

De La Salle University

College of Computer Studies

Software Technology Department

**CAI-STA**

SOFTWARE REQUIREMENTS SPECIFICATION

|  |  |
| --- | --- |
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| **Date Submitted** | February 9, 2015 |

**Table of Contents**

|  |  |
| --- | --- |
| 1. Executive Summary | 1-1 |
| 1. Overview | 2-1 |
| * 1. Existing Business Process | 2-1 |
| * 1. Data Requirements | 2-2 |
| * 1. Roles in the Business Process | 2-3 |
| 1. Problem Analysis | 3-1 |
| 1. Software Solution | 4-1 |
| * 1. Objectives | 4-1 |
| * 1. Characteristics | 4-1 |
| 1. User Stories | 5-1 |
| * 1. <User Story 1> | 5-1 |
| Appendix A - Improved Business Process | A-1 |
| Appendix B - Interview Transcript | B-1 |
| Appendix C - Sample Forms and Reports | C-1 |
| Appendix D - References and Acknowledgements | D-1 |

1. **Executive Summary**

Describe your client's company or organization, its domain, the type of business it is in and about the specific division/department that you are delivering solutions to. Cite your sources (online web pages, journals, news articles) to avoid being charged with plagiarism.

Example:

*Manila Doctors Hospital is a premiere private tertiary hospital operating at 667 United Nations Avenue, Ermita, Manila, Philippines[[1]](#footnote-1). It was founded in 1956 by a group of doctors, under the corporate name Manila Medical Services Inc. (MMSI).*

*One of the services offered by Manila Doctors Hospital is Surgical Pathology located in the Laboratory Medicine Department. The Surgical Pathology Section is where cells and tissues are submitted for pathologic diagnosis and interpretation from a biopsy or a surgical procedure for routine tissue processing. The section also specializes in performing autopsies, frozen sections and rapid diagnosis of aspirates from CT Scan/Ultrasound guided biopsies. Immunohistochemical staining procedures are also performed by adept medical technologists and histopathology technicians.*

*A biopsy is an examination of tissues or cells (<cite your source>). A patient’s tissue is extracted and placed in a slide or a small glass. The tissue is then to be examined by a pathologist using a microscope. One reason why biopsies are performed is too see if a person has cancer.*

1. **Overview of the Business Process**

*This chapter presents the company’s business process and goals as an organization/department. Included in this chapter are the following items:*

* *Description of the company's existing process and business requirements*
* *Data requirements as part of the business process, including data that are captured, stored and generated (report formats should be placed in the Appendix)*
* *Existing software or tools used as part of the business process, if any*
* *Different roles in the business process*

Notes:

* You can use subsections, e.g., 2.1 Existing Business Process; 2.2 Data Requirements; 2.3 Roles in the Business Process.
* Sample forms and reports should be included in the Appendix, for example, you can write your business process as follows:

*Weekly sales reports are prepared by each Account Executive and submitted to his/her immediate superior for review. A sample report is shown in Appendix C-2.*

The following is an example overview of the business process for a fictional company named ECTPA (adapted from INTRODB Project Specs 2009). Notice how the writing style differs across each section, eventhough the contents are repeatedly stated. Make sure your content across all sections remain consistent.

***2.1 Existing Business Process***

*Easy Call Training and Placement Agency (ECTPA) provides a complete recruitment, training and placement service to deliver well-trained and competent operators to call centers. It selects and trains operators for placement in call centers that provide outsourcing services to local and foreign companies.*

*The process starts with interested applicants accomplishing a paper-based resume (see Appendix C-1), which contain useful personal information and educational background. Once received by the Applicants Registration Department, the recruitment officer notes down the date when the application form was received and stamps it with an “application” status. The officer also assigns a unique applicant identification number to each application form for easier tracking purposes, and schedules the applicant for interview. A logbook is used to track down the list of the application forms that are received every day (see Appendix C-2). Another logbook is used to track the schedule of interviews (see Appendix C-3). The resume itself is filed in a folder that is forwarded to the Applicant Screening Department.*

*Although most Filipinos are well-versed with the English language, they must still undergo training on English Communication Skills, Customer Care, Computer Operations, and Business Operations (to know the products and services of the specific company). These trainings are provided by ECTPA to ensure that qualified call center operators are sent to the call center companies. Various training courses may be created to cover the topics provided above, and new courses may be created depending on the identified industry needs. The training officer identifies the needed training courses based on consultations with Call Center Companies. The officer then schedules multiple sessions of a specific training course, with each session accommodating up to 20 students. The schedule of courses (see Appendix C-4) is posted to enable applicants to choose their own schedule.*

*The applicant screening officer reviews each resume and conducts an interview with the applicant. After the interview, the officer decides whether to accept or reject an applicant. For accepted applicants, the officer prepares a training plan (see Appendix C-5) tailored to the needs of each applicant (i.e., based on the applicant's interview outcome, educational background and work experience). The officer sends an email to each applicant informing him/her of his application status (accept or reject) and the training plan (for accepted applicants). The status of the accepted applicant is then changed to "training".*

*Applicants with the "training" status must enroll courses specified in their respective training plan. They can choose any of the available training sessions. The applicant should receive a grade of at least 3.0 for each course stated in his/her training plan before his/her status can be changed to "ready for deployment”. Each applicant is allowed to keep on re-taking the course until he/she gets the required minimum grade, provided he/she did not receive a 0.0. An applicant who receives two 0.0 for the same or different courses will automatically be rejected (status = "reject").*

*Call Center companies who need manpower may fill-up paper-based registration forms (see Appendix C-6). The account officer of ECTPA assigns a unique identification number to each registration form. This number is then used by call center companies to notify ECTPA of job openings. For each job opening, the account officer accomplishes a job opening request form (see Appendix C-7) and marks this with a status (i.e., new, applicant selection by ECTPA, applicant screening by company, completed, cancelled). A job request that is not yet completed may be cancelled by the company or the agency.*

*Applicants in the “ready for deployment” status are selected to fill the job positions based on their qualifications (matching the requirements stated by the company). There are two steps in the screening process. In the first step, the account officer of ECTPA performs an initial selection of the required number of “ready for deployment” applicants with the specified gender. Records of the candidate applicants who are selected by ECTPA will be forwarded to the company, and their status will be changed to "company screening". The corresponding job request form's status is also updated to "applicant screening by company".*

*In the second step of screening, the call center company will send back a list of candidate applicants that it has selected. The account officer forwards this list to the employment officer, who then changes status of these applicants will then be marked “deployed”. The employment officer also prepares an employment contract, and updates the work experience (employment history) record of accepted applicants to reflect this new assignment.*

*After the contract, an applicant will be returned to the applicant pool (status = "ready for deployment") if he/she receives a rating of at least 4.0 from the company. He/She will be required to undergo further trainings (status = "training"), to be identified by the employment officer, if he/she receives a rating of at least 2.5. If the applicant receives a rating of less than 2.5, he/she will no longer be employed by ECTPA and his/her record will be marked “discontinued”.*

*The business process can be visualized in the diagram shown in Figure 2-1.*

*<insert your business process diagram here>*

*Figure 2-1. Existing Business Process*

*<Reports that are produced as part of the business process must be discussed next. >*

***2.2 Data Requirements***

*A resume (see Appendix C-1) that is submitted to the Applicants Registration Department contains the following personal information namely, complete name, complete address, contact numbers (home number and cellular phone number), email address, date of birth, and gender. The resume also contains educational background, specifically the degree attained, college or university where the degree was attained, and year of completion. Furthermore, each resume is given a timestamp (date and time when it was received by the recruitment officer), a status (for example, "application"), and a unique applicant identification number.*

*A course that is defined by the training officer includes the unique course code, course title, course description, and total number of hours. For each course offering, or session, the following details are also recorded by the officer: the unique session number, starting date, ending date, schedule (e.g., MWF, start time, end time), venue, and course fee.*

*The training plan (see Appendix C-5) of an applicant contains the course code, session number, and final grade of the applicant.*

*A call center registration form (see Appendix C-6) contains the company name, complete address (street, city, zip code), contact numbers, date of registration, and a unique company identification number.*

*A job request form (see Appendix C-7) has a unique job identification number, the date the request was submitted to ECTPA, the date the request must be completed, the date the request was actually completed, and the requirements for manpower. The requirements state the quantity and gender of manpower needed, for example, 20 male and 15 female. A job request form is also assigned a status in order for ECTPA to track its progress.*

*The employment record (see Appendix C-8) of an applicant with ECTPA contains the details of each contract assignment, specifically, the starting date of employment, number of months of effectivity of the contract, salary, and rating (to be provided by the company at the end of the contract period).*

*<Other reports that are prepared by the employees of ECTPA should also be presented here.>*

***2.3 Roles in the Business Process***

*There are two main types of users in the system being made for CAI-STA. These users and their tasks are summarized in Table 2-1.*

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| Role | Description of Tasks |
| *Technician* | * *Fills up paper-based resume* * *Enrolls in courses specified in his/her training plan* |
| *Manager* | * *For each submitted resume:* * *Places a timestamp (date and time the resume was received)* * *Marks the applicant with an "application" status* * *Assigns a unique applicant identification number* * *Logs the application form details in the Application Form logbook* * *Schedules an applicant for interview* * *Logs the applicant name in the Inteview Schedule logbook* * *Files the the application form in the Applicant Screening folder* * *Handles inquiries from applicants regarding their application status* |

*Table 2-1. User Roles and Tasks in CAI-STA*

1. **Problem Analysis**

This chapter presents the findings of the investigation on CAI-STA’s needs and problems to be addressed by the software.

| **ID** | **Description** | **Cause** | **Symptoms** | **Impact** |
| --- | --- | --- | --- | --- |
| # | What’s the problem? | What causes the problem? | How do we know the problem exists? | Why is this important? What are the consequences? |
|  | The ends of warranties and contracts are difficult to keep track of. | Even though the relevant dates are present in the MS Excel files being used, MS Excel itself does not have a notification feature; the compnay needs to manually set the dates in a calendar application for her to be notified. | There are instances wherein the client overlooked contracts and end of warranties of some items and pieces of equipment | If a piece of equipment was to get damaged, and its warranty or contract weren’t renewed, then there will be complications in the repair or replacement of that piece of equipment. |
|  | The current approach in managing the inventory is open to inconsistencies between the different files containing data. | There is no centralized database for easy data management; instead multiple MS Excel files are used, often for the same data. Because of this, the company needs to update and check multiple files whenever the data is edited. | The need to maintain multiple files that aren’t directly connected and contain copies of the same data sometimes leads to discrepancies in this data. | If there end up being discrepancies between these files, they would be difficult to resolve and may lead to complications in handling inventory items through this data later on. |
|  | The items listed in the inventory are difficult to filter and sort. | The company is unable to automatically sort the items and data contained in MS Excel. | The company currently has to create a separate MS Excel file that the company manually arranged in order to view the sorted list of items. | If the company were to make a mistake in transferring, copying and rearranging data between these files (e.g. forgetting to transfer an item or accidentally overwriting an item), then this could invalidate some of that data and lead to complications later in processes involving that data. |

***The section ends with the statement of the problem, need or opportunity where the software is the proposed solution (BUSINESS REQUIREMENT).***

1. **Software Solution** 
   1. **Objectives**

The software aims to provide CAI-STA with a system to manage the data involved in purchases and inventory.

*“The specific objectives of the software are as follows:*

* *To provide a facility for managing inventory;*
* *To provide a facility for managing suppliers;*
* *To provide a facility for managing purchase orders;*
* *To provide a facility for keeping track of contracts and warranties;*
* *To provide a facility for keeping track of item and project assignments to employees;*
* *To notify the manager about any upcoming expiries of contracts and warranties;*
* *To generate reports regarding the current inventory;*

* 1. **Characteristics**

The software is intended to run on the Java Runtime Environment (JRE). The software should present consistency in records and ease in creating purchase orders, adding items to inventory, and generating the necessary reports. It should have the correct information at all times, to be implemented by using a single database, and it should be easily useable and maintainable, in case future development teams wish to add features.

1. **User Stories**

*This chapter presents the user stories included in the product backlog.*

**5.1. View Reports**

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| **User Story #1: The president can view the reports so that s/he can monitor the company’s performance and status.** | |
| **Estimate (Days): 3** | **Priority: 30** |
| **Pre-condition:**  The manager and the technicians should have finished managing the inventory | |
| **Interaction:**   1. The manager creates Purchase Orders 2. Technicians edit the inventory once supplies arrive 3. The manager uses the system to generate reports based on the inventory 4. The manager sends the generated reports to the president. | |
| **Post-condition:**  The system should export the information to an excel file. Then the manager will review and print the reports and show it to the president whenever the president inquires of it. | |
| **Acceptance Criteria:**   1. Test if the generated reports contain data equivalent to the ones in the database. | |

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| **User Story #2: The manager should be able to have executive access to the system, so that the integrity of the data for the purchase order can be secured.** | |
| **Estimate (Days): 1** | **Priority: 10** |
| **Pre-condition:**  The manager must already be registered to the database. | |
| **Interaction:**   1. The manager will start up the system. 2. On startup, the system will prompt the manager for her password and username. 3. The manager will input the password and his username and presses the *Enter* key. 4. If the password and username is correct, then the screen, which includes the purchase order module, inventory module, and the project assignment module, that is only for the manager will show up. | |
| **Post-condition:**  The manager can create the purchase order and view the purchase orders created. The manager also has the privilege to edit the information in the inventory and to assign the projects to the employees. | |
| **Acceptance Criteria:**   1. Test if the screen, which includes the purchase order module, inventory module, and the project assignment module, that is only for the manager will show up if both the username and the password are correct. 2. Test if the screen, which includes the purchase order module, inventory module, and the project assignment module, that is only for the manager will not show up if the password or the username is incorrect and the user will be prompted for the correct password and username. | |

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| **User Story #3: A technician should have access to the inventory, so that I can add and edit information in the said inventory.** | |
| **Estimate (Days): 1** | **Priority: 10** |
| **Pre-condition:**  The technician must already be registered to the database. | |
| **Interaction:**   1. The technician will start up the system. 2. On startup, the system will prompt the technician for his password and username. 3. The technician will input the password and his username and presses the *Enter* key. 4. If the password and username is correct. The screen, which only includes the inventory module, that is only for the technicians will show up. | |
| **Post-condition:**  The technician can add and edit information in the inventory. | |
| **Acceptance Criteria:**   1. Test if the screen for the Inventory module will show up if both the password and username is correct. 2. Test if the screen for the Inventory module will not show up if the password or username is incorrect and the user will be prompted for the correct password and username. | |

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| **User Story #4: The manager can record customer details to keep track of customers and their corresponding purchases** | |
| **Estimate (Days): 2** | **Priority: 40** |
| **Pre-condition:**  There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager can click a button to view list of customers. 3. The manager can click a button to add customers. 4. A form is shown for customer details that the manager must fill up. 5. The manager clicks a button to add the customer details. 6. The system adds the details to the database. | |
| **Post-condition:** The manager is able to see the new customer in the list of customers. | |
| **Acceptance Criteria:**   1. The user should be prompted with an information message first for the user to check if the information to be added is correct. 2. The user should be prompted with a warning message if there will be any significant information that were left blank upon submission. 3. The user should be prompted with a warning message if the customer is already added to the database. 4. The user should be prompted with a confirmation message once a customer has been successfully added to the database. 5. The interface that will be used for the user to view the list of customers must be updated automatically once the updates in the database are done. | |

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| **User Story #5: The manager can record supplier details to have a directory of suppliers where the company could get their purchases as well as contact for any inquiries** | |
| **Estimate (Days): 2** | **Priority: 50** |
| **Pre-condition:**  There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager can click a button to view list of suppliers. 3. The manager can click a button to add supplier. 4. A form is shown for supplier details that the manager must fill up. 5. The manager clicks a button to add the supplier details. 6. The system adds the details to the database. | |
| **Post-condition:** The manager is able to see the new supplier in the list of suppliers. | |
| **Acceptance Criteria:**   1. The user should be prompted with an information message first for the user to check if the information to be added is correct. 2. The user should be prompted with a warning message if there will be any significant information that were left blank upon submission. 3. The user should be prompted with a warning message if the supplier is already added to the database. 4. The user should be prompted with a confirmation message once a supplier has been successfully added to the database. 5. The interface that will be used for the user to view the list of suppliers must be updated automatically once the updates in the database are done. | |

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| **User Story #6: The manager can canvas suppliers to identify the most beneficial bid for supply purchases.** | |
| **Estimate (Days): 2** | **Priority: 60** |
| **Pre-condition:**  The manager must be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager can click a button to view suppliers and their bids. 3. There are comboboxes and checkboxes to filter the bids. 4. Clicking the bids pop up additional details about it and a button to accept the bid. 5. If the button is clicked, the manager is redirected to the create purchase order page. | |
| **Post-condition:** | |
| **Acceptance Criteria:**   1. The filters must correctly filter the data based on the criteria. | |

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| **User Story #7: The manager can create purchase orders so that s/he can monitor purchase transactions between the suppliers and the clients** | |
| **Estimate (Days): 2** | **Priority: 20** |
| **Pre-condition:**  The manager must be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager clicks a button to view list of purchase orders. 3. The manager clicks a button to create purchase orders. 4. The system shows a form for purchase order details that the manager must fill up. 5. The manager clicks a button to add the purchase orders. 6. The system adds the details to the database. | |
| **Post-condition:**  The manager must see the new purchase order in the list of purchase orders. The manager must be able to view the added purchase order. | |
| **Acceptance Criteria:**   1. The added details in the database must reflect what was entered in the form. | |

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| **User Story #8: The manager can edit purchase orders** t**o modify incorrect values and inconsistencies**. | |
| **Estimate (Days): 2** | **Priority: 30** |
| **Pre-condition:**  There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager can click a button to view list of purchase orders. 3. The manager can click a button to edit a purchase order. 4. A form is shown for purchase order details that the manager can modify. 5. The manager clicks a button to edit the details. 6. The system pushes the details modified to the database. | |
| **Post-condition:** The manager is able to see the purchase order in the list of purchase orders. Upon viewing its details, the details should already be updated. | |
| **Acceptance Criteria:**   1. The user should be prompted with an information message first for the user to check if the edited information is correct. 2. The user should be prompted with a warning message if there will be any significant information that were left blank upon submission. 3. The user should be prompted with a confirmation message once the edited information has been successfully updated in the database. 4. The interface that will be used for the user to view the list of purchase orders must be updated automatically once the updates in the database are done. | |

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| **User Story #9: The manager can monitor purchase contract expiry dates so that I can renew the contract in order to repair or to replace an equipment when complications arise.** | |
| **Estimate (Days): 2** | **Priority: 20** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The manager must also be logged in. Items that are added to the inventory that are classified as I.T. assets are the only ones that can have an involvement with this feature. | |
| **Interaction:**   1. The manager logs in. 2. The manager can click a button to add an item to the inventory. 3. If the item is classified as an I.T. asset, a form is shown for the contract details that the manager must fill up. 4. The system adds the details to the database. 5. There is a portion of the screen dedicated for notifications. 6. Notifications on items with near contract expiry dates are displayed. | |
| **Post-condition:** Notifications are seen when the manager logs in. | |
| **Acceptance Criteria:**   1. If an item is classified as an I.T. asset, a form should appear for the contract details that the manager must fill up. 2. The user will be prompted with an information message first for the user to check if the information is correct. 3. The user will be prompted with a warning message if there will be any significant information that were left blank upon submission. 4. The user will be prompted with a confirmation message once the information has been successfully added in the database. 5. Only items with contract expiry dates within two weeks are displayed. | |

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| **User Story #10: The manager can monitor the item warranty expiry dates to monitor the fee of maintaining the item which increases without the warranty** | |
| **Estimate (Days): 2** | **Priority: 20** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. There is a portion of the screen dedicated to notifications. 3. Notifications on items with near warranty expiry dates are displayed. | |
| **Post-condition:** Notifications are seen when the manager logs in. | |
| **Acceptance Criteria:**   1. Only items with warranty expiry dates within two weeks are displayed. | |

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| **User Story #11: The manager can assign items to its corresponding project and employees to record the project and employees assigned in the handling of the item.** | |
| **Estimate (Days): 2** | **Priority: 20** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager clicks a button to view the inventory. 3. The manager clicks an item to view its details. 4. The manager selects from a combobox to assign it to an employee. 5. The manager selects from a combobox to assign it to a project. 6. The manager clicks a button so save all changes. 7. The system saves the data in the database. | |
| **Post-condition:** Upon viewing the item, it should display the correct employee and project. The employees must be able to view that a project has been assigned to them. | |
| **Acceptance Criteria:**   1. If the item is already assigned to an employee/project, promt the user with a warning message before continuing to replace the previous data. 2. If the data has been saved, prompt the user with a completion message. | |

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| **User Story #12: The manager can review the inventory to monitor purchases and corresponding details.** | |
| **Estimate (Days): 2** | **Priority: 20** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager clicks a button to view the inventory. 3. The manager may filter the items. 4. The manager clicks an item to view its details. | |
| **Post-condition:** The details must correctly reflect the item selected. | |
| **Acceptance Criteria:**   1. The filter functionality must correctly show the items that match the criteria. | |

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| **User Story #13: The manager can edit the inventory to modify wrong details or to specify the status of an item.** | |
| **Estimate (Days): 2** | **Priority: 20** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager clicks a button to edit the inventory. 3. The manager clicks an item to edit its details. 4. The manager can select the item’s new status using radio buttons. 5. The manager may edit the other details in combo boxes and text fields. 6. The manager clicks a button to save the data. 7. The system saves the data. | |
| **Post-condition:** Upon viewing the item, the details should have changed already. | |
| **Acceptance Criteria:**   1. The user should be prompted with an information message first for the user to check if the edited information is correct. 2. The user should be prompted with a warning message if there will be any significant information that were left blank upon submission. 3. The user should be prompted with a confirmation message once the edited information has been successfully updated in the database. 4. The interface that will be used for the user to view the list of purchase orders must be updated automatically once the updates in the database are done. | |

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| **User Story #14: The manager can add employees to assign them items and projects.** | |
| **Estimate (Days): 1** | **Priority: 40** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The manager must also be logged in. | |
| **Interaction:**   1. The manager logs in. 2. The manager clicks a button to view list of employees. 3. The manager clicks a button to add an employee. 4. The manager fills up a form on employee details. 5. The manager clicks a button to save the details. 6. The system saves the details. | |
| **Post-condition:** The new employee must be seen in the employee list. Clicking on his/her name shows the employee details. | |
| **Acceptance Criteria:**   1. The user should be prompted with an information message first for the user to check if the information to be added is correct. 2. The user should be prompted with a warning message if there will be any significant information that were left blank upon submission. 3. The user should be prompted with a warning message if the employee is already added to the database. 4. The user should be prompted with a confirmation message once an employee has been successfully added to the database. 5. The interface that will be used for the user to view the list of employees must be updated automatically once the updates in the database are done. | |

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| **User Story #15: A technician can add items to the inventory to record the receipt of ordered supplies from the suppliers.** | |
| **Estimate (Days): 1** | **Priority: 20** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The technician must also be logged in. | |
| **Interaction:**   1. The logs in. 2. The manager clicks a button to view list of purchase orders. 3. The manager clicks a button to create purchase orders. 4. The system shows a form for purchase order details that the manager must fill up. 5. The manager clicks a button to add the purchase orders. 6. The system adds the details to the database. | |
| **Post-condition:**  The manager must see the new purchase order in the list of purchase orders. The manager must be able to view the added purchase order. | |
| **Acceptance Criteria:**   1. The added details in the database must reflect what was entered in the form. | |

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| **User Story #16: A technician can edit the inventory to modify wrong details or to specify the status of an item.** | |
| **Estimate (Days): 2** | **Priority: 30** |
| **Pre-condition:** There must be a centralized database where data can be managed and updated. The technician must also be logged in. | |
| **Interaction:**   1. The technician logs in. 2. The technician clicks a button to edit the inventory. 3. The technician clicks an item to edit its details. 4. The technician can select the item’s new status using radio buttons. 5. The technician may edit the other details in combo boxes and text fields. 6. The technician clicks a button to save the data. 7. The system saves the data. | |
| **Post-condition:** Upon viewing the item, the details should have changed already. | |
| **Acceptance Criteria:**   1. The user will be prompted with an information message first for the user to check if the edited information is correct. 2. The user will be prompted with a warning message if there will be any significant information that were left blank upon submission. 3. The user will be prompted with a confirmation message once the edited information has been successfully updated in the database. 4. The interface that will be used for the user to view the list of purchase orders must be updated automatically once the updates in the database are done. | |

**Appendix A – Improved Business Process**

*This chapter presents the improved business process when the proposed software solution is implemented. This visualizes how the software solution benefits or affects the current business process.*

**Appendix B – Interview Transcript**

The following is the interview that took place between four members of SystemScape: Austin Fernandez, Clarisse Poblete, Shayane Tan, and Bryan Coquilla, with Ms. Rosalie Fernandez of CAI-STA on January 23, 2015.

Shayane - S

Austin - A

Clarisse - C

Bryan - B

Ms Fernandez - F

S: How the process of—

F: Purchase? Okay. We have, okay. Brief explanation lang? We have a partner in US. So they get us our clients. Marketing \*\*\*\* So we also have list of purchase. So the requirements from the clients are parang data gathering, stuff like that. So they discuss things like software, hardware, internet connection and once it's final, they send it through me then I'll be the one to source it out. So I make a P.O., pero simple lang pero I use Excel only. We're the ones pala who developed ATM, the Bancnet, also the LTO registration. We're part of a team kaya lang we don't have enough time to our own inventory kasi it's not earning money. So upon request, sinosort out yan and I make the P.O. using Excel only and then before the inventory system is online from U.S. but it's too slow and so many data that we don't need kasi sa kanila kasi online, the DELL laptops online so we even we say So we want to make it simpler, what we need lang is the model for the or we'll start na lang from the purchase order? So we did this a.. you want to see? Gusto nyo macheck na? Uh sige. Kita niyo naman eh so this one is the P.O. number, hard for hardware, soft for software, gen for general items so gusto ko sana the numbering is automatic what do you call that?

S: Auto-increment

F: so yeah para di nagdodouble ung bill so nagdrop down sya para kapag kung hardware yung ipupurchase ko yeah then ah there's name so ayun and then check to wherever if there's some modification then ito palang kasi so item description, 123, unit price, the total with vat and the grand total with the signature, this is me, purchase manager and then the president. Eto pala yan, parang yung condition, these are the things that I need lang.

S: So ano..

F: So we can give you a copy sa excel para automatic nagcocompute yung ano

S: So aside from you who else, other types of users who can have..

F: I'm the only one

S: So what, aside from editing or putting the necessary information in the purchase order are you also the one parang nagaadd ng customer?

F: Yeah

S: Yung parang other products?

F: Yeah, I canvass it, different suppliers. I pick up the lowest bidder not exactly the low quality then I make the P.O. out of the (quotation?) So hindi na computerized yan kasi it's manual. So parang final na, nasa akin na yung chosen supplier and I'll be the one to input or to input their address and contact but if we can regular suppliers if can just pick it up. I don't have to worry. Pwede ba yun?

S: So kelangan po namin ng parang I think ng list ng suppliers ng data?

F: Yung regular, or later on I can edit it or add. So clear tayo sa purchase order it's very simple so and then when the time na it was delivered already, that's the time na I want it computerized to the inventory system. Asset, We call it Asset Management. So for example, dineliver laptop, a laptop has specs, and then service tag number para kapag sira sya you just give the service tag number to the supplier and they know kung anong warranty nyan. And then we have an asset tag, this is for our own use. Alam namin through asset tag kung kanino sya nakaassign. So ang lalabas dun yung item description, asset tags, service tag number and data of delivery.

S: Gano po kafrequent yung \*\*\*\*\* sa purchase nyo

F: Purchase? It depends kung anong dating ng project. May time na ang dami dami. May time na ilang months wala

S: Are there any business rules po na may influence po or may effect po sa data? Descriptions parang ganun. Parang ano, let's say, let's say kunwari sa faculty. Kunwari 15 units yung load nila, sa pagka purchase order po, parang may business rules po kayo?

F: Wala naman, wala naman kaming business rules. Although for the equipment I want something that kasi 1 equipment kapag dineliver yan may 5 yrs warranty I want it parang may tracking kung yung warranty when magstart at matatapos. Parang kasi after 5 yrs kapag nasira siya hindi mo na ipapagawa it's more expensive Pero when it's under warranty pwede mo pa syang ipagawa sa supplier but you have to know, kasi yung mga desktop hindi mo na babaligtadin para malaman mo kung anong service tag number nya so kapag sinabi yung asset number eto na yung ano dapat may record. Right now kasi a simple

S: Ms, Tanong lang po. Diba kayo po nageedit ng, basta main editor ng purchase order?

F: Ako lang yung purchase order, ako lang nageedit then sinasubmit ko sya. Anong nagvoview ng P.O.? AKo lang. And then yung president. Pero yung inventory

S: Sino sino po sila?

F: Yung inventory, yung technical namin kasi when nadeliver kapag dumating yung delivery go straight to them they'll be the one to input yung mga details ng … I double check their work kung tama yung inventory namin diba. Although kasi the boss will go to me, although we have these hardware the boss will not go to them, that's why I review their work para alam kung. Pero now if you have the system, if we have the system, pwede ko ng iview itype ko yung dell 620, ayan parang date of purchase, may end of warranty, hardware specs..

S: yun po yung format ng inventory?

F: since we don't have inventory system I'm using lang Excel para nasosort out ko sya kaya ganyan lang. I don't know papano nyo ba to gagawin pero yung report na kelangan sometimes ganyan. Eto yung username, eto yung model, service tag, asset tag, date of warranty so eto yung mga information na kelangan. May nakita akong sample. What else do you need?

S: So if ever gagawin po namin yung system. Ano po yung platform? Ano po yung OS na gagamit para compatible po yung system na gagawin po namin sa mga computers nyo? windows or?

F: Windows, nakawindows kami although we have linux pero kami lahat nakawindows. Nasabi mo java?

A: Yeah

F: Para walang license involved

A: But you have to install java runtime environment though

F: But we don't have to buy?

A: No, free

S: Sa paggawa ng mga nito, may mga ano po ba kayo, problems encountered?

F: Problems? Ano bang favorite mong problems anong klaseng problems?

S: Para po di po namin maulit yung

F: Ah sa inventory system before? Like I said wala pa kaming inventory system

S: Like pag manual po may problems po ba?

F: Wala kasi excel lang sya tas parang ano .. so syempre sa inventory system gusto ko ng security. Hindi matatamper. SO may user's may, administrator syempre. Una tayo papasok sya sa PO and as I've said kapag nadeliver pupunta sya sa inventory system. Lahat yan manual mo yan iinput sa system Important dun is the item description like what is stated in the PO and addition lang dun is the asset tag, the service tag, the price hindi naman important sa inventory, the quantity, the warranty period. Meron syang ano. We need to know if it's available or not available or in store or yung items in store, available, in use, and junked, disposed parang disposed sira na sya so remove na sya sa inventory. Pero may history pa rin na naremove na sya sa inventory kasi junked na sya para alam mo na hindi ninakaw yung ano. Tapos the reports has the ability to export the reports in excel. Track the life cycle of assets. So pwede mo syang itrack. Track information assets with notification if the warranty is about to expire. Like for the servers which cost mga 1 million we renew it after 5 years nererenew pa rin namin yung contract nya. So if halimbawa mga 30 days, mga dec 30 mageexpired na sya pwede ba may notification sya sakin na mageexpired na yung contract. Kaya ba yun?

B: Yes, we can do it.

F: Hm?

B: Yeah

F: So parang dun sa program parang lalabas lang parang mayroon kang puti sa taas inventory tapos contract parang nandun yung MA. We call it maintainance contract parang nakaspecify dun kasi pwede mo ipasok dun manually ah. If pwede kong ipasok dun yung items with contract. So yun yung mga kakaroon ng contract...

S: Yung items with contract po if ever ano po yung information na kelangan?

F: Start and entry sometimes pwede rin siguro yung amount pero lahat naman yan parang remarks yan. So ang drop down nyo is IT assets, non IT assets sa inventory? IT assets, non IT assets tapos asset component, software, and others, mga office supplies mga consumables, non IT na yun eh. Kuha?

C: Can you repeat?

F: ang items nyo for the inventory is IT assets pag IT assets yan yung mga equipment, non IT mga tables, chairs, office supplies, consumables, asset component uh IT component sya yung parts nung mga binili mo, software lahat na ng software. Yan lang yung drop down ng mga items nyo sa inventory.

S: Okay lang po ba clarification? So purchase reports, mga inventory tapos yung contracts

F: The contracts is information lang. Hindi mo naman ipprint yung buong contract. So kasi the contract is paper. Paper license we have a share of share holder for that. Ang kelangan lang syempre sa dami ng items, sometimes kapag namiss ko yung patay ako so gusto kong maremind. Sa US kasi meron silang ganun pero they don't want to share with us kasi may license. Dapat simple lang yung gagawin nyo. Meron akong nakita eh.. So eto parang ganito yung nakito ko dun sa ano contract.. Parang ganyan ganyan lang. Parang contract rules. parang may date from..Parang ganito..so tanggalin na natin yung mga changes para madali sa inyo so parang eto yung purchase code ng P.O., eto yung purchase order tsaka eto yung mga assets tapos pwede kayo maglagay jan ng mga computer, IT, non IT para may idea na kayo so yun na yung demo although natin kelangan yun diba... para may idea ka sa design. So this is our software..

S: Mayroon po bang mga ano?

F: Pero it's not working ha. Para meron kayong idea.

A: Do you have a centralized server for the database or ..?

F: pero this one ,standalone sya ako lang.

A: 'Cause we can either install the database here or kung nakaconnect ka sa net may local area network pwedeng ilagay yung database sa server mismo and then ethernet cable nalang

F: Pwede. Nakawifi ako. Isend ko na lang sayo. Simplehan nyo lang para hindi kayo mahirapan. Ang kelangan nyo lang na information is ganun kasimple. Tingnan mo yung warranty, iisa isahin mo pa.. Are there any?

A: Ano pa yung mga may asset tag, service tag, description dito? Laptops only.

F: Hindi lahat may asset tag. Yung mga simple items..

A: So IT assets?

F: IT assets.

A: yung components?

F: wala rin. yung mga equipments lang.

A: so sila rin yung mga may warranty?

F: lahat may warranty

A: all equipments pati yung components?

F: Yung components may warranty pero hindi ganun kaimportante… so lahat ng sample ibibigay ko nalang sayo, kung ilang digits din yung service tag...

S: yung ano lang po..

F: summary?

S: purchase order po, tapos po, for you only use excel for the PO for the purchase of order the information that you need... so yung ...tapos ano pa po yung iba?

F: Gen is for general other than software and hardware so it's general.

S: So tapos po yung number po na... So yung sa PO po yung kelangan po product description, quantity, unit price, asset, total.. tapos sa inventory?

F: once completed delivered. the items in that PO magtatally sya directly pupunta sya dun sa inventory. Although not necessarily pero para madali niyo makuha yung info.

A: after the PO what happens to get the item to the inventory?

F: because when you make the PO, the information hindi pa complete so if you receive the items, that items in the PO may icclick ka para mag go sya sa inventory. So you have to retype so andun na sya.

A: Separate yung list of items sa inventory kasi you have to transfer?

F: the inventory naman will have the info for the quantity kasi and the warranty, date of purchase pa.

S: sa inventory po yung mga information pong kelangan yung asset tag?

F: hindi una description pa nya, parang yung IT asset, non IT, classification you call that classification.

C: sorry.

A: so this is for all items? the description-the classification. Are there any special attributes for id components aside from the warranty?

F: warranty, asset tag, service tag.

A: for the components?

F: ganun din.

A: available in use, disposed?

F: sya yung san nga ba sya papasok. what do you call that. parang kapag hinanap mo yung items, for example, laptop, e620 pag you click that one lalabas sya in use,

B: status

F: status nya, assignee kanino nakaassign. kapag in use sya kanino nakaassign.

A: so that goes for all items, yung in use .. where do you get the information for assignees?

F: we assign it. manual ano din sya pero yung report lahat na sya manual entry kapag dumating items, ikikey in mo, halimbawa idesign ko sa inyo each one of you. the description, your name the description everything is included there. Pero kapag after a week I'll key in the description of this computer. Makikita ko na lahat nakaassign sakin. So assignee, Austin Fernandez then the description.

A: so imemaintain yung list of your assignees? is there any other previous source for the list? do you retrieve it from the database or manual sya?

F: We have an IT tracking system. Once you log-in to your computer, it shows all the description in your computer, all the software. Because we're not allowed to install pirated so all the software nag-aUP yan. Although I lost my access when I changed my laptop and it's from the US so I can't access it anymore. So once you log-in to your computer makikita lahat to tapos da S. Fernandez that ganyan and all the software in my laptop. But we don't need that kasi meron na kami ngayon. Now dinadrive ko yung inventory kasi out of that IT tracking system, pwedeng may excel file yun eh so they just give me the excel file and from that parang manual kong ginagawa para pagnanghingi ng reports yung presidente I'll just give it to her. So sinend ko lahat ng info. Itong ginagawa natin is for tracking of asset lang hindi naman \*\*\* talaga. Kasi natatrack yung nakaconnect. Natatrack yung in use eh, yung nakaconnect sa network but you can not track yung mga on-stock dun sa system namin kasi yung once you log-in pero nasa stock room hindi nakikita sa inventory. That's what I want to kasi wala kaming control kung may nakapasok dun although we have cctvs so but if we have the inventory.

A: Are there any special information you need for your software?

F: we have also, the inventory is. when we use it the \*\* license. For example in one \*\*\*\* license meron syang 5 users so sumexerox kasi namin yung 5 copies na yun and we put in the individual folder with your asset tag number so it means to say na yung isang license, meron syang license key everything lahat. may inventory kami nun eh. License key, tas quantity nakaassign yun sa asset tag. Microsoftt Office 2010 to parang ganun yung license sa software namin para we're sure na walang pirated na nakakalusot.

A: So yung software may asset tag din?

F: wala. ano sya quantity lang, license key.

A: yung software may assignee din?

F: pero masyadong mahirap para sa inyo yung. quantity na lang itag natin and user kasi masyadong for the software madaming information kasi yung ano eh

A: You can maintain a list of your customers?

F: yes

A: and suppliers?

F: yes. and oh it's good you mentioned. I need a project name. Project name kasi yung assignee.. Nakaencode yung project na yun.

A: how many projects can an assignee have?

F: even you have two projects you only have 1 the other \*\*\* lang. this asset tag number is assigned to you on what project.

C: so if the person had two projects will the asset be assigned to both projects or just one of them?

F: both projects.

C: ok.

A: Can equipment be assigned to someone pero wala syang project?

F: yes. may training sya. so pero kung training lang yun. we have the training. pag may training lang \*\* computers. pag di mo sya owner, wala kang ownership dun sa training pc. so it means to say that computer sa training room is on stock. so ang inventory nun is on stock sya. actually sa training can be assigned to, used \*\*\* anybody.

A: so during the training, who is it assigned to?

F: uh no, training pc. you call it pc, if we don't say any need for that. we assign it then we buy new ones. kasi we always get yung top of the line. Pag bumili ka you dont buy the same model kasi madaling magobsolete sya. kaya napakadaming ng models kasi we don't stick to one. pag bumili ka this week, next week iba na yung specs nya so magiiba na naman yung inventory. so yung pag project assigned..

S: so sabihin ko ulit. sorry sorry.. yung users po ikaw na po, pati yung nakakaedit.

F: ako yung user sa purchase order. ako lang yung user sa purchase order. sa inventory we can be three.

S: sino sino po ung three?

F: technical level. so sila yung mga nagaassign. sila yung mga nageexam parang technician ng computers. technical support.

A: so the technical team has access to the system?

F: sila yung nagkikeep.

A: so bigyan nalang namin sila nung software pero may password para sa kanila lang. The president can only view?

F: only receives the reports. she doesnt need to view.

A: so yung excel file lang.

F: oo

A: there are only three kinds of users: you, technical level 1 and level 2. anong difference ng level 1 and level 2?

F: mas magaling yung level 2.

A: that's it?

C: is there a difference in how much they can access in the system?

F: actually they can access it kasi if not I'll be the one to do it. so dapat may access sya anyway they're the ones maintaining the security of everything so secret naman sya.

A: they can't edit the purchase order though?

F: they have more access than I have kasi sila talaga ang may alam ng lahat ng security. so full access. except for the PO.

A: they can't edit the PO.

F: they can't

A: but they can view the PO?

F: no, ako lang.

S: so yung contract po start and end date tapos ano pa po yung ibang?

F: yun lang report.

A: contract bills with an item any of the four types?

F: only equipment

A: so IT assets

F: yes.

A: so you need the PO, the INVENTORY, the CONTRACTS, the PROJECT ASSIGNENT is there anything else?

F: The project assignments included in the inventory, part of the inventory and the contract also is part of the inventory. everything naman \*\* purchase order

A: Pero kasi we can add a separate module para you can add projects tapos sa inventory drop down na lang.

F: normally naman ganun eh so there's a facility where you can add everything kasi equipment naman can be air condition, hindi naman lahat IT so may air condition pa rin yun pwedeng vehicles. so pwede kayo magsample ng ganun I'll just change it.

A: prototype?

F: yeah

A: anything else?

S: so thank you for everything thank you for the interview. if there are any more issues \*\*\* and we'll give you preview\*\*\*

ALL: thank you

F: thank you

**Appendix C – Sample Forms and Reports**

*This chapter contains the different forms and reports used by the company as part of its business process.*

*C-1. Customer Profile Form*

*The Customer Profile Form is filled up by an account executive for each new customer that he/she brings in to the company. This is submitted to the Accounting Office who manages all customer records of the company.*

*<copy of sample form here...>*

*C-2. Weekly Sales Report*

*The Weekly Sales Report*

**Appendix D – References and Acknowledgement**

### This section allows you to properly cite all materials that you used, be these in the form of books or online resources. You must also acknowledge any person(s) and/or organization(s) you have interviewed or gathered the information from (name, position).

1. www.maniladoctors.com.ph [↑](#footnote-ref-1)