UNIVERSITY OF THE PHILIPPINES

OPEN UNIVERSITY

IS 226 WEB INFORMATION SYSTEMS

SOFTWARE REQUIREMENTS SPECIFICATION

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RELEASE INFORMATION

PROJECT:	SIMPLIFIED INVENTORY SYSTEM
INTERNAL RELEASE NUMBER:	1.0.0
ATTACHED WORKSHEETS:	SRS > USE CASE SUITE SRS > FEATURE SET
RELATED DOCUMENTS:	PROJECT PROPOSAL > USER NEEDS GLOSSARY

INTRODUCTION

The Simplified Inventory System aims to modernize the ABC Technical College's inventory process. The SIS geared towards providing a centralized web-based application that will cater to all the inventory needs of the Centre. With its "on-the-go" feature, every user will be able to conduct inventory transactions effortlessly. Report generation will be a breeze with a simple click of a button. This system will be accessible on virtually any device regardless of operating system.

The technology of choice for this project is HTML5 since this is a web-based application. Bootstrap will be the front-end framework and will make most of the users feel immediately comfortable as they will be using interface similar to that of Google's, Facebook and Twitter.

PHP will be the back-end tool since the database will be implemented in MySQL. PHP can provide more than enough capabilities when working with MySQL database.

USE CASES

The SIS is designed to be easy to use as it was based on the actual process in ABC Technical College's inventory. The modules used in SIS are logically grouped mimic the manual process as close as possible.

USE CASES BY FUNCTIONAL AREA

- User Account Management
  - UC-00 Login to system
  - UC-01 Register a user account
  - UC-02 Request password
  - UC-03 Edit user profile
  - UC-04 View list of users
  - UC-05 Delete user profile
- Item Management
  - UC-06 Add Item
  - UC-07 View Item
  - UC-08 Edit Item
- Stocks Managements
  - UC-09 Request Stocks
  - UC-10 Authorize Request
  - UC-11 Issue Stocks
  - UC-12 Receive Stocks
  - UC-13 Search Stocks
  - UC-14 View Item History

USE CASES BY BUSINESS OBJECT AND STAKEHOLDERS/ACTOR

BO \ Actor	All	Staff	Department Head	Store Manager / Administrator	Master Administrator
Items	View items and its related information View item history information	Request for items currently not available in inventory	N/A	Add items Edit items	N/A
Stocks	Request for stocks/supply Search Stocks	N/A	Authorize or grant a request	Issue stocks Receive Stocks	N/A
Users	View users	N/A	N/A	N/A	Elevate user rights

FUNCTIONAL REQUIREMENTS

In developing the SIS, careful consideration was made regarding the client's requirements. These requirements are then integrated in the overall design.

Requirement	Description
REQ1	The system shall allow the system administrator to add users and designate appropriate system usage rights.
REQ2	The system shall allow users tagged as "store managers" to add items with details following their own formats
REQ3	The system shall update available balance and stock balance of an item. Available balance reduces as requests are made. Stock balance will only be change when an item is received or issued.
REQ4	The system shall allow all users to view stock balances.
REQ5	The systems shall allow all users to make item request.
REQ6	The system shall allow users tagged as "Head of Department" to authorize/grant or deny request, including his/her own.
REQ7	The system shall allow users tagged as "store managers" to record item issued including his/her own.
REQ8	The system shall allow users tagged as "store managers" to perform all functions available to "staff".
REQ9	The system shall allow users to generate a list of current inventory status.
REQ10	The system shall allow users to generate list of transaction history.
REQ11	The system shall allow users the system administrator to remove user/s from the system.
REQ12	The system shall provide all users with a comprehensive (not lengthy) How-to guide.
REQ13	The system shall provide all users a way to send feedback to the developers.
REQ14	The system shall provide login and reset password feature.

FEATURES BY FUNCTIONAL AREA

- User Account Management
  - F-00 Login to system
  - F-01 Register a user account
  - F-02 Request password
  - F-03 Edit user profile
  - F-04 View list of users
  - F-05 Delete user profile
- Item Management
  - F-06 Add Item
  - F-07 View Items
  - F-08 Edit Item
- Stocks Managements
  - F-09 Request Stocks
  - F-10 Issue Stocks
  - F-11 Receive Stocks
  - F-12 Search Stocks
  - F-13 View Item History

NON-FUNCTIONAL REQUIREMENTS

USABILITY REQUIREMENTS

Change is accepted differently by different people but a great major are receptive to this. This is why the main requirement considered in building the SIS is understandability. The system interface design was built on top of Bootstrap framework which provides intuitive interface that common to major website nowadays. This will more likely soften the blow and make users feel quick comfortable using the system.

Efficiency of use is the next requirement considered. The SIS provides easy to use functionalities such granting a stock request with just a click of a button. View item's transaction history can be down in many way allowing users to accomplish the task faster and more efficient.

Aside from these, users will be able to do their work even on their mobile devices. The search feature of the system is not restricted to specific type (field or column in a table) of data. It searches the whole table so users won't need to remember where to search for keyword. Lastly, the client would like to have an interface that doesn't look like a "system" per se. The SIS uses the SB Admin Bootstrap template which displays information in a "big" format. Much information is displayed in large panels and buttons used are large as well creating an impression that deviates from the old concept of a system where one needs to navigate through a series of submenus to locate a particular command or function.

RELIABILITY AND UP-TIME REQUIREMENTS

The client requires that the system should be up and running during office hours and should only be accessible from within the vicinity. The SIS is designed to be running 24/7 and can be setup either in a LAN environment or it could be run from the Internet.

SECURITY REQUIREMENTS

The SIS takes system security seriously without compromising efficiency. Although, a user may register his/her account, a newly created account is set to a limited privilege. It would take a "master administrator" to elevate a user's right. A user may only be elevated to having a role of a "department head", "administrator/store manager" or "master administrator". The design of SIS provides a mechanism that prevents a single user to manipulate its transactions and the database credibility. These once again simulate the actual model the college is following. Passwords registered by the users are not stored in plain text. Instead, it follows the industry standard of hashing it before storing in a table using the one stand-out option in PHP called Bcrypt.

SCALABILITY AND PERFORMANCE REQUIREMENTS

The ABC College currently employs a little less than a hundred of teaching and non-teaching staff. Although it is unlikely, at most, the SIS should be able to concurrently allow this number of users to use the system. These will exceed the requirement set by the client to just about sixty (60) or 60% which comprises the teaching staff. The SIS is also expected be able to query or search the inventory in less than a second. Other requirement of the client like the page loading will somehow depend also on their existing network infrastructure.

The SIS database will likely grow over time as it will be recording all transactions per item in its inventory and having it installed on a legitimate server machine which is regularly managed will help the system scale up with this anticipated growth.

MAINTAINABILITY AND UPGRADABILITY REQUIREMENTS

Although the client is clear about its requirement, it would also be safe to assume that this will change especially when they started using the system. They might require additional functionalities they might have overlooked at the beginning of the project. One option to resolve this foreseeable scenario is by preparation a provision for an automatic update feature. In this way, downtime may even be reduced to zero and the cost of doing upgrade would likely be far less than without this feature.

SUPPORTABILITY REQUIREMENTS

The client requires support especially during the first few months of system deployment. The SIS will feature a “contact me” function that will enable the client to reach out and seek technical support. Provision for system’s automatic upgrade will be considered once the product is deployed and when the client requires for it. With this feature installed, support cost will be minimized.

ENVIRONMENTAL REQUIREMENTS

SYSTEM HARDWARE REQUIREMENTS

The SIS is a web-based application and as such would require a web server. The client is required to produce a standard PC with an updated OS to act as a web server although a rack/tower server like the Dell PowerEdge would enhance the performance of the system.

A networking infrastructure is also required to access the system. Wired or wireless connection, it will work just fine. Aside from these, a stable internet connection is required since some plugins and application frameworks are fetching from CDN. In this, way when an update is available to these plugins the client won't need to do anything as they will automatically be using the latest version of the plugins. However, to increase the SIS performance the plugins may also be stored on the web server side by side with the SIS.

SYSTEM SOFTWARE REQUIREMENTS

A web server is required to run the SIS. NGINX is the ideal web server application for this system but it can also run on other web servers like Apache. Other software requirements include PHP for the back-end server side application, MySQL for its database and plugins like Bootstrap, JQuery and DataTables.

For users to be able to access and use the SIS, a web browser is required. It can be used on any device and on any OS.

DATA IMPORT AND EXPORT REQUIREMENTS

Existing inventory data of ABC College can be imported to the SIS using the SQL format saves in a ".sql" file. The SIS database can also be exported to SQL file, Text or even Excel file format.