STANFORD UNIVERSITY

ADMINISTRATIVE SYSTEMS

FUNCTIONAL SPECIFICATION DOCUMENT

DOCUMENT VERSION <x.x>

<date>

AUTHORS

Name	Role	Department

DOCUMENT HISTORY

Date	Version	Document Revision Description	Document Author

APPROVALS

Approval Date	Approved Version	Approver Role	Approver

Table of Contents

1. Introduction

< Identify and describe the business need or problem this document will address. Include background information here.>

1.1   Purpose of the document

< Describe what a Functional Specification Document is and its intended purpose for the audience. Included below is a standard purpose of the FSD, but modify the description as needed.>

The Functional Specification Document is a document that provides detailed information on how the system solution will function and the requested behavior. This document is created based on the high-level requirements identified in the Business Requirements Document and provides traceability on the functional specifications back to the business requirements. Included in this document will be the detailed functional requirements including use cases, system inputs and outputs, process flows, diagrams, and mockups.

1.2   Project Scope

<Describe the project scope that addresses the business need or problem. Include high-level information on the solution>.

1.3   Scope of the document

<If there are multiple FSDs created for the project, describe the specific scope that this document will address. Sections 1.2 and 1.3 can be combined together>.

1.4   Related documents

<Add any related documentation that is relevant and related to the FSD. Some examples are the Project Charter, Business Requirements Document, etc.>.

Component	Name (with link to the document)	Description

1.5   Terms/Acronyms and Definitions

<State any terms and its definition that are described in the functional specifications. Include any acronyms that are mentioned in the document.>

Term/Acronym	Definition	Description

1.6   Risks and Assumptions

<List any assumed factors and identified risks that could affect the functional design of the system. Included can be third-party or commercial components that will be used, issues around the operating environment, or any constraints.>

2.   System/ Solution Overview

<Provide a short description of the software and solution being specified and its purpose, including relevant benefits, objectives, and goals.>

2.1   Context Diagram/ Interface Diagram/ Data Flow Diagram, Application Screen Flow, Sitemap, Process Flow

<Provide any appropriate graphical representations that are relevant to the system and project such as a context/interface/data flow diagram, application screenflow, site map, or process flow. Add as many as needed.>

2.2   System Actors

2.2.1   User Roles and Responsibilities / Authority Requirements

User/Role	Example	Frequency of Use	Security/Access, Features Used	Additional Notes
<include the specified user/role such as Purchasing Manager, Dept Admin, Faculty, Student, etc>	<include examples of real people in the role>	<describes how often they use the system. State Frequent, Occasional or Rare>	<describe the features of the system available for the role and any security/access permissions that should be stated>	<add any additional notes or supporting documentation as necessary>

2.3 Dependencies and Change Impacts

2.3.1   System Dependencies

<List and identify any dependencies the proposed solution will have on other systems.>

2.3.2   Change Impacts

<List and identify existing systems that will be impacted by the implementation of the proposed solution.>

3.   Functional Specifications

<Start describing the specifications related to the overall system here. You may want to create a table/ index of all functionalities explained in the sections below and link them to the items below>

<If no separate reference/ traceability document is created for the project, use this section to map the business requirements, use cases, functional requirements and the test cases>

 <Group your functional specifications as appropriate for your project. You may want to divide them by screens, functional areas, user role, JIRA tickets or high-level functions Vs detailed functions or any other way that works for your project.>

3.1 <Title>

3.1.1 Purpose/ Description
<Include a high-level description and purpose of the specifications covered in the section.>

3.1.2 Use case
<Map the functional requirement to one or more use cases mentioned in the Business Requirements document. If the use case is not described in detail in the Business Requirements document, describe the use case here. This typically includes the element s in the following table.>

UC-1	<Use case name>
Primary Actor(s)	< primary actors that participate in this use case>
Stakeholders and Interest	<One sentence describing other stakeholders>
Trigger	<Condition/action that initiates/starts the use-case>
Pre-conditions	<Condition assumed to be true before the first step>
Post-conditions	<Condition after the use case is successfully executed >
Main Success Scenario	1. <visit STARTING-POINT 2. Step 3. Step 4. Make sure GOAL-ACHIEVED>
Extensions	If Condition, then Alternative Steps <List any extended steps/ scenarios that occur, other than the main success scenario.>
Priority	<indicate priority of high, medium or low)
Special Requirements	<Any system related special requirements needed to fulfill the use case>
Open Questions	<Notes and questions>

3.1.3 Mock-up
<Provide the mock-up of the functionality or a mock-up of the entire page>

3.1.4 Functional Requirements
<Describe the page level details that are not captured in section 3.1.5 below. These may include any requirements related to Navigation Menu, Actions, transaction status, verification and validation requirements etc.

Make sure each specification has a reference number and is explained in the following format.>

Spec ID	Specification Description	Business Rules/ Data Dependency
<Specification Identifier>	<Short explanation of the specification>	<Any validation rules or business rules>

<Note: Section 3.1.4 and section 3.1.5 may be combined if there are a few functionalities on a particular page>

3.1.5 Field level specifications
<Specify all the field data elements related to the functional requirement in both tables below.>

Form Elements:

Call-out	Field Label	UI Control	Mand?	Editable	Data Type	Value Set	Default Value	Data Example	Data Source
<mock-up reference>	<Label name>	<specify what UI control will be on screen>	<specify if field is mandatory>	<specify if field is editable>	<Specify the data type that will be used for this field>	<If value is from the set, specify the entire value set here>	<Specify if it should be defaulted to any value>	<Provide an example of the data>	<Specify the source of the data>
Example: Call-out 1	User name	textbox	Yes	Yes	Alpha-numeric	none	NA	agujar	User entry

Form Business Rules and Dependencies:

Field Label	Validation / Business Rules	Error Messages	Data Dependencies	Additional Info/ Notes

<Label name>	<Specify the validation rules and/ or business rules applicable to the form element>	<List the error message that should be displayed and under what conditions>	<Specify if there are any date dependencies>	<Provide any additional information here>
Example: User name	User name shall be a valid Stanford Sunet ID	For incorrect user name display on setFocusOff: "Please provide a valid user name"	None	Access prohibited only to Stanford affiliates. For non-Stanford affiliates, check call-out 3.1

Buttons, Links and Icons:

Button, Link, Icon Label	OnClick Event	Other Event	Visible	Enabled Vs Disabled	Navigate To	Validation	Dependencies
<Button label name>	<Specify the operation that would be performed on an on-click event>	<Specify the operation that would be performed on other events>	<Specify default visibility of the button>	<Specify if button is enabled or disabled and the condition, if any>	<Specify the link where the page will be re-directed, if any>	<Specify the validation rules on operation of the button>	<Mention if there are any dependencies on other form elements and/ or buttons>
Example: Submit	Verify if user name and password are correct. If yes, log the user into the system.	OnMouseHover display the following message: "Please provide your web-authentication details to sign in>	Yes, always	Disabled, by default. Enabled, after first key entered in either username or password field.	User Dashboard page	Verify if Username is a valid sunet ID and username and password match with registry data.	Disable the New user functionality on subsequent pages if user logs in through this button.

4.   System Configurations

<Provide an overview of all the steps or the set ups required to configure an application/program. Also state the intent or purpose behind each setup or configuration. Discuss the possible alternatives, customizations, workarounds, conditions and dependencies in a particular configuration. In case of Oracle applications, please list all applicable BR100's or Application set up documents>

5.   Other System Requirements/ Non-Functional Requirements

<This section is used in contrast with stated functional requirements to highlight the additional details on the quality related aspects as well as other behavioral aspects of a system. This section is used to capture the stakeholders' implicit expectations about how well the system will work under a given circumstance. Here you can state the specific SLA's related to system response times (Data search and retrieval), Performance needs and metrics, Latencies in a particular timeframe or during high volume transactions, System failures and recovery management, Security levels and accessibility constraints, Data Backup and archiving Capabilities, Legal compliance needs etc. The broader definition of the term 'system' also includes integrations with all types of Mobile platforms, Mobile devices, Tablets and Smartphones.>

6.   Reporting Requirements

<This section is used to capture the reporting needs, including but not limited to the scope and format of the report, data elements and contents required on the report, file types and extraction mechanisms, user base and accessibility levels, frequency of report extractions etc. Also provide the mock up of the report if needed If necessary, create a separate document for reporting requirements.>

7.   Integration Requirements

<Identify the integration needs and state all required interfaces with anything external to this solution including hardware, software, and users. Include Architectural overview diagrams, high level data flow diagrams, table structures and schema, interface protocols, API's, Error conditions, Error validations and messaging needs, Auto processing requirements etc. You can optionally state hardware and software dependencies, Upgrade requirements, compatibility issues with existing frameworks and solutions, etc>

(Data Flow Diagrams, Interface Diagrams – if necessary)

7.1   Exception Handling/ Error Reporting

<This is where you can explain the error conditions/Exceptions that normally happen in Interfaces or cross flow system integrations. Explain the nature of exception, Error Id, Root cause of the error and also the strategy to handle the scenario. You can also indicate if there are any concurrent programs designed to automatically handle the errored records or error conditions. State if there are any error reports

generated or notifications utilized to alarm the support teams and system Administrators during the interface failures or outages>

Exception/ Error ID	Error	Cause	Solution Strategy

8.   Data Migration/ Conversion Requirements

<Explain in brief the data conversion plan. Provide full identifying information for the automated system, application, or situation for which the Data Conversion Plan applies. Describe briefly any assumptions, constraints or risks regarding the data conversion effort. (Provide details in section 1.6)>

8.1   Data Conversion Strategy

<Include the overall strategy for the Data Conversion. This includes how and when you will perform the conversion - the approach used to extract, transform and load data during the conversion process, the conversion schedule, and test plan for testing the converted data.>

8.2   Data Conversion Preparation

<Provide details on any prerequisites necessary for the conversion. Discuss the backup strategy, restoration process in case the conversion fails.>

8.3   Data Conversion Specifications

Source	Source Data Element	Target	Target Data Element	Conversion Rules	Notes
<Source location>	<Source Data Element Identifier >	<Target location>	<Target Data Element Identifier>	<Describe rules for Data conversion>	<Additional notes>

9.   References

<List all references to external material used as background information or knowledge for the FSD. Examples may include a compliancy website, Stanford website, etc>

10.   Open Issues

Issue ID	Issue	Raised By	Raised On	Solution/ Decision	Resolved By	Resolved On	Status

Appendix