



UTM
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SECD 2613 SYSTEM ANALYSIS AND DESIGN

PHASE 2 - Information System Gathering and Requirement

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Group 2

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1.0 Overview

The Personal Portfolio Website project aims to design and develop a comprehensive personal web-based platform that will innovate the way a person can showcase their personal projects, skills, experiences and accomplishments in a professional and eye-catching manner, all in one website. By providing a platform for users to personalize their portfolio with an interactive and intuitive online platform, we will streamline the process of showcasing projects, past experiences, highlight skills, and their work to potential employers, clients and collaborators.

2.0 Problem Statement

Many freshly graduated students and even experienced professionals face significant challenges in presenting their skills, projects, and accomplishments effectively. Traditional resumes and generic portfolio formats fail to adequately highlight unique talents and experiences, resulting in missed opportunities for employment and professional growth. The absence of a centralized, user-friendly system for creating and managing portfolios further exacerbates these issues, making it difficult for individuals to showcase their potential to employers, clients, and collaborators.

ISSUES (CURRENT SITUATION)

Ineffective Presentation: Traditional resumes and generic portfolios do not effectively highlight individual skills and projects.

Lack of Centralization: There is no efficient system for compiling and managing portfolio content in one place.

Difficulty in Updates: Users find it challenging to keep their portfolios up to date in an easy way.

Limited Visibility: Poor search engine optimization reduces the visibility of portfolios, making it harder for users to be discovered.

Absence of Personal Branding: Current tools do not allow users to reflect their unique identities and styles in their portfolios.

OBJECTIVES (DESIRED SITUATION)

1. Create a user-friendly platform that allows users to easily showcase their personal projects with detailed descriptions, visually-captivating profiles and images.
2. Develop and implement a content management system that allows swift updates and personalization of portfolio items, projects, and achievements.
3. Guarantee a receptive and accessible website across different devices and screen sizes.
4. Optimize the website for search engines to improve visibility, making it easier for users to find and visit the site.
5. Integrate elements of personal branding into the site to reflect the users' unique identity and style.

REQUIREMENTS

User-Friendly Interface: The platform must be intuitive and easy to navigate for users with varying levels of technical expertise.

Responsive Design: The website must be accessible and functional across different devices and screen sizes.

Customization Options: Tools for personal branding and customization to reflect the user's unique identity.

Security: Ensure the platform is secure to protect user data and privacy.

Usability Testing: Conduct thorough testing to ensure the platform is user-friendly and free of bugs.

CONSTRAINTS

Budget: The project must be developed within the allocated budget.

Time: The project needs to be completed within a specified timeframe.

Technical Limitations: The platform must be compatible with existing technologies and infrastructure.

User Adoption: Ensuring ease of use to promote widespread adoption among users with different technical backgrounds.

Compliance: The platform must comply with relevant data protection and privacy regulations.

3.0 Proposed Solutions

Solution 1: Development of an Intuitive Web-Based Platform

Description: Develop a user-friendly and visually appealing web-based platform that allows users to create and manage their personal portfolios with ease. The platform will include a robust content management system and customization options to reflect users' personal branding.

Features:

- **User Interface:** Design an intuitive interface with drag-and-drop functionality for easy content arrangement.
- **Customization:** Provide templates and design tools to enable users to customize their portfolios to match their personal style.
- **Content Management:** Implement a content management system that allows users to quickly add, update, and organize portfolio items.
- **Responsive Design:** Ensure the platform is fully responsive, providing an optimal experience across all devices and screen sizes.

Solution 2: Implementation of a Comprehensive Content Management System

Description: Develop a comprehensive system that supports the creation, management, and updating of portfolio content, including text, images, videos, and other multimedia elements.

Features:

- **User-Friendly Dashboard:** Provide an intuitive dashboard for managing portfolio content.
- **Media Library:** Include a media library for storing and organizing images, videos, and other multimedia assets.
- **Template Library:** Offer a variety of pre-designed templates that users can customize.
- **Version Control:** Implement version control to track changes and allow users to revert to previous versions if needed.

Solution 3: Responsive Design and Cross-Platform Compatibility

Description: Ensure the platform is designed with a responsive layout to provide an optimal user experience across different devices and screen sizes.

Features:

- **Responsive Layouts:** Design layouts that adapt to various screen sizes, from desktops to mobile devices.
- **Cross-Browser Compatibility:** Ensure the platform works seamlessly across all major web browsers.
- **Mobile Optimization:** Optimize the platform for mobile devices to ensure fast load times and smooth navigation.
- **Accessibility Features:** Incorporate accessibility features to ensure the platform is usable by individuals with disabilities.

Solution 4: Integration of Personal Branding Elements

Description: Incorporate tools and features that allow users to infuse their portfolios with elements of personal branding, making them stand out.

Features:

- **Custom Themes and Templates:** Provide customizable themes and templates that reflect different personal styles.
- **Branding Tools:** Include tools for adding logos, custom fonts, color schemes, and other branding elements.
- **Profile Customization:** Allow users to create detailed profiles with personalized biographies, contact information, and social media links.
- **Interactive Elements:** Integrate interactive elements such as animations, hover effects, and interactive project showcases.

Solution 5: Comprehensive Testing and Optimization

Description: Conduct thorough testing and optimization to ensure the platform's functionality, usability, and performance.

Features:

- **Usability Testing:** Perform usability testing with real users to gather feedback and identify areas for improvement.

- **Performance Optimization:** Optimize the platform for fast load times and smooth performance.
- **Cross-Platform Testing:** Test the platform across different devices, browsers, and operating systems to ensure compatibility.
- **Feedback Mechanism:** Implement a feedback mechanism for users to report issues and suggest improvements.

4.0 Information Gathering process

4.1 Method Used

Questionnaires

Purpose

The purpose of using questionnaires is to gather detailed and structured responses from a wide range of users about their experiences, needs, and expectations regarding current portfolio systems. This method allows us to collect qualitative data that can provide insights into specific pain points and desired features in a new portfolio platform.

Target Participants

The questionnaires will target diverse groups, including:

- Fresh graduates who are actively seeking employment.
- Current undergraduates who are interested in improving their portfolio showcasing skills.
- Experienced professionals looking to showcase their career achievements.
- Freelancers who need to present their projects and skills to potential clients.
- HR recruiters who evaluate portfolios as part of their hiring process.
- Current users of various portfolio platforms.

4.2 Summary from method used

Distribution and Collection

- **Distribution Channels:** Online distribution via email, social media

- **Tools:** Google Forms for creating and distributing questionnaires.
- **Response Collection:** Electronic collection for ease of access and convenience.

Data Analysis

- **Compilation:** Responses compiled.
- **Categorization:** Answers categorized based on themes (user experience, customization needs, accessibility, desired features).
- **Analysis:** Review of textual responses to identify specific pain points and suggestions.

Example Questions

1. What platform do you currently use for your portfolio?
 - LinkedIn
 - Personal website (e.g., Wix, WordPress)
 - PDF portfolio
 - Adobe Portfolio
2. How long have you been using this platform?
 - Less than 6 months
 - 6 months to 1 year
 - 1 to 2 years
 - More than 2 years
3. How easy is it to update your portfolio on your current platform?

- ☐ Very easy
- ☐ Easy
- ☐ Neutral
- ☐ Difficult
- ☐ Very difficult

4. What specific features do you use most frequently on your current platform? (Select all that apply)

- ☐ Adding projects
- ☐ Updating resume/CV
- ☐ Customizing design/layout
- ☐ Adding multimedia content (images, videos)

5. What motivated you to choose your current portfolio platform?

6. How satisfied are you with the customization options available on your current platform?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very dissatisfied

7. What customization features would you like to see in a new portfolio platform?

8. What improvements would you like to see in a new portfolio platform?

5.0 Requirement Analysis

5.1 Current Process

Fresh Graduate Creating a Portfolio

1. Initial Setup

- **Task:** Create User Account or Login
- **Actions:**
 - Register and create an account on the platform.

2. Content Collection

- **Task:** Gather all necessary content for the portfolio.
- **Actions:**
 - Collect academic transcripts, certificates, project details, work samples, and resume.
 - Organize multimedia content like images, videos, and presentations.

3. Portfolio Creation

- **Task:** Set up the portfolio
- **Actions:**
 - Input personal information, skills, and experiences.
 - Upload and format multimedia content and project descriptions.

5.2 Functional Requirement

1. User Registration and Profile Setup

- **Input:** Personal details
- **Process:** Form submission, account creation, setup wizard.
- **Output:** User profile initialized.

2. Content Upload and Organization

- **Input:** Documents, multimedia files.
- **Process:** File upload, tagging, organization.
- **Output:** Organized content ready for portfolio integration.

3. Portfolio Template Selection and Section Editing

- **Input:** Template choice, section content (text, images, videos).
- **Process:** Template application, content editing, autosaving.
- **Output:** Draft portfolio with populated sections.

4. Design Customization

- **Input:** Custom logos, design preferences.
- **Process:** Customization tool application.
- **Output:** Personalized design preview.

5. Portfolio Publication

- **Input:** Final review confirmation.
- **Process:** Error checking, publishing.
- **Output:** Live portfolio with shareable URL.

6. Ongoing Updates and Maintenance

- **Input:** New project details, certifications, updated resume.
- **Process:** Content addition, modification, real-time updates.
- **Output:** Continuously updated portfolio.

5.3 Non-functional Requirement

System Availability

- The platform must be available 99.9% of the time to ensure users can access and update their portfolios without interruptions.

Response Time

- The system should respond to user actions (e.g., saving content, loading pages) within 2 seconds to provide a smooth user experience.

Load Time

- Portfolio pages should load within 3 seconds, even with high-resolution images and multimedia content.

Security

- **Data Protection:** All user data must be encrypted both at rest and in transit using industry-standard encryption protocols.

- **Authentication:** The platform must support secure login methods, including multi-factor authentication.
- **Authorization:** Role-based access control must be implemented to ensure users only have access to their own portfolios and administrative users can manage the system securely.

5.4 Logical DFD As-Is System

Context Diagram

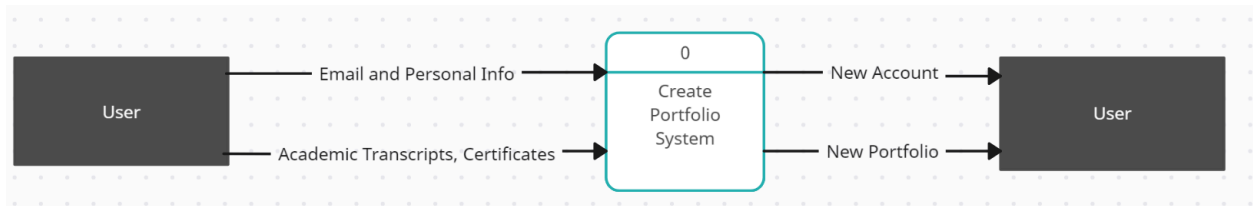
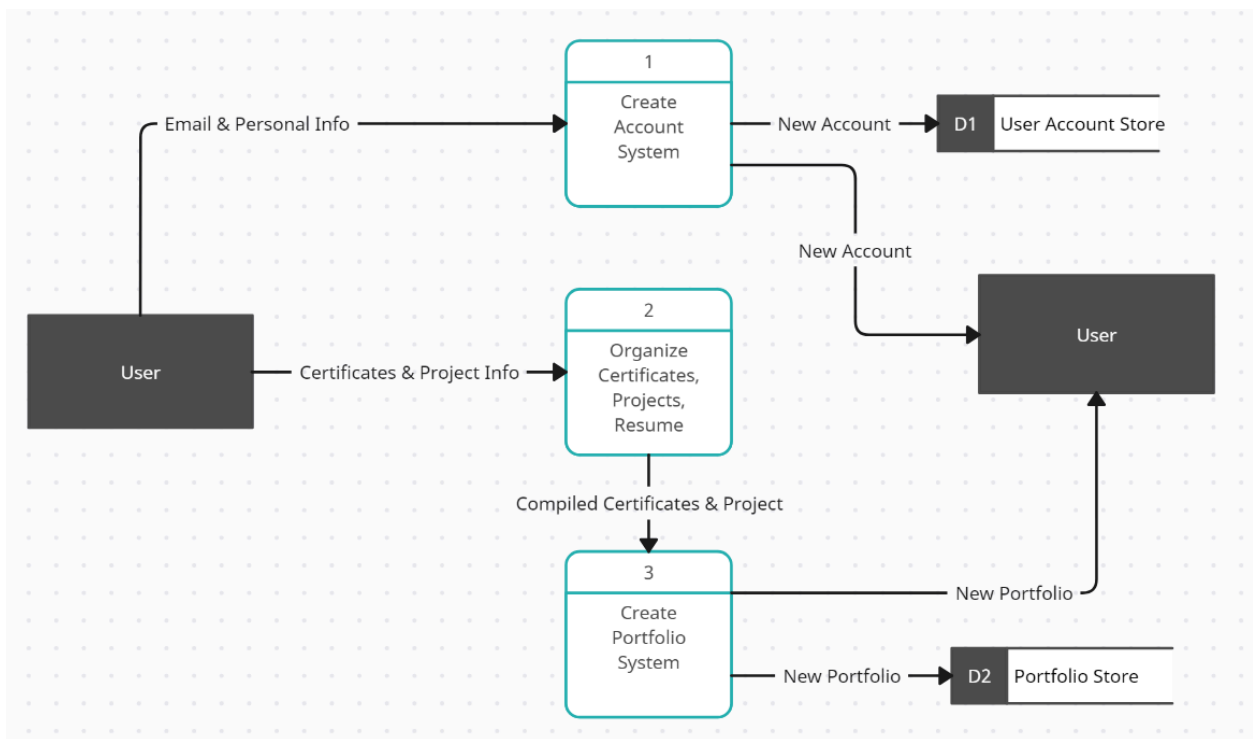
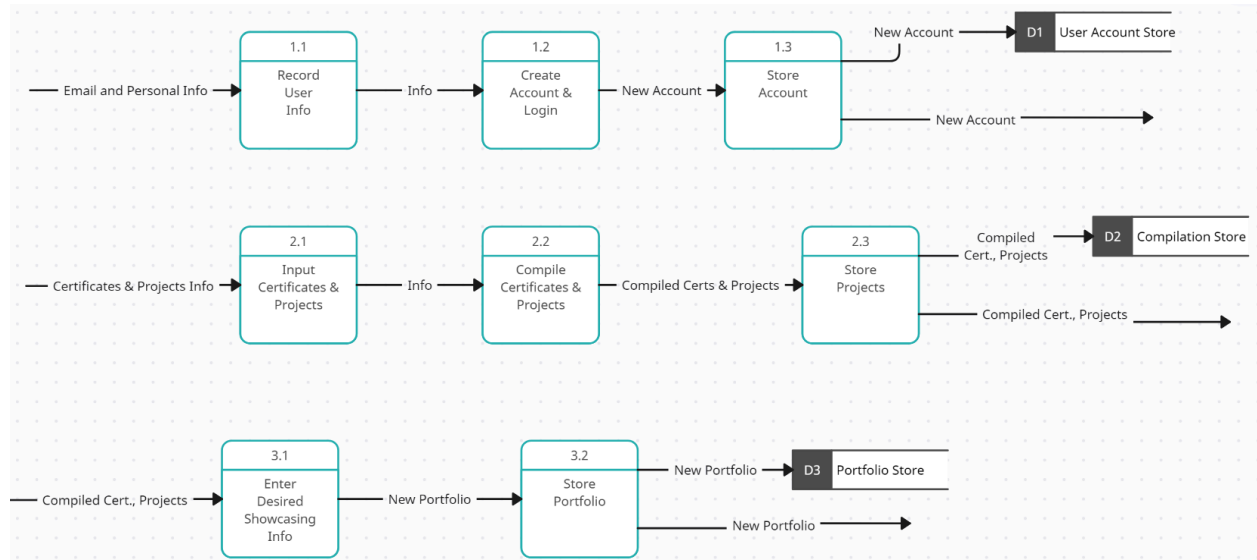


Diagram 0



Child Diagram



6.0 Summary of Requirement Analysis Process

Understanding the Problem Statement

The first step involved clearly defining the problem that the Personal Portfolio Website aims to solve. The problem statement identified key issues:

- Fresh graduates struggle with creating and maintaining effective portfolios.
- Existing portfolio platforms are often not user-friendly or customizable enough.
- A lack of centralized and streamlined systems for managing and showcasing personal projects, skills, and accomplishments.

2. Gathering Requirements

We gathered requirements through various methods, focusing primarily on questionnaires. The process involved:

- **Developing Questionnaires:** Crafting a set of questions aimed at understanding user needs, preferences, and pain points.
- **Distributing Questionnaires:** Engaging with fresh graduates, employers, and clients to collect diverse perspectives.
- **Analyzing Responses:** Reviewing the feedback to identify common themes and specific requirements.

3. Identifying Functional and Non-Functional Requirements

Functional Requirements:

- **Input:** Personal details, project descriptions, multimedia content, customization preferences.
- **Process:** Registration, content upload and organization, customization, publishing, maintenance.
- **Output:** User profiles, organized portfolio content, customized and live portfolios.

Non-Functional Requirements:

- **Performance:** High system availability, fast response times, quick load times, efficient data processing.
- **Control:** Data security, user authentication, reliability, maintainability, performance monitoring.

4. Creating Logical Data Flow Diagrams (DFDs)

Context Diagram: An overview showing interactions between the system and external entities like fresh graduates, employers, and portfolio platforms. **Diagram 0 (Level 1 DFD):** Breakdown of the main system process into sub-processes such as account setup, content upload, customization, and maintenance. **Child Diagram (Level 2 DFD):** Detailed breakdown of each process, showing steps like content upload, organization, and review.

5. Defining Current Business Process (AS-IS)

We analyzed the current workflow for fresh graduates creating portfolios, identifying key steps:

- Choosing a platform.
- Collecting and organizing content.
- Creating, customizing, and publishing the portfolio.
- Maintaining and updating the portfolio regularly.

In conclusion, the requirement analysis process provided a comprehensive understanding of the needs and challenges faced by users in creating and managing their portfolios. By gathering and analyzing requirements, we defined clear functional and non-functional requirements and visualized the current business process through DFDs. This thorough analysis sets a strong foundation for designing and developing an effective Personal Portfolio Website that addresses the identified issues and meets user needs.