

CSE306: Software Engineering and Information System Design Lab

Crafting a Comprehensive Software Requirement Proposal

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Crafting a Comprehensive Software Requirement Proposal

Company Name: Brain Brick Software Co.

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Travel Agency Software Proposal

Odyssey Travels : Your Passport to Adventure

Project Description

We are presenting a proposal for the development of a robust website for a travel agency, offering users the ability to explore diverse travel packages, customize their itineraries, book flights, and make payments seamlessly. Our goal is to create a user-centric platform that simplifies the travel booking process while ensuring security and convenience for customers.

Project Features

- **Package Exploration:** Users can browse through a diverse range of travel packages, including destination highlights, activities, and accommodation options.
- **Customization Options:** The website will allow users to tailor their travel itineraries by selecting specific destinations, activities, and travel dates.
- **Flight Booking:** Integration with a reliable flight booking system will enable users to search for and book flights directly through the website.
- **User Profiles:** Users can create accounts to manage their bookings, preferences, and past travel history.
- **Payment Gateway:** Secure payment processing for booking confirmations, including support for multiple currencies and payment methods.
- **Reviews and Ratings:** Users can provide feedback and ratings for destinations, accommodations, and overall travel experiences.
- **Responsive Design:** Ensuring optimal performance and accessibility across various devices, including desktops, tablets, and smartphones.

Project Plan

Phase 1: Planning and Preparation

- Duration: 1 month
- Project Initiation
 - Define project objectives, scope, and success criteria.
 - Identify key stakeholders and establish communication channels.
- Requirement Gathering
 - Conduct interviews and workshops with internal stakeholders to gather functional and technical requirements.
 - Prioritize features and define user stories.
- Resource Allocation

- Allocate human and technical resources required for software development.
- Set up development environment and infrastructure.

Phase 2: Design and Development

- Duration: 4 months
- UI/UX Design
 - Develop wireframes and mockups for the user interface.
 - Gather feedback from stakeholders and iterate on design.
- Database Design
 - Design the database schema to support the required functionality.
 - Determine data storage and retrieval mechanisms.
- Backend Development
 - Develop server-side logic and APIs to support client interactions.
 - Implement business logic for booking management, payment processing, and itinerary generation.
- Frontend Development
 - Develop client-side interfaces for the customer portal and administrative dashboard.
 - Implement responsive design and ensure cross-browser compatibility.
- Integration
 - Integrate third-party services, such as payment gateways and CRM systems, as needed.
 - Conduct thorough testing to ensure seamless integration.

Phase 3: Testing and Quality Assurance

- Duration: 1 month
- Unit Testing
 - Test individual components and functions to identify bugs and errors.
 - Use automated testing tools for regression testing.
- Integration Testing
 - Test the interaction between different modules and subsystems.
 - Verify data flow and system behaviour under various scenarios.
- User Acceptance Testing (UAT)
 - Invite stakeholders and end-users to participate in UAT.
 - Gather feedback and address any usability issues or discrepancies.

Phase 4: Deployment and Launch

- Duration: 1 month
- Deployment
 - Deploy the software to production servers or cloud infrastructure.
 - Configure monitoring and logging systems for performance tracking.
- Training
 - Conduct training sessions for internal users on how to use the software.
 - Provide documentation and support materials for reference.
- Soft Launch
 - Roll out the software to a limited audience for initial feedback and testing.
 - Monitor system performance and address any issues in real time.

Phase 5: Post-Launch Support and Maintenance

- Duration: Ongoing
- Bug Fixing and Optimization
 - Continuously monitor and address bugs reported by users.
 - Optimize system performance and scalability as needed.
- Feature Enhancements
 - Gather feedback from users and stakeholders to prioritize feature enhancements.
 - Plan and implement updates and new features in iterative cycles.
- Technical Support
 - Provide ongoing technical support to users through various channels, including email, chat, and phone.
 - Respond to inquiries and troubleshoot issues on time.

Background / Motivation

The travel industry has undergone significant transformations in recent years, driven by technological advancements and changing consumer preferences. In this dynamic landscape, travelers seek convenient and personalized solutions that simplify the process of planning and booking their trips. As such, there is a growing demand for online platforms that offer comprehensive travel services, from exploring destination options to booking flights and accommodations.

Traditional methods of travel planning often involve extensive research across multiple websites, making it time-consuming and cumbersome for travelers to finalize their itineraries. Moreover, the lack of customization options and limited access to

real-time information can hinder the overall travel experience.

In response to these challenges, there is a clear need for a centralized platform that streamlines the entire travel booking process while providing users with greater flexibility and control over their travel plans. By integrating features such as package exploration, customization options, flight booking, and secure payment gateways, we aim to address these pain points and elevate the travel booking experience for customers.

Furthermore, the COVID-19 pandemic has reshaped the way people approach travel, with safety and flexibility becoming paramount concerns. A robust online platform that offers transparent information, flexible booking policies, and seamless payment options will not only meet the evolving needs of travelers but also instill confidence and trust in the travel agency's services.

In summary, the motivation behind this project stems from the desire to revolutionize the way travelers plan and book their trips. By leveraging technology to create a user-centric travel agency website, we aim to enhance convenience, accessibility, and satisfaction for customers, ultimately establishing the travel agency as a leading player in the competitive travel industry.

Budget Analysis : Odyssey Travels & Tours Project

1. Development Costs:

- Software Development Team Salaries: \$200,000
- Infrastructure Setup (Servers, Cloud Services): \$50,000
- Software Tools and Licenses: \$20,000

2. Design Expenses:

- UI/UX Design Services: \$30,000
- Graphic Design and Branding: \$15,000

3. Testing and Quality Assurance:

- Testing Tools and Software: \$10,000
- QA Team Salaries: \$50,000

4. Deployment and Training:

- Deployment Costs (Hosting, Domain): \$10,000
- User Training and Documentation: \$15,000

5. Marketing and Promotion:

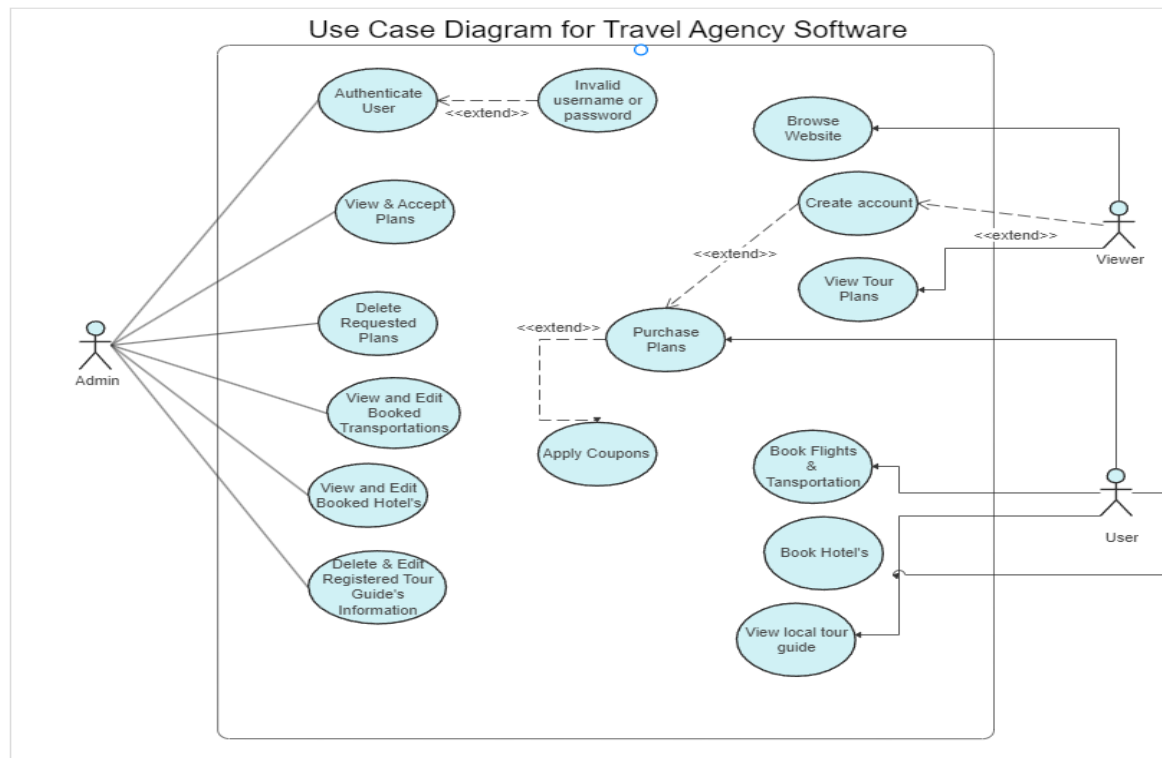
- Website Development and Marketing Collateral: \$25,000
- Digital Marketing Campaigns: \$50,000

6. Contingency Fund (10% of Total Budget): \$45,000

Total Estimated Budget: \$520,000

Note: The budget analysis provides a rough estimate of the costs involved in developing and launching the WorldWander project. Actual expenses may vary depending on factors such as team size, project scope, and specific requirements. Adjustments can be made to the budget breakdown based on detailed project planning and resource allocation.

UML Diagram For Travel Agency Software



Software Requirements :

Technologies will be used :

- Next.js
- Tailwind CSS
- Ant Design
- Deysi UI
- Firebase (for authentication, database, and hosting)
- Toastify (for notifications)
- Node.js
- Express.js

- MySQL (as the relational database)

Additional Tools:

- Visual Studio Code (for development)
- Git and GitHub (for version control)
- Figma (for UI/UX design and prototyping)
- Postman (for API testing)
- Swagger (for API documentation)

Proposed Additional Features:

- User Authentication
- Trip Management
- Booking Management
- Payment Integration
- User Dashboard
- Admin Panel
- Search and Filter
- Responsive Design
- Notifications
- Performance Optimization
- API Documentation
- Security Measures
- Testing
- Deployment

Project Timeline:

- Week 1-2: Requirement gathering and planning.
- Week 3-4: Setting up project structure and authentication.
- Week 5-6: Developing trip management functionalities.
- Week 7-8: Implementing booking management and payment integration.
- Week 9-10: Testing, debugging, and optimization.
- Week 11-12: Final testing, deployment, and documentation.

Conclusion

In the realm of travel, where dreams intertwine with reality, the Odyssey Travels and Tours project proposal stands as a testament to innovation and excellence. Through meticulous planning, thoughtful design, and unwavering dedication, we have outlined a vision for a groundbreaking online platform that redefines the travel booking experience. The journey through the intricacies of development, guided by the principles of agility and collaboration, we remain steadfast in our commitment to realizing this vision. With each line of code and every design element, we strive to create a digital haven where exploration knows no bounds. The Odyssey Travels and Tours project represents more than just a website; it embodies the aspirations of travelers worldwide, seeking adventure, discovery, and moments that transcend the ordinary. With features such as package exploration, customizable itineraries, seamless flight booking, and secure payment gateways, we aim to elevate the travel experience to new heights.

As we embark on this odyssey together, we extend our gratitude to all stakeholders for their trust and collaboration. With your continued support, we are confident that the Odyssey Travels and Tours website will not only meet but exceed expectations, becoming a beacon of inspiration for travelers far and wide. Let us embark on this journey with excitement and determination, knowing that the Odyssey awaits, ready to unveil a world of possibilities. Together, let us redefine the future of travel.