



SECV2113 07
HUMAN COMPUTER INTERACTION

Lecturer: Ts. Dr. Sarina binti Sulaiman

REPORT PROJECT PART #2
ESTABLISHING REQUIREMENTS

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1.0 USER ANALYSIS

1.1 PROPOSED TASK

Task 1: Book a Cleaning Service

An online appointment booking system allows individuals to schedule cleaning services conveniently over the internet with cleaners. It typically provides a user-friendly interface for users to view available time slots, select desired dates and types of cleaning services, and secure appointments. With AI integration, an intelligent virtual assistant can guide customers through the process, ensuring accurate bookings and answering common questions. The customer just needs to ensure the location is ready for cleaning at the scheduled time.

When a booking system is integrated with a customer journey management system and enhanced by AI features, it becomes a powerful tool that enables organizations to move customers seamlessly from online service scheduling to real-time updates on cleaner arrival and job progress. AI avatars can provide personalized recommendations, reminders, and even collect feedback, ensuring efficient service delivery and an engaging customer experience

Task 2: Rent cleaning tools

Cleaning tool rentals provide a quick and easy way to access specialized equipment for home or vehicle maintenance. The rental system uses a web-based platform enhanced with AI to allow users to browse available tools, select the desired equipment, and choose a rental period. With an AI assistant, customers can receive personalized tool recommendations and instant answers to their questions. The process is simple and efficient, it offers flexibility for customers to pick up the tools themselves or have them delivered to their location.

Once the rental is confirmed, the system, supported by AI, provides clear usage instructions, maintenance tips, and real-time assistance if needed. The app tracks the

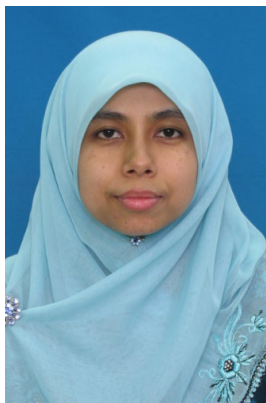
rental period, sends return reminders, and ensures smooth coordination with tool providers, who are notified to prepare equipment for the next user. This integration of AI streamlines operations, optimizes tool availability, and enhances the overall customer experience.

Task 3: Applying job as a cleaner

This application system allows individuals to register as cleaners conveniently over the internet. It provides a user-friendly interface for users to fill out their profiles, upload required documentation, and select their availability and service areas, streamlining the process of onboarding new service providers. Applicants just need to complete the registration process and wait for approval before they can start working.

1.2 PERSONA

persona 1



Name: Prof Madya Dr Shariffah Suhaila

Age: 40

Occupation: Lecturer

Dr. Shariffah is a dedicated university lecturer who spends most of her time preparing lectures, grading assignments, and mentoring students. Her days are packed with back-to-back classes, research projects, and departmental meetings, leaving her little time for herself, let alone household chores. Between her busy schedule and frequent

commutes, her house and car often end up neglected. Dr. Shariffah feels guilty about the dusty corners in her living room and the state of her car, but she simply can't find the time or energy to handle the cleaning herself.

What Dr. Shariffah needs is an AI-powered app that simplifies the process of booking cleaning services. She envisions an app where she can input her specific needs like house deep-cleaning or car detailing and receive tailored recommendations. The AI could suggest trusted service providers based on reviews, availability, and her location, guiding her step-by-step through the booking process. With automated reminders and flexible scheduling, the app would allow Dr. Shariffah to manage her cleaning needs effortlessly, freeing her to focus on her demanding work and finally enjoy a clean, stress-free environment.

persona 2



Name: Habibullah

Age: 22

Occupation: Mosque community

Habibullah is a warm and dedicated member of his mosque community, where he spends most of his time. He finds comfort in the peaceful environment of the mosque and enjoys contributing to its upkeep. One of his favorite activities is the monthly *gotong-royong*, where everyone comes together to clean and care for the mosque. While Habibullah is diligent and community-oriented, he doesn't have proper tools to clean the

mosque's carpets or other things effectively. He needs to rent a specialized cleaning tool but lacks knowledge about the specifications required for the right equipment. Navigating rental services or understanding technical details can feel frustrating and overwhelming for him.

What Habibullah really wants is a simple, friendly AI-powered app that feels approachable. He imagines an AI Avatar that could guide him through the process, offering helpful suggestions and making it easy to choose and book the right specified cleaning tool. With clear steps and a personal touch, this would make him feel supported and more confident in using technology to meet his needs.

persona 3



Name: Amir

Age: 24

Occupation: University Student

Amir is a final-year university student pursuing a degree in education. Between attending classes, preparing for exams, and managing his expenses, Amir struggles to find flexible part-time work that aligns with his schedule. He needs a job that allows him to work on weekends or during his free hours while earning enough to cover his tuition and living expenses. Despite his busy schedule, Amir is enthusiastic and willing to work hard, but he finds it challenging to secure opportunities without prior work experience.

Amir is looking for a platform where he can register as a cleaner and start earning quickly. He expects a simple registration process where he can input his availability, upload necessary documents, and get matched with nearby cleaning jobs. He values transparency in earnings and the ability to view customer reviews to build his reputation. Amir wants a reliable system that helps him balance his studies and work commitments without stress.

1.3 SCENARIO

Book a Cleaning Service (persona 1)

Dr. Shariffah sighed, staring at the pile of grading papers on her desk. Another late night, another mountain of work. She longed for a clean, organized home, but the thought of tackling the dust bunnies in her living room and the grime on her car felt overwhelming. She knew she needed a solution, a way to manage her busy schedule and still have a clean and comfortable space.

Then, she remembered the AI-powered cleaning app she'd heard about. A wave of hope washed over her. Imagine, an app that could understand her specific needs, recommend trusted cleaners, and manage the entire booking process, all while fitting seamlessly into her hectic schedule. With this app, she could finally reclaim her time and enjoy the peace of mind that came with a clean home and car, without sacrificing her dedication to her students and research.

Rent Cleaning Tools (persona 2)

One afternoon, Habibullah stood in the mosque's prayer hall, gazing at the large, well-worn carpet. Despite their best efforts during the monthly *gotong-royong*, the stains and dust seemed impossible to remove with their usual tools. A friend suggested renting a professional cleaning machine, but when Habibullah tried searching online, he was overwhelmed. The technical terms and variety of options left him confused and hesitant to make a decision, worried he might choose the wrong one. Frustrated, he set the idea aside, unsure of what to do next.

Later, Habibullah came across an AI-powered cleaning app that felt simple and approachable. As he explored, a friendly AI Avatar guided him through the process of choosing the right carpet cleaning machine. It asked clear, easy-to-understand questions about the mosque's carpet and suggested a suitable option, explaining its features in plain terms. The Avatar even walked him through booking the tool and arranging delivery, making the entire experience effortless. Feeling reassured and supported, Habibullah finally managed to rent the right equipment, ready to bring new life to the mosque's beloved carpet.

Applying Job as a Cleaner (persona 3)

Amir, a university student, is looking for a flexible part-time job to support his education. He downloads the AI-powered cleaning app after hearing from a friend about opportunities for becoming a cleaner. Using the app, he creates a profile, uploads his identification, and inputs his availability for weekends and evenings with the help of AI. All Amir needs to do is either use a voice to fill the requirements or type to fill the requirements such as name, address and much more.

Within a day, Amir receives a notification that his profile has been verified. He starts receiving job requests from customers in his area. His first task is cleaning an office space on Saturday morning. After completing the job successfully, he receives positive feedback from the client, boosting his confidence and profile rating. Over time, Amir balances his studies and work commitments effectively, earning a steady income through the app's user-friendly and reliable system.

2.0 TASK ANALYSIS

2.1 INTRODUCTION

A large selection of high-quality rental house cleaning equipment is available from Clean Like Pro, which offers effective solutions for a range of cleaning requirements. Their products, which range from sophisticated spray extraction carpet cleaners to multipurpose wet and dry vacuums with HEPA filtration, are made to be both incredibly effective and simple to use. For more difficult jobs, they provide high-pressure washers

and heavy-duty vacuums that are perfect for cleaning outdoors, and steam cleaners that sanitise without the use of chemicals, getting rid of up to 99.99% of germs. Additionally, air blowers guarantee that cleaned surfaces dry more quickly, resulting in a smooth and efficient process. In the meantime, Recommend.my is the preferred website in Malaysia for applying for cleaning jobs or hiring reputable cleaners. With the support of clear reviews and adaptable options, it links clients with vetted service providers for everything from general house cleaning to specialised services. Through the platform's dependable matchmaking and simple booking process, job seekers can use it to find safe opportunities with households and businesses. Whether you want to do it yourself or hire a professional, these services together guarantee that you have access to high-quality cleaning solutions.

2.2 DERIVATION OF HTA

a) HTA for Task 1 - Order Cleaner

User 1 : Lecturer

Link

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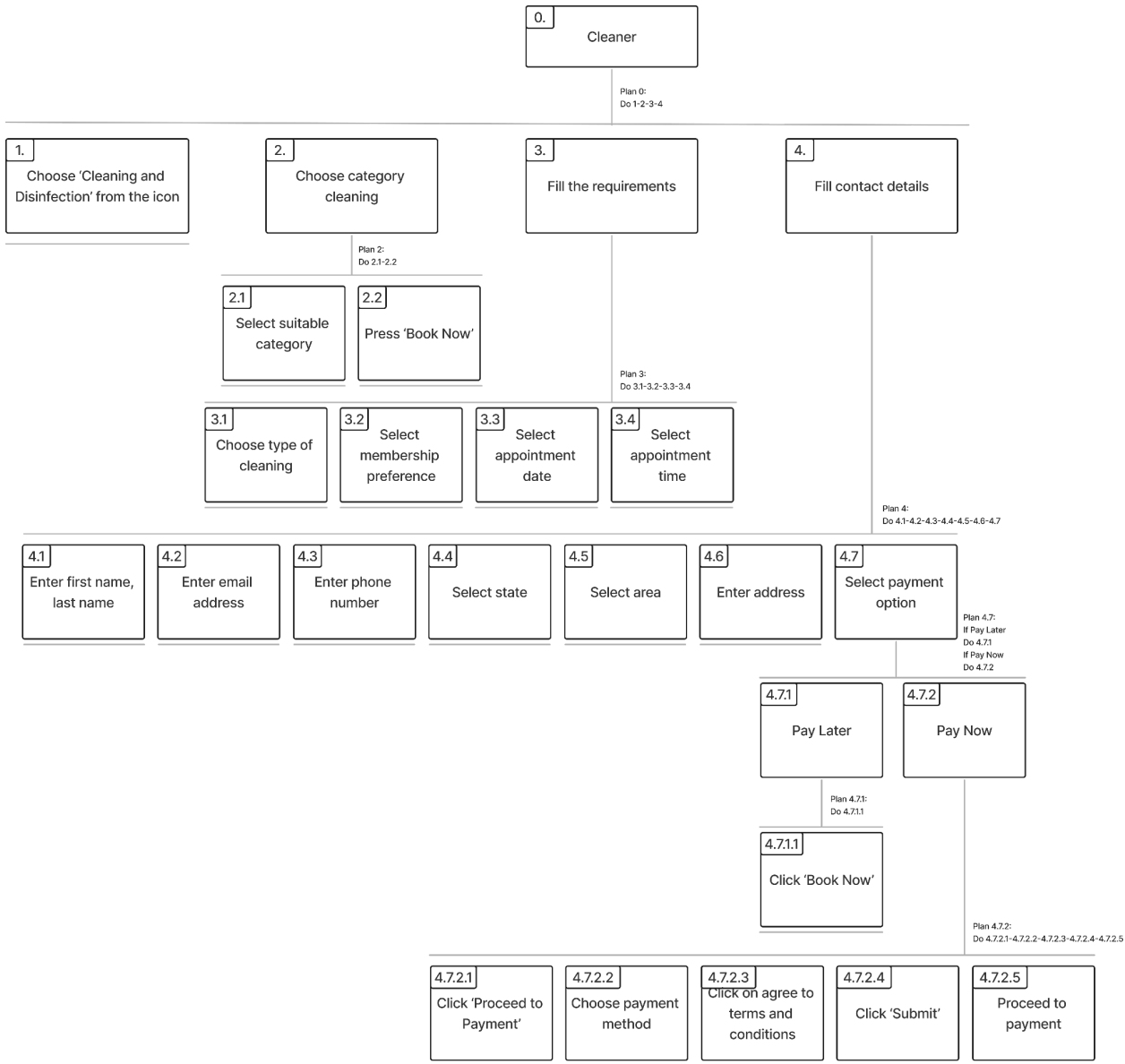
Textual Presentation

0 Cleaner

1. Choose 'Cleaning and Disinfection' from the icon
2. Choose category cleaning
 - 2.1. Select suitable category
 - 2.2. Press 'Book Now'
3. Fill the requirements
 - 3.1. Choose type of cleaning
 - 3.2. Select membership preference
 - 3.3. Select appointment date
 - 3.4. Select appointment time
 - 3.5. Click 'Next'
4. Fill contact details
 - 4.1. Enter first name, last name
 - 4.2. Enter email address
 - 4.3. Enter phone number
 - 4.4. Select state

- 4.5. Select area
- 4.6. Enter address
- 4.7. Select payment option
 - 4.7.1. Pay Later
 - 4.7.1.1. Click 'Book Now'
 - 4.7.2. Pay Now
 - 4.7.2.1. Click 'Proceed to Payment'
 - 4.7.2.1.1. Choose payment method
 - 4.7.2.1.2. Click on agree to terms and conditions
 - 4.7.2.1.3. Click 'Submit'
 - 4.7.2.1.4. Proceed to payment

Diagram Presentation



User 2 : Mosque Community

Link

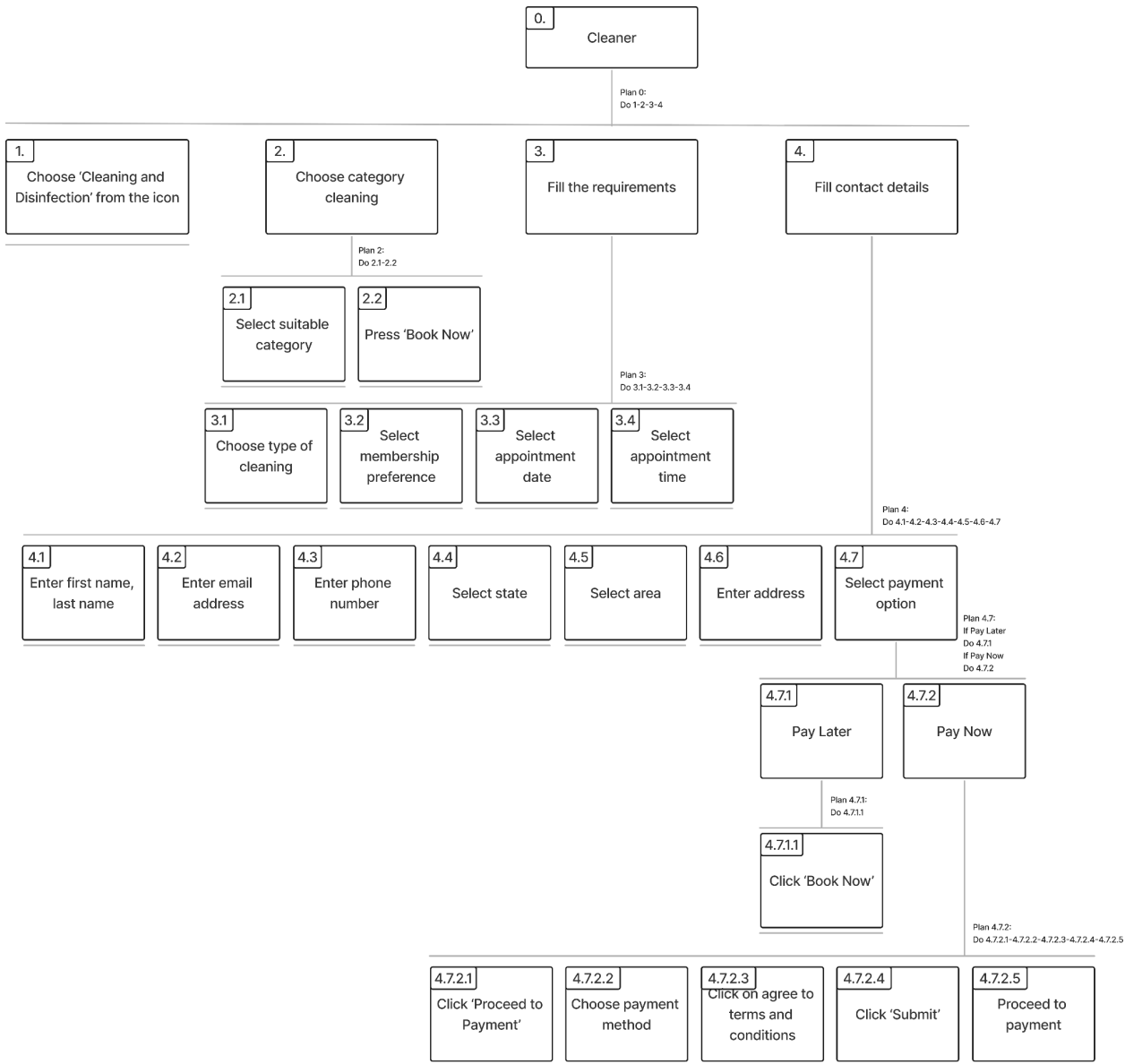
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 - 4.7.1.1. Click 'Book Now'
 - 4.7.2. Pay Now
 - 4.7.2.1. Click 'Proceed to Payment'
 - 4.7.2.1.1. Choose payment method
 - 4.7.2.1.2. Click on agree to terms and conditions
 - 4.7.2.1.3. Click 'Submit'
 - 4.7.2.1.4. Proceed to payment

Diagram Presentation



User 3 : Student

Link:

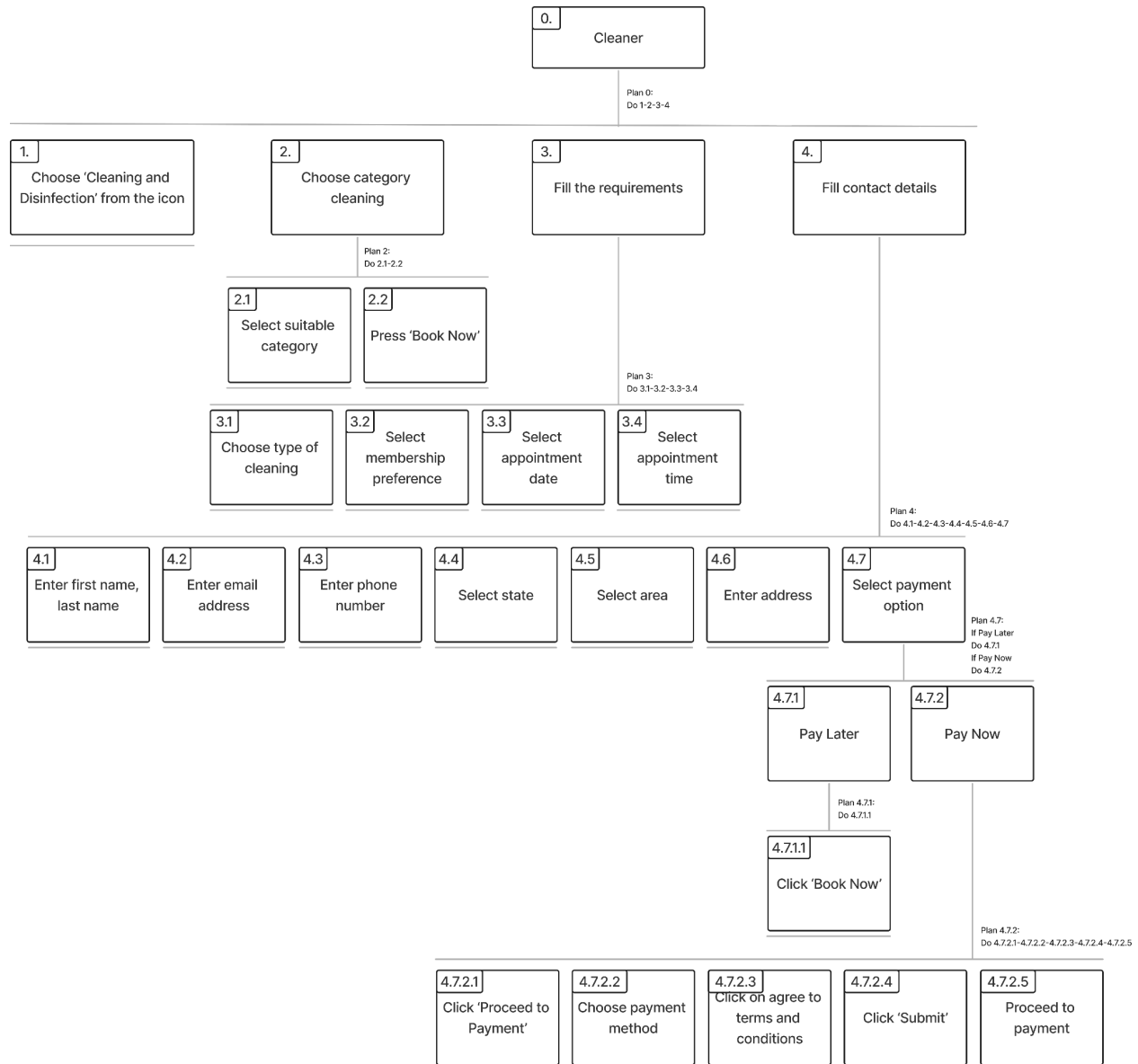
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Textual Presentation

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 - 4.7.2. Pay Now
 - 4.7.2.1. Click 'Proceed to Payment'
 - 4.7.2.1.1. Choose payment method
 - 4.7.2.1.2. Click on agree to terms and conditions
 - 4.7.2.1.3. Click 'Submit'
 - 4.7.2.1.4. Proceed to payment

Diagram Presentation



Findings from the HTAs for Task 1

For Task 1, it is evident that all the Human Resource Tasks (HTAs) for each user are identical. This is because they are required to follow the same process as other users in hiring a cleaner. Regardless of the specific role, all users appear to be facing the same challenge which is difficulty during the hiring process for a cleaner. While the process itself is not particularly arduous, it is indeed complex. Some users find it challenging to select the suitable service and complete the necessary information, particularly if they are unfamiliar with the process.

b) HTA for Task 2 - Rent Cleaning Tools

User 1 : Lecturer

Link :

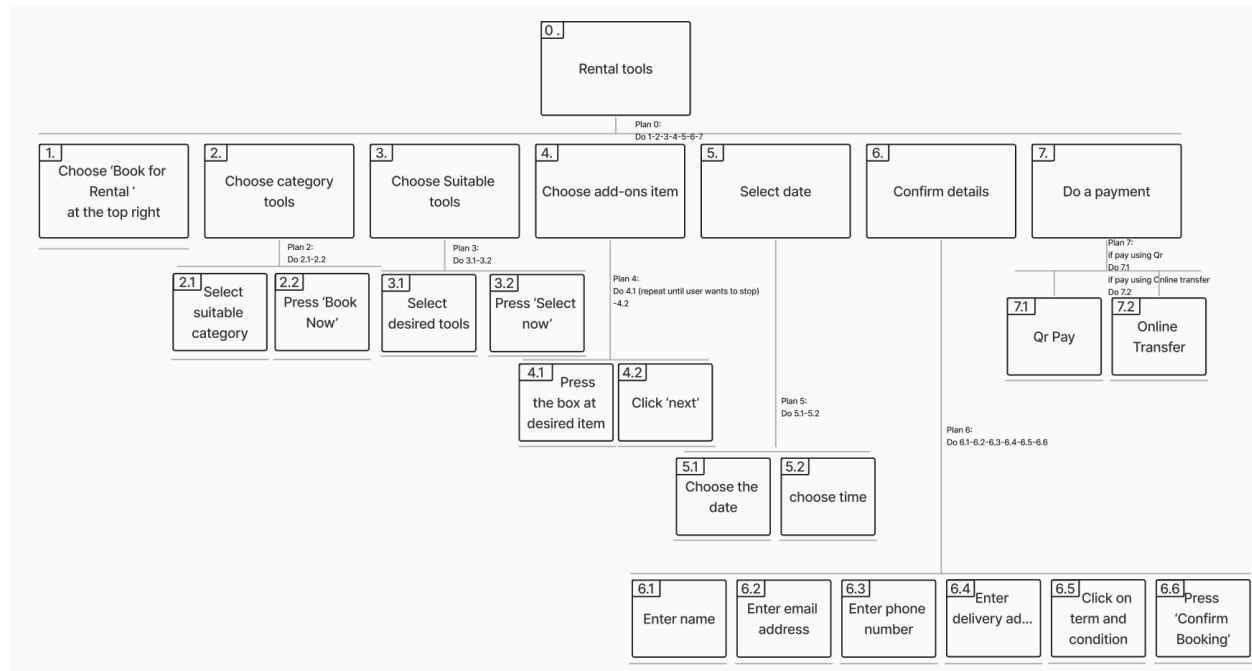
<https://drive.google.com/drive/folders/1g-R3QGfrwpuPiR1F-2pYip5Ryrt4n3zx?usp=sharing>

Textual Presentation:

0 Rental tools

1. Choose 'Book for Rental' at the top right
2. Choose category tools
 - 2.1 Select suitable category
 - 2.2 Press 'Book Now'
3. Choose Suitable tools
 - 3.1 Select desired tools
 - 3.2 Press 'Select now'
4. Choose add-ons item
 - 4.1 Press the box at desired item
 - 4.2 Click 'next'
5. Select date
 - 5.1 Choose the date
 - 5.2 Choose time
6. Confirm details
 - 6.1 Enter name
 - 6.2 Enter email address
 - 6.3 Enter phone number
 - 6.4 Enter delivery address
 - 6.5 Click on term and conditions
 - 6.6 Press 'Confirm Booking'
7. Do a payment
 - 7.1 Qr Pay
 - 7.2 Online transfer

Diagram Presentation:



User 2 : Mosque Community

Link

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Textual Presentation:

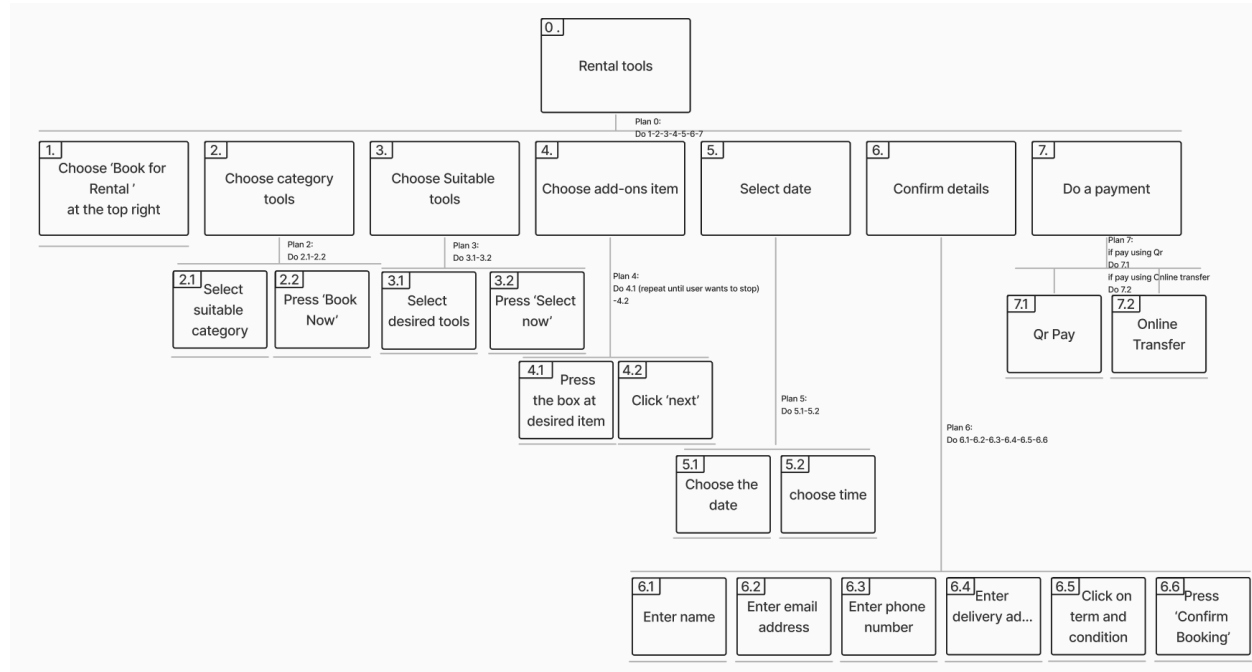
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 - 5.1 Choose the date
 - 5.2 Choose time
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 - 6.2 Enter email address

- 6.3 Enter phone number
- 6.4 Enter delivery address
- 6.5 Click on term and conditions
- 6.6 Press 'Confirm Booking'

- 7. Do a payment
 - 7.1 Qr Pay
 - 7.2 Online transfer

Diagram Presentation:



User 3 : Student

Link

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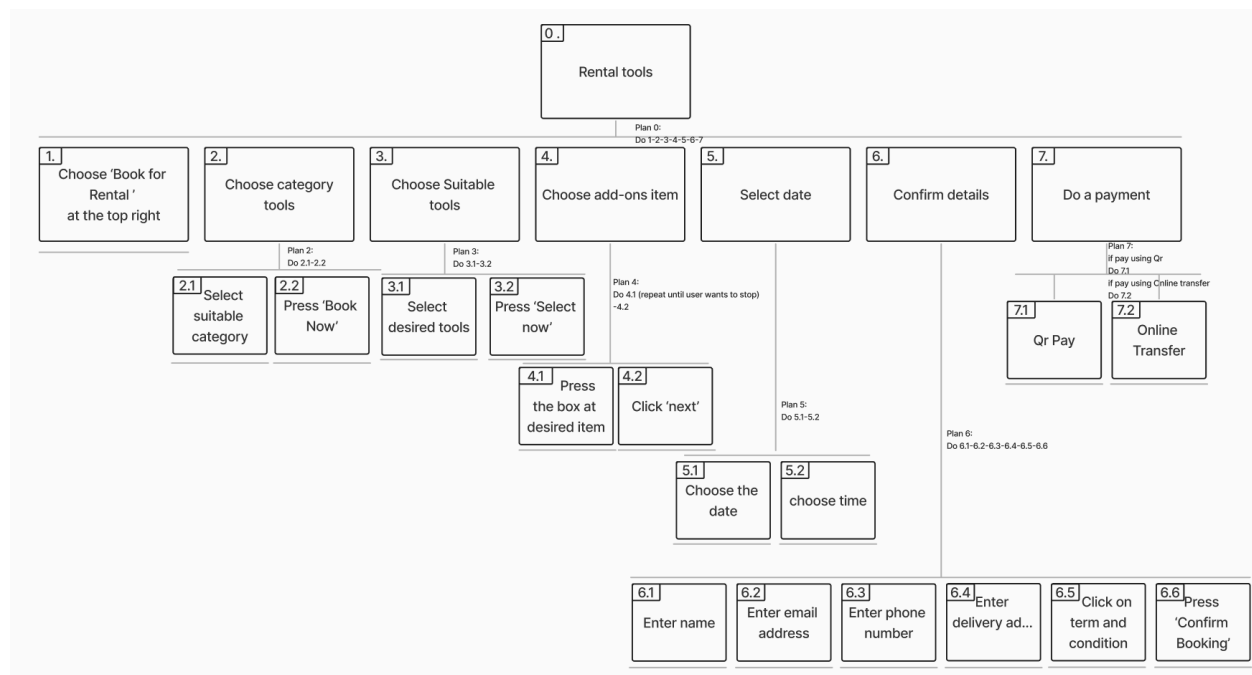
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6. Confirm details
 - 6.1 Enter name
 - 6.2 Enter email address
 - 6.3 Enter phone number
 - 6.4 Enter delivery address
 - 6.5 Click on term and conditions
 - 6.6 Press 'Confirm Booking'
7. Do a payment
 - 7.1 Qr Pay
 - 7.2 Online transfer

Diagram Presentation:



Findings from the HTAs for Task 2

For Task 2, we can observe that all the HTAs for each user are the same, this is because they need to do the same process as others to rent the tools. It does not matter what the role is, all of the users seem to have the same problem which is having difficulty during the process of renting. The process is not that hard, it is just complicated and some users

find that it is hard to choose the category or brand of tools if they do not have enough knowledge and understanding about the tools itself.

c) HTA for Task 3 - Applying Job as a Cleaner

User 1 : Lecturer

Link :

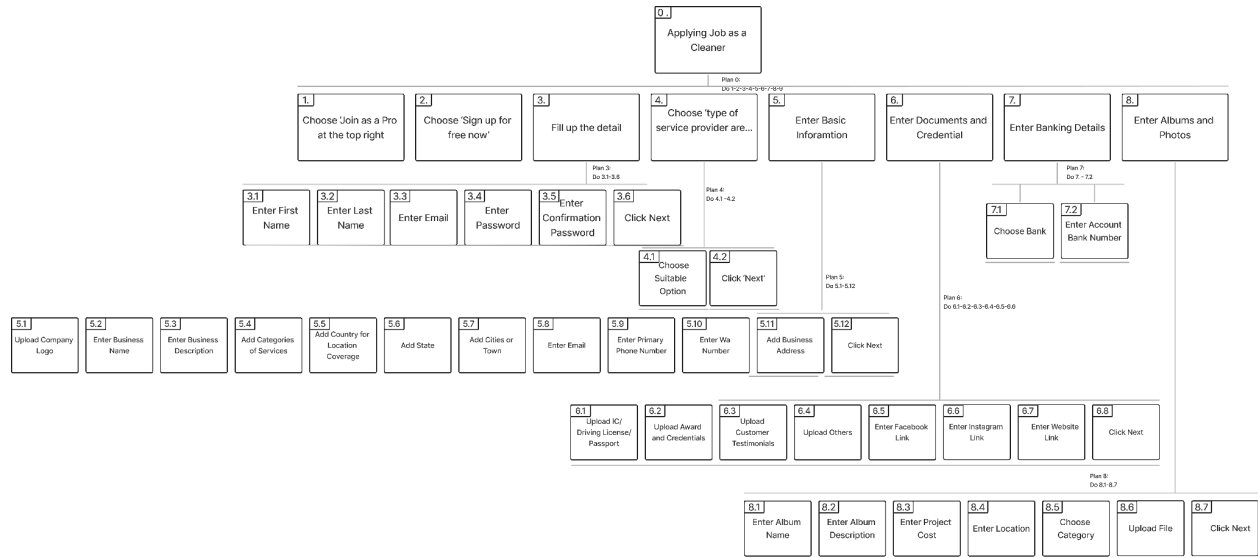
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Textual Presentation

1. Choose 'Jois as Pro' at the top right
2. Choose 'Sign up for free now'
3. Fill up the detail
 - 3.1 Enter First Name
 - 3.2 Enter Last Name
 - 3.3 Enter Email
 - 3.4 Enter Password
 - 3.5 Enter Confirmation Password
 - 3.6 Click Next
4. Choose What type of service provider are you?
 - 4.1 Choose suitable option
 - 4.2 Click Next
5. Enter Basic Information
 - 5.1 Upload Company Logo
 - 5.2 Enter Business Name
 - 5.3 Enter Business Description
 - 5.4 Add Categories of Services
 - 5.5 Add Country for Location Coverage
 - 5.6 Add State
 - 5.7 Add Cities or Town
 - 5.8 Enter Email
 - 5.9 Enter Primary Phone Number
 - 5.10 Enter Wa Number
 - 5.11 Add Business Address
 - 5.12 Click Next

6. Enter Documents and Credential
 - 6.1 Upload IC/Driving License/Passport
 - 6.2 Upload Award and Credentials
 - 6.3 Upload Customer Testimonials
 - 6.4 Upload Others
 - 6.5 Enter Facebook Link
 - 6.6 Enter Instagram Link
 - 6.7 Enter Website Link
 - 6.8 Click Next
7. Enter Banking Details
 - 7.1 Choose Bank Name
 - 7.2 Enter Account Number
8. Enter Albums and Photos
 - 8.1 Enter Album Name
 - 8.2 Enter Album Description
 - 8.3 Enter Project Cost
 - 8.4 Enter Location
 - 8.5 Choose Category
 - 8.6 Upload File
 - 8.7 Click Next

Diagram Presentation



User 2 : Mosque Community

Link :

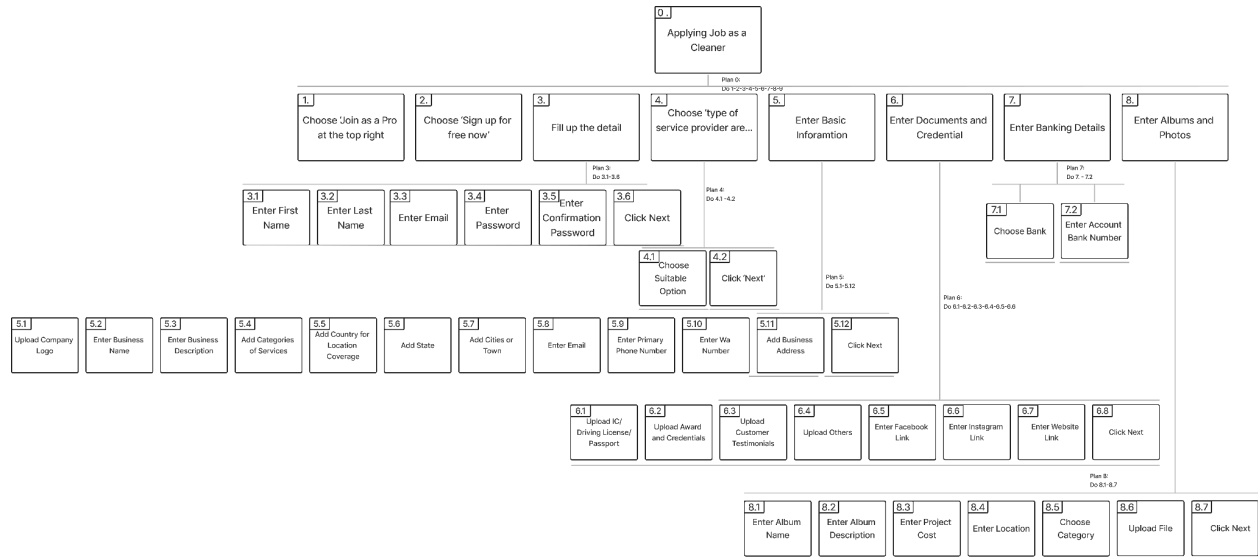
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 - 8.5 Choose Category
 - 8.6 Upload File
 - 8.7 Click Next

Diagram Presentation



User 3 : Student

Link :

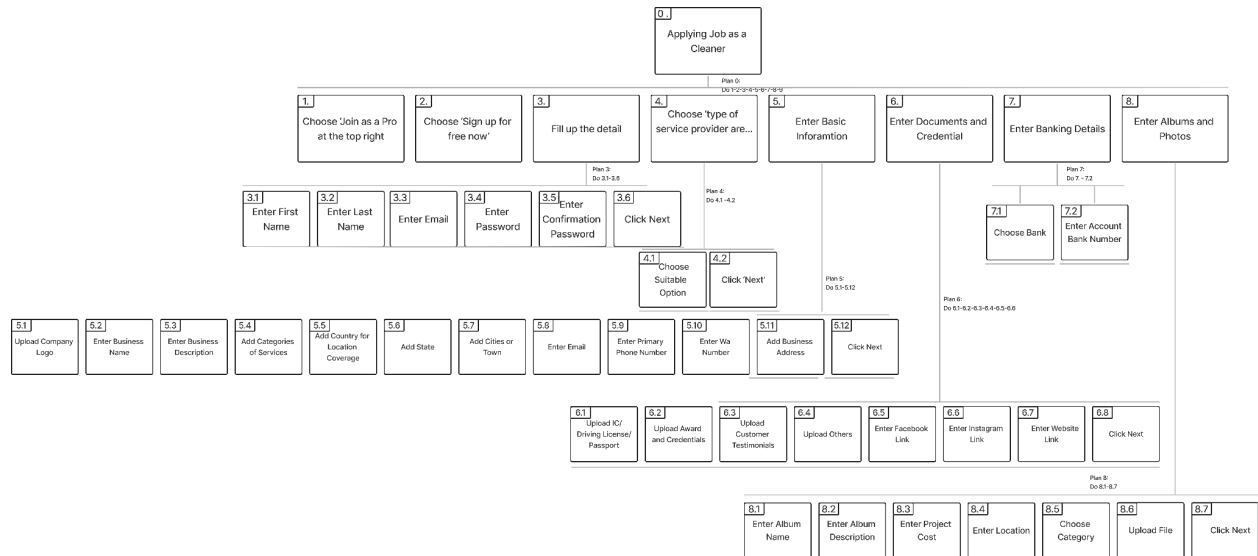
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Diagram Presentation



Findings from the HTAs for Task 3

We can see that all of the HTAs for each user in Task 3 are identical because they must follow the same steps as everyone else in order to apply for a cleaner job. Regardless of their role, all users appear to be experiencing the same issue, which is difficulty during the application process.

2.3 DESIGN REQUIREMENT

Based on the analysis of three cleaning-related websites, several key improvements and features have been identified to enhance the development of a new cleaning service platform. By combining the most advantageous aspects of these platforms into a single mobile application, we can minimize redundancy, optimize device storage, and provide a smoother, more user-friendly experience. This unified application will also feature a contemporary and intuitive design, facilitating user navigation and service access.

The application will incorporate a streamlined registration and booking system that enables customers to locate cleaners by location, service type, and availability. Service providers can also manage their schedules and profiles through a user-friendly dashboard, ensuring expedited bookings and a hassle-free experience for both customers and cleaners.

Furthermore, the application will feature a marketplace inspired by Clean Like Pro, where users can purchase or rent essential cleaning tools and products. This

marketplace will provide product details, reviews, and direct purchasing options, making it convenient for users to acquire the necessary equipment.

To enhance communication, the application will transmit real-time notifications regarding booking confirmations, schedule modifications, or cancellations. These updates will be disseminated via email, SMS, or in-app alerts, ensuring users remain informed about their bookings.

Privacy and security will also be paramount. The application will implement two-factor authentication and encryption to safeguard user data and adhere to privacy regulations. This guarantees users' trust in the platform's ability to handle their information securely.

Finally, the application will be optimized for mobile devices, featuring a clean and responsive design that is compatible with various screen sizes. With expedited loading times and user-friendly navigation, the application will provide an immersive and enjoyable experience for all users.

By integrating the most advantageous features from these three platforms, this application will offer a reliable, efficient, and contemporary solution for cleaning services, establishing a new benchmark in the industry.