DOCSPOT

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Project Name	DocSpot

DocSpot – Brainstorm & Idea Prioritization

DocSpot is a platform designed to streamline healthcare appointment management and patient-doctor interaction.
The ideation phase focused on generating and prioritizing ideas related to user login systems, doctor profile management, scheduling appointments, calendar integration, reminders, and notifications.

Step 1: Team Gathering, Collaboration, and Problem Selection
The team collaborated to identify major problems in current appointment systems, such as inefficiency, poor notifications, and lack of integration with users' digital calendars.

Step 2: Brainstorm, Idea Listing, and Grouping
Ideas generated included: multi-role login, doctor availability syncing, interactive calendar views, automated reminders (email/SMS), notification dashboards, and profile-based search filters.

Step 3: Idea Prioritization
Ideas were prioritized based on feasibility, impact, and user-centricity. High-priority features included:
- Seamless login system with authentication
- Real-time appointment booking and cancellation
- Calendar with color-coded schedules
- Smart reminders and in-app notifications

DocSpot – Empathy Map Canvas

Target User: Patients using online platforms for booking doctor appointments.

What the user thinks and feels:
- Needs easy and quick access to doctors.
- Wants reliable notifications about appointments.
- Feels anxious if reminders are missed or appointments are unclear.

What the user sees:
- Overloaded hospital reception desks.
- Difficult interfaces in existing apps.

What the user says and does:
- "I wish I could just book online and get reminded automatically."
- Frequently checks phone/email for confirmations.

What the user hears:
- Friends suggest apps but complain they are hard to use or not updated.

Pain points:
- Forgetting appointment times.
- No clear doctor profiles or feedback.

Gains:
- Easy scheduling, doctor availability in real time, and auto-reminders through one simple interface.

DocSpot – Problem Statement

Customer Problem Statement:

Patients often face difficulties in scheduling doctor appointments efficiently. They experience confusion due to a lack of clear doctor availability, no unified calendar integration, and missed appointments due to insufficient reminders.

DocSpot aims to solve this by:
- Providing a user-friendly login and profile system.
- Displaying up-to-date doctor availability.
- Allowing real-time appointment scheduling and modification.
- Syncing appointments with users' calendars.
- Sending automated reminders and push/email notifications.

This solution will reduce patient no-shows, enhance user satisfaction, and improve healthcare accessibility.

Project Overview:

Project Name: DocSpot

Project Description:A user-friendly platform that allows patients to book, reschedule, and manage medical appointments with healthcare professionals. Features include doctor search, real-time availability, appointment booking, video consultation, digital prescriptions, and calendar integration.

Testing Scope:

- Patient registration and login
- Doctor profile creation and calendar setup
- Search and filter for doctors
- Real-time appointment bookin
- Reschedule and cancel appointments
- Video consultation module
- Digital prescriptions
- Appointment reminders (SMS/email)

Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail
TC-001	User Registration	1. Visit site 2. Click "Sign Up" 3. Fill & submit form	Profile saved	Account created, redirected to dashboard	[Pass/Fail]
TC-002	Doctor Profile Creation	1. Login as doctor 2. Fill bio & availability 3. Save	Profile saved, listed in search results	Account created, redirected to dashboard	[Pass/Fail]
TC-003	Book Appointment	1. Search doctor 2. Select time 3. Confirm booking	Booking confirmed and shown in user dashboard	Appointmeet will br booked	[Pass/Fail]

- Payment integration

- Review and rating system

Requirements to be Tested:

- As a patient, I want to easily search and book appointments with available doctors.

- As a doctor, I want to manage my availability and bookings.

- As a user, I want secure login, video consultations, and payments.

- As an admin, I want to manage users and handle disputes or feedback.

Project Design Phase

Problem – Solution Fit Overview:

The Problem–Solution Fit ensures that DocSpot effectively tackles the challenges in appointment booking faced by both patients and healthcare providers. This validation is essential before expanding the platform.

- **Purpose:**
- Simplify and streamline the appointment booking process.
- Provide a centralized platform for schedule management to avoid conflicts and delays.
- Enhance patient access to timely healthcare services through smart search and booking.
- Improve communication via reminders to reduce no-shows and cancellations.

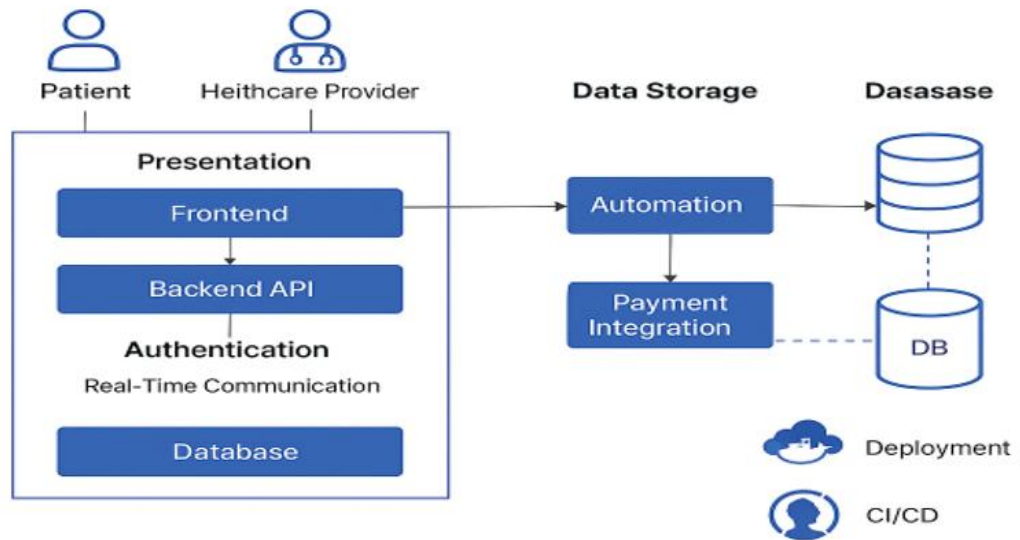**Patients and healthcare providers face challenges such as:**

- Complex and time-consuming appointment booking.
- Lack of centralized scheduling causing overlaps and missed appointments.
- Poor communication and reminder systems leading to high no-show rates.
- Difficulty in quickly finding available doctors or specialists.
- Managing appointments across multiple platforms or clinics is inconvenient.

DocSpot offers a seamless appointment booking platform with:

- Easy search and booking using filters like specialty, location, and availability.
- Real-time calendar management for providers to optimize schedules.
- Automated reminders and notifications to reduce no-shows.
- Secure patient profiles with appointment history and preferences.
- Admin controls for managing providers, appointments, and report**ing.**

Solution Architecture

DocSpot: Seamless Appointment Booking for Health

Project Planning Phase

Functional Requirement	User Story Number	User Story / Task	Story Points	Priority	Team Members
User Authentication	USN-1	As a user, I can sign up and log in securely.	3	High	
	USN-2	As a user, I can reset my password.	2	Medium	
Doctor Discovery & Booking	USN-3	As a patient, I can search and filter doctors by location/speciality.	2	High	
Profile Management	USN-4	As a doctor, I can set up and update my profile and availability.	3	High	
	USN-5	As a user, I can update my profile information.	2	High	
	USN-6	As a user, I can send/receive messages.	2	Medium	
Payment Integration & Reviews	USN-7	As a client, I can pay freelancers securely.	3	High	

User Story Table – DocSpot

User Type	Functional Requirement (Epic)	User Story / Task	Acceptance Criteria
Patient	Appointment Booking	As a patient, I can search for doctors by specialty and location.	Search results return rel doctors.
		As a patient, I can book, reschedule, or cancel appointments.	Appointment status up
Healthcare Provider	Schedule Managem	As a provider, I can manage my availabil calendar.	Changes reflect immediately in patient booking system.
User	Messaging	As a user, I can chat with the other party in real-time.	Messages appear instan
Admin	Profile Management	As a Admin, I can update my profile.	Changes are saved successfully.

Client	Payment Processing	As a client, I can make secure payments after job completion.	Payment recorded and shown in transaction his
user	Review System	As a user, I can leave a review after project closure.	Review appears on prof
Admin	User Moderation	As an admin, I can review reported users and take action.	Reports and actions log

Functional Requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Authentication	Sign up, Login, Password Reset
FR-2	**Appointment Booking**	Search doctors by specialty, location, and availability
		Book, reschedule, and cancel appointments
FR-3	**Calendar & Schedule Management**	Freelancers apply to jobs
		View upcoming and past appointments
FR-4	**Notifications & Reminders**	Automated SMS/email reminders for upcoming appointments

Non-functional Requirements

NFR No.	Non-Functional Requirement	Description
NFR -1	Usability	The platform should provide a simple, clean UI for all users, inc healthcare providers.
NFR -2	Security	All patient and appointment data must be encrypted. Implement role-based access and secure authentication
NFR -3	Reliability	Appointment booking, notifications, and telehealth services must be available and dependable at all times.
NFR -4	Performance	Pages and booking actions should load within 2 seconds; reminders and notifications should be timely.
NFR -5	Availability	The system should ensure 99.9% uptime with minimal downtime.
NFR -6	Scalability	Support a growing number of users, providers, and concurrent bookings without degradation.

Technology Stack

S.No	Component	Description	Technology
1.	User Interface	Web and mobile-friendly interface for patients and providers	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic-1	Appointment booking, calendar management, reminders	Node.js, Express.js
3.	Application Logic-2	Admin panel, provider management, reporting	React js, Node js
4.	Database	Stores user profiles, appointments, provider datas	MongoDB

References:

[React.js Documentation](#)

[Node js Best Practice](#)

[JSON Web Server Referance](#)