DSD 607 Project 2- Assessment 1

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Task 1- Develop a project plan to complete each stage of the SDLC (Software Development Lifecycle) excluding the
maintenance stage. [38 marks]
The project plan must include:
a) A clear summary of the project idea and its objectives. [3 marks] (100-150 words)
b)

Project summary

The React JS News Publishing and Management Web Application is a comprehensive digital platform designed to streamline the process of creating, managing, and publishing news articles. Built using the React JavaScript library, this application aims to provide a user-friendly and efficient solution for journalists, content creators, and editorial teams to collaborate on content creation and distribution. The application will offer a seamless user experience, enabling users to draft, audit, edit, and publish news articles while maintaining an organized workflow.

Objectives:

- User-friendly and intuitive interface.
- Responsive and high-performance application that loads quickly, responds promptly to user interactions.
- Database highly structured.
- Role-based design with customized content and UI.

b) Problem analysis and requirements-A comprehensive description of the requirements/deliverables that have been gathered. You must provide records of all client communications such as emails, phone calls, meeting minutes and the like. [7 marks] (200-250 words)

Analysis of Problems:

Complexity of Role Hierarchy: In larger organizations, the role hierarchy can become intricate. Managing permissions and access levels across various roles (auditors, editors, administrators, etc.) can lead to complexities, especially if the application lacks a clear and intuitive interface for role management.
Permission Granularity: Different roles require different levels of access to different parts of the application. Striking the right balance between providing enough control without overwhelming users with unnecessary permissions can be challenging.

Requirments:

Intuitive User Interface: Develop a user-friendly and visually appealing interface that

enables users to easily navigate through the application's features. Implement responsive design principles to ensure compatibility across various devices.

Article Creation and Editing: Provide a rich text editor integrated into the application, allowing users to create, format, and edit news articles. Incorporate features such as text formatting, image embedding, and multimedia integration to enhance content quality.

Collaborative Workflow: Implement a role-based user system, enabling editorial teams to collaborate effectively. Users should be able to assign roles such as writers, editors, and administrators, with corresponding permissions for each role.

Draft Management: Allow users to save articles as drafts, enabling them to work on articles over time and collaborate with colleagues before finalizing. Implement version control to track changes and facilitate easy comparison between different versions of the same article.

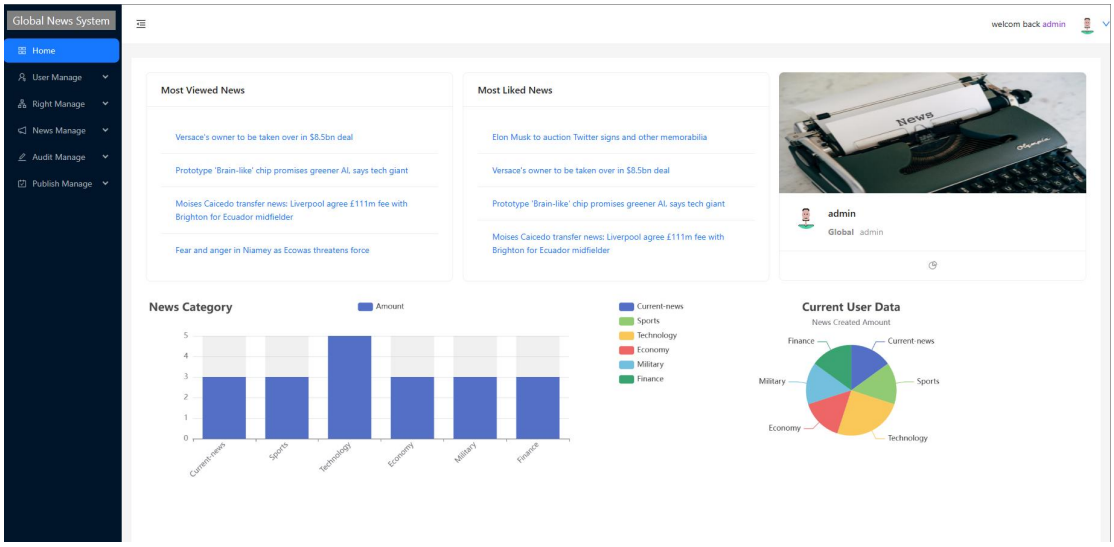
Audit and Approval Process: Integrate a audit and approval system, enabling editors to provide feedback, suggest changes, and approve articles before they are published. Notifications and alerts should be in place to keep all stakeholders informed about the status of each article.

Data visualization: Display statistic data with bar or pie chart on web application.

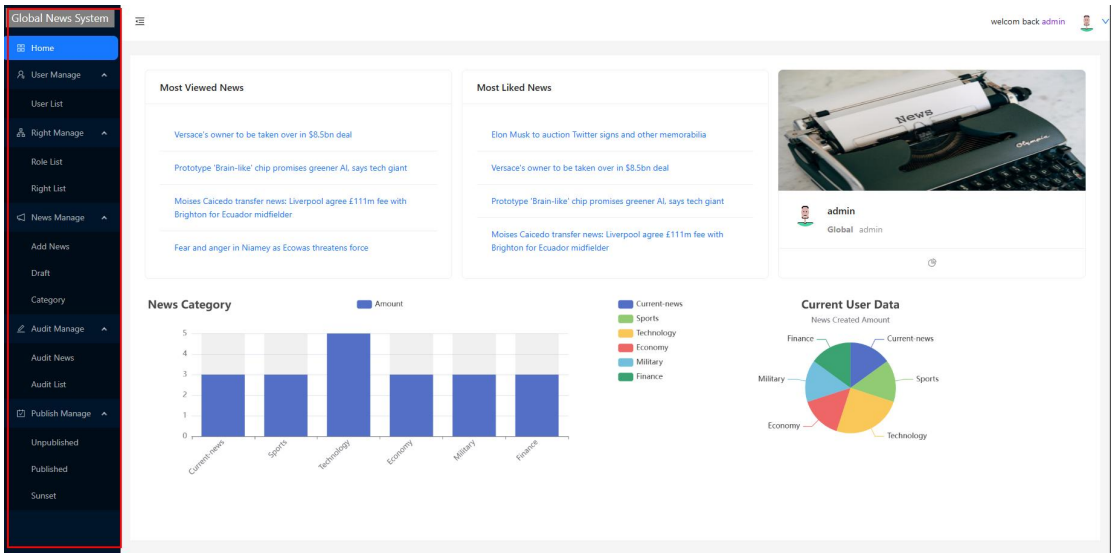
c) Solution design - A high-level design of the user interface including wireframes/mock-ups. The design must include a detailed description of the software components, the relationships between them, and the overall system architecture.

Login

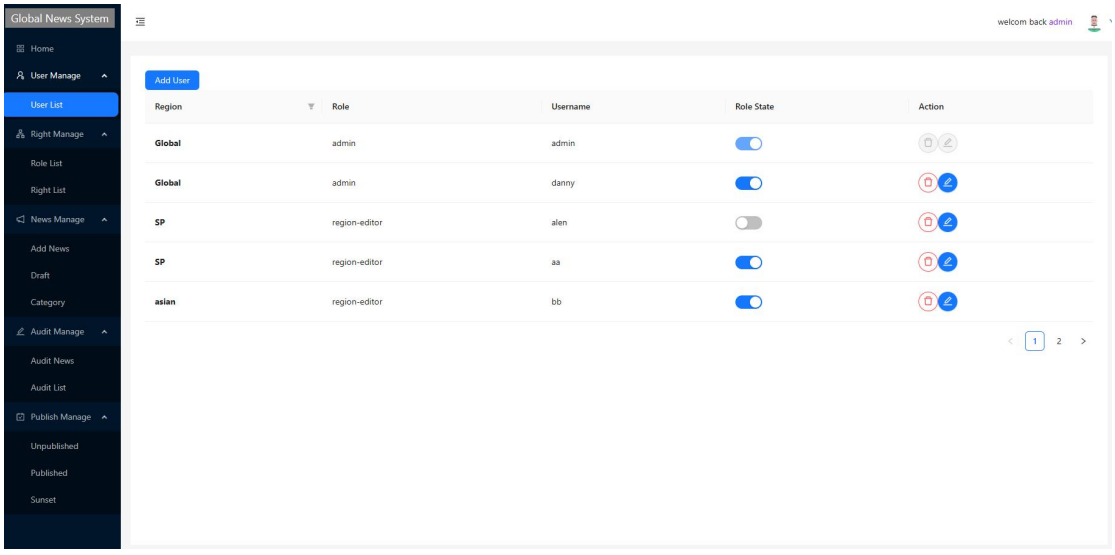
Home

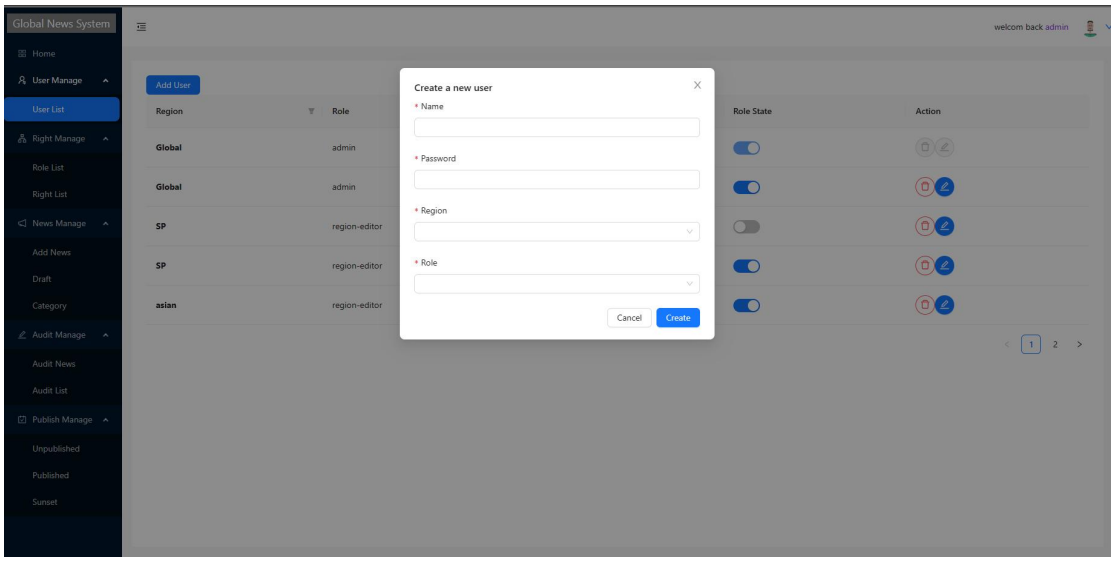


Sidebar Menu---Dynamically changed with different user

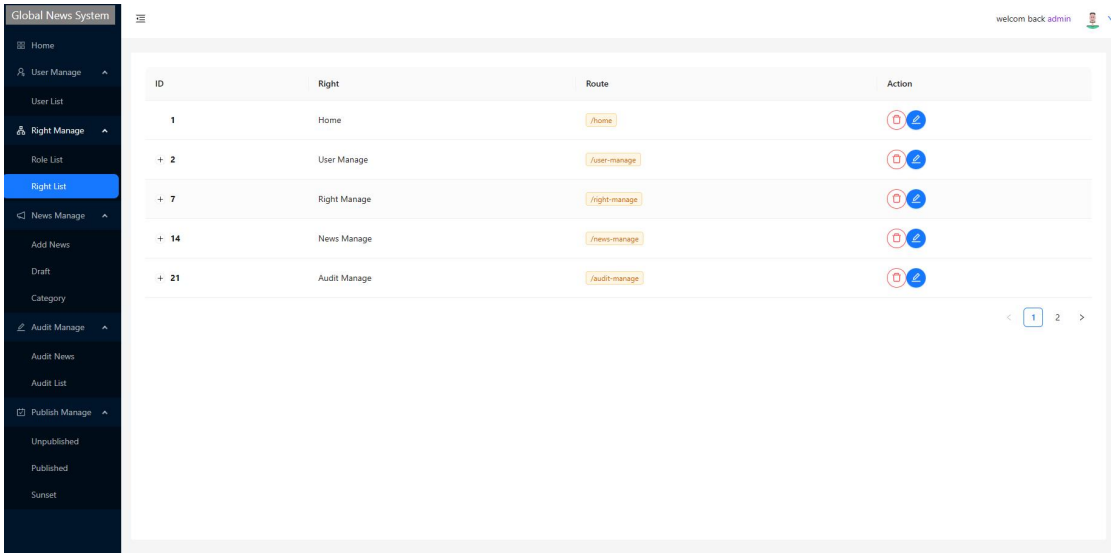


User manage





Right manage


Global News System
Home
User Manage
User List
Right Manage
Role List
Right List
News Manage
Add News
Draft
Category
Audit Manage
Audit News
Audit List
Publish Manage
Unpublished
Published
Sunset
welcom back admin
ID
Right
Route
Action
1
Home
/home
2
User Manage
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Right Manage
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News Manage
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Audit Manage
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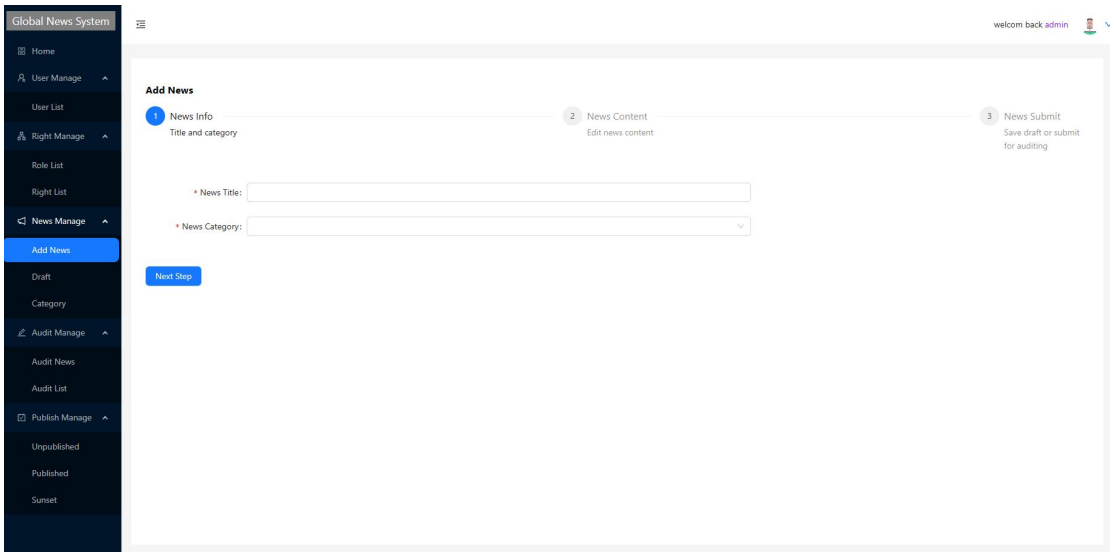
News manage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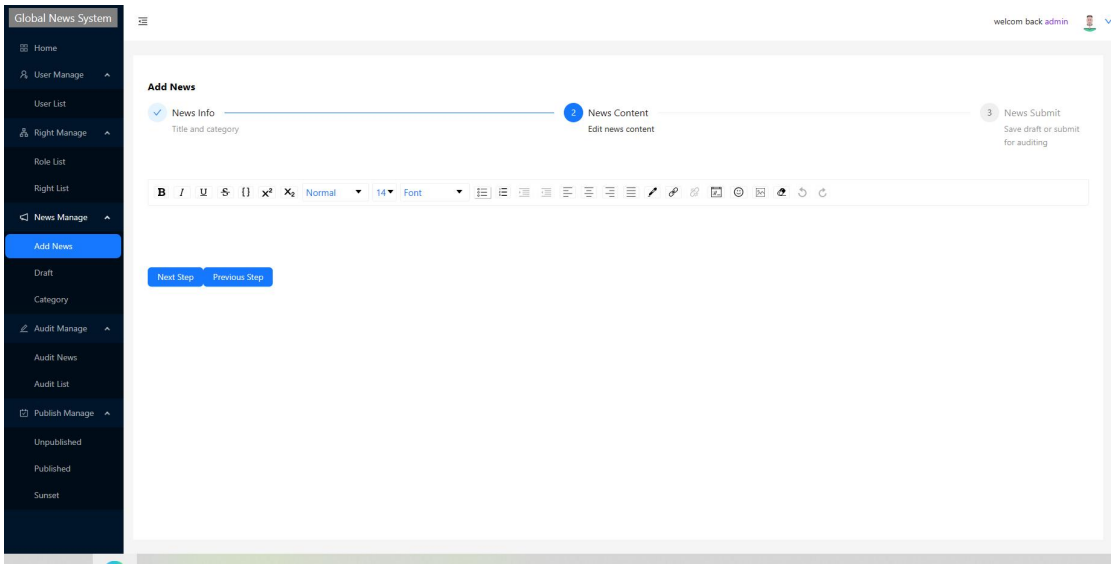
Audit List
Publish Manage
Unpublished
Published
Sunset
welcom back admin
Add News
1
News Info
Title and category
2
News Content
Edit news content
3
News Submit
Save draft or submit for auditing
* News Title:
* News Category:
Next Step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Publish Manage
Unpublished
Published
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Add News
News Info
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2
News Content
Edit news content
3
News Submit
Save draft or submit for auditing
Normal
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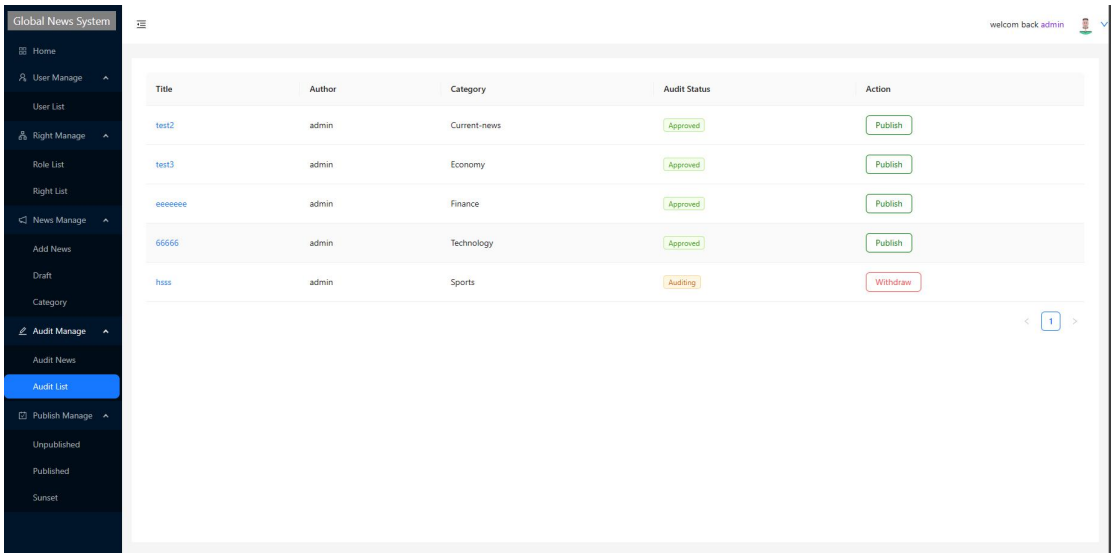
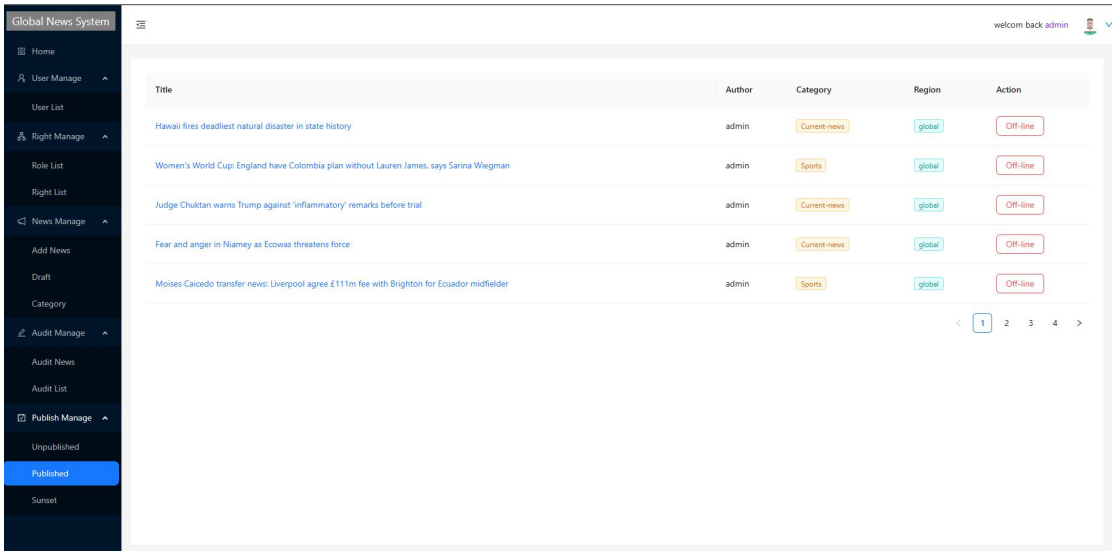
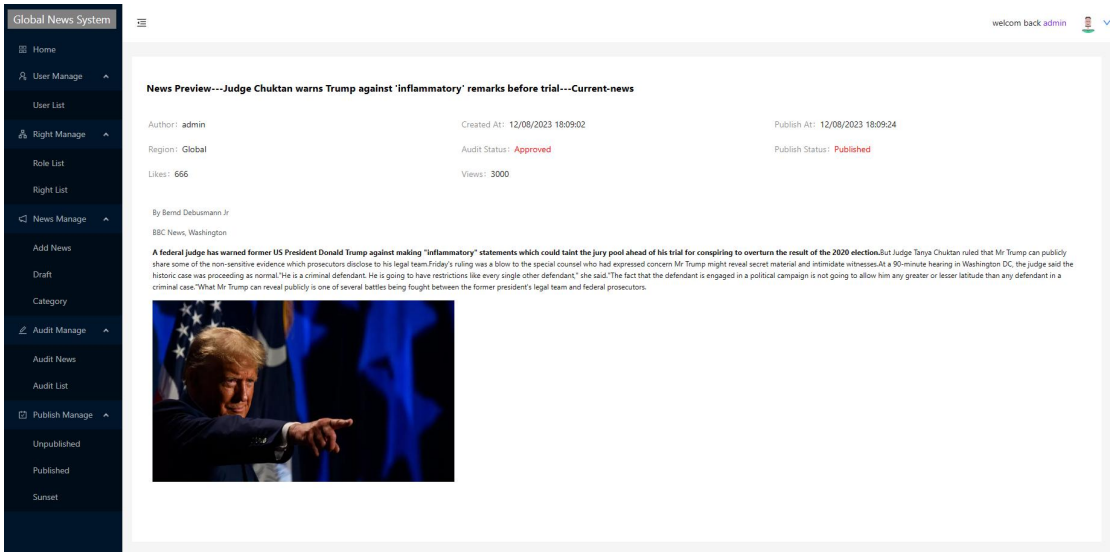
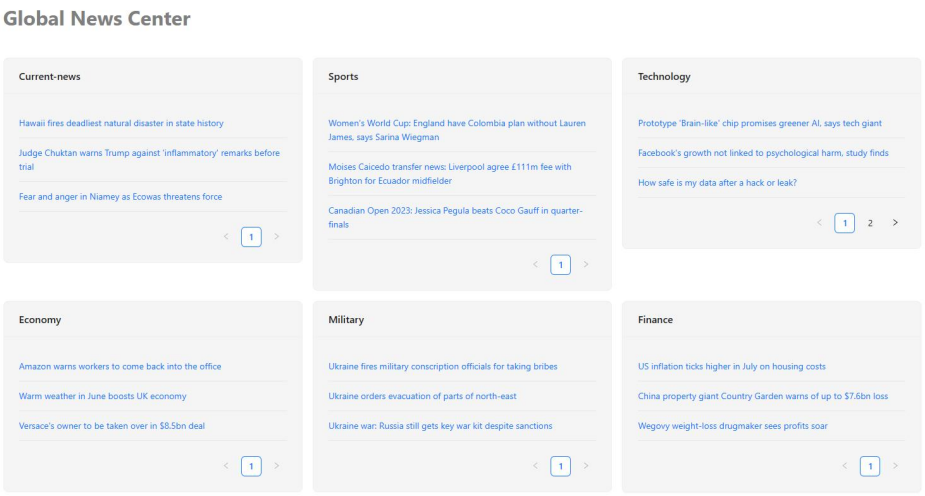
Next Step
Previous Step

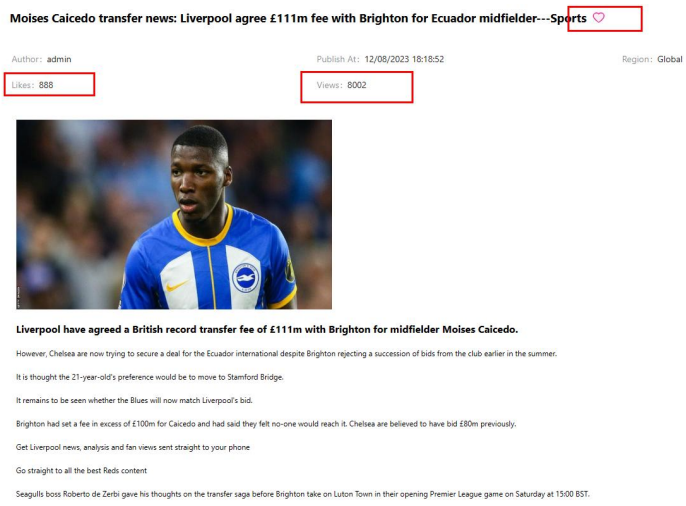






Visitor news center





d) Implementation plan - Develop a comprehensive implementation plan that outlines the development and deployment of the software solution, including the development methodology, tools, technologies, and timeline.
The plan must explain how version control will be used to manage changes to the code over time.

Frontend: React.js
Backend: Web API JSON FILE
Version Control: Git (GitHub repository)

Development Process:
Phase 1: Project Setup and Planning (1 week)
Set up GitHub repository for version control
Create initial project structure

Define user stories and backlog
Plan first sprint tasks

Phase 2: Iterative Development (2 weeks)

Each sprint includes development, testing, and code review
Implement user stories based on priority
Regularly merge code changes into the main branch

Phase 3: Testing (1 weeks)

Performance testing, security testing, and user acceptance testing

Version Control Strategy:

A Git repository will be set up on GitHub to manage the source code.
The main branch will be considered the stable version.
Feature branches will be created for each user story or feature.
Regularly scheduled merges from the main branch to feature branches to keep them up-to-date.

Timeline:

Project Start: Month 1
Project Setup and Planning: Week 1
Iterative Development (Sprints 1-8): Week 2-3
Testing: Week 4

d) Testing plan - Outline the testing methodologies to be used, user acceptance testing (UAT- Mandatory),functional testing, security testing, or unit testing. The plan must include a detailed description of when, what,and how testing will be conducted, including a timeline for each stage of testing. The tools and resources to be used for testing must also be identified.

Test methodology used: UAT

Test Data Preparation:

Populate the UAT environment with representative data to mimic real-world usage scenarios.

Test Scenarios and Test Cases:

Define UAT test scenarios based on user stories, requirements, and workflows.
Create detailed UAT test cases for each scenario, outlining steps, inputs, expected outcomes, and acceptance criteria.

UAT Testing Phases(Last week of project):

i. Functional Testing:

Participants perform tests to validate that the application's functionalities align with their needs.
Focus on critical user workflows and common scenarios.

ii. Usability Testing:

Participants assess the application's user-friendliness, navigation, and overall user

experience.Gather feedback on design, layout, and ease of use.

iii. Compatibility Testing:

Test the application on different browsers, devices, and operating systems to ensure cross-platform compatibility.

iv. Performance Testing:

Evaluate the application's responsiveness, load times, and overall performance under varying user loads.

v. Security Testing:

Validate that user data and interactions are secure and that authentication and authorization mechanisms are working as intended.

Task 2- Review the ITP Code of Practice and familiarize yourself with its principles and guidelines.

a) Select three principles from the ITP Code of Practice that you believe are particularly relevant for managing potential risks in your project. For each of the three principles you have selected, provide a detailed explanation of how they can be applied to manage potential risks in an IT project.

The "ITP Code of Practice" refers to the code of ethics and professional conduct developed by the Institute of IT Professionals (ITP) in New Zealand. When managing potential risks in a news publishing and management IT project, several principles from this code can be particularly relevant. Here are three principles and their explanations:

1. Principle: Professionalism

Professionalism emphasizes the importance of conducting oneself with integrity, honesty, and accountability while adhering to ethical standards. In the context of managing risks in a news publishing and management project, professionalism involves transparent communication with stakeholders about potential risks, their potential impact, and the mitigation strategies in place. This ensures that all parties involved are well-informed and can make decisions based on accurate information.

2. Principle: Duty to the Profession

Duty to the profession entails upholding the reputation of the IT profession and contributing positively to its growth. When managing risks in an IT project, this principle involves staying updated with industry best practices, standards, and methodologies to ensure that risks are identified, assessed, and managed effectively.

3. Principle: Responsible Decision-Making

Responsible decision-making involves making informed and ethical choices that consider the interests of stakeholders, the public, and the profession. In risk management for an IT project, this principle emphasizes making decisions that prioritize the well-being of the project, the organization, and its users.

By applying these principles from the ITP Code of Practice, project teams can effectively manage potential risks in a news publishing and management IT project, fostering a

culture of professionalism, industry knowledge, and responsible decision-making.

b) Determine the limitations or challenges of these three principles in managing potential risks that may arise during their practical implementation in real-world scenarios.

1. Principle: Professionalism:

Limitations/Challenges:
Subjectivity of Ethics: Determining what constitutes professionalism and ethical behavior can sometimes be subjective. Different stakeholders may have varying opinions on what is considered transparent communication and honesty. Balancing transparency with the need to avoid causing unnecessary panic can be challenging.
Conflicting Interests: Professionalism may be tested when there are conflicting interests between stakeholders. Striking a balance between transparency and protecting sensitive information can be difficult, especially when legal or contractual obligations are involved.

Ethics in Risk Communication: Communicating potential risks transparently while also ensuring that the information is clear and understandable for non-technical stakeholders can be challenging. There's a risk of misinterpretation or undue concern if not communicated carefully.

2. Principle: Duty to the Profession:

Limitations/Challenges:
Evolving Technology: The IT field is rapidly evolving, and staying updated with the latest best practices, methodologies, and standards can be demanding. This challenge is exacerbated when project teams are dealing with emerging technologies that lack well-established guidelines.
Time and Resource Constraints: In real-world scenarios, projects often have tight timelines and limited resources. Balancing the need to implement thorough risk management practices with these constraints can be difficult. This may lead to compromises on the extent of risk analysis or mitigation strategies.
Diverse Project Scenarios: Different IT projects have varying levels of complexity, technology stacks, and risk profiles. Applying a standardized duty to the profession across diverse projects can be challenging, as what works for one project may not be directly applicable to another.

3. Principle: Responsible Decision-Making:

Limitations/Challenges:
Trade-offs: In risk management, there are often trade-offs between different risks and their potential impacts. Making a responsible decision may involve choosing the lesser of two undesirable outcomes. Determining which decision is truly responsible can be difficult.

Unforeseen Consequences: Responsible decision-making requires anticipating the consequences of different choices. However, in complex projects, it's difficult to predict all possible outcomes accurately, and some consequences may only become apparent after a decision has been made.

Pressure and Urgency: Projects often operate under pressure, and decision-makers may feel pressured to make quick choices to keep the project moving. This can lead to decisions that prioritize short-term gains over long-term responsible outcomes.