**Bookify**

*Hotel Reservation Web Application*

**Project Idea**

**Bookify** is a comprehensive hotel reservation web application designed to streamline the booking process for both guests and hotel administrators. The platform provides an intuitive interface for users to search, compare, and book hotel rooms while offering robust management tools for hotel staff.

**Project Overview:**

* **Purpose:** Develop a full-stack web application that simplifies hotel reservations and management
* **Target Audience:** Hotel guests seeking easy booking experiences and hotel administrators managing reservations
* **Expected Outcome:** A fully functional web application with user authentication, booking system, payment integration, and admin dashboard
* **Timeline:** 4-5 weeks
* **Technology Stack:** ASP.NET Core (Backend), Angular (Frontend), SQL Server (Database)

**Team Members (pentaRae)**

* **[Ahmed Sabry]** - Full Stack Developer & Project Lead
* **[Ahmed Ibrahim]** - Backend & Frontend
* **[Omar Mohamed]** – Backend & Database
* **[Islam Ahmed]** – Backend & Database
* **[Basem Hussien]** - Database
* **[Abdallah Beshr]** - Documention

**Work Plan**

**1. Research & Analysis**

* **Duration:** 1 weeks
* **Deliverables:**
  + Competitive analysis of existing hotel booking platforms (Booking.com, Expedia, Hotels.com)
  + User personas (Business travelers, Leisure travelers, Hotel administrators)
  + Technical requirements documentation
  + Database schema design
  + API specification document
* **Responsible:** Full Stack Developer & Database Administrator

**2. Visual Identity**

* **Duration:** 1 weeks
* **Deliverables:**
  + Brand guidelines for Bookify
  + Logo design (primary, secondary, and favicon versions)
  + Color palette (primary blues, accent colors)
  + Typography selection (web-safe fonts)
  + UI component style guide
* **Responsible:** UI/UX Designer

**3. Main Designs**

* **Duration:** 1 weeks
* **Deliverables:**
  + Website wireframes and mockups
  + User interface designs (Home, Search, Booking, Profile, Admin Dashboard)
  + Mobile-responsive design layouts
  + User flow diagrams
  + Interactive prototypes
* **Responsible:** UI/UX Designer & Frontend Developer

**4. Complementary Products**

* **Duration:** 4 weeks (parallel with development)
* **Deliverables:**
  + ASP.NET Core Web API development
  + Angular frontend application
  + SQL Server database implementation
  + User authentication system
  + Payment gateway integration
  + Email notification system
  + Admin dashboard for hotel management
* **Responsible:** Backend & Frontend Developers

**5. Review & Finalization**

* **Duration:** 2 weeks
* **Deliverables:**
  + Code review and optimization
  + User acceptance testing
  + Bug fixes and performance improvements
  + Security testing and validation
  + Documentation updates
* **Responsible:** All team members

**6. Final Presentation**

* **Duration:** 1 week
* **Deliverables:**
  + Project demonstration and live demo
  + Technical documentation package
  + Deployment guide
  + User manual
  + Presentation for stakeholders
* **Responsible:** Project Lead & Full Stack Developer

**Roles & Responsibilities**

**Primary Roles:**

* **Project Manager:** [Ahmed Sabry] - Oversees development timeline, coordinates team activities, ensures deliverables meet requirements
* **Backend Lead:** [Omar Mohamed] - Develops ASP.NET Core API, implements business logic, manages server-side architecture
* **Frontend Lead:** [Ahmed Ibrahim] - Builds Angular application, implements responsive UI, handles client-server integration
* **Database Administrator:** [Basem Hussien] - Designs and maintains SQL Server database, ensures data integrity and performance

**Secondary Responsibilities:**

* **Quality Assurance:** [Ahmed Sabry] - Tests application functionality, performs security audits
* **DevOps Coordinator:** [Islam Ahmed] - Manages deployment pipeline, handles server configuration
* **Documentation Lead:** [Abdallah Beshr] - Maintains technical documentation, creates user guides

**KPIs (Key Performance Indicators)**

*Metrics for project success:*

**Technical KPIs:**

* **System Uptime:** 99.5% availability during testing phase
* **Response Time:** API responses under 500ms, page load times under 3 seconds
* **Code Coverage:** Minimum 80% unit test coverage
* **Security Score:** Pass all OWASP security tests

**Development KPIs:**

* **Sprint Completion Rate:** 95% of planned features delivered on time
* **Bug Resolution Time:** Critical bugs fixed within 24 hours, minor bugs within 1 week
* **Code Review Efficiency:** All code reviewed within 48 hours of submission

**User Experience KPIs:**

* **Usability Score:** System Usability Scale (SUS) score of 75+
* **Booking Completion Rate:** 85% of started bookings successfully completed
* **Mobile Responsiveness:** 100% functionality across devices (desktop, tablet, mobile)

**Technical Architecture**

**Backend (ASP.NET Core):**

* RESTful API architecture
* Entity Framework Core for data access
* JWT authentication
* AutoMapper for object mapping
* Swagger for API documentation

**Frontend (Angular):**

* Component-based architecture
* Angular Material for UI components
* RxJS for reactive programming
* Angular Guards for route protection
* Progressive Web App (PWA) features

**Database (SQL Server):**

* Normalized database design
* Stored procedures for complex operations
* Indexing for performance optimization
* Data backup and recovery procedures

**Instructor**

* **Name**: Hesham Mohamed
* **Contac[**[**Email**](file:///C:\Users\20155\Downloads\a)]

**Project Files**

You can find the full project files here:

* **Source Code Repository:** [[GitHub](https://github.com/sabry558/bookify)]
* **Drive link[**[**Link**](https://drive.google.com/drive/folders/10zaYSFUky8sNg12Yq9b8SYdrRUO9B59K?fbclid=IwAR1TyOJ9FEJna369dBEnKyU_DW3c5oHK3Ew14t4EzMlYiJOVsiiqDBuoQQc)**]**

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**Project Start Date:** 2025/10/1  
**Expected Completion Date:** 1 months   
**Last Updated:**