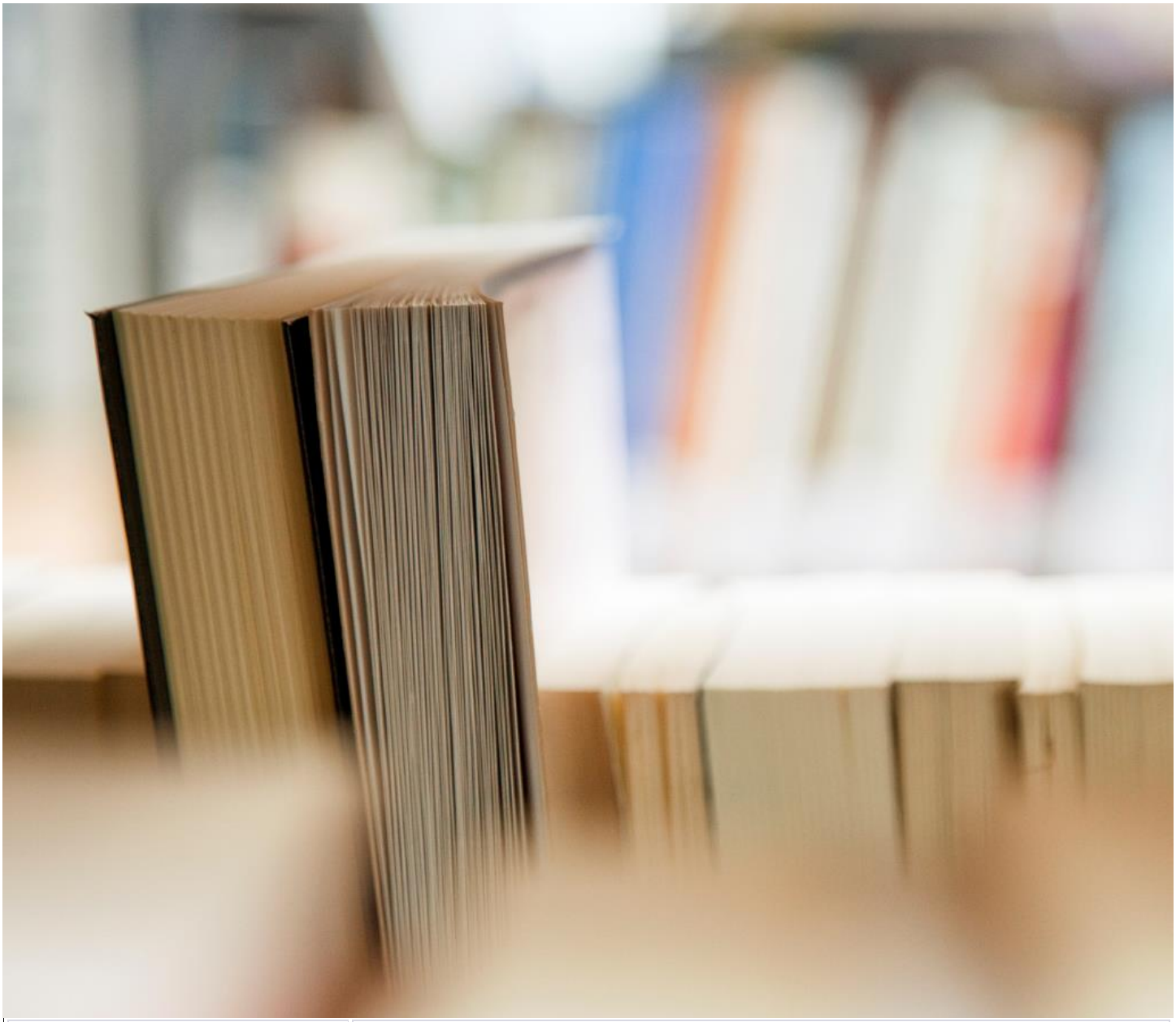

Singireddy Sahithi	**Project Coordinator and Documentation Lead:**
Thileti Sai Sruthi	**Requirement Analyst and Customer Communication:**
Chenreddy Joshnavi	**System Architect and Design Specialist:**
Eravelly Ashwitha	**Development Lead and Technical Specialist:**

Customer Review System

1. Individual Contributions Breakdown:

1. Project Coordinator and Documentation Lead:

- Responsibilities:
    - Oversee the project's overall progress and coordination.
    - Develop the Cover Page with project details.
    - Create the Individual Contributions Breakdown section for all team members.
    - Manage the documentation process and ensure adherence to guidelines.

2. Requirement Analyst and Customer Communication:

- Responsibilities:
    - Collaboration.
    - Prepare the revised Customer Statement of Requirements based on available information.
    - Update the Glossary of Terms to reflect changes or additions.
    - Coordination.

3. System Architect and Design Specialist:

- Responsibilities:
    - Develop the system architecture, ensuring alignment with refined requirements.
    - Design class diagrams and interface specifications, incorporating relevant design patterns.
    - Lead the system design phase, focusing on scalability, modularity, and maintainability.

4. Development Lead and Technical Specialist:

- Responsibilities:

- Implement functional requirements specified in the revised document.
- Create system sequence diagrams for use cases to be demonstrated in the final demo.
- Address non-functional requirements and contribute to the domain analysis.
- Work closely with the system architect to ensure seamless integration of design elements with development.

2. Table of Contents:

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3. Summary of Changes:

In this section, we comprehensively highlight the key revisions and modifications made during the development of Report-2. Building upon the foundations laid in Report-1, our team embarked on an ambitious journey to enhance and refine various aspects of the software system. The modifications encompass a spectrum of artifacts, including interaction diagrams, class diagrams, and package diagrams. Among the prominent changes, the interaction diagrams underwent a substantial transformation. We revisited the initial design to align it more closely with the system's evolving architecture. Notable refinements were made to streamline the flow of information between system components, enhancing overall efficiency.

Class and package diagrams also witnessed meticulous revision. The restructuring aimed to improve the system's modularity and encapsulation, contributing to a more robust and scalable architecture. This involved reorganizing classes into coherent packages, reflecting a clearer understanding of the system's logical divisions.

Additionally, the revised summary highlights the evolution of system sequence diagrams, aligning them with the use cases slated for implementation during the final demo. This synchronization ensures that the diagrams accurately represent the anticipated system behavior, providing a reliable roadmap for the development team.

In essence, the summary of changes serves as a dynamic record of the iterative development process, showcasing our commitment to delivering a software system that not only meets but exceeds the expectations outlined in the initial reports.

4. Customer Statement of Requirements:

The Customer Statement of Requirements serves as the anchor for our software development endeavor, shaping the functionality and features of the system based on the client's needs. In alignment with Report-1, this section outlines the refined and revised set of requirements that steer the development of our software system.

Building on the foundation laid in the initial report, we revisited each requirement to ensure clarity, completeness, and relevance to the evolving project scope. Where necessary, adjustments were made to accommodate emerging insights and to respond effectively to any shifts in the project's objectives.

The requirements capture the essence of the client's expectations, detailing the system's core functionalities, performance benchmarks, and any specific constraints or preferences articulated by the customer. This document is not a static entity but rather an evolving guide that adapts to the dynamic nature of software development.

One significant enhancement involves a more nuanced articulation of user stories, reflecting a deeper understanding of the end-users' needs and expectations. Each requirement is now accompanied by a user-centric narrative, providing context and insight into the real-world scenarios that the system is designed to address.

Moreover, this section sheds light on any newly identified requirements that surfaced during the development process. These additions are presented alongside the original set, offering a comprehensive overview of the expanded scope and capabilities of the software system.

In essence, the Customer Statement of Requirements is a living document that captures the evolving dialogue between the development team and the client, ensuring a shared understanding of the project's objectives and paving the way for the subsequent stages of system design and implementation.

5. Glossary of Terms:

The Glossary of Terms acts as a key reference point, providing a comprehensive compilation of the terminology used throughout the software development process. In line with the principles established in Report-1, this section undergoes careful scrutiny to ensure precision, consistency, and clarity in the language employed.

New terms introduced during the iterative development process are seamlessly integrated into the glossary, fostering a shared understanding among team members and stakeholders. Each term is accompanied by a concise definition, elucidating its role and significance within the context of the project. An emphasis is placed on aligning the glossary with industry standards and conventions, promoting effective communication, and mitigating the risk of misunderstandings arising from disparate interpretations of terminology. In instances where terms undergo refinement or modification, the glossary serves as a documentation tool, tracing the evolution of language choices and ensuring transparency in communication.

Furthermore, the glossary extends beyond a mere compilation of words and their meanings. It serves as a bridge between technical and non-technical stakeholders, facilitating a common language that promotes collaboration and understanding across diverse roles within the project.

In essence, the Glossary of Terms is more than a static list; it is a dynamic repository that mirrors the evolving landscape of the software development process, capturing the essence of shared language and fostering a collaborative environment.

6. Functional Requirements Specification:

The Functional Requirements Specification (FRS) serves as the backbone of the software development lifecycle, articulating the specific functionalities and features that the system must deliver to meet the outlined objectives. Building upon the foundation laid in Report-1, the FRS is a living document that undergoes meticulous refinement and enhancement.

Within this section, a detailed exploration of the use cases slated for implementation by the final demo is presented. Each use case is dissected, offering a granular view of the system's expected behavior in response to various inputs and scenarios. This narrative not only delineates what the system is expected to achieve but also outlines the conditions under which each functionality operates.

System Sequence Diagrams (SSDs) are seamlessly integrated, providing a visual representation of the interactions between external actors and the system. These diagrams serve as a powerful tool for stakeholders to comprehend the flow of activities within the system, offering insights into how user requests translate into specific system responses.

Emphasis is placed on traceability, linking each functional requirement to the corresponding use case and, by extension, to the overarching project objectives. This ensures that every piece of functionality is purposefully designed and aligned with the strategic goals of the project.

In instances where revisions or new functionalities emerge during the iterative development process, they are methodically incorporated into the FRS. This dynamic nature of the document reflects the agility of the development process, accommodating changes while maintaining a clear and organized specification.

In essence, the Functional Requirements Specification is a comprehensive guide that not only outlines the "what" of the system's capabilities but also delves into the intricacies of "how" these capabilities are realized, fostering a shared understanding among all project stakeholders.

7. Nonfunctional Requirements:

Nonfunctional requirements, sometimes aptly referred to as "ilities" (scalability, reliability, maintainability, etc.), play a pivotal role in shaping the holistic performance and characteristics of the software system. This section provides an exhaustive exploration of the nonfunctional dimensions that transcend the mere feature set, encompassing aspects critical to the system's overall success.

Drawing insights from Report-1, the Nonfunctional Requirements (NFRs) undergo a thorough reassessment to ensure they align seamlessly with the evolving project landscape. Parameters such as performance, security, usability, and reliability are scrutinized to guarantee that the system not only meets functional expectations but also excels in delivering a robust and user-centric experience.

Performance requirements are meticulously defined, encapsulating metrics related to response times, throughput, and concurrent user handling. This section delves into the anticipated load scenarios, outlining how the system should gracefully scale under varying levels of demand to prevent performance bottlenecks.

Security considerations are paramount, with a focus on safeguarding sensitive data and mitigating potential vulnerabilities. Encryption standards, authentication mechanisms, and authorization protocols are expounded upon to provide a comprehensive view of the security posture adopted by the system.

Usability requirements are crafted with the end user in mind, elucidating the principles that underpin an intuitive and accessible user interface. Human-Computer Interaction (HCI) principles are invoked to guide the design decisions, ensuring that the system is not just functional but also user-friendly.

Reliability and maintainability criteria are outlined, emphasizing the system's ability to operate consistently over time and undergo updates and enhancements with minimal disruption. These requirements serve as the foundation for crafting a system that stands the test of time and adapts to evolving user needs.

In essence, the Nonfunctional Requirements section transcends the functional scope, providing a panoramic view of how the system will perform, behave, and endure in the real-world ecosystem.

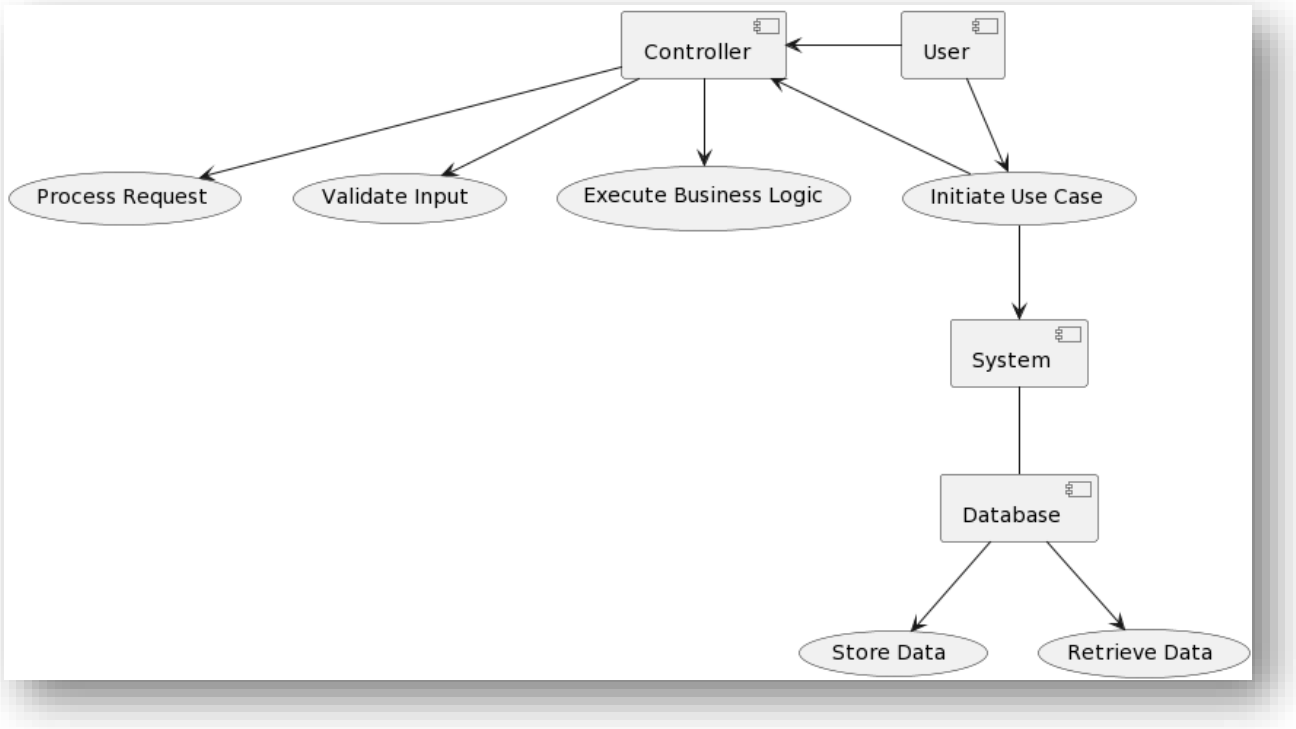


Figure 1 sequence diagram

8. Domain Analysis:

In the expansive realm of software engineering, domain analysis is the compass that guides developers through the intricacies of a specific problem space. Akin to peering through a unique lens tailored for the

project at hand, domain analysis involves a profound exploration of the subject matter, problem domain, and the contextual nuances that define the project's landscape.

Building upon the groundwork laid in Report-1, the Domain Analysis section of Report-2 embarks on a journey to reevaluate and augment the understanding of the project's domain. This involves a comprehensive examination of the industry-specific terminology, business processes, and overarching goals that shape the software solution.

The section kicks off with a lucid exposition of the domain's key concepts, shedding light on the fundamental building blocks that constitute the project's foundation. It addresses any updates or refinements made since Report-1, providing a seamless transition for readers familiar with the initial domain exploration.

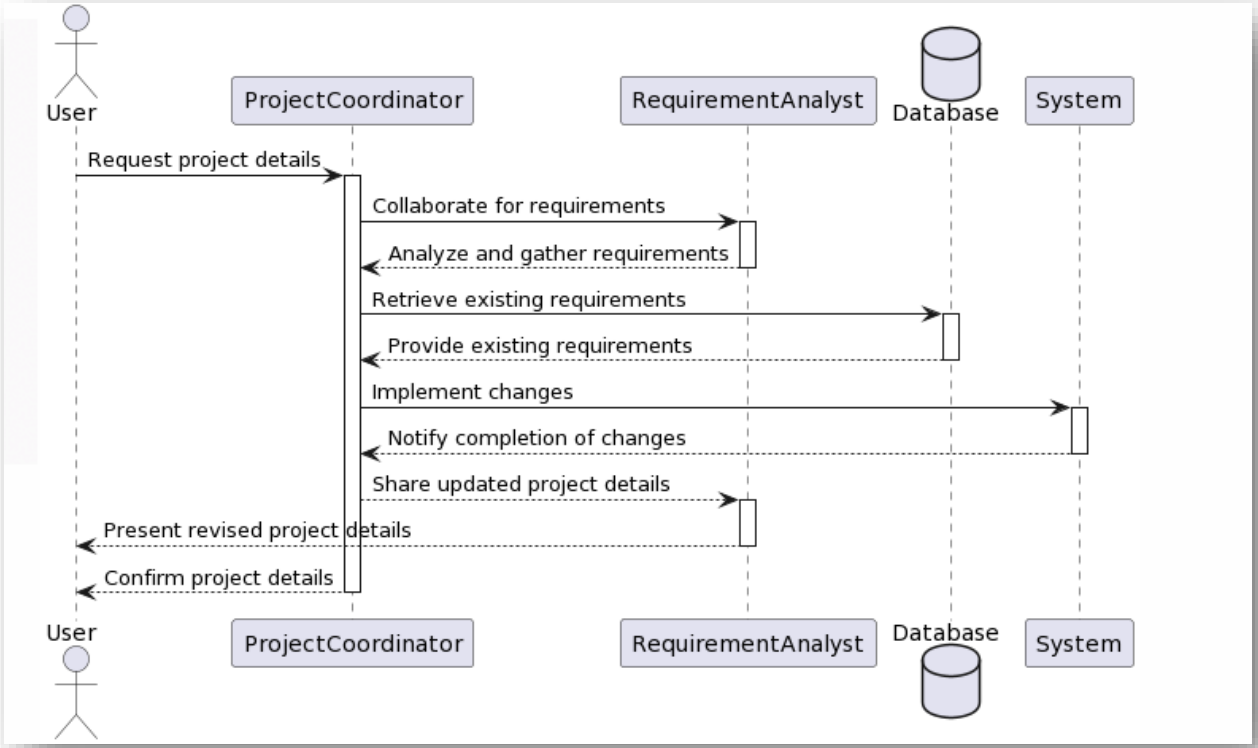
Furthermore, a nuanced exploration of the stakeholders involved in the project is presented, elucidating their roles, expectations, and contributions to the overarching objectives. This analysis serves as a vital compass, ensuring that the developed software aligns harmoniously with the needs and aspirations of those invested in its success.

The Domain Analysis section delves into the intricate interplay of various components within the problem space. It explores the relationships between entities, the flow of information, and the overarching processes that govern the domain. Any shifts or expansions in this understanding, especially concerning insights gained during the project's evolution, are meticulously documented.

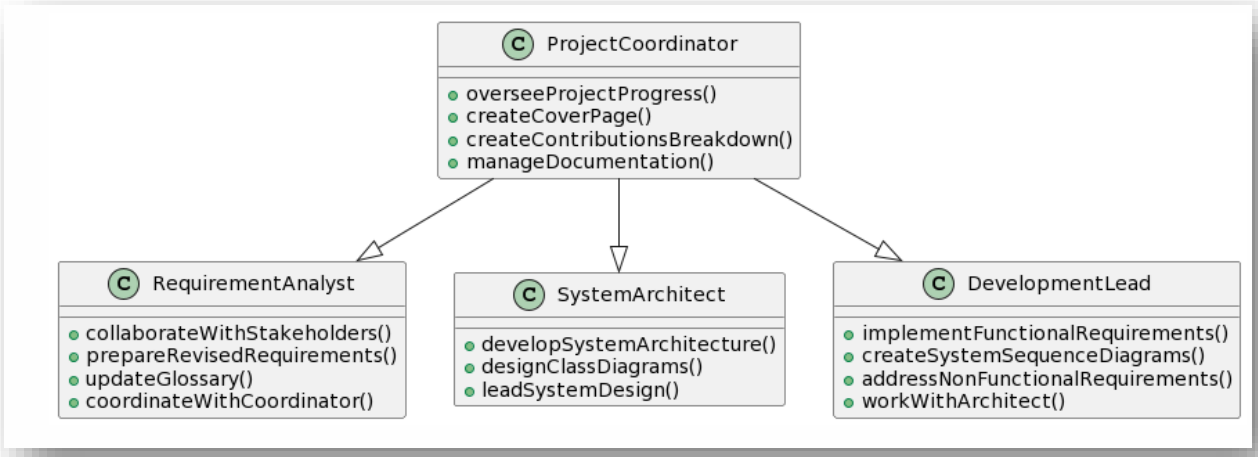
Moreover, the section ventures into a comprehensive review of industry best practices, standards, and regulatory considerations relevant to the project. This not only ensures compliance but also positions the software within the larger context of established norms, fostering a sense of trust and reliability.

In essence, the Domain Analysis section acts as the bedrock upon which the entire system is erected. It synthesizes a refined comprehension of the domain, aligning it with the project's trajectory to yield a software solution that seamlessly integrates with its intended environment.

9. Interaction Diagrams:



10. Class Diagram and Interface Specification:



This section provides a panoramic view of the system's structure, showcasing how classes collaborate, the relationships that bind them, and the interfaces that define their interactions.

Beginning with an exhaustive review of changes from the previous report, this segment meticulously outlines the evolution of class relationships, attribute modifications, and the rationale behind each adjustment. In instances where new classes emerge or existing ones undergo metamorphosis, the report elucidates the conceptual shift and the driving forces behind these alterations.

The Class Diagrams act as visual metaphors, capturing the essence of the system's organization. Every class, replete with its attributes and methods, is a building block in the edifice of the software, and this section ensures that stakeholders comprehend the structural dynamics at play.

Accompanying the Class Diagrams, the Interface Specification provides a granular breakdown of the methods that define how classes communicate. In a symphony of method signatures and parameter details, this section delineates the contractual obligations each class must adhere to, facilitating seamless communication between components.

The Interface Specification is not a mere technical document but a bridge between the abstract and the concrete, translating design decisions into a language that developers and stakeholders alike can understand. It is a guidebook for developers, offering insights into the expected behavior of classes and the pathways through which they engage with one another.

The report goes beyond the static portrayal of classes; it unveils the dynamics of their collaborations through detailed scenarios and narratives. Stakeholders are not just presented with diagrams; they are taken on a journey that explores how classes come to life, interact, and collectively contribute to the software's overarching objectives.

In essence, this section transforms the seemingly esoteric world of classes and interfaces into a comprehensible narrative, ensuring that even non-technical stakeholders can appreciate the elegance and robustness of the software's architectural design.

11. System Architecture and System Design:

Embark on a journey through the intricate tapestry of System Architecture and Design, where the foundational decisions that shape the software's behavior are meticulously crafted. This section serves as the architectural masterplan, unraveling the overarching design philosophy and the intricate details that breathe life into the system.

Beginning with a comprehensive overview of changes from the antecedent report, this segment meticulously articulates the evolution of the system's architectural landscape. It delves into the considerations that propelled architectural modifications, offering stakeholders a lucid understanding of the rationale behind each decision.

The report unfolds the system's architecture like a narrative, elucidating the interplay of components, the distribution of responsibilities, and the strategies employed to ensure scalability, robustness, and maintainability. From the selection of architectural patterns to the allocation of modules, each decision is rationalized, providing stakeholders with a roadmap to navigate the complexities of the software ecosystem.

System Design, the linchpin of this section, translates architectural concepts into tangible components, each contributing to the system's functionality. From database schemas to the orchestration of services, the report navigates through the design intricacies, ensuring a comprehensive understanding of how each element fits into the larger architectural puzzle.

Accompanying textual elucidations are visual aids—architectural diagrams that transcend the abstract, offering stakeholders a visual tour of the software's inner workings. These diagrams are not just illustrations; they are windows into the soul of the software, demystifying complexity and fostering a shared understanding among stakeholders.

The section doesn't merely stop at static representations; it breathes life into the design decisions through dynamic scenarios. Stakeholders are guided through hypothetical user journeys, showcasing how the architecture facilitates seamless interactions and fulfills the envisioned user experiences.

In summation, this section isn't a mere exposition of architectural elements; it's an immersive exploration of the thought processes, decisions, and meticulous planning that converge to shape a resilient and purposeful system architecture.

12. Algorithms and Data Structures:

Embark on a voyage into the algorithmic heart and the structured backbone of the system, where the essence of computational intelligence and organizational efficiency converges. This section unfurls the algorithms employed, unraveling the intricate dance of logic that powers the software's decision-making processes.

Algorithms:

Here, algorithms cease to be mere abstract concepts and transform into the guiding principles orchestrating the system's operations. Delve into the algorithmic intricacies governing critical functions, whether it's the computation of motion trajectories for animated figures or the orchestration of complex computations. Visual aids, such as activity diagrams, breathe life into these algorithms, transcending code to offer stakeholders a tangible grasp of the underlying computational choreography.

The report doesn't shy away from the intricacies; instead, it embraces them. Each algorithm is dissected, elucidating the rationale behind its selection, its computational complexity, and its real-world implications. The symbiotic relationship between algorithms and system functionality is unveiled, empowering stakeholders with insights into the computational prowess propelling the software.

Data Structures:

A deep dive into the organized realms of data structures awaits. From arrays that streamline storage to linked lists facilitating dynamic data management, the report deciphers the choices underpinning the system's data architecture. The narrative extends beyond the theoretical; it ventures into the practical, showcasing how each data structure contributes to optimizing information retrieval, storage, and manipulation.

In the spirit of clarity, visual representations accompany textual descriptions. These representations go beyond traditional diagrams, offering stakeholders a visual journey into the interconnected data landscapes. Trees, arrays, linked lists—each is not merely a structure but a strategic choice, shaping the system's responsiveness and efficiency.

This section culminates with a holistic view, connecting algorithms and data structures into a cohesive narrative. It's not just about the 'what'—the algorithms and structures employed—it's about the 'why' and 'how,' providing stakeholders with a panoramic understanding of the system's computational and organizational core.

13. User Interface Design and Implementation Details:

Prepare to traverse the intersection of aesthetics and functionality, where the user interface becomes the tangible frontier between the user and the system's intricate machinery. This segment unfurls the canvas upon which users interact with the digital realm, exploring the nuances of design choices and the meticulous implementation that brings these choices to life.

Database Implementation:

The journey commences with a spotlight on the database, the repository of digital entities that form the backbone of the software. Tables, the elemental building blocks of the database, are meticulously crafted and strategically organized. The report not only delineates the tables' structures but also elucidates the

rationale behind the schema design. Stakeholders are invited into the thought process, understanding how each table contributes to efficient data storage, retrieval, and management.

Visual aids, ranging from ER diagrams to schema visualizations, materialize abstract database concepts. These visuals transcend the traditional, offering a dynamic portrayal of the relational intricacies. As stakeholders navigate through the database's architecture, they gain a profound appreciation for the systematic organization underpinning the software's data-handling capabilities.

User Interface Aesthetics:

Venture beyond the database into the realm of the user interface (UI), where aesthetics meet functionality. The report unfurls the visual tapestry that users encounter, transcending pixel-deep design to delve into the strategic decisions shaping the UI's look and feel. From color palettes that evoke specific emotions to iconography that streamlines user interactions, each design choice is a deliberate step toward an intuitive and engaging user experience.

Wireframes and mockups materialize the conceptual, offering stakeholders a preview of the user's digital journey. The report navigates through the UI's evolution, from conceptualization to implementation, detailing the design iterations and the user-centric considerations influencing each decision. Accessibility features, responsive design strategies, and interactive elements converge into a comprehensive narrative, providing stakeholders with a 360-degree view of the user interface's prowess.

This section culminates with a synthesis of the database and UI, illustrating how these seemingly disparate elements harmonize to deliver a seamless user experience. It's not just about pixels and tables; it's about the symphony of design and functionality orchestrating a user-centric digital experience.

14. Unique Capability:

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15. Conclusions and Future Work:

In the twilight of this comprehensive report, we delve into the reflections, conclusions drawn, and the roadmap for future endeavors. This section unfolds in two acts, first painting a vivid picture of the challenges surmounted during the project and then casting a visionary gaze into the future.

Technical Challenges Overcome:

Navigate the labyrinth of technical challenges that peppered the developmental landscape. The report candidly discusses the hurdles, providing stakeholders with a nuanced understanding of the obstacles conquered. From debugging labyrinthine code to resolving integration conundrums, each challenge is dissected to offer insights into the problem-solving prowess exhibited by the development team.

The technical challenges aren't presented in isolation; rather, they are woven into the broader narrative of project evolution. Stakeholders gain an appreciation for the dynamic interplay between challenges and solutions, fostering a deeper understanding of the project's maturation process.

Software Engineering Techniques at Play:

In the crucible of project development, software engineering techniques emerged as guiding beacons. This section articulates how the principles and methodologies gleaned from the software engineering course were instrumental in navigating the intricacies of real-world development.

From requirement analysis to iterative development cycles, the report delineates the symbiotic relationship between theoretical knowledge and practical application. Stakeholders traverse the journey from conceptualization to deployment, witnessing firsthand how software engineering techniques provided the compass to navigate the tumultuous seas of development.

Unveiling Future Trajectories:

With the present dissected, attention shifts to the horizon of possibilities. What lies beyond the current state of the software? This question finds resonance in the second act of this section, where the future trajectory of the project unfolds.

Stakeholders are presented with a roadmap for future work, outlining areas ripe for enhancement and expansion. Whether it's refining existing features, exploring new functionalities, or integrating emerging technologies, the report serves as a guide for those poised to carry the torch forward.

The narrative doesn't conclude abruptly; instead, it opens a dialogue on what lies ahead. Suggestions for improvement, lessons learned, and the seeds of innovation planted during the project culminate in a narrative that transcends the boundaries of this report, extending an invitation to future developers and visionaries.

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