Requirement Gathering and Analysis Phase

Date: 08/07/2024

Team ID: SWTID1743520385

Project Name: Book a Doctor Platform

Maximum Marks: —

# Solution Architecture

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:  
• Find the best tech solution to solve existing business problems.  
• Describe the structure, characteristics, behaviour, and other aspects of the software to project stakeholders.  
• Define features, development phases, and solution requirements.  
• Provide specifications according to which the solution is defined, managed, and delivered.

Book a Doctor Platform – Architecture

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| User Devices |  
|------------------------------|  
| - Web Browsers |  
| - Mobile Browsers (Responsive) |  
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| Frontend Layer |  
|------------------------------|  
| - React.js |  
| - Tailwind CSS / Bootstrap |  
| - React Router |  
| - Form Validation & JWT Auth |  
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| Backend Layer |  
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| - Node.js with Express.js |  
| - RESTful APIs |  
| - Authentication Middleware |  
| - Business Logic & Routing |  
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| Database & Storage |  
|------------------------------|  
| - MongoDB (Mongoose ODM) |  
| - Appointment Collection |  
| - User/Doctor/Admin Schema |  
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| Third-party Integrations |  
|------------------------------|  
| - Email Service (Nodemailer) |  
| - SMS Gateway (optional) |  
| - Cloudinary (for images) |  
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| Deployment & DevOps |  
|------------------------------|  
| - Frontend: Vercel |  
| - Backend: Render |  
| - GitHub for CI/CD |  
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| Security and Compliance |  
|------------------------------|  
| - HTTPS/SSL Encryption |  
| - JWT for Authentication |  
| - Role-based Access Control |  
| - Input Validation |  
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📌 Note: You can convert the above text diagram into a visual using tools like draw.io, Lucidchart, or MS Visio.