

01_Project_Planning

Project Overview

Project Name: Bookify Hotel Reservation System

Technology Stack: ASP.NET Core MVC, Entity Framework Core, ASP.NET Identity, Stripe

Architecture: N-Tier Architecture with Repository Pattern and Unit of Work

Duration: 4 Weeks

Team :

- Nour Eldeen Mahmoud
- hazem hany
- mohamed soultan
- omar ashraf
- shahd ayman
- alia harb

Project Objectives

Primary Goals

- Build a robust and scalable hotel reservation web application
- Implement clean architecture using N-Tier pattern
- Create a seamless booking experience for customers
- Provide comprehensive admin panel for hotel management
- Integrate secure payment processing with Stripe

Success Criteria

- Functional room search and booking system
- Secure user authentication and role-based access
- Admin panel for hotel management
- Payment integration with Stripe
- Responsive and user-friendly interface
- Comprehensive logging and health monitoring

Project Scope

In Scope

- *Customer Features:*
 - User registration and authentication
 - Room search and filtering
 - Room availability checking
 - Booking reservation with cart functionality
 - Payment processing via Stripe
 - User profile and booking history
 - Responsive web interface
- *Admin Features:*
 - Secure admin dashboard
 - Room and room type management
 - Booking management and oversight
 - User management
 - Analytics and reporting
- *Technical Features:*
 - N-Tier architecture implementation
 - Repository pattern for data access
 - Unit of Work pattern for transactions
 - Dependency injection
 - Health checks and monitoring
 - Structured loggings

Project Timeline

Week 1: Architecture Setup and Room Listings

Duration: 7 days

Key Deliverables:

- Complete N-Tier architecture setup
- Database schema with Entity Framework Core
- Repository and Unit of Work implementation
- User authentication system
- Public room listing page

Tasks:

- ☐ Create solution structure with 3 projects
- ☐ Set up Entity Framework Core with migrations
- ☐ Implement generic and specific repositories
- ☐ Configure ASP.NET Identity
- ☐ Create room listing functionality
- ☐ Implement user registration and login

Week 2: Reservation Flow, Roles, and Admin Panel

Duration: 7 days

Key Deliverables:

- Functional reservation cart system
- Role-based access control
- Admin dashboard with DataTables
- Room and booking management

Tasks:

- ☐ Implement session-based reservation cart
- ☐ Set up role-based authorization
- ☐ Create admin dashboard
- ☐ Implement room management
- ☐ Add booking management features
- ☐ Integrate DataTables for data display

Week 3: Booking Confirmation and Stripe Integration

Duration: 7 days

Key Deliverables:

- Complete booking confirmation process
- Stripe payment integration
- User profile and booking history
- Transaction management

Tasks:

- ☐ Implement booking confirmation logic

- ☐ Integrate Stripe payment gateway
- ☐ Create user profile pages
- ☐ Add booking history functionality
- ☐ Implement transaction handling
- ☐ Test payment processing

Week 4: Health Checks, Logging, and Final Polish

Duration: 7 days

Key Deliverables:

- Health monitoring endpoints
- Structured logging system
- UI/UX enhancements
- Comprehensive testing

Tasks:

- ☐ Implement health checks
- ☐ Set up Serilog structured logging
- ☐ Enhance UI with jQuery and Toastr JS
- ☐ Conduct end-to-end testing
- ☐ Performance optimization
- ☐ Documentation completion

Quality Assurance

Testing Strategy

- *Unit Testing:* Repository and service layer testing
- *Integration Testing:* API endpoints and database operations
- *User Acceptance Testing:* End-to-end user workflows
- *Security Testing:* Authentication and authorization
- *Performance Testing:* Database queries and page load times

Code Quality Standards

- Follow SOLID principles
- Implement proper error handling
- Use dependency injection consistently

- Maintain code documentation
- Follow ASP.NET Core best practices

Resource Requirements

Development Environment

- Visual Studio 2022 or VS Code
- .NET 8 SDK
- SQL Server or SQL Server Express
- Git for version control
- Stripe account for payment testing

Dependencies

- ASP.NET Core MVC
- Entity Framework Core
- ASP.NET Identity
- Stripe.NET
- jQuery
- DataTables
- Toaster JS
- Serilog
- Bootstrap

Success Metrics

Functional Metrics

- 100% of user stories completed
- All acceptance criteria met
- Zero critical bugs in production
- Payment processing success rate > 99%

Performance Metrics

- Page load time < 3 seconds
- Database query response time < 500ms
- 99.9% uptime

- Support for 100+ concurrent users

User Experience Metrics

- Intuitive navigation (user testing feedback)
- Accessibility compliance
- Cross-browser compatibility

Communication Plan

Daily Activities

- Code development and testing
- Progress tracking
- Issue identification and resolution

Weekly Activities

- Progress review and reporting
- Risk assessment updates

Milestone Activities

- Deliverable presentation
- Project retrospective

Change Management

Change Request Process

1. Document change request
2. Assess impact on timeline and scope
3. Get stakeholder approval
4. Update project plan
5. Communicate changes to team

Version Control

- Use Git for source code management
- Implement branching strategy
- Regular commits with descriptive messages

- Code review process for critical changes

Project Closure

Final Deliverables

- Complete source code with documentation
- Database schema and migration scripts
- Deployment guide
- User manual
- Technical documentation
- Test results and reports

This project plan serves as the foundation for the Bookify Hotel Reservation System development. Regular updates and reviews will ensure project success and stakeholder satisfaction.