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Chapter Five

Requirements Specification



Topics to be covered

- System Definition Document (SDD)
- System Requirements Specification (SyRS)
- Software Requirements Specification (SRS)
- Importance of SRS

Introduction to Software Req. Specification

- ▶ SRS is a document that outlines the **functional and non-functional requirements** of a software system.
- ▶ It serves as **a blueprint** for the development team, ensuring that everyone involved in the project has a clear understanding of what needs to be built.
- ▶ SRS typically includes information about the **system's purpose, functionality, performance, and design constraints.**

Cont'd...

- ▶ It also outlines the **user requirements**, such as how the system should behave and what features it should have.
- ▶ For complex systems, particularly those involving large non-software components, three different types of documents are produced:
 - ▶ System definition,
 - ▶ System requirements, and
 - ▶ Software requirements.
- ▶ For simple software products, only the third of these is required.

System Definition Document

- ▶ SDD is an important component of the SRS. It provides a detailed description of the system
 - ▶ Architecture
 - ▶ Objective
 - ▶ Design
 - ▶ Implementation approach, and
 - ▶ Target environment.
- ▶ It defines the high-level system requirements from the domain perspective.

Cont'd...

- ▶ SDD also outlines the system's **Data model**, including the types of data that will be stored and how they will be organized.
- ▶ This document helps to ensure that all stakeholders have a clear understanding of the system's overall structure and how it will be implemented.

System Requirements Specification

- ▶ SyRS is a **more detailed version of the SDD**. It provides a comprehensive overview of the
 - ▶ **system's functional and non-functional requirements,**
 - ▶ **any design constraints or limitations.**
- ▶ System requirements relate to the system as a whole. Like **hardware, software, processes, documentation and so on.**
- ▶ The SyRS typically includes information about the system's **user interface, data storage & retrieval, security features, and performance requirements.**

Software Requirements Specification

- ▶ This SRS is a **more specific version of the SyRS** that focuses on the software aspects of the system.
- ▶ Provides a realistic basis for estimating product **costs, risks, and schedules**.
- ▶ Organizations can also use a software requirements specification document as the basis for developing effective **verification** and **validation** plans.

Importance of SRS

- ▶ Having well defined SRS is critical to the success of any software development project.
- ▶ It also ensures all stakeholders have a clear understanding of the system's requirements, reducing the risk of miscommunication and misunderstanding.
- ▶ Leads to a more efficient development process, fewer bugs and errors, and ultimately, a higher quality product.

Conclusion

- ▶ In summary, software requirements specification documents plays a crucial role in the software development process.
- ▶ Provides a clear set of guidelines for development team and stakeholders.
- ▶ In short, system requirements deal with the hardware and software needed to run an application, while software requirements deal with the features and functionality that the application must provide.

Reading Assignment

Chapter III: Requirements Elicitation	Sommerville - 2011	Wiegiers - 2003
5.1. System Definition Document	Chapter 4 – section 2 Chapter 4 – section 3 Chapter 12 – section 2 to 5.	Chapter 10
5.2. System Requirements Specification		
5.3. Software Requirements Specification		



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END OF CHAPTER FIVE

