

'Product Name'

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Software Requirement Specifications for 'Component Name'

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Revision History

Name	Date	Reason For Changes	Version

3 Detail Requirements

This section contain all of the software requirements at a level of detail that enables designers to design 'component name' to satisfy those requirements, and testers to develop a plan test cases for 'component name' that satisfies the requirements. Throughout this section, every stated requirement is externally perceivable by users, operators, or other external systems. These requirements include a description of every input (stimulus) into the system, every output (response) from the system, and all functions performed by the system in response to an input or in support of an output.

3.1 External Interfaces Requirements

This section provides a detail description of the external interaces of 'component name'.

3.1.1 User Interfaces Requirements

This section describe the characteristics for the user interface (UI).

3.1.1.1 'UI 1'

A description of purpose for 'UI1' is provide here. The parameters are defined below.

Input

Insert the detail information about the what is input via this interface. This section shall define the input parameters and its source (i.e. status request, financial report, frequency,etc.) .This information should describe the type of data along with the size of the data. Based on the number of inputs, this part maybe broken into multiple lower level subsections to make traceability more visible to the testers.

Output

Insert the detail information about what is output via this interface. This section shall define the output parameters and destinations (i.e.status report, acknowledgement, error, signal, etc.). This information should describe the type of data along with the size of the data. Based on the number of outputs, this part maybe broken into multiple lower level subsections to make traceability more visible to the testers.

Valid ranges

Define the valid ranges for the input and output parameters for this interface. It should define the accuracy and/or tolerance for these parameters. Based on the number of inputs and outputs, this part maybe included in the lower level subsections of the outputs and inputs sections.

Unit of measure

Insert the unit of measure for input/output parameters if necessary. Based on the number of inputs and outputs, this part maybe included in the lower level subsections of the outputs and inputs sections.

Timing

Insert the timing requirement for input/output parameters if necessary. Based on the number of inputs and outputs, this part maybe included in the lower level subsections of the outputs and inputs sections.

Relationships to other inputs/outputs

Insert description about relationships to other inputs/outputs.

Screen formats

Insert detail screen format for each input/output parameter.

Window formats

Insert detail window format for each input/output parameter

Data formats

Insert detail data format for each input/output parameter via this interface. These formats shall be consistent with format in the Interface Control Document (ICD).

Command formats

Insert detail data format for each input/output parameter via this interface. These formats shall be consistent with format in the Interface Control Document (ICD).

End messages

Define and name the messages for each input/output parameter via this interface. These formats shall be consistent with format in the Interface Control Document (ICD).

3.1.1.2 'UI₂'

Same as 3.1.1.1

3.1.2 Hardware Interfaces Requirements

Same as 3.1.1

3.1.3 Software Interfaces Requirements

Same as 3.1.1

3.1.4 Communications Interfaces Requirements

Same as 3.1.1

3.2 Functional Requirements

This subsection shall define the fundamental actions that must take place in the software in accepting and processing the inputs and in processing and generating the outputs. The following sections define the functional requirements for all the required mode.

3.2.1 User Interface Functional Requirements

Insert description of how the interface is processed.

3.2.1.1 'UI 1' : Functional requirement 1.1

3.2.1.1.1 Inputx

Insert exact sequence of operations for processing Inputx validity checks, response to abnormal situations, formats, message types.

3.2.1.1.2 Inputy

Insert exact sequence of operations for processing Inputy including validity checks, response to abnormal situations, formats, message types.

3.2.1.1.3 Outputx

Insert exact sequence of operations for processing outputx including validity checks, response to abnormal situations, formats, message types.

3.2.1.1.4 Ouputy

Insert exact sequence of operations for processing Inputy including including validity checks, response to abnormal situations, formats, message types.

3.2.1.2 'UI₂' Functional requirement 1.2

Same as 3.2.1.1

3.2.1.n 'UI_n' Functional requirement 1.n

Same as 3.2.1.1

3.2.2 Hardware Interfaces Functional Requirements

Same as 3.2.1 but applied to 'HI₁'

3.2.2.1 Functional Requirement 2.1

Same as 3.2.1.1

3.2.2.2 Functional Requirement 2.2

Same as 3.2.1.1

3.2.2.n Functional Requirement 2.n

Same as 3.2.1.1

3.2.3 Software Interfaces Functional Requirements

Same as 3.2.1

3.2.4 Communications Interfaces Functional Requirement

Same as 3.2.1

3.3 Performance Requirements

This subsection shall define the capacity requirements. The capacity requirement shall include a numerical representation for the limits applied to each functional requirement

3.3.1 'UI₁' :Performance Requirement 1.1

Insert the numerical capacity for this interface.

Example,

1. 10 number of terminals supported
2. 95% of the transactions shall be processed in less than 1s

3.3.2 'UI₂' :Performance Requirement 1.2

same as 3.3.1

3.3.3 'HI₁' :Performance Requirement 1.3

same as 3.3.1

3.4 Logical Database Requirements

This section shall specify the logical requirements for any information that is placed in a database.

3.5 Design Constraints

This section shall specify design constraints imposed by hardware limitations or etc.

3.6 Software System Attributes

This subsection specifies the required attributes of 'component name'

3.6.1 Reliability

This subsection specifies the factors required to establish the required reliability of the software system at time of delivery.

3.6.2 Availability

This subsection specifies the factors required to guarantee a defined availability level for the entire system such as checkpoint, recovery, and restart.

3.6.3 Security

This subsection specifies the factors that protect the software from accidental or malicious access, use, modification, destruction, or disclosure. Specific requirements may include: cryptographic techniques, keep a history of data sets, assign certain functions to different components, restrict communications between some areas of the software, check data integrity for critical variables

3.6.4 Maintainability

This subsection specifies the factors required to maintain 'component name'.

3.6.5 Portability

This subsection specifies the factors required for the portability of 'component name'. Such factors may include: percentage of components with host-dependent code, Percentage of code that is host dependent, Use of a proven portable language, Use of a particular compiler or language subset, Use of a particular operating system.

3.7 Other Requirements

This subsection specifies other requirements for 'component name'.

3.7.1 Modes of Operations

3.7.2 User classes

3.7.3 Objects

3.7.4 Features

3.7.5 Stimulus

3.7.6 Response

3.7.7 Functional hierarchy

3.8 Additional comments

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