Project ID: Sem2_2024
Project Title: Metropolitan Blood Donation and Transfer System
Client: Aniroudh Phadke

Project Overview:

Problem Statement:

In metropolitan cities, arranging blood donors for medical emergencies is often time-consuming and inconvenient for donors, taking between 3-6 hours due to travel and logistical challenges. The goal of this project is to develop a system that hospitals can use to accept blood from nearby donors and manage the daily transfer and settlement of blood units between hospitals using equipped transportation. The system should store all donor data along with the blood units donated. Donations may or may not be patient-specific, and the patients could be at any participating hospital.

Objectives:

- Develop a mobile app for donors and delivery staff.

- Develop a web interface for hospitals.

- Implement a database to store donor and blood unit data.

- Facilitate efficient daily transportation and settlement of blood units between hospitals.

- Ensure user-friendly UI/UX for all user groups: hospitals, delivery staff, and donors.

Users:

1. **Hospitals:** Manage blood unit requests, donor data, and blood unit settlements.

2. **Delivery Staff:** Handle the transportation and delivery of blood units between hospitals.

3. **Donors:** Register, schedule donations, and get notified for donation opportunities.

Project ID: Sem2_2024
Project Title: Source Ticketing Platform and Create Ticketing System for IT Helpdesk
Client: ATMC – Rajvir Uppal – 0403 600 091 - Rajvir.uppal@atmc.edu.au

Project Overview

The Australian Technical and Management College (ATMC) seeks to enhance its IT support infrastructure by sourcing and implementing a comprehensive ticketing system for its IT Helpdesk. This system will streamline the process of issue resolution, improve response times, and enhance overall user satisfaction.

Objectives

1. **Identify a Suitable Ticketing Platform:** o Source and evaluate multiple ticketing platforms.
o Ensure the chosen platform aligns with ATMC's specific needs and budget.

2. **Implement the Ticketing System:** o Configure the system to handle IT Helpdesk requests efficiently.
o Customise the platform to reflect ATMC's branding and workflows.

3. **Training and Support:** o Provide comprehensive training for IT Helpdesk staff.
o Ensure ongoing support and maintenance post-implementation.

Scope of Work

1. **Requirements Gathering:** • Engage with ATMC stakeholders to understand their needs.

• Document detailed functional and technical requirements.

2. **Platform Selection:** • Research and shortlist potential ticketing systems.
• Conduct demonstrations and evaluations of shortlisted platforms.
• Recommend the best-fit platform based on features, cost, and scalability.

3. **System Configuration:** • Set up the ticketing system according to ATMC's requirements.

• Configure user roles, permissions, and workflows.

• Integrate the system with existing IT infrastructure (e.g., email, user authentication).

4. **Customisation:** • Customise the user interface to align with ATMC's branding.
• Develop custom workflows, forms, and automation rules as required.

5. **Data Migration:** • Migrate existing helpdesk data to the new system.
• Ensure data integrity and continuity during the transition.

6. **Testing:** • Conduct thorough testing to ensure system functionality and reliability.
• Perform user acceptance testing (UAT) with IT Helpdesk staff.

7. **Training:** • Develop training materials and documentation.
• Conduct training sessions for IT Helpdesk staff on system usage and best practices.

8. **Go-Live and Support:** • Launch the ticketing system for full operational use.
• Provide post-implementation support to address any issues.
• Offer ongoing maintenance and updates as required.

Deliverables

1. Requirements specification document.
2. Evaluation report of shortlisted ticketing platforms.
3. Configured and customised ticketing system.
4. Data migration plan and execution.
5. Training materials and conducted training sessions.
6. Post-implementation support and maintenance plan.

Timeline

Phase	Timeline
Requirements Gathering	2 weeks
Platform Selection	3 weeks
System Configuration	4 weeks
Customisation	3 weeks
Data Migration	2 weeks
Testing	2 weeks
Training	1 week
Go-Live and Support	Ongoing

Budget

The vendor is requested to provide a detailed budget that includes:
• License costs of the ticketing platform.
• Implementation and customization fees.
• Training and documentation costs.
• Post-implementation support and maintenance fees.

Selection Criteria

Vendors will be evaluated based on:
• Relevant experience and expertise.
• Proposed solution's alignment with ATMC's requirements.

• Cost-effectiveness of the proposal.
• Quality of references and past performance.

Proposal Submission
Interested vendors are requested to submit their proposals by [Submission Deadline Date].
Proposals should include:
• Overview of the proposed ticketing platform.
• Detailed project plan and timeline.
• Comprehensive budget breakdown.
• Case studies or references from similar projects.

Contact Information

For any queries or further information, please contact:

Contact Person: Rajvir Uppal
Email: Rajvir.uppal@atmc.edu.au
Phone: 0403 600 091

We look forward to receiving your proposal and working together to enhance ATMC's IT support capabilities.

Thank you,
Rajvir Uppal
Head of IT Australian Technical and Management College (ATMC)

Project ID: Sem2_2024
Project Title: Development of a Comprehensive E-commerce Website for ScrubsPlus
Client: ScrubsPlus – Lydia Boughosn – 0401597662 - Lydiaboughosn@gmail.com

Project Overview:

Overview: ScrubsPlus is a business dedicated to creating vibrant, fun scrubs with children's prints to bring joy and brightness to their wearers. Currently, ScrubsPlus operates through a simple Shopify website. The goal of this project is to develop a standalone, fully functional e-commerce website linked to the GoDaddy registered domain name www.scrubsplus.com.au.

Objectives:

1. Develop a user-friendly, visually appealing website that reflects the fun and bright ethos of ScrubsPlus.
2. Implement an inventory management system to track stock levels in real-time.
3. Set up a robust shipping operation system that can handle multiple shipping options and integrate with carriers.
4. Ensure the website can be easily marketed through SEO, social media integration, and other digital marketing tools.
5. Create a virtual chatbot to assist customers throughout their shopping experience, from product inquiries to checkout.
6. Develop a mail tracking system and a customer database to manage orders and customer interactions efficiently.

Project Requirements:

Website Design and Development:
- Aesthetic design that aligns with the brand identity of ScrubsPlus.
- Responsive design to ensure compatibility with all devices (desktops, tablets, and smartphones).
- User-friendly navigation and layout.

Inventory Management System:
- Real-time stock level updates.
- Alerts for low stock items.

- Integration with the backend to handle inventory from multiple suppliers if necessary.

Shipping Operation System:
- Integration with major shipping carriers.
- Multiple shipping options for customers (e.g., standard, express).
- Real-time shipping cost calculations.

Marketing Features:
- SEO-friendly structure and content.
- Integration with social media platforms.
- Tools for promotional campaigns (e.g., discount codes, email marketing).

Virtual Chatbot:
- AI-driven chatbot to assist with customer inquiries.
- Ability to guide customers from product search to checkout.
- Integration with the customer service team for complex queries.

Mail Tracking System and Customer Database:
- System to track outgoing mail and shipments.
- Database to store customer information, order history, and interaction logs.
- Secure handling of customer data in compliance with privacy regulations.

Deliverables:

A fully functional, user-friendly e-commerce website for ScrubsPlus.
A back-end system for inventory management and order processing.
An integrated shipping solution with real-time updates.
An SEO-optimized website with integrated marketing tools.
A virtual chatbot to assist customers.
A mail tracking system and a secure customer database.

Timeline:

- **Week 1-2:** Requirement gathering and initial design mockups.
- **Week 3-4:** Development of core functionalities (inventory management, shipping operations).
- **Week 5-6:** Implementation of marketing features and chatbot integration.
- **Week 7-8:** Testing, debugging, and refinements.
- **Week 9:** Final review, client feedback, and adjustments.
- **Week 10:** Deployment and training for the ScrubsPlus team.

Budget: To be determined based on detailed project scope and resources required.

Success Criteria:

- A seamless, engaging shopping experience for customers.
- Efficient back-end management of inventory, orders, and customer interactions.

- Increased online visibility and sales through effective marketing tools.
- Positive feedback from customers regarding usability and support.

Contact Information: For any queries or further details, please contact:

- **Name:** Lydia Bou-Ghosn
- **Email:** Lydiaboughosn@gmail.com
- **Phone:** 0401597662

We look forward to collaborating with you and bringing this exciting project to life!

Project ID: Sem2_2024
Project Title: Website Enhancement
Client: Equity Logisitics – Paul Cursio – 0400230848 – sales@equitylogistics.com.au

Project Overview:

The company website is currently outdated and somewhat convoluted.

The aim is to develop and enhance the website, making it more inviting, accessible and interactive. Inclusion of videos – including "our story'' video for example.

Project ID: Sem2_2024
Project Title: Freight Calculator Application
Client: Equity Logisitics – Paul Cursio – 0400230848 - sales@equitylogistics.com.au

Project Overview:

Being a freight broker, we would like to create an automated application where customers can obtain quotes and pricing based on their rates with us. We have many rates with various carriers which

sometimes proves to be difficult for customers to ascertain what is the best option.

The application would allow for customers to simply input the details of pickup and destination, quantity, dimensions and weights, then provide pricing with various options dependent on their rates.

Project ID: Sem2_2024
Project Title: Website Creation
Client: Sass Hair & Makeup – Angela Diele – 0414307374 – sassmakeupartistry@yahoo.com.au

A website is required for the company.

Things to be included:

Introduction and bio

Images or image gallery

List of services with full description including pricing

Client testimonials

Contact information

Contact Form

Background

Uppal Services aims to make router configuration easier for their customers. Many users find setting up and managing their home routers challenging. The goal is to create a user-friendly website and mobile app to guide users through the process.

Objectives

• Develop a website with detailed guides, tutorials, and support for router configuration.

• Create a mobile app for Android and iOS to assist users on the go.

• Ensure seamless integration between the website and app for a consistent user experience.

Key Features

Website:

• User-Friendly Interface

• Step-by-Step Guides

- Video Tutorials

- FAQ Section

- Support Portal

- User Accounts

Mobile App:

- Router Configuration Guidance

- QR Code Scanning

- Notifications

- Remote Management

- Offline Access

- In-App Support

Target Audience

- Home Users

- Small Businesses

- Non-Technical Users

Technical Requirements

Website:

- CMS or Custom-Built

- Responsive Design

- Security (HTTPS, user authentication, data protection)

- Reliable Hosting

Mobile App:

• Android and iOS platforms

• Cross-platform or native development

• API Integration with website backend

• Secure Communication

Timeline

• Planning and Requirements Gathering: 2 weeks

• Design: 4 weeks

• Development: 8 weeks

• Testing: 4 weeks

• Deployment and Training: 2 weeks

• Post-Launch Support: Ongoing

Success Criteria

• User-friendly interfaces

• Positive user feedback

• Reduction in support queries

• Smooth integration between website and app

Conclusion

The Router Configuration Website and App project for Uppal Services aims to improve user experience and simplify router setup for non-technical users. Through careful planning, design, development, and support, this project will reduce customer support demands and enhance overall satisfaction.

Prepared by:

Rajvir Uppal

Director

Email: Rajvir@uppalservices.com.au Phone: 0403 600 091

Project ID: Sem2_2024
Project Title: Self-Password Reset Website for End Users
Client: ATMC – Rajvir Uppal - Rajvir.uppal@atmc.edu.au

Project Overview

Develop a self-service password reset website that allows end users to securely reset their passwords. This website will communicate with the on-premises Active Directory (AD) and synchronise with Microsoft Entra ID (formerly Azure AD). The solution aims to reduce IT support workload, enhance security, and improve user experience.

Objectives

• Enable end users to reset their passwords without IT intervention.

• Ensure secure communication with on-premises AD.

• Synchronize password changes with Microsoft Entra ID.

• Enhance user experience with a simple and intuitive interface.

• Maintain high-security standards and compliance with organisational policies.

Key Features

User Authentication

• Multi-factor authentication (MFA) to verify user identity.

• Options for SMS, email, or app-based authentication.

Password Reset Process

• Step-by-step guided password reset process.

• Real-time validation of password strength and policy compliance.

Integration with On-Premises AD

• Secure LDAP/LDAPS communication with on-premises AD.

• Real-time password update in the on-premises AD.

Microsoft Entra ID Sync

• Seamless synchronisation of password changes with Microsoft Entra ID.

• Utilize Microsoft Graph API for secure communication with Entra ID.

User Interface

• Responsive design for desktop and mobile access.

• Accessibility features to support all users.

Security and Compliance

• Encryption of data in transit and at rest.

• Compliance with organizational and industry security standards (e.g., GDPR, HIPAA).

Logging and Auditing

• Detailed logging of password reset attempts and success/failure events.

• Integration with SIEM systems for real-time monitoring and alerts.

Technical Requirements

Frontend

• HTML5, CSS3, JavaScript (React or Angular framework).

• Responsive design using Bootstrap or similar framework.

Backend

• .NET Core or Node.js for server-side processing.

• Secure API endpoints for user authentication and password reset operations.

Database

• SQL Server or equivalent for logging and auditing purposes.

Integration

• LDAP/LDAPS for on-premises AD communication.

• Microsoft Graph API for Entra ID synchronisation.

Security

• HTTPS for secure communication.

• MFA integration (e.g., Twilio Authy, Microsoft Authenticator).

Milestones

1. Requirement Analysis and Planning (2 weeks)

o Define detailed requirements and project plans.

2. Design Phase (3 weeks)

o Create UI/UX design mock-ups.

o Design system architecture and security model.

3. Development Phase (8 weeks)

o Frontend development.

o Backend development.

o Integration with on-premises AD and Entra ID.

4. Testing Phase (4 weeks)

o Unit testing, integration testing, and user acceptance testing (UAT).

5. Deployment and Training (2 weeks)

o Deploy the solution in the production environment.

o Provide training for end users and IT staff.

6. Post-Deployment Support (4 weeks)

o Monitor system performance.

Address any issues or bugs.

Stakeholders

• Project Sponsor: IT Director

• Project Manager: Assigned by IT Department

• Development Team: Frontend and Backend Developers, QA Engineers

• Security Team: Security Analysts, Compliance Officers

• End Users: Employees requiring password reset functionality

• IT Support Team: For initial training and ongoing support

Success Criteria

• Reduction in password-related IT support tickets by at least 50%.

• Positive user feedback on ease of use and security of the password reset process.

• Compliance with security and data protection regulations.

• Successful

Prepared by:

Rajvir Upal

IT Manager

Email: Rajvir.uppal@atmc.edu.au

Phone: 0403 600 091

Project ID: Sem2_2024
Project Title: Q&T Premium Website Redesign and Rebuild Using Modern Web Frameworks
Client: 8 Horses – Youyou Tian - 0406 847 070

Project Overview

The goal of this project is to redesign and rebuild the Q&T Premium website using modern web frameworks such as React, Next.js, Tailwind CSS, and Shadcn/ui. The new design will maintain the existing functionality and pages of the current WordPress site while updating the overall aesthetics, performance, and user experience to reflect contemporary web standards. The project will ensure brand consistency by retaining the green theme color and incorporating all brand elements seamlessly.

Project Requirements

1. Retain Existing Pages and Functions

Migrate all existing pages from the current WordPress site to the new Next.js framework.

Ensure that all current functionalities, including forms, interactive elements, and any backend integrations, are maintained.

2. Theme and Branding

Color Scheme: Retain green as the primary theme color to ensure brand consistency.

Brand Elements: Ensure that all brand elements such as logos, icons, and images are incorporated seamlessly into the new design.

3. Redesign Components

Navigation Bar: Modernize the design of the navigation bar.

Ensure it is responsive and user-friendly across all devices.

Fonts and Typography:

Select new fonts that are modern and professional.

Adjust font sizes for readability and aesthetics.

Ensure consistency in typography across the website.

Button Styles:

Unify the design of buttons with a consistent style guide.

Ensure buttons are easily recognizable and accessible.

Page Layout:

Reorganize the page layouts for better visual hierarchy and user experience.

Ensure responsive design principles are applied for optimal viewing on various devices.

4. Performance and SEO

Optimize the new website for fast loading times.

Implement SEO best practices to maintain or improve search engine rankings.

Use Next.js features such as server-side rendering (SSR) and static site generation (SSG) for better performance and SEO.

5. Accessibility

Ensure the new design adheres to accessibility standards (e.g., WCAG).

Implement features like keyboard navigation and screen reader support.

6. Integration with Current Systems

Ensure seamless integration with existing backend systems and third-party services.

Migrate any necessary data from the WordPress backend to the new system.

7. Testing and Quality Assurance

Conduct thorough testing across different browsers and devices to ensure compatibility.

Perform user acceptance testing (UAT) to gather feedback and make necessary adjustments.

8. Responsiveness

Ensure the entire website is fully responsive.

Design and test for optimal performance on a wide range of devices, including desktops, tablets, and smartphones.

Apply responsive design techniques such as flexible grids, fluid images, and media queries.

9. Deployment and Maintenance

Set up a staging environment for testing before deployment.

Plan for a smooth transition with minimal downtime during the switch from the old site to the new one.

Provide documentation and training for the Q&T Premium team to manage and update the new site.

Learning Opportunities for a Last-Year Student

Key Takeaways:

1.Hands-on Experience with Modern Web Frameworks

Working with React, Next.js, Tailwind CSS, and Shadcn/ui provides practical knowledge of popular and widely used technologies in the industry.

2.Understanding Web Migration

Gaining experience in migrating a WordPress site to a modern framework is valuable for understanding legacy systems and modern web practices.

3.Responsive Design Principles

Learning to design and implement responsive web pages ensures the website performs well across different devices and screen sizes, a critical skill in modern web development.

4.Performance Optimization

Optimizing a website for speed and SEO teaches important performance enhancement techniques and best practices.

5.Accessibility Compliance

Ensuring accessibility standards are met helps understand the importance of creating inclusive web applications.

6.Integration Skills

Working on integration with existing backend systems and third-party services provides experience in handling real-world project complexities.

7.Testing and Quality Assurance

Conducting thorough testing and UAT instills a sense of quality assurance and attention to detail.

Why This is Suitable for a Beginner Developer:

•Comprehensive Learning: The project covers a wide range of essential web development skills, providing a holistic learning experience.

•Real-World Application: It offers exposure to real-world scenarios and challenges, preparing the student for future professional projects.

•Supportive Frameworks: React, Next.js, and Tailwind CSS have extensive documentation and community support, making it easier for beginners to learn and troubleshoot issues.

•Incremental Learning Curve: The project allows gradual learning, starting with understanding the existing system, moving to design, and finally to development and deployment.

Project Overview

The Arkfei Online Design Tool aims to provide a state-of-the-art platform for users to design their smart home systems. This tool will allow users to upload floor plans, use a drag-and-drop interface for product integration, and generate detailed project documentation such as cost of materials and quotes. The target audience includes distributors, homeowners, integrators, engineers, and design professionals like interior designers, builders, and architects.

Project Requirements

1. User Interface

Floor Plan Upload:

▪Allow users to upload floor plans in common image formats.

▪Provide guidelines for scaling and orienting the floor plan correctly.

Drawing Tool:

▪Include a built-in drawing tool for creating or modifying floor plans.

▪Provide options to draw walls, doors, windows, and other structural elements.

Drag-and-Drop Functionality:

▪Enable users to drag and drop Arkfei products onto the floor plan.

▪Ensure products snap into predefined positions compatible with architectural elements.

2. Product Configuration

Product Palette:

▪Display available products categorized by type (e.g., sensors, switches) in a sidebar.

▪Allow users to filter and select products to view basic specifications and compatibility.

Interactive Elements:

▪ Show optional settings for products on the floor plan, such as the angle of sensor detection or areas of coverage.

3. Visualization and Analytics

Coverage Visualization:

▪Display dynamic overlays showing the coverage area of sensors, cameras, and WiFi.

▪Help users optimize product placement for desired coverage.

o

Power Consumption Analysis:

▪Calculate and display total power consumption of all devices on the plan.

▪Warn users if the proposed system exceeds safe power thresholds.

4. Export Functions

Design Export:

▪Allow users to save their designs for future editing or export them as high-resolution images.

Documentation Generation:

▪Automatically generate cost of devices and detailed quotes, exportable as PDF documents.

▪Provide a comprehensive list of all selected devices, including quantities and unit prices, for review or export as part of the project documentation.

5. Technical Features

2D Views:

▪Provide a 2D view of the floor plan to better understand product placement within the space.

Real-Time Editing:

▪Ensure changes to product placement or settings update in real-time, allowing users to experiment with different configurations.

Responsive Design:

▪Ensure the tool is optimized for all devices, using responsive design principles to adjust content layout across desktops, tablets, and mobiles.

6. Integration with Current Systems

Ensure seamless integration with existing backend systems and third-party services.

Support real-time updates and configurations for the online design tool.

7. Testing and Quality Assurance

Conduct thorough testing across different browsers and devices to ensure compatibility.

Perform user acceptance testing (UAT) to gather feedback and make necessary adjustments.

8. Deployment and Maintenance

Set up a staging environment for testing before deployment.

Plan for a smooth transition with minimal downtime during the switch from the old system to the new one.

Provide documentation and training for the Arkfei team to manage and update the design tool.

Learning Opportunities for a Last-Year Student

Key Takeaways:

1.Practical UI/UX Design Experience

Designing an intuitive and engaging user interface with features like floor plan upload, drawing tools, and drag-and-drop functionality.

2.Hands-On Product Configuration

Configuring interactive product elements and visualizing complex data like coverage areas and power consumption.

3.Advanced Visualization Techniques

Implementing dynamic overlays and real-time editing to enhance user interaction and feedback.

4.Comprehensive Export and Documentation

Developing features for exporting designs and generating detailed project documentation, valuable for understanding end-to-end project workflows.

5.Responsive Design Implementation

Ensuring the tool is optimized for all devices, providing hands-on experience with responsive web design principles.

Why This is Suitable for a Beginner Developer:

•Focused Learning Scope: The project focuses on a specific tool, allowing for deep learning and mastery of relevant technologies.

•Real-World Application: Offers exposure to practical scenarios and challenges, preparing the student for future professional projects.

•Supportive Frameworks: Utilizes frameworks like React, Next.js, and Tailwind CSS that have extensive documentation and community support, making it easier for beginners to learn and troubleshoot issues.

•Incremental Complexity: The project allows for gradual learning, starting with basic functionalities and progressing to more advanced features like real-time editing and dynamic visualizations.

•End-to-End Development Experience: Covers the entire development process, from initial design to deployment and maintenance, providing a comprehensive learning experience.