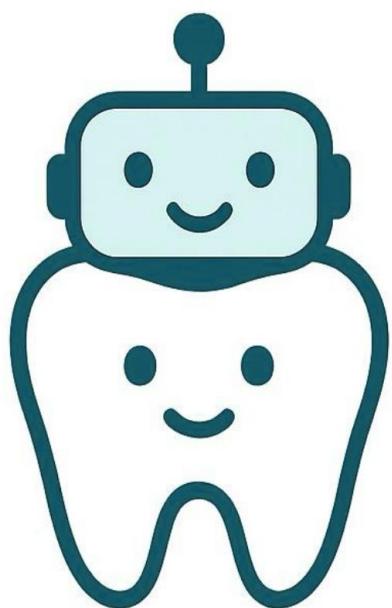


# UI/UX RESEARCH PROJECT



# DentoBot

Your Smart Dental Assistant

**PRESENTED BY**

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## **PRODUCT IDEA**

Product Name: Dentobot — Your Smart Dental Assistant

### **Concept:**

Dentobot is an AI-powered chatbot designed to promote dental health awareness and assist patients with everyday oral care queries. It provides reliable information on dental hygiene, preventive care, and treatment options while helping patients identify when they should visit a dentist.

### **Key Features:**

- 24/7 conversational assistant for dental health queries
- Personalized reminders for check-ups
- Symptom checker for minor dental issues
- Educational content (videos, infographics, FAQs)
- Integration with local dental clinics for appointment booking

## **USER RESEARCH METHODS**

For the dentobot , we will carry out mixed method user research that includes both qualitative and quantitative approaches

The chatbot is intended for two main groups of users i.e. patients and dentist/ dental staff.

### **RSEARCH METHOD FOR PATIENTS**

#### **1. User Interviews (Qualitative):**

Why: To understand how patients currently look for dental information,

what problems they face, and what they hope to get from an AI chatbot.

How: Conduct 1-on-1 semi-structured interviews with 10 to 15 patients.

## 2. Online Surveys (Quantitative):

Why: To gather information from a larger group of patients about their use of digital tools and their openness to using a chatbot for dental-related queries

How: Use a short online questionnaire via platforms like Google Forms or Typeform.

## 3. Usability Testing (Qualitative + Observational):

Why: Once a prototype is developed, we will watch how easily users can interact with the chatbot to perform certain tasks

How: Watch 8-10 users complete specific task like booking an appointment or ask about a tooth pain.

# **Research Methods for Dentists and Clinic Staff**

## 1. Expert Interviews (Qualitative)

Why: Dentists are experts in their field. Their input is important for making sure the chatbot is accurate and fits well into clinic's routine

How: Conduct one-on-one or group interviews with 6 to 10 dentists or clinic staff.

## 2. Contextual Inquiry / Observation

**Why:** This helps you understand how the clinic works, including how staff handle calls, schedule appointments and answer common questions.

**How:** Watch them in action as they deal with daily tasks like managing phone calls or responding to frequently asked questions.

### 3. Co-Design Workshop

Involving dentists in shaping the chatbot's way of talking and how it interacts.

**How:** Run a 1- to 2-hour workshop with small groups of dentists.

**Activity:**

- Look at sample chatbot conversations.
- Discuss what kind of language feels safe and caring.
- Work together to improve the chatbot's responses.

### **Why This Approach Works**

Patients' input helps make the chatbot approachable, easy to use, and reliable.

Dentists' input ensures the chatbot is safe, correct, and useful for the clinic.

By combining both, we get a chatbot that:

- Effectively meets patient needs

- Stays within clinical guidelines
- Makes things easier for the staff
- Builds lasting trust in AI-assisted care

## **Objective of the User Research**

The main goals of doing user research for dentAI are:

1. To find out the real needs and problems that patients and dentist face when communicating about dental care and managing appointments.
2. To learn what users expect from an Ai chatbot when getting healthcare advice and what makes them trust it.
3. To figure out which features are most important to users, such as scheduling, reminders and checking symptoms.
4. To decide on the best tone and style of communication—whether professional, friendly, or casual—that users prefer.
5. To spot any problems with how easy the chatbot is to use, so it remains simple and easy to access.
6. To collect input from dentists about the safety, accuracy, and how well the chatbot fits into their daily work.

## **Questions for the User Research**

### **◊ For Patients**

- When you have a dental issue, what is the first thing you do?
- Have you ever searched online or used a chatbot for dental advice?

- What kind of dental questions do you often want quick answers for?
- What would make you trust or distrust a chatbot?
- How comfortable are you booking dental appointments online?

## ◊ For Dentists / Clinic Staff

- What are the most common patient questions you receive every day?
- How do you currently manage appointment bookings and follow-ups?
- What kind of information should a chatbot be allowed to provide to patients?
- What concerns do you have about AI giving dental guidance?
- How could a chatbot make your daily workflow easier?
- How do you think patients should be redirected from the chatbot to a real dentist when needed?

## Data / Insights

After doing interviews, surveys, and testing how users interact with the system, we'll gather and look through the data to spot common ideas and trends.

### What Patient wants?

Most patients look for fast and dependable answers to basic dental issues. They like a warm and comforting way of speaking, not complicated medical terms.

Keeping their information safe and private is very important when they share personal details.

They want it easy to book appointments and set reminders.

Many feel nervous about going to the dentist and value kind and

understanding responses from the chatbot.

### What dentist wants?

Dentists often get the same questions repeatedly, which a chatbot can handle automatically.

They want correct and safe information to be shared with patients.

A chatbot could help reduce busy work and make communication smoother.

Dentists stress that the chatbot shouldn't provide medical diagnoses, but it can offer helpful information and help decide when to see a dentist.

### How the Insights Will Be Used

The findings will help with:

Creating characters that represent both user groups.

Designing how the chatbot speaks (tone, flow, and style of responses). Choosing which features to focus on first, like booking, reminders, and after-care advice.

Improving the user interface and overall experience based on what we learn.

## **USER PERSONAS & STORIES**

### USER STORY 1- Dental Intern

Dr. Priya Sharma is a 24-year-old dental intern. During her time on clinical rotations, she often talks to patients who aren't aware of basic oral hygiene practices. Dr. Priya wants to teach patients about oral health beyond the clinic, using modern tools and technologies.

### User Needs: -

Dr. Priya needs a dependable and engaging way to teach patients about oral health in easy-to-understand language. She wants to cut down on repetitive counselling by using a tool that can automatically answer common patient questions. She also wants to track the most common concerns patients have so she can better understand where there are gaps in awareness. She needs digital tool that is easy to share with patients, especially during outreach and online consultations.

### Solution: -

- A Dental AI Chatbot for Oral Health Awareness can meet these needs. The chatbot can give quick, accurate answers to questions about oral hygiene, dental care, and common dental problems.
- It can offer personalized tips and reminders, use simple images and explanations, and can be available around the clock through mobile or web apps.
- Additionally, it can collect data on the most frequently asked questions, helping Dr. Priya identify key areas where patients need more education.
- This way, she can save time, improve patient education, and better connect with public.

### **User persona 1 – Dental Intern**

Name: Dr. Priya Sharma

Age: 24

Occupation: Final year dental intern

Location: Mumbai, India

Education: Bachelor of dental Surgery (BDS)

Primary Device- Smartphone

Personality Traits: Curious, empathetic, detail-oriented, always learning

Background:

Priya is a dental intern she is currently doing her clinical rotation in a hospital, where she assists her seniors, interact with patients, and manage basic administrative tasks. She is aware about AI being introduced in healthcare and wants to explore how technology can make patient communication smoother.

Quotes:

"Patient frequently ask me the same question each day, if someone could take care of that, I would have more time to focus on learning and assisting dentists"

Goals:

- To provide quick and correct answers to patient's common problems
- To save time on repetitive tasks
- To use dento AI as learning aid for improving her own communication and triage skills

Pain Points/ Frustrations

- Patient constantly ask the same thong ("Can I eat after my filling")
- Between assisting in procedures, she doesn't get time to give detailed explanation to each patient
- Most patients ignore complex instructions and forget after leaving the clinic

Expectations

Even though Priya haven't started using chatbot yet, she hopes it could:

- Answer common questions of patient automatically

- Provide safe, verified information that align with dentist would say
- Be easy to use by both dentist and patient
- Encourage patient trust by being friendly, polite and clear

## **USER STORY 2 Dental Patient:-**

Rahul Sharma is a 30-year-old sales executive who lives in Pune. His job requires him to travel often, work irregular hours, and deal with a lot of stress. Even though he takes care of his basic hygiene, he doesn't always make time for regular dental check-ups because of his hectic schedule. He sometimes experiences problems like tooth sensitivity and bleeding gums, but instead of going to the dentist, he tends to look for quick answers online.

### User Needs: -

Rahul wants quick access to reliable information about oral health without having to visit a dentist. He needs easy-to-understand explanations about how to prevent dental problems, without using technical language. He wants reminders for dental check-ups and daily oral hygiene routine. He wants to avoid misleading information online but still get helpful, tech-based advice.

### Solution:—

- A Dental AI Chatbot for Oral Health Awareness can deliver clear and simple answers about dental issues
- It offers personalized tips for oral care, guidance
- It is available all the time, 24/7, on his mobile or laptop
- It helps Rahul take charge of his oral health and know when to see a dentist if needed.

## **USER PERSONA 2- Patient**

Name: Rahul Sharma

Occupation: Sales Executive

Location: Pune, India

Tech comfort Level: Moderate

Primary Device: Smart phone, laptop

Personality trait: busy, practical, health-conscious but tends to delay appointments.

Background:

Rahul is a 35-year-old sales executive who sends most of his day meeting clients, travelling and handling calls. His busy work schedule often makes it difficult for him to find time for regular dental check-ups. He sometimes feels tooth sensitivity and mild gum pain, but he usually searches for solution online instead of going to the dentist right away

Quote:

“I usually google my dental problem, but the answer online just makes me more confused”

Goals:

- To get quick and reliable answer about common dental problems without visiting a clinic right away.
- To understand when it's necessary to see a dentist versus when home care is enough.
- To save time by easily booking appointments or checking clinic availability
- To get reminders or follow-up message after appointments.

Pain-Points / Frustrations

- Often confused about whether this dental symptom is serious or not
- Get too many conflicting answers from internet, leading to anxiety.
- Sometimes feels uncomfortable asking small or silly questions at the clinic.
- Finds it hard to schedule appointments due to work commitments.

## Expectations

- Gives accurate, trustworthy advice that's easy to understand.
- Offer quick solutions or preventive care tips for minor dental issues.
- Allow him to book appointment or contact nearby clinic instantly.
- Protect his privacy and not ask for unnecessary personal information.

## **USER STORY 3 Dentist:-**

Dr. Arjun Reddy is a 45-year-old dentist who runs a small clinic in Bangalore. He has been doing this for more than 15 years and has a steady group of patients who trust him. However, he finds it difficult to keep up with the latest technology and the growing expectations of his patients. His clinic has a small team. Dr. Reddy has noticed that many of his patients don't understand the importance of preventive dental care, which often leads to them coming in only when their problems are more serious. He is looking for ways to educate his patients and improve their involvement without making his job any heavier.

### User Needs: -

A straightforward and budget-friendly digital solution to teach patients about proper oral hygiene and prevention. A method to cut down on the time spent explaining basic dental care routines repeatedly. A way to keep patients involved and informed even after their visits. A tool to update his clinic's image by using technology-driven patient support. A better understanding of the common issues patients face so he can improve how he communicates and plans treatments.

### Solution: -

- A Dental AI Chatbot for Oral Health Awareness can act as a virtual helper that gives quick and accurate answers to common questions patients have.

- It can be linked to the clinic's website or WhatsApp, making it easy for patients to get help whenever they need it.
- The chatbot provides customized advice on oral hygiene, sends reminders, and answers frequently asked questions, which cuts down on the need to explain the same things repeatedly.
- It can also give insights into patient interactions, helping Dr. Reddy spot common dental issues that come up again.

By using this AI-based tool, the clinic can boost its reputation and build more trust with patients through a modern, tech-savvy approach to care.

### **USER PERSONA 3- DENTIST**

Name: Dr. Arjun Reddy

Age: 45

Location: Bangalore

Experience: 15 years in private dental practice.

Personality-Trait: Professional, empathetic, detail-oriented, cautious about new technology

Background:

Dr Arjun runs a small busy dental clinic in Bengaluru with two assistants and a receptionist. He uses digital tools like WhatsApp for sending appointment reminders and Google calendar for scheduling. He knows that technology can make clinic operations more efficient. Dr Arjun is open to new ideas but is also careful. He wants to make sure that AI-assisted system introduced in the clinic is accurate, secure, and helpful. He doesn't want something that ends up causing more work or introducing risks.

Quote:

“Most of my time goes in answering calls about simple things. By the end of the day, I have explained post-treatment care at least 10 times, so it becomes hard to keep every patient well informed when the clinic becomes busy”

Goals:

- To improve communication with patient without increasing staff workload.
- To reduce tasks like answering FAQs, follow up messages, and appointment queries.
- To ensure patients gets consistent, trustworthy information even when he's busy
- To maintain a professional image while adopting AI based tools.

#### Pain-points / Frustrations

- Patient often ask the same post- treatment questions (diet, pain, medications)
- Patient information and reminders are mostly handled manually
- Managing both clinic and communication leaves little time for marketing

#### Expectations

- Provide accurate, reliable information that align with dental practice.
- Allow customization- he wants to control what chatbot says to people.
- Be able to handle FAQs automatically
- Save time for him and his staff, not create more work.

## STORY BOARDIING

The storyboard below illustrates the user journey and interaction flow of Dentobot.

The purpose of this storyboard is to depict the key touchpoints in the user experience — registration, topic selection, chatbot interaction, and learning feedback.

This visual narrative helps communicate how Dentobot maintains a user-friendly tone while delivering accurate, educational content about dental care.

## Storyboard Frame Descriptions

1. **Meet Dentobot:** Introduces Dentobot as a friendly guide who teaches users about brushing, hygiene, and cavity care.
2. **Getting Started:** Users register by entering their details to begin a personalized dental learning journey.
3. **Pick Your Topic:** Users choose a topic like brushing, cavities, oral hygiene, or braces care for focused learning.
4. **Chat Begins:** Dentobot interacts through friendly chats, making dental learning simple and engaging.
5. **Learning Through Visual Steps:** Dentobot explains dental care techniques clearly through short, illustrated steps.

## MEET DENTOBOT!



Hi! I'm DentoBot - your friendly guide to keep your smile bright and healthy! I'll teach you all about brushing, hygiene, and cavity care.

## CHAT BEGINS!

Dentobot

Do you know how often you should brush?

Twice a day?

DentoBot interacts through friendly chats, making dental learning simple and interactive.



Step 1: Hold brush at 45° to your gums

1 of 4

DENTOBOT EXPLAINS DENTAL CARE PRACTICES CLEARLY THROUGH SHORT VISUAL STEPS.

## GETTING STARTED!

### REGISTER



Email

Password

Register

Users enter their details to start their personalized dental learning journey with DentoBot.

Pick your topic — DentoBot will guide you step by step!



Brushing



Cavities



Oral Hygiene



Braces Care

Users can select a topic of interest. Each section opens a mini-lesson with illustrations and voice guidance.

## YOU DID IT!



After completing Dentobot congratulates the users.

## HIGH FIDELITY DENTOBOT DESIGN

- High fidelity wire frames are generated by Figma AI
- It represents the visual layout and interactive structure of chatbot

Create Account

Join our dental health community

Full Name \*

John Doe

Email Address \*

john@example.com

Phone Number (Optional)

+1 (555) 000-0000

Password \*

.....

Confirm Password \*

.....

I agree to the Terms & Conditions and Privacy Policy

Create Account

Already have an account? [Sign in](#)

Create a modern, minimalist account registration form for a dental chatbot app called Dentobot. The form should include fields for full name, email address, optional phone number, password, and confirm password. Add a checkbox for agreeing to terms and privacy policy, a blue "Create Account" button, and a "Sign in" link below. Use soft rounded corners, clean white background, light shadows, and subtle blue accents for a friendly and professional dental theme.



Dental Awareness Hub  
Your Guide to Better Oral Health

### Welcome to Dental Awareness

Learn essential tips and best practices for maintaining optimal oral health

#### Heart Daily Care

- Brush twice daily for 2 minutes
- Floss at least once a day
- Use fluoride toothpaste
- Replace toothbrush every 3 months

#### Shield Prevention

- Visit dentist every 6 months
- Limit sugary foods and drinks
- Don't smoke or use tobacco
- Wear mouthguard for sports

Design a clean and modern Dental Awareness dashboard. Include a top header with the app name "Dental Awareness Hub". Add a blue welcome banner titled with a short subtitle about oral health tips. Below, create two rounded information cards side by side: one labeled "Daily Care" and the other "Prevention" with a blue shield icon. Use soft shadows, white background, and blue and green accents for a friendly healthcare feel.

### Dental Health Topics

Brushing

Flossing

Diet

Problems

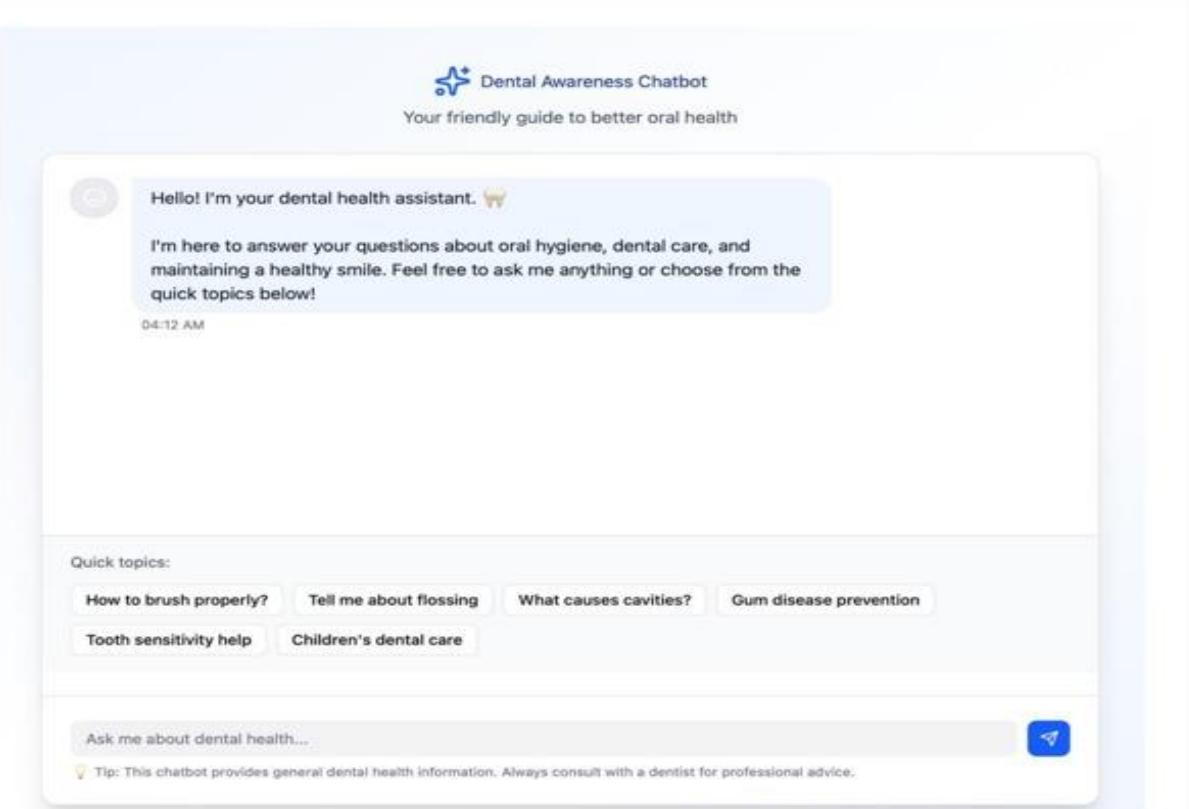
#### Proper Brushing Technique

Follow these steps for effective brushing:

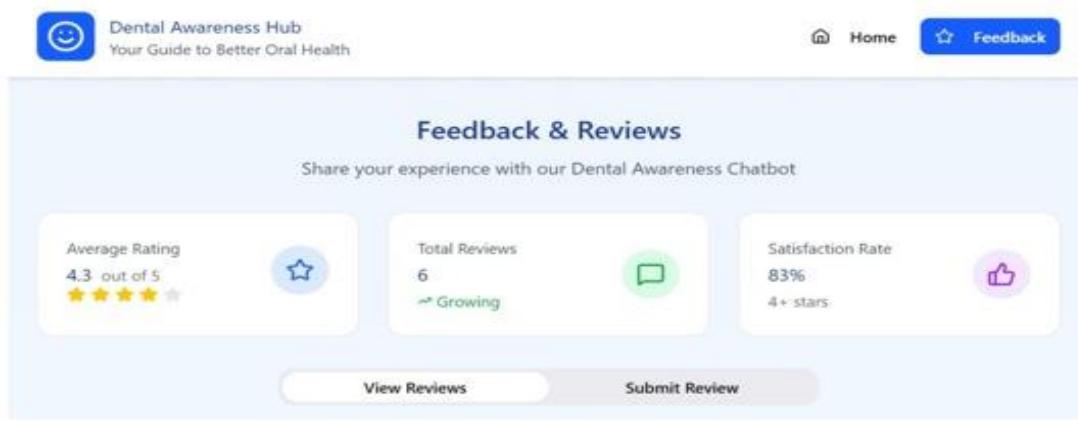
1. Place toothbrush at 45-degree angle to gums
2. Gently move brush back and forth in short strokes
3. Brush outer, inner, and chewing surfaces of teeth
4. Use tip of brush for inner front teeth
5. Brush your tongue to remove bacteria

Duration: 2 minutes

Design a clean, minimal Dental Health Topics interface for a dental chatbot app. Add a title "Dental Health Topics" at the top and a horizontal tab bar with four rounded tabs labeled "Brushing," "Flossing," "Diet," and "Problems." Below, display content for "Brushing" followed by a numbered list of brushing steps. Use soft shadows, light gray background, and friendly typography for a modern healthcare look.

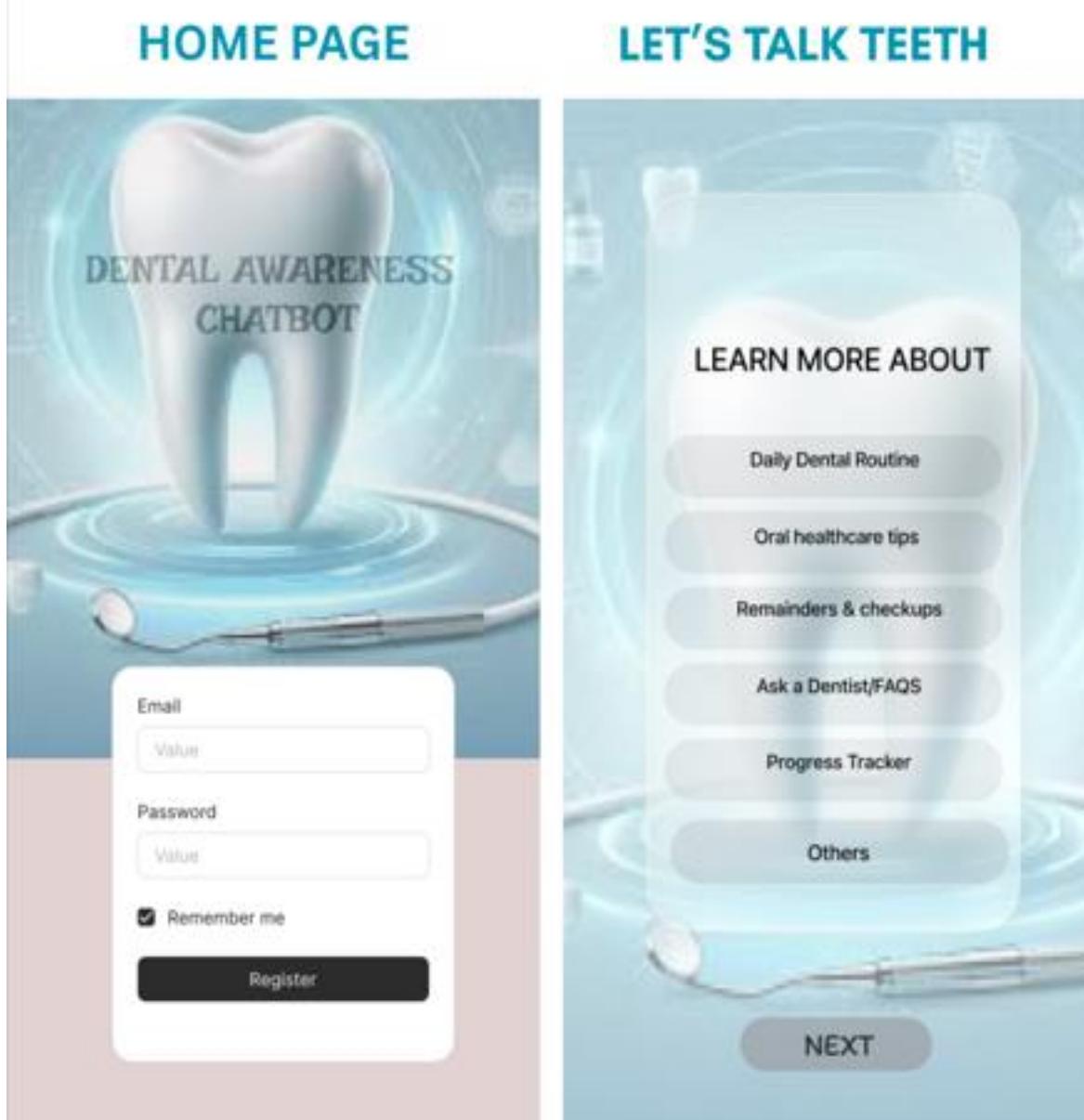


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## LOW FIDELITY DENTOBOT DESIGN

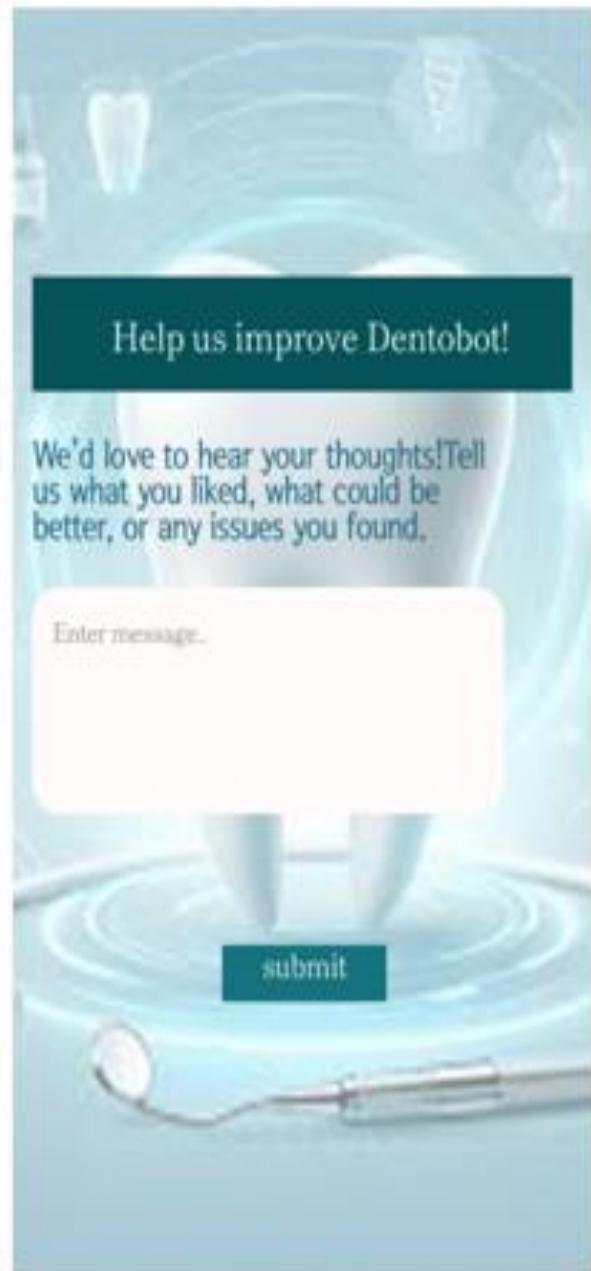
- This is the initial visual representations of the *Dentobot* chatbot interface. That focus on the layout, structure, and flow of the application rather than the final design details like colour, typography, or icons.



## **CHATBOT**



## **FEEDBACK PAGE**



## **CONCLUSION**

Dentobot is an AI-powered dental awareness chatbot designed to educate users about oral hygiene in an interactive and user-friendly way. The goal of this project was to create a digital platform that helps both patients and dental professionals' access accurate dental care information quickly and easily.

Through a structured UX design process, the project involved conducting user research, developing user personas, creating storyboards, and designing low- and high-fidelity wireframes. These steps helped identify user needs, define pain points, and build an intuitive interface that encourages learning through conversation.

The final design emphasizes simplicity, accessibility, and engagement, ensuring that Dentobot serves as a friendly digital companion for improving dental awareness and promoting better oral hygiene practices.