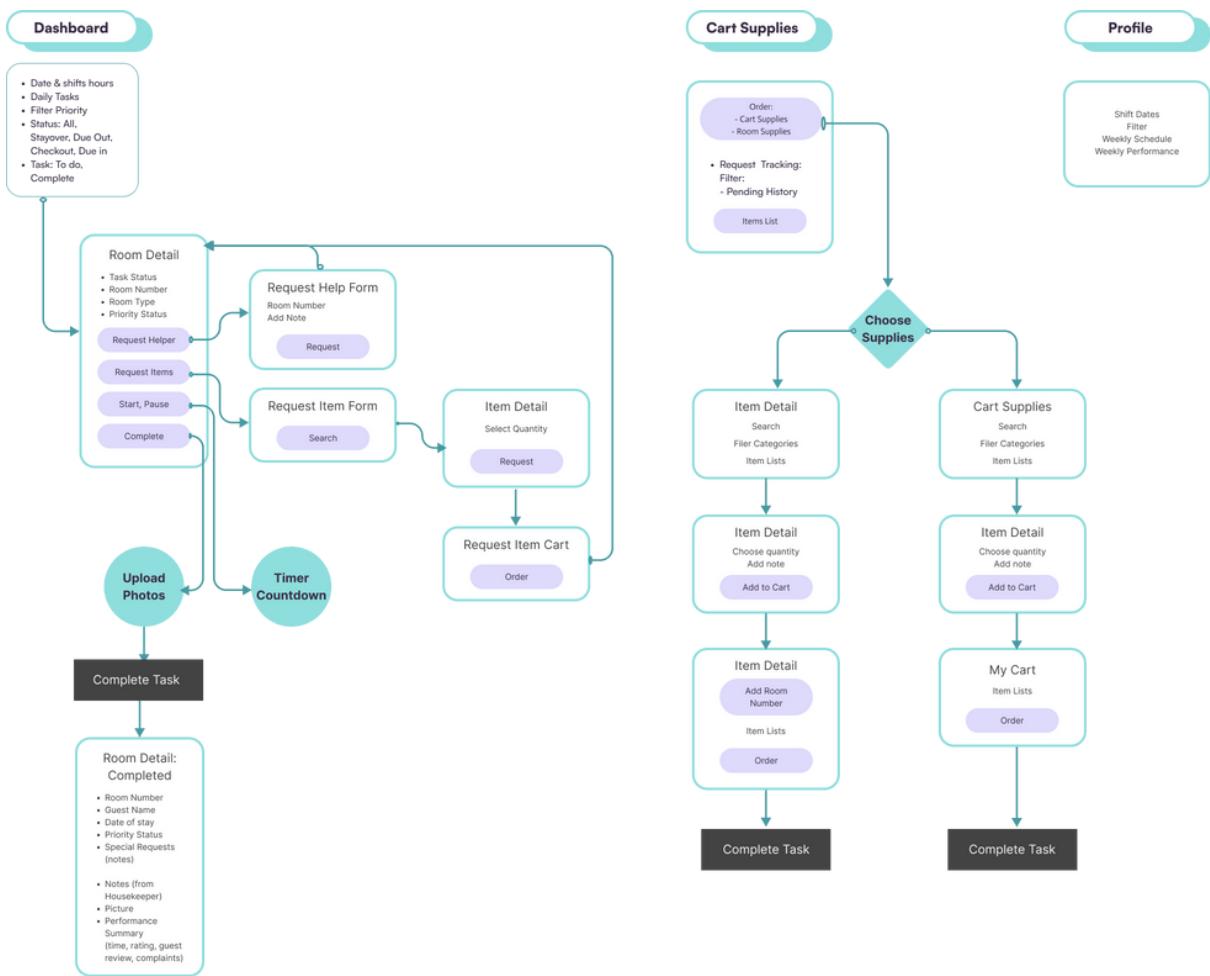
Challenges

- Limited real-time visibility
- Difficulty in communicating across different departments.
- Time-consuming manual processes
- Concerns about the environmental impact

"As a hotel manager, I'm constantly looking for ways to improve efficiency and enhance the guest experience. "

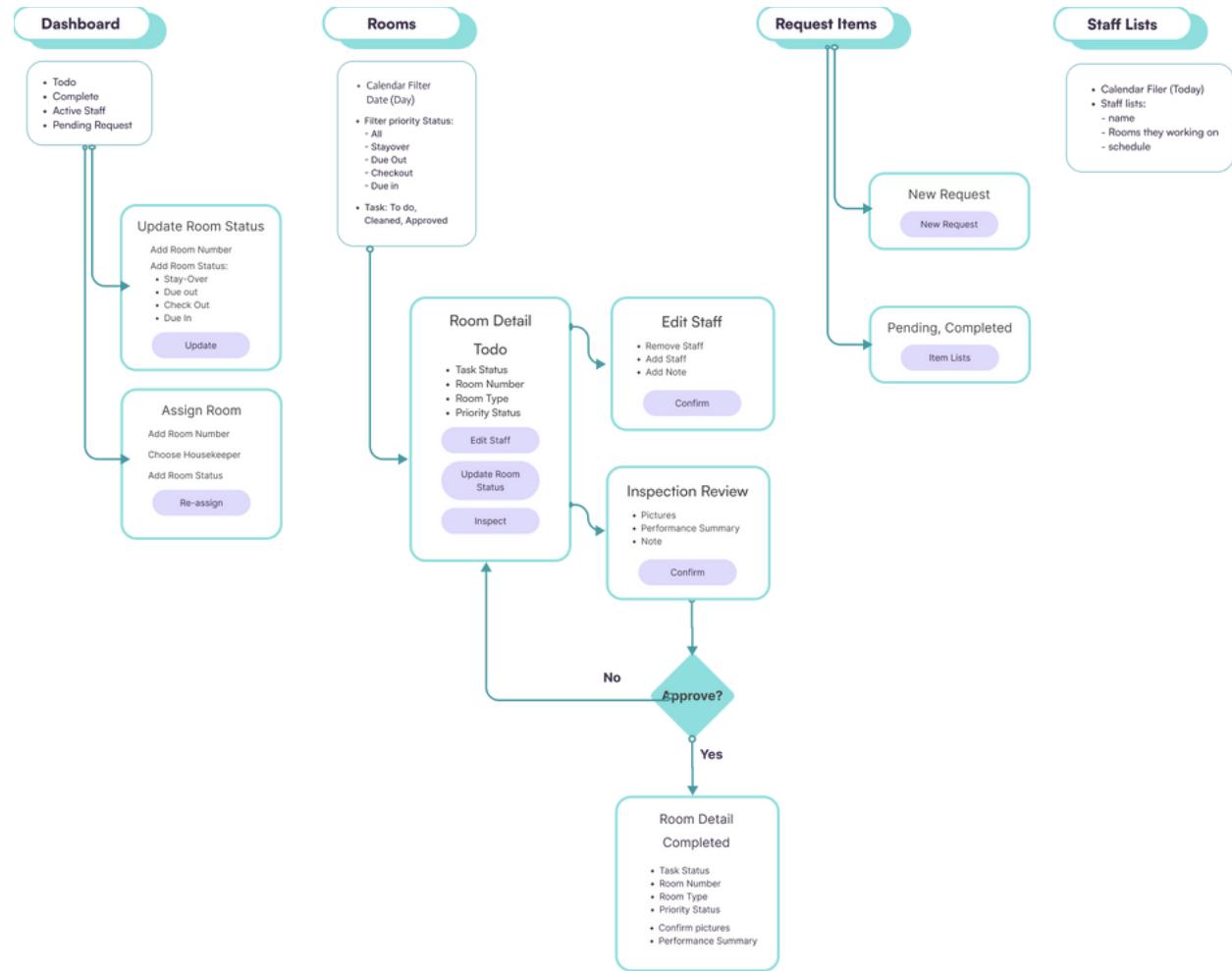
Userflow

Housekeeper



Userflow

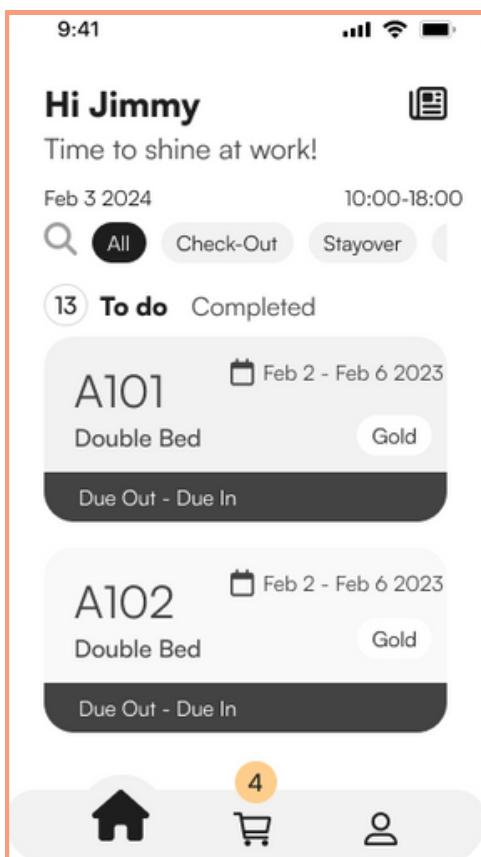
Manager



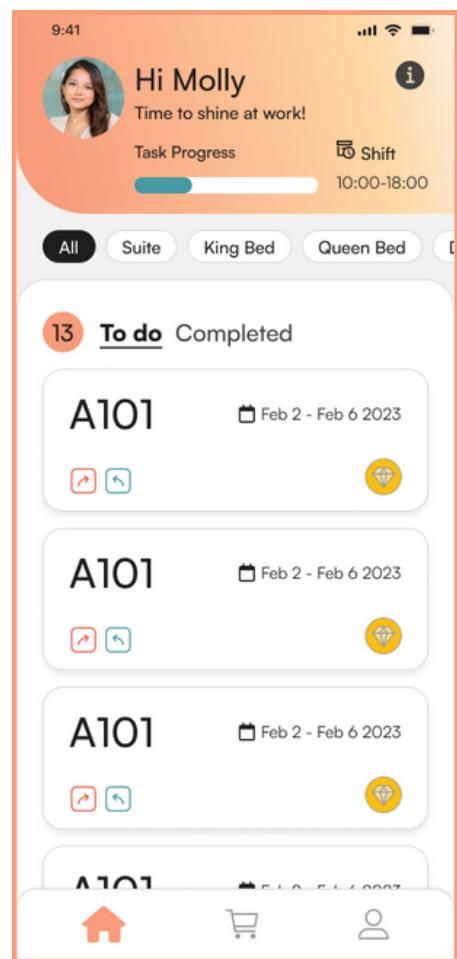
Wireframes & Mockup

Housekeeper - Home

Wireframe



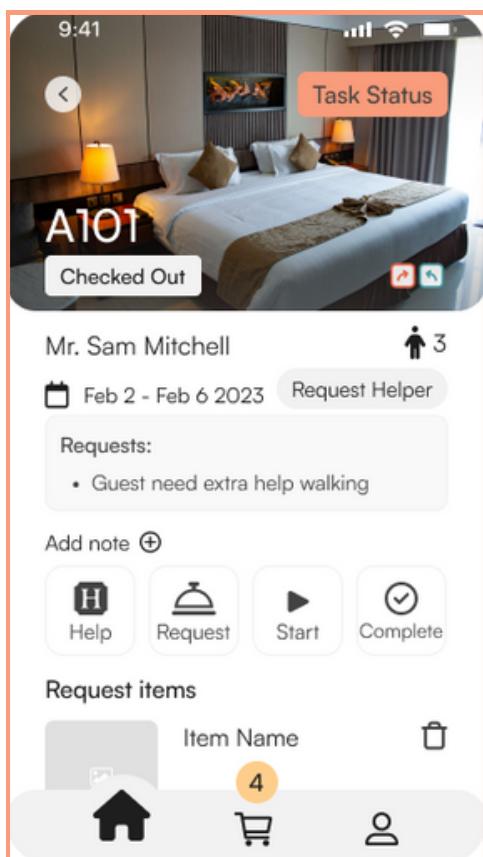
Mockup



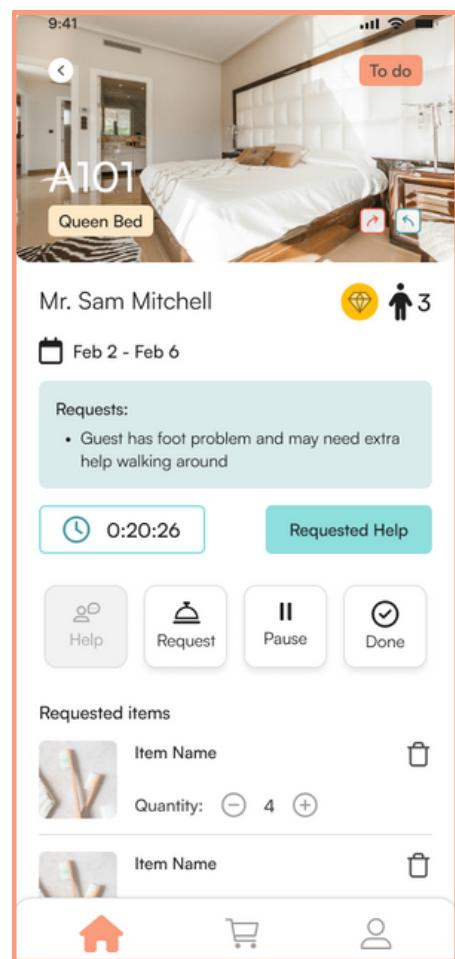
We present housekeeping tasks as room cards, which display the room status with icons. Rooms can be filtered by completion status as well as room type.

Housekeeper - Room Detail

Wireframe



Mockup

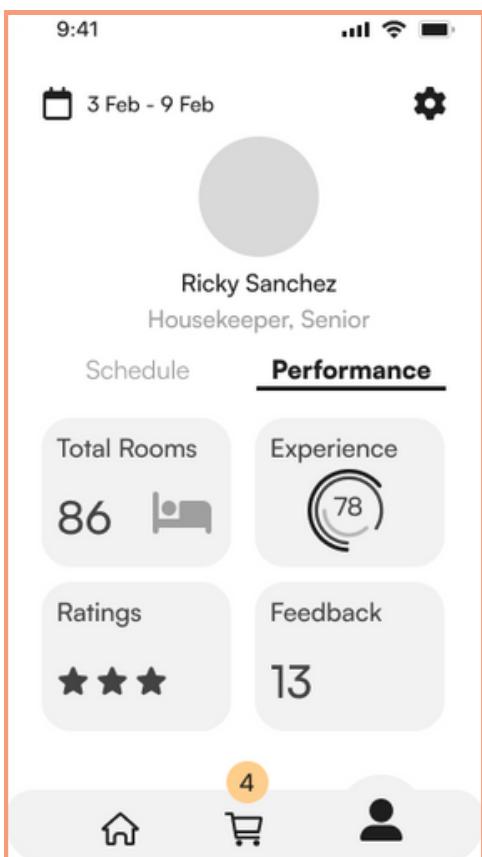


The room detail screen displays the room status and stay duration. Action buttons are available to request assistance or items. Starting at the beginning of the shift helps the app track their performance.

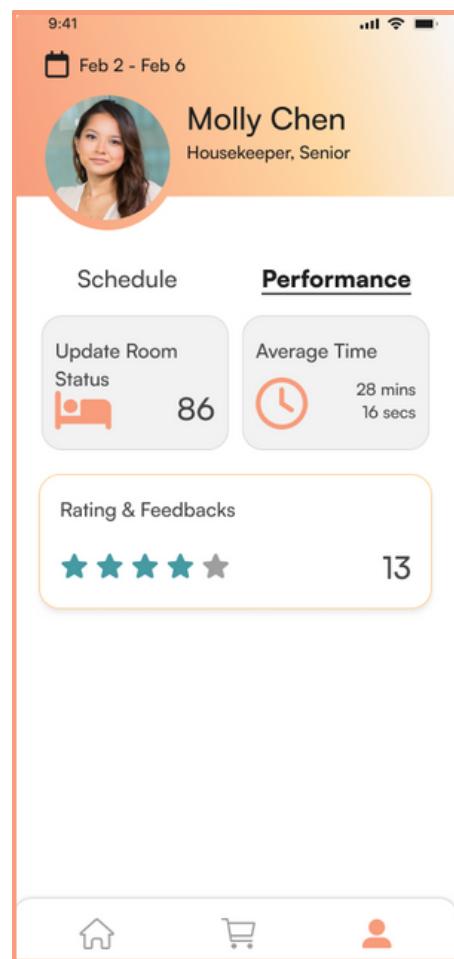
Wireframes & Mockup

Housekeeper - Profile

Wireframe



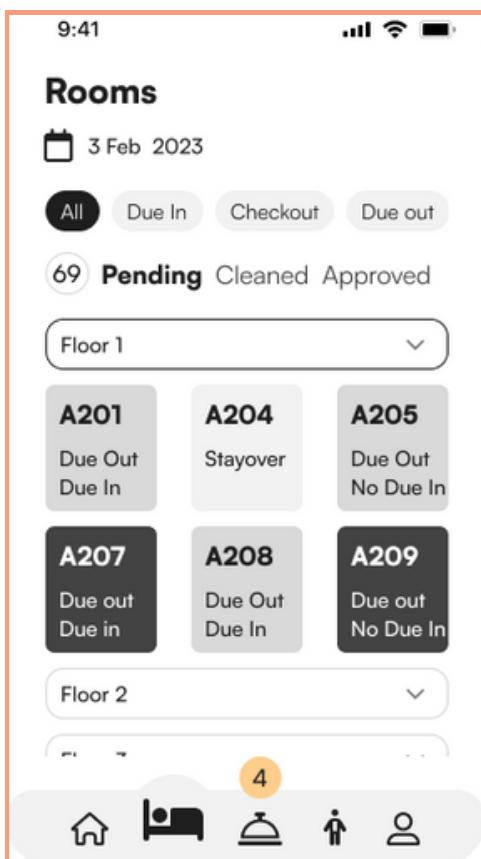
Mockup



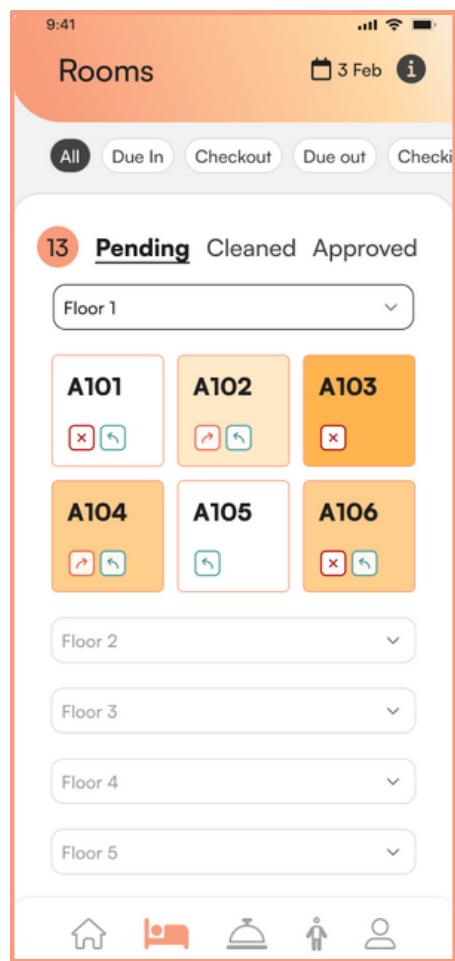
On the profile page, housekeepers can track their weekly performance, feedback, and shifts in a table format.

Manager - Daily Rooms

Wireframe

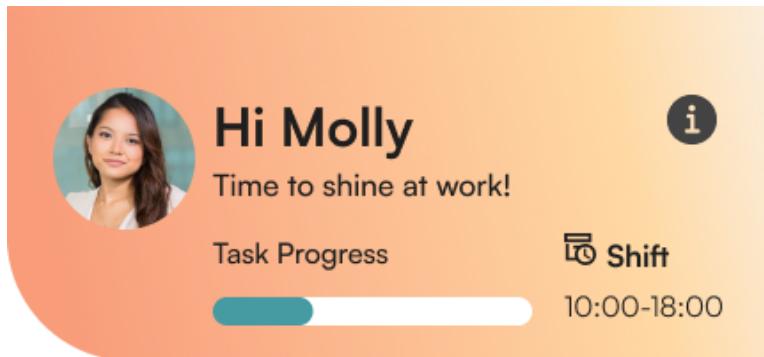


Mockup

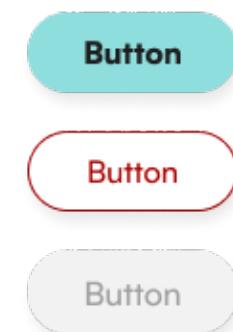
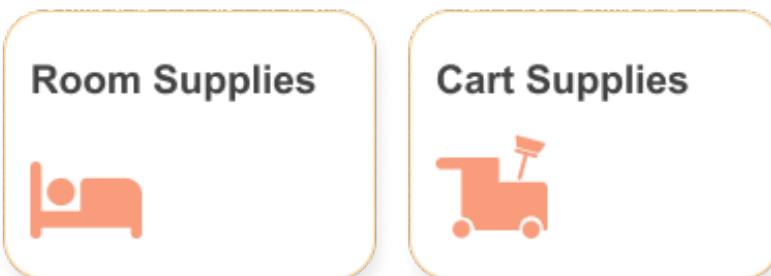
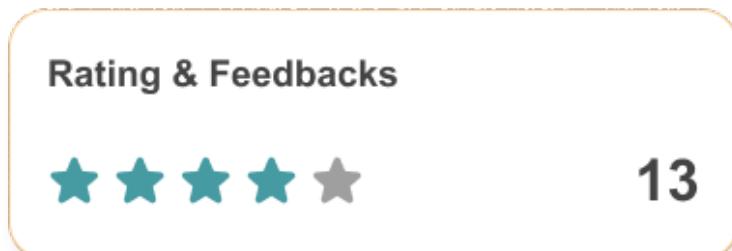
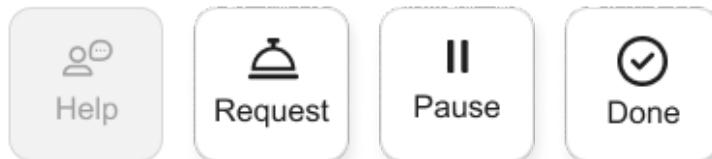


Managers can filter their task tracking by pending or cleaned status. The rooms for each floor can be expanded using a dropdown, color-coded according to room types with guest status icons. Once a room is complete, managers can inspect and approve the task.

UI Kit



- Due Out
- Due In
- Due Out - Due In
- Checked Out (already left)
- Checked Out - Due In
- Checked In



Branding

Main Logo



Responsive Logo



Typography

Satoshi

Regular Bold
Medium Black

Aa

Heading

Subheading

Body

Brand Colour



Bleached
Silk
#F2F2F2



Upstream
Salmon
#F89C7B



Juicy
Mango
#FECE8C



Island
Paradise
#8FDEDE

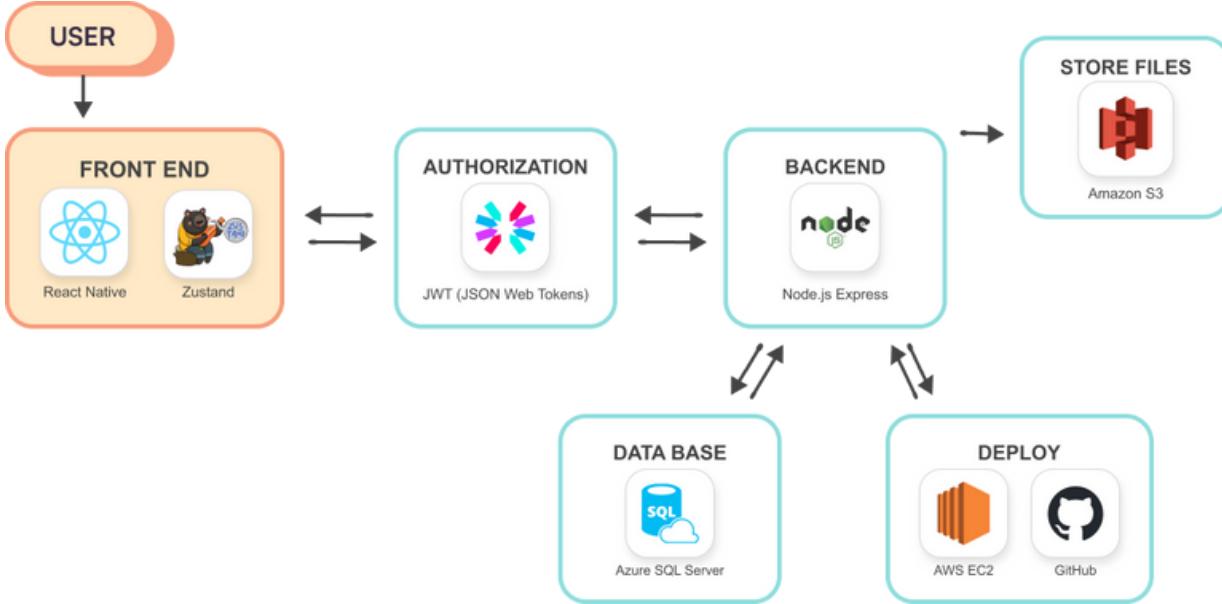


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Black
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Development Process

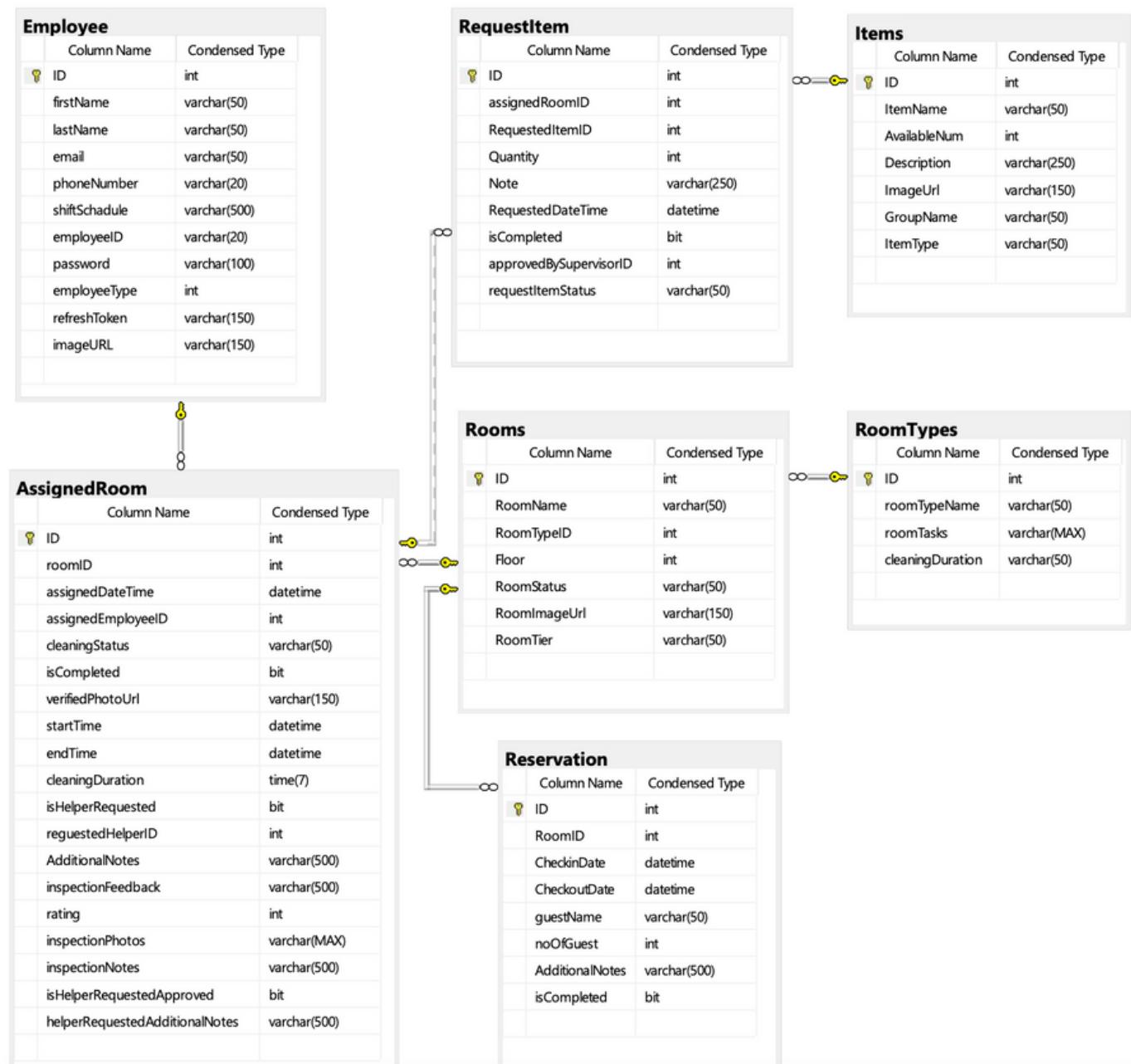
System Architecture
Data Diagram
Development Milestone

System Architecture



- **React Native:** Write code once for both Android and iOS, reaching more users effortlessly.
- **Zustand:** Efficiently manage app state with ease, like having a helpful butler for data organization.
- **JWT (JSON Web Tokens):** Secure access to app areas with fast verification, maintaining performance.
- **Node.js Express:** Swiftly handles internet requests, ensuring app responsiveness and user satisfaction.
- **Azure SQL Server:** Safely store and retrieve app data with high efficiency and security.
- **AWS EC2 & Github:** Scalable cloud computing resources for smooth app operations without hardware maintenance.
- **Amazon S3:** Unlimited cloud storage for all app media, accessible from anywhere, anytime.

Data Diagram



The ER diagram illustrates the structure of the CleanOpsDB database, comprising tables for various entities crucial in managing cleaning operations.

The tables that have static data coming from the user's management system are:

- Employees table entails employee details, including names, contact information, and roles.
- RoomTypes and Rooms tables have information about the room details like room tier and room name.
- Reservation table encompasses guests' details, including names, number of guests, and duration of stay.
- Items table includes a list of items that are required by the housekeepers to complete their tasks.

The tables that we have created for better management of operations are AssignedRoom and RequestItem.

- AssignedRoom table records room assignments to employees, tracking details such as assigned date and time, cleaning status, and inspection feedback.
- RequestItem table logs employees' requests for specific materials.

This concise yet comprehensive database design facilitates seamless coordination and organization of cleaning operations within the system.

Development Milestone

Week 9

- Present a functional Housekeeper flow with partial styling and management flow integration.
- Features will include, but are not limited to:
 - a. Starting, timing, and completing room cleaning functions.
 - b. Requesting items from the inventory.
 - c. Housekeeper visibility into daily tasks.
 - d. Housekeeper's ability to request help.
- Create unit tests to ensure application functionality.

Week 11

- Implement polished UI for both management and housekeeper flows.
- Integrate key features for management flow, including:
 - a. Task management, encompassing the creation of assignments and inspection of housekeeper cleaned rooms.
 - b. Inventory and help request management.

Development Milestone

Week 13

- Demonstrate polished interaction between housekeeping and management interfaces.
- Deliver CleanOps MVP product.



Team Members



Developers



Pujan Shakya

LEAD DEVELOPER

With about 4 years of experience as a Software Engineer at Cotiviti, a US-based Healthcare Analytics Company, he is seasoned in the tech realm. For Cleanops , he handles front-end development using React Native and back-end using node Express and SQL Server



[pujan-shakya](#)



[puzannshakya](#)



Cylvia Lian

PM, FRONT-END DEVELOPER

Drawing from her previous digital business experience, she assumed the role of project manager at CleanOps while developing her skills as a React Native front-end developer.



[cylvialian](#)



[cylvito](#)

Team Members



Developers



Thalha Uzair

FULL STACK DEVELOPER

Bringing two years of experience from Capgemini, this developer dives into the CleanOps project, offering their expertise as a full-stack contributor. Passionate about problem-solving, they're dedicated to ensuring CleanOps functions seamlessly and efficiently, making valuable contributions at every turn.



[thalha-uzair](#)



[thalhauzair1](#)



Azim Mohammadi

FULL STACK DEVELOPER



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Team Members



Designers



Kanin Phuvanatnaranubala (Jump)

LEAD UX/UI DESIGNER

With three years of experience in the UX/UI field and previous work in digital marketing, he brings a wealth of expertise to leading Cleanops' design team tasks in UX research, the design process, and branding.

[jumpchill](#)

[jumpcreativespace.com](#)



Geraldine Succar Angulo

UX/UI DESIGNER

Industrial Designer with 1 year of experience as a User experience coordinator with knowledge in digital Marketing and digital business, for CleanOps she is UX/UI Designer

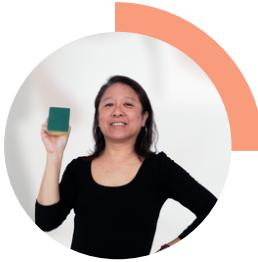
[geraldinesuccar](#)

[geraldinedesign](#)

Team Members



Designers



Jessica Ruiz

UX/UI DESIGNER

Advertising Graphic Designer and Marketing Coordinator with more than 25 years in the Finance field, now in UX / UI Designer role at Clean Ops.



jessicaruizbc



jessicaruiz24





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