Architecture Design

Insurance Premium Prediction

Revision Number: 1.2

Last date -17/03/2024

Chirag

Architecture Design

Document Control

Date	Version	Description	Author
18/03/2024	1.0	Introduction, Architecture	Chirag
18/03/2024	1.1	Deployment	Chirag
19/03/2024	1.2	Conclusion	Chirag

Architecture Design

Contents

1. Introduction

1.1. What is an Architecture design document?

An architecture design document (ADD) is a comprehensive blueprint that outlines the structure, components, and interactions of a software system or application. It serves as a guide for developers, architects, and stakeholders, detailing the system's design decisions, patterns, and principles. The ADD provides a high-level view of the system's architecture, including its modules, interfaces, data flow, and deployment considerations, facilitating effective communication and collaboration throughout the development lifecycle.

1.2. Scope

The scope of the Architecture Design Document (ADD) encompasses defining the boundaries and objectives of the architectural design process. It outlines the specific areas and aspects of the system architecture that will be addressed, including its functionality, performance, scalability, security, and interoperability requirements. The scope also delineates the stakeholders involved, the resources available, and the constraints or limitations that may impact the architectural decisions. Overall, the scope provides clarity on the focus and extent of the architectural design effort, guiding the development team in achieving the desired outcomes.

2. Architectural Overview

The architectural overview provides a high-level perspective of the system's structure and components, outlining its major architectural elements, interactions, and dependencies. It gives stakeholders a comprehensive understanding of how the system is organized and how its various parts collaborate to achieve the desired functionality. This section typically includes diagrams, such as system architecture diagrams or component diagrams, to visually represent the system's architecture and highlight key design decisions. Additionally, it may describe the rationale behind the chosen architectural style or patterns and discuss any trade-offs or considerations made during the architectural design process. Overall, the architectural overview serves as a foundational reference point for understanding the system's architecture and guiding further design and development activities.

3. System Components

The system components section describes the individual elements or modules that make up the overall system architecture. It provides a detailed breakdown of the system's structure, including its main components, subsystems, and their respective responsibilities and

interactions. Each component is typically described in terms of its functionality, interfaces, dependencies, and relationships with other components. This section may also include information about the technology stack or frameworks used for implementing each component and any design patterns or architectural principles followed in their design. By outlining the system's components, this section helps stakeholders understand the system's modular design and how different parts of the system work together to achieve its objectives.

4. Deployment Architecture

The deployment architecture section outlines the infrastructure and environment required to deploy the system. It describes the physical or virtual resources needed to host and run the application, including servers, databases, networking components, and any third-party services or cloud platforms utilized. This section also covers aspects such as scalability, reliability, and security considerations in the deployment setup. It may include details about deployment strategies, such as single-server deployment, load balancing, or containerization, as well as disaster recovery plans and backup procedures. By documenting the deployment architecture, stakeholders

gain insights into how the system will be deployed and managed in production environments, ensuring smooth and efficient operation.

5. Security and Compliance

The deployment architecture section outlines the infrastructure and environment required to deploy the system. It describes the physical or virtual resources needed to host and run the application, including servers, databases, networking components, and any third-party services or cloud platforms utilized. This section also covers aspects such as scalability, reliability, and security considerations in the deployment setup. It may include details about deployment strategies, such as single-server deployment, load balancing, or containerization, as well as disaster recovery plans and backup procedures. By documenting the deployment architecture, stakeholders gain insights into how the system will be deployed and managed in production environments, ensuring smooth and efficient operation

6. Conclusion

In conclusion, the architecture design document serves as a blueprint for the system's structure, outlining its components, interactions, and deployment strategy. It provides a comprehensive overview of the system's architecture, including its scope, components, deployment architecture, and security measures. By documenting these aspects, the document facilitates communication among stakeholders, guides the development process, and ensures alignment with project objectives. Moving forward, ongoing updates and revisions to the architecture design will be essential to accommodate evolving requirements and maintain the system's effectiveness and integrity.