
Chapter 10

Documenting the requirements



Objectives

- The software requirements specification
- A software requirements specification template

- The SRS states the functions and capabilities that a software system **must provide, its characteristics, and the constraints** that it must respect.
- It should describe as completely as necessary the system's behaviors under various conditions, as well as desired system qualities such as performance, security, and usability.

- The SRS is the basis for subsequent project planning, design, and coding, as well as the foundation for system testing and user documentation.
- SRS should not contain design, construction, testing, or project management details

A software requirements specification template

1. Introduction

- 1.1 Purpose
- 1.2 Document conventions
- 1.3 Project scope
- 1.4 References

2. Overall description

- 2.1 Product perspective
- 2.2 User classes and characteristics
- 2.3 Operating environment
- 2.4 Design and implementation constraints
- 2.5 Assumptions and dependencies

3. System features

- 3.x System feature X
 - 3.x.1 Description
 - 3.x.2 Functional requirements

4. Data requirements

- 4.1 Logical data model
- 4.2 Data dictionary
- 4.3 Reports
- 4.4 Data acquisition, integrity, retention, and disposal

5. External interface requirements

- 5.1 User interfaces
- 5.2 Software interfaces
- 5.3 Hardware interfaces
- 5.4 Communications interfaces

6. Quality attributes

- 6.1 Usability
- 6.2 Performance
- 6.3 Security
- 6.4 Safety
- 6.x [others]

7. Internationalization and localization requirements

8. Other requirements

Appendix A: Glossary

Appendix B: Analysis models

A software requirements specification template

1. Introduction

- 1.1 Purpose
- 1.2 Document conventions
- 1.3 Project scope
- 1.4 References

2. Overall description

- 2.1 Product perspective
- 2.2 User classes and characteristics
- 2.3 Operating environment
- 2.4 Design and implementation constraints
- 2.5 Assumptions and dependencies

3. System features

- 3.x System feature X
 - 3.x.1 Description
 - 3.x.2 Functional requirements

4. Data requirements

- 4.1 Logical data model
- 4.2 Data dictionary
- 4.3 Reports
- 4.4 Data acquisition, integrity, retention, and disposal

5. External interface requirements

- 5.1 User interfaces
- 5.2 Software interfaces
- 5.3 Hardware interfaces
- 5.4 Communications interfaces

6. Quality attributes

- 6.1 Usability
- 6.2 Performance
- 6.3 Security
- 6.4 Safety
- 6.x [others]

7. Internationalization and localization requirements

8. Other requirements

Appendix A: Glossary

Appendix B: Analysis models

2. Overall description

2.1. Product perspective

- *Describe the product's context and origin.*
- *Consider including visual models such as a context diagram.*

2.2. Physical Data Model

Identify the various user classes that you anticipate will use this product, and describe their pertinent characteristics.

2.3. Operating environment

Describe the environment in which the software will operate, including the hardware platform; operating systems and versions; geographical locations of users, servers, and databases,...

A software requirements specification template

1. Introduction

- 1.1 Purpose
- 1.2 Document conventions
- 1.3 Project scope
- 1.4 References

2. Overall description

- 2.1 Product perspective
- 2.2 User classes and characteristics
- 2.3 Operating environment
- 2.4 Design and implementation constraints
- 2.5 Assumptions and dependencies

3. System features

- 3.x System feature X
 - 3.x.1 Description
 - 3.x.2 Functional requirements

4. Data requirements

- 4.1 Logical data model
- 4.2 Data dictionary
- 4.3 Reports
- 4.4 Data acquisition, integrity, retention, and disposal

5. External interface requirements

- 5.1 User interfaces
- 5.2 Software interfaces
- 5.3 Hardware interfaces
- 5.4 Communications interfaces

6. Quality attributes

- 6.1 Usability
- 6.2 Performance
- 6.3 Security
- 6.4 Safety
- 6.x [others]

7. Internationalization and localization requirements

8. Other requirements

Appendix A: Glossary

Appendix B: Analysis models

3. Function Requirements

Arranging functional requirements by functional area, process flow, use case, mode of operation, user class

4. Data Requirements

Including entity-relationship diagrams and UML class diagrams or a logical representation for the data that the system will manipulate

5. External Interface Requirements

Describe the logical characteristics of each user interface that the system needs.

A software requirements specification template

1. Introduction

- 1.1 Purpose
- 1.2 Document conventions
- 1.3 Project scope
- 1.4 References

2. Overall description

- 2.1 Product perspective
- 2.2 User classes and characteristics
- 2.3 Operating environment
- 2.4 Design and implementation constraints
- 2.5 Assumptions and dependencies

3. System features

- 3.x System feature X
 - 3.x.1 Description
 - 3.x.2 Functional requirements

4. Data requirements

- 4.1 Logical data model
- 4.2 Data dictionary
- 4.3 Reports
- 4.4 Data acquisition, integrity, retention, and disposal

5. External interface requirements

- 5.1 User interfaces
- 5.2 Software interfaces
- 5.3 Hardware interfaces
- 5.4 Communications interfaces

6. Quality attributes

- 6.1 Usability
- 6.2 Performance
- 6.3 Security
- 6.4 Safety
- 6.x [others]

7. Internationalization and localization requirements

8. Other requirements

Appendix A: Glossary

Appendix B: Analysis models

6. Quality Attributes

- *External Quality Attributes*
- *Internal Quality Attributes*

Chapter 11

Writing excellent requirements

Student Self-Study

A decorative graphic at the bottom of the slide consisting of a solid orange rectangle on the left and a series of parallel orange and white diagonal stripes on the right.