Software Requirement Specification

Software Requirements Specification (SRS) template

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SRS explained

- **1.0 INTRODUCTION**

This document specifies all the requirements for

- **1.1 Purpose**

The purpose of the …is to ….

The system should assist ….

The intended audience for this document is …

This specification describes …..

- **1.2 Scope**

This document applies only to ……

This specification is not concerned with …..

SRS explained

- **1.3 Definitions, Acronyms, and Abbreviations**

SRS - Software Requirements Specifications

IEEE - Institute of Electrical and Electronic Engineering

- **1.4 Reference**

[1] IEEE 830-1993: IEEE Recommended Practice for Software Requirements Specifications" IEEE Standards Collection, IEEE, 1997.

- **1.5 Overview**

In the following sections of this specification……will be presented.

In Section 2, the general product and its functions will be introduced.

SRS explained

In Section 3, all detailed requirements will be specified and grouped.

In Appendix …….

2.0 GENERAL DESCRIPTION

2.1 Product Perspective

This system allows stakeholders to…..

The system will display…..

The system will help ……

The system provides information about ….

2.2 Product Functions

The system provides the following functions:

SRS explained

- **2.3 User Characteristics**

The users of the system are:

  - **Level of Users' Computer Knowledge**
  - **Level of Users' Business Knowledge**
  - **Frequency of Use**

- **2.4 General Constraints**

The system will support ….

The system will not allow ……

- **2.5 Assumption and Dependencies**

This system relies on ……

The system must have a satisfactory interface and ……

Section 3 of SRS

- **SPECIFIC REQUIREMENTS**
  3.1 Functional Requirements
  3.1.1 Unit Registration
- The unit registration requirements are concerned with functions regarding unit registration which includes students selecting, adding, dropping, and changing a unit.
- **SRS-001 (3.1.1.1):**
- The system shall allow the user to register a unit.
- **SRS-002 (3.1.1.2):**
- STS shall allow the user to delete a unit if the user has chosen to drop that unit.
- **SRS-003 (3.1.1.3):**
- STS shall check if a unit has been filled by enough registered students.

SRS functional reqs

- **SRS-004 (3.1.1.4):**
- STS shall allow the user to add his/her name to the unit waiting list if the user wants to register in a unit which has been filled already with enough registered students.
- **SRS-005 (3.1.1.5):**
- STS shall automatically register the unit for the user who is the first one on the waiting list if a vacancy appears for that unit.
- **SRS-006 (3.1.1.6):**
- STS shall allow the user to change practical session(s) within a unit.
- **SRS-007 (3.1.1.7):**
- STS shall allow the user to change tutorial session(s) within a unit.

Functional parent reqs broken into many child-reqs.

- **3.1.2 Retrieving and Displaying Unit Information**
- The retrieving and displaying requirements are concerned with how information is retrieved and presented to the user.
- **SRS-014 (3.1.2.1):**
- The system shall allow users to enter the following selection criteria to retrieve unit information: by unit code, by unit number, by title of unit, by weight of unit (credit points).
- **OR** by unit code **(3.1.2.1.1)** , by unit number **(3.1.2.1.2)** , by title of unit **(3.1.2.1.3)** , by weight of unit (credit points) **(3.1.2.1.4).**

Design Constraints (3.2)

- **3.2 Design Constraints**
- **SRS-031 (3.2.1):**
- STS shall store and retrieve persistent data.
- **SRS-032 (3.2.2):**
- STS shall support PC and/or UNIX platforms.
- **SRS-033 (3.2.3):**
- STS shall be developed using the JAVA programming language

Non-functional requirements

- **3.3 Non-Functional Requirements**
- **SRS-034 (3.3.1):**
- STS shall respond to any retrieval in less than 5 seconds.
- **SRS-035 (3.3.2):**
- STS shall generate a report within 1 minute.
- **SRS-036 (3.3.3):**
- STS shall allow the user to remotely connect to the system.
- **SRS-041 (3.3.8):**
- The system will be accompanied by a comprehensive user manual.

Other SRS template for section 3

- **3. Specific Requirements**
- **3.1 External Interface Requirements**
- 3.1.1 User Interfaces
- 3.1.2 Hardware Interfaces
- 3.1.3 Software Interfaces
- 3.1.4 Communication Interfaces
- **3.2 Functional Requirements**
- 3.2.1 Requirement 1
- 3.2.1.1 Introduction
- 3.2.1.2 Inputs
- 3.2.1.3 Processing
- 3.2.1.4 Outputs
- 3.2.2 Requirement 2 …..

Other SRS template for section 3

- **3.3 Performance Requirements**
- **3.4 Design Constraints**
- 3.4.1 Standards Compliance
- 3.4.2 Hardware Limitations ……
- **3.5 Software System Attributes**
- 3.5.1 Reliability
- 3.5.2 Availability
- 3.5.3 Security
- 3.5.4 Maintainability
- 3.5.5 Portability
- 3.5.6 Reusability
- 3.5.7 Usability 3.5.8 Other Factors ……
- **3.6 Other Requirements**
- 3.6.1 Database …

Safety and security issues

- **3.5.3 Security**
- The security requirements are concerned with security and privacy issues.

SRS-029:

- VSS shall provide staff ID and password verification protection to protect from unauthorized use of the system.

SRS-030:

- VSS shall allow the store manager to add, remove and modify staff ID and passwords as required.

The attributes for a “good” SRS are:

- Requirements must be correct.
- Requirements must be feasible. One must be able to implement each requirement within the known capabilities and limitations of the system and its environment.
- Requirements are necessary for the project, and must be prioritised.
- Requirements must be unambiguous, verifiable, complete, consistent, modifiable, and traceable.

Change management

- Possible scenarios that are considered volatile
- Some requirements change quicker than others (eg.tax regulations)
- Domain dependent volatility
- Dependence on external environmental factors (market changes)
- How handle change:
  - Consider plan of action if changes occur to the requirements
  - Consider the criticality of the requirement
  - Consider which requirements are affected
  - Consider risks posed by change
  - Suggest change management strategies