**FINAL PROJECT REPORT**

**Project Title**: NEW SMILE Dental Clinic application

**Course**: Human-Computer Interaction: Innovation Project

**Team members and roles**:

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**Abstract**

This project is about designing a dental clinic application called NEW SMILE. The app helps users book appointments easily and find important information about their dental visits. We used Figma to create the design and followed HCI principles to ensure the app is simple, friendly, and useful. We also did user research and testing to improve the design. In the end, we made a working prototype that is easy to use for everyone, especially first-time patients.

**Introduction**

Many people find it difficult to book a dental appointment or know what to do before visiting a clinic. Our team created a simple and helpful app to solve this problem. The NEW SMILE app lets users book appointments, find dentists, and understand the process clearly. We used HCI methods to ensure the design fits users' needs. The app is made for people of all ages, including students, working adults, and elderly users.

**Innovative Concept**

The NEW SMILE app stands out from typical clinic websites and apps by offering a clean, friendly, and easy-to-use design that encourages users to act with confidence. One unique feature is the dedicated “First-Time Patient” page, which helps new users understand what to expect during their first dental visit, making the experience less intimidating. The app also provides a clear list of available dentists, complete with names, job positions, and years of experience, helping users make more informed choices based on their preferences. Booking an appointment is made simple through a short and straightforward form, avoiding the need for users to scroll through multiple pages or input unnecessary details. After confirming a booking, the app displays a confirmation message and reminds users to check their email for further details. Navigation is smooth and intuitive, thanks to a bottom tab bar that gives quick access to key sections like Home and Profile. The app is designed using Human-Computer Interaction (HCI) principles to ensure maximum clarity, accessibility, and user satisfaction for people of all ages and tech comfort levels.

**Target Users and User Research**

Our app is made for students, working people, and older adults. We chose these groups because they often face problems with booking or understanding dental services. To learn what users want, we created a short survey and talked to a few people. Many said they prefer using an app instead of calling the clinic. Some said they want to see the dentist's details before choosing. Others said that first-time visits are stressful when they do not know what they need to do and what will happen. This feedback helped us decide what features to include and how the app should look.

**Design Process**

We started by drawing basic ideas on paper to plan the screens. After that, we made digital wireframes to show the layout. Then, we used Figma to create the final version. We designed the main screens, including Home, Login, Sign Up, Contact Us, First-Time Patient, Find Specialist, Booking Form, and Profile. We chose soft mint colors, large buttons, and simple icons to make everything easy to read and use. During the design, we tested the app and made changes to improve it.

**High Fidelity Prototype**

Our final prototype includes all the important parts of the app. The Home screen shows a welcome message and quick access to contact us.

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| First Page  This is the welcome screen; the first page users see when they launch our dental app. It features our logo at the center, along with a brief and friendly introduction to what the app offers. The clear and inviting “Get Started” button encourages users to begin their journey, taking them directly to the sign-up page. From there, users can quickly create an account and start exploring features like booking appointments, viewing dentist profiles, and managing their visits—all in one convenient place. |  |

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| Login and Sign-up Page  This is the sign-up page, designed to help new users create an account with ease. The form includes simple, clearly labeled fields for entering a name, email address, and password. Users can choose to sign up or log in using the dedicated buttons, making navigation straightforward. For added convenience, we’ve included a “Forgot Password?” link that guides users through resetting their password if needed. Additionally, a “Continue with Google” option allows for quick and secure access. The page is carefully designed to be fast, intuitive, and user-friendly for people of all ages, ensuring a smooth start to their experience with our app. | Login Page | Sign Up Page |

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If the user clicks on the "Forgot Password" link on the login page, they will be directed to a password recovery page where they are prompted to enter their registered email address. After submitting the email, the user will be guided to a screen where they can create a new password, which must be confirmed by entering it a second time for accuracy. To assist with this process, a "Show Password" icon is available for users to view their password as they type. Once both the new password and confirmation are entered correctly, the user can click the “Reset Password” button. This will take them to a success page, confirming that their password has been successfully updated. The success page also includes a "Go Back to Login" button, allowing users to return to the login screen and access their account with their new password.

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This page appears when a user chooses the “Continue with Google” option from either the sign-up or login screen. The process begins by asking the user to enter their Google email address, followed by their password. To support ease of use, especially for users who may have difficulty typing, we’ve included a “Show Password” checkbox so users can clearly see what they are entering. If the user forgets their Google password, there is a built-in option to reset it directly from this flow. After successfully resetting their password, a confirmation page appears, letting the user know that their password has been updated. This page also features a “Go Back to Sign In/Login” button, which redirects users back to the login screen so they can resume accessing the app. This smooth and secure process ensures users have multiple options to log in comfortably and continue using the NEW SMILE app without hassle.

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| Home Page  The Home page features a friendly welcome message and image, with quick-access buttons like “Book Now” and “Contact Information.” Icons clearly show available dental services, and a feedback section displays user comments and star ratings to show users’ personal experience. It also includes an easy navigation bar (Home & Profile) and is designed to scroll vertically for smooth browsing. |  |  |

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| Contact Us Page | The Contact Us page  This page shows basic info and includes a “Book Appointment” button that takes users to the booking page with all available specialists and a “Get Started” button for new users that will take them to the First-Time Patient page.  That page explains what to do before visiting the clinic, like checking in, filling out a form, and meeting the dentist. In this page, it has a “Schedule your appointment” button that will take the user to properly book their appointment with a specialist. | First-Time Patient Page |

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| Find the specialist page  When users choose a dentist on the Find Specialist page, they go to the Booking Appointment page. This page will show a list of dentists that includes their profile photo, full name, position, years of experience, and even a rating. Once the user wants to book an appointment with one of the specialists, it will lead the user directly to the appointment form. |  |

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| Form 1 | Form 2 | Form 3 | Form 4 |

Appointment Form page

Here, users can fill in their name, date of birth, contact details, preferred date and time, and an optional message. After completing the form, the user clicks on the “Confirm Appointment” button at the bottom to finalize their request. This action will send the information to the clinic and begin the appointment process.

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| Confirm Appointment Page  This page appears after a user successfully submits their appointment request by clicking the “Confirm Appointment” button. It features a clear success icon, a confirmation message, and a follow-up action button. The message reassures users that their request has been sent to the clinic and includes a gentle reminder to check their email for further details or confirmation. |  |

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| Profile page  The Profile page provides users with a clear overview of their personal information, including their user ID, email address, and phone number. It also includes an option to update or change their password for added security. This can enable users to be in control of their personal information. The layout is well-organized and easy to navigate, ensuring users of all ages can manage their account details without confusion. |  | Here you can change your password, then reset it with the button or go back to undo. | This is a successful change password page with a “go back to profile page” button. |

**Usability Testing**

We tested our prototype with 3 users to understand how easy and effective it was to use. All users gave positive feedback on the layout and navigation, saying the app looked clean and was easy to explore.

User 1 found the overall layout of the app clean and easy to navigate. She especially liked how the home page and dentist profiles were organized. However, she mentioned that some button labels were unclear, which made them hesitate before clicking. Based on this, we improved the wording of the buttons for better clarity.

User 2 tested the flow from “Contact Us” to “First Time Patient” and appreciated the helpful information provided. However, they found the booking form a little too long and suggested that some fields were unnecessary. As a result, we simplified the booking form to make the process quicker.

User 3 completed all tasks smoothly without any confusion. They liked the design and commented that it felt modern and professional. Their only suggestion was to slightly increase text size for better readability. We adjusted font sizes in key areas based on this feedback.

**HCI Principles**

We applied key Human-Computer Interaction (HCI) principles throughout the design of our app to ensure a user-friendly and efficient experience.

One important principle we used is visibility—all buttons, labels, and icons are clearly displayed, so users always understand what actions they can take and what each element does. This reduces confusion and increases confidence while navigating the app.

Another principle we focused on is consistency. Every screen follows a unified style, layout, and color scheme, allowing users to develop a sense of familiarity as they move through different sections. This makes the app feel more predictable and easier to learn.

We also prioritized feedback by making sure users receive immediate responses after performing actions. For example, once a user books an appointment, a confirmation message appears, letting them know the request was successful and prompting them to check their email. These feedback cues help users feel reassured and informed throughout their journey.

By combining these HCI principles—visibility, consistency, and feedback—we’ve created an app that is not only functional but also comfortable and accessible for users of all ages.

**Challenges and Lessons Learned**

Throughout the project, we faced several challenges that helped us grow as designers. One of the key difficulties was creating a design that worked seamlessly for both new and returning users. We wanted to ensure that the app was intuitive for first-time users while providing a quick and efficient experience for those returning. Another challenge was simplifying the app's design without losing essential features or compromising functionality. Balancing simplicity with usability took careful consideration and adjustments.

Additionally, connecting all the pages smoothly in Figma required a significant amount of time and effort to ensure smooth navigation and a seamless user flow. We learned that even small design details—like button placement or transitions—had a big impact on the user experience.

User testing played a crucial role in identifying issues we hadn’t noticed. It highlighted subtle problems and gave us insights into how real users interacted with the app, allowing us to make informed changes. We also discovered that even small design decisions could make a significant difference in overall usability.

Finally, we learned a great deal about teamwork and collaboration. Working together allowed us to share feedback, combine our strengths, and create a more effective final product. Applying Human-Computer Interaction (HCI) principles throughout the project helped us ensure that the app was not only functional but also easy to use and accessible. These experiences have given us valuable insights into both the design process and effective team collaboration.

**Conclusion**

The NEW SMILE Dental application is designed to help users book appointments quickly and efficiently, while also boosting their confidence about their dental visits. With its simple, user-friendly interface, the app offers a smooth experience for both first-time patients and regular users. It guides new patients through the process, providing helpful information and ensuring they feel comfortable with their appointment choices. Users can easily select a dentist, choose a convenient time, and receive clear confirmation of their booking.

We carefully followed Human-Computer Interaction (HCI) principles to create a design that enhances usability, making it intuitive for people of all ages. Through thorough user testing, we were able to refine the app and address any issues, ensuring it meets the needs of a wide range of users. We believe this design not only simplifies the dental booking process but also contributes to making dental care more accessible and less stressful for many people.