

**L.A. Fruits**

SOFTWARE REQUIREMENTS SPECIFICATION

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| **Team Name** | **Agile Coders** |
| **Section** |  |
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1. **Executive Summary**

L.A. Fruits is one of the main suppliers of fruits retailers here in the philippines. The company is managed by Ridad family by 16 years. Operating at 5 Paraiso Street, San Francisco, Del Monte, Quezon City including the warehouse and the office of the owner.

The business is basically to supply quality fruits to different fruit manufacturers like DIZON farms before distributing them to different supermarkets in the country. The business is not only for manufacturers but also they are catering to private fruits businesses as their clients. They are receiving daily orders from the retailers and they also have their own delivery services. At the morning, they receive their supplies from different farms in the country and then they do their own quality checking so that they can return the rejected fruits to the farms immediately. At the afternoon, they will be delivering the fruits to the retailers.

The fruits has different variations like, bananas have *lakatan, latundan* and *senorita* which has different prices based on their transactions with the retailers considering the quality, quantity and weight of a fruit. Also, there is a price change to the fruits usually by week but sometimes even daily.

1. **Overview of the Business Process**

**2.1 Existing Business Process**

1. The fruits will arrive in the morning from the farms.
2. Fruits will be checked by the crew in terms of quality and quantity.
   1. If there are rejected fruits:
      1. within 24 hours the fruits can be returned back to the farm.
      2. if it is over 24 hours, the fruits will be sold to individual sellers at the market.
      3. if any fruit is severely damaged, it will be disposed.
   2. Fruits in the inventory will be prepared for deliveries.
      1. if a fruit is damaged in the time that it is in the inventory, it will be sold to individual sellers at the market or be disposed.
      2. these fruits are to be shipped to retailers.
      3. mishandled fruits are to be returned back to warehouse.

**2.2 Data Requirements**

* A master inventory list that contains the category of fruit, type of fruit, supplier of fruit, prices of fruit per batch, quantity of fruit, time of delivery, percentage of spoilage,
* All incoming/Outgoing purchase orders that are tracked yearly, monthly, weekly, and daily.
* All icoming/Outgoing deliveries made that are tracked yearly, monthly, weekly, and daily.
* A list of all sales records in order to be tracked yearly, monthly, weekly, and daily.

**2.3 Roles in the Business Process**

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| **Role** | **Description of Tasks** |
| Manager | 1. The manager will receive, negotiate and accept orders.    1. There may be a need to stock up on the needed order before the due date. The manager will estimate when to acquire the needed products.    2. Manager will negotiate with farms from different places to acquire needed fruits. 2. The manager will recall the purchase orders due for the day and make sure that there is enough stock in the inventory.   The manager tells the staff what are the deliveries today with all the necessary details. |
| Sales Person | 1. Record new stocks and take note of quantity and price. 2. Check the price of the all fruits for price change. 3. Update the price of the fruits. 4. Monitor the price of the fruits. 5. Compute for every day , weekly, and monthly sales. 6. Compute for expenses. 7. Compute for rejected fruits for reselling. |

1. **Problem Analysis**

Based on the interview of their business process, these are the problems that was investigated by the team that needs a software solution.

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| **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? |
| 1 | Sales and expenses are not properly computed due to several factors affecting their inventory. | * there are some rejected fruits and sometimes sold in low price or throw in the garbage depending on the quality. | * incoming and outgoing number of fruits do not tally. * time consuming during the checking before the delivery to the retailers. * too many fruits came from different areas of the country. * 24 hour period of return to the farms. | * fruits will be rejected and sold cheaper than the SRP. * delays in daily delivery. |
| 2 | Fruits are not properly recorded and monitored during price changes. | * weekly or daily price change of fruits . * unable to update the price of the fruits immediately or in real time. | * each fruits has different variations. * each variations has different prices. * orders to the farms are only estimated based on the orders of the retailers. | * fruits are paid by the company but not sold. * fruits are sometimes wasted. * excess fruits are sold to a cheaper price due to price change. * low profit. |

**Problem ID #1: *Sales and expenses are not properly computed due to several factors affecting their inventory.***

There are various factors that affects their inventory such as: variations of fruits, price for each variations, rejected fruits, quantity of fruits, etc… Due to this factors, sales and expenses are difficult to compute specially the daily, weekly and monthly profit. Because the fruits are too many, computing for the profit may cause to inaccuracy that may affect the succeeding orders and purchases during collections.

**Problem ID #2: *Fruits are not properly recorded and monitored during price changes.***

Price changes cannot be avoided specially to suppliers of fruits due to conditions in the farm. The company has a problem on keeping track of the prices due to accessibility of the records. Since the one in charge of the records is doing other tasks, the records may or may not be updated in real time.

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

The software aims to provide an inventory and delivery system including the sales in order for the users to properly track the incoming and outgoing number of fruits per day, per week and per month. The inventory should focus on keeping the records of the different fruits and their variations including the prices. The delivery function should focus on everyday delivery transactions of the fruits to the retailers. Lastly, the sales management should be able to show sales reports daily and store them for future computations.

The specific objectives of the software are as follows:

* to provide an inventory system to track the number of fruits.
* to provide easy access in changing properties of a fruit such as: quantity, price, etc.
* to provide facility to monitor daily deliveries.
* to provide facility to compute daily, weekly and monthly sales.
* to provide facility to track orders.
  1. **Characteristics**
* Modified data in the database should be updated for all users and devices.
* Specific data in the database should be scalable depending on the number of necessary categories for each item.
* Capacity of the database should match the size of the actual inventory.
* Availability of the system should be accessible for all users.
* Reliability of the system should remain bug-free.
* Recoverability of the system should be maintained by making data back-ups at least once a month.
* Security of the system should be granted to only those have authority to use it.

*This section discusses the non-functional requirements that need to be addressed to achieve the business goals stated in Section 2.*

1. **User Stories** 
   1. **Login**

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| **The secretary, manager and the owner/administrator can log-in their account for constraints in software features** | |
| **Estimate (Days): 1** | **Priority: 70%** |
| **Pre-condition:**  The secretary, manager, and the assistant manager is registered and ready to log in. | |
| **Scenario:**   1. The user will run the system. 2. On startup, the system will prompt for a password. 3. The lab personnel will input the password and presses the *Enter* key. 4. If the password is correct. The main menu of the system will show up. 5. At the upper right corner, the user can change their passwords before logging in. 6. The change password form will appear. 7. The user can confirm changes. | |
| **Post-condition:**  The user should be able to log in their accounts. | |
| **Acceptance Criteria:**   1. Test that if the password is correct, the main menu will show up. 2. If the user clicks on the “change password”, Test if the username and password fields are correct. 3. If the fields are incorrect a notice will display saying that the log in fields should be correct before changing the password. 4. Check if the password is incorrect, the main menu will not show up and the user will be prompted for the correct password. | |

1. **Main Menu**

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| **The users can use different features according to their account for easy access to tasks.** | |
| **Estimate (Days): 1** | **Priority: 20%** |
| **Pre-condition:**  The user should be able to log in first to access this feature. | |
| **Scenario:**   * 1. The user will be shown a menu with 4 tabs including: Inventory, Purchases, Deliveries, and Sales.   2. The user can click on the tab and then a sidebar will appear at the left side indicating the submenu of the chosen main tab.   3. When the user clicks on the submenu, the content of the item will appear on the right sidebar.   4. Additional menus can also be found on the side bar | |
| **Post-condition:**  The user can navigate anywhere on the menu | |
| **Acceptance Criteria:**   1. The user will be shown additional menus on the sidebar. 2. The table on the left side varies its result depending on the menu. 3. The system will show the contents of the database based on the selected sub menu. | |

1. **Inventory Tab**

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| **The Inventory should contain the database of the fruits and all its properties. The admin and manager can add and modify the contents of the inventory so that they can monitor the changes and the items. While the sales person can only view and update the price of the fruits.** | |
| **Estimate (Days): 3** | **Priority: 20%** |
| **Pre-condition:** An account should be active. | |
| **Scenario:**   * 1. The user will click on the inventory tab.   2. The side bar for the inventory tab will appear.   3. When the user clicks on a fruit, it will display its variations in the table on the right.   4. The user can also click on the “view all” to view all fruits.   5. The column header can also be clicked for sorting.   6. The admin can add fruits or modify data.   7. The admin will fill up the add fruits and press the submit button.   8. If the admin wants to modify a fruit, she will select a fruit from the list and edit its information.   9. The admin then, press the submit button. | |
| **Post-condition:**  the add fields are all required fields. The system saves additional changes to the database. | |
| **Acceptance Criteria:**   * 1. Test If all fields are done, it will show an acceptance message.   2. If the field has blank space, it will prompt the user to complete all fields.   3. The admin account should be able to do the “add” and “modify” features.   4. Test if there are no conflicting data/duplicate data to the inventory.   5. Other accounts like the secretary should be able to only view the contents of the inventory. | |

1. **Purchases Tab**

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| **The Purchases should have the records of the purchases to the suppliers and purchases of the retailers. The users can add and view purchases of the retailers while the admin can modify the purchases to the suppliers so that they can easily monitor the incoming and outgoing fruits for delivery. This will also show notifications.** | |
| **Estimate (Days): 3** | **Priority: 20%** |
| **Pre-condition:** An account should be active. | |
| **Scenario:**   * 1. The user will click on the purchases tab.   2. The side bar for the purchases tab will appear.   3. The forms when adding purchases can be found in the sidebar.   4. The “update form” will only be available for the admin.   5. The admin will fill up the update form of the pending purchases.   6. The admin will save her changes to the purchases.   7. The admin can add another order from the sidebar.   8. The admin will add order to purchase.   9. They can also add notes or special instructions in the purchase forms.   10. The admin will click on the submit button. | |
| **Post-condition:**  the add fields are all required fields. The system will save the contents/status of purchases to the database. | |
| **Acceptance Criteria:**   1. If all fields are done, it will show an acceptance message. 2. If the field has blank space, it will prompt the user to complete all fields. 3. The admin should be able to modify the contents of the database. 4. Test if the purchase of a client do not duplicate. 5. Other accounts should be able to view the contents of the purchases. | |

1. **Delivery Tab**

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| **The delivery tab should contain the incoming and outgoing delivery records and also the record on the quantity of rejected fruits. The users can view the status of the outgoing and incoming delivery records. The admin can accept or confirm if the delivery has arrived so that they can keep track on the number of rejected fruits to be returned to the suppliers.** | |
| **Estimate (Days): 3** | **Priority: 20%** |
| **Pre-condition:** An account should be active. | |
| **Scenario:**   * 1. The user will click on the delivery tab.   2. The side bar for the delivery tab will appear.   3. The user can click on the incoming or outgoing menu to view the status of the deliveries.   4. The users can add the quantity of the rejected fruits that will be returned to the farm.   5. The add form for rejected fruits will appear.   6. The users will add fruits to the rejected fruits.   7. The users can also add fruits to the rejected fruits from the retailers or from the farm.   8. The user will click on the “compute”.   9. The user will be shown the price of the rejected fruits.   10. The user can also see the status of delivery vehicles. | |
| **Post-condition:**  the add fields are all required fields. The system will update the database according to the rejected fruits either to the farm or from the retailers. | |
| **Acceptance Criteria:**   1. Test if all fields are done, it will show an acceptance message. 2. If the field has blank space, it will prompt the user to complete all fields. 3. Test if the rejected fruits are recorded from a specific supplier. 4. Test if the rejected fruits exceeds the 24 hr. time limit from the farm. | |

1. **Sales Tab**

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| **The sales should contain the daily, weekly, and monthly profit, expenses from rejected fruits, collection details, and profits from private merchants. The users should be able to view the profits and also the users can easily see the computation on how the profit was computed so that they can see the accurate expenses and profit.** | |
| **Estimate (Days): 3** | **Priority: 20%** |
| **Pre-condition:** An account should be active. | |
| **Scenario:**   * 1. The user will click on the Sales tab.   2. The side bar for the Sales tab will appear.   3. The users can view the sales reports depending on the dates.   4. The users will click on the sort menu.   5. The sort menu will show daily, weekly, monthly sales.   6. The user will select for a certain report.   7. The user can save the reports individually for future reference.   8. The user will click on the “view saved reports” to view all the saved reports. | |
| **Post-condition:** The system will get the data from the database, and add the data to the “saved reports” also in the database. | |
| **Acceptance Criteria:**   1. There should be data to save if the user want to save a report. 2. If the user clicks on the “view saved reports”, test if the saved reports contains data. 3. Test if a report is saved already to prevent duplicate saved reports. | |

1. **Tracking Logs/Add User**

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| **The tracking log and add user is only available for the admin. The admin can view logs that recently modifies data in the database.** | |
| **Estimate (Days): 2** | **Priority: 5%** |
| **Pre-condition:** The admin account should be active to access. | |
| **Scenario:**   * 1. The admin will click on the tracking log or add user.   2. If the admin clicks on the tracking log, the table will show the logs of other users.   3. If the admin clicks on the add user, she will fill up register forms in order to add new user to the system.   4. The admin will click on the “confirm user” button. | |
| **Post-condition:**  The system will add the new user to the database. | |
| **Acceptance Criteria:**   1. Test if the fields are complete before the admin can add another user. 2. Test if the new user does not duplicate other account. | |

**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.*

Daily Routine:

**Appendix B – Interview Transcript**

Interviewee - Ms. Norita Ridad

**Interview Transcript**

Q: Anu ano po yung mga proseso nyo ngayon para magawa yung kailangan gawin?

A: Nakakapag gawa na kami sa excel ng mga report pero noong mga October lang kase bago lang din yung anak ko dito. Dati kase kaming tatlo dito, manu mano lang yung pag gawa (record). Kayo din ang mag eestablish papaano. Kaya nasasainyo yun. Kayo yung mag ieestablish ng program o system na susundin namin.

Q: So for now po, ang ginagamit niyo is excel or manual pa lang?

A: Manual pa lang talaga pero yung ibang sales namin ineexcel. Yung internal in and out namin, wala pa sya sa excel. Yung kalakal na pumapasok, kalakal na lumalabas, manual pa talaga.

Q: Tapos, yung sa, yung ginagawa niyo araw-araw, katulad ng pagiinventory, kapag kunwari may dumating po na supply, paano po niyo hinahandle o pinoprocess yun?

A: Pag pumasok na samin, ichecheck na ng tao. Ititimbang tapos isstock na sya. Yan yung sa incoming namin sa umaga. May out going naman kame sa gabi. Yan yung delivery sa mga outlet

Q: So kapag nacheck niyo na po na may darating na delivery, ipapasok siya sa inventory pag okay. Tapos mamaya po, iprepepare for outgoing naman then dadalin nyo sa mga outlet. Yung ganung proceso, ano po yung pinaka mahirap gawin?

A: May factors din kase na minsan naman yung stock namin ang may problema. Minsan di nammeet yun purchase order dahil may mga na oover ripe or nasspoil. So yun din yung gusto kong malaman. Dahil yung record naman ng incoming fruits, di na sya magtutugma sa outgoing. Yung mga nawawala, pag iccheck ko, dun pa lang makikita na may damage. Gusto ko sanang macompute yung mga ganon.

Q: Sinu-sino po yung nagchecheck ng mga dadating?

A: May mga boy kami na mag bababa ng stock tapos sila na nagbibilang at nag ccheck.

Q: Tapos sasabihin na lang isa-isa pag may damage?

A: Oo. pero yung pag tatally ng in and out, dito na nangyayari (sa office) samin.

Q: Pag kunwari pagdating sa inyo okay pa siya, then pagdating sa doon sa outlet, may diperensya na. Paano po nyo inaayos yun?

A: Pagka samin galling yung delivery at yung fruits may damage pagkadating dun, babalik samin. Pero pagka tumagal na doon sa kanila, sila na may sagot noon. Pagka naman sakanila yung delivery, wala na kaming sagot nun.

Q: So sa inventory niyo po, parang iba-ibang klaseng ng food or yung , kasi sabi sa amin kanina po na yung fruits niyo po may iba ibang pa pong klase …..

A: Merong iba iba pang klase sa isang prutas. Halimbawa yang saging, may lakatan, latundan, at iba pa.

Q: So per batch niyo po, iba iba yung presyo niya?

A: Oo. Depende sa pagkukuhanan. Kunwari yung lakatan sa Pampangga pa galling. Bukod dun, possibleng iba iba din presyo ng lakatan per batch kahit sa same place galling o sa iba. Depende sya sa season din.

Q: Tas kayo na po yung pinaka bahala mag presyo sa iba ibang lugar tas kayo rin magdedeliver?

A: Yung presyuhan, pinapaaprrove din yan sa PCA. Weekly yan. Tas pag naapprove, pwedeng yan na presyo mo. Pag hindi, yung presyo na before.

Q: Posible po ba na parang kunwari yung isang klase ng pakwan na nanggaling sa kunwari Pampanga, pag kinukuha siya hindi yung kunwari ito yung delivery na ito same price lang ng katulad ng delivery nya noon o iba iba siya? And kapag dinideliver sa ibang outlet, iba ulit yung price?

A: Possible yun. Yung sa mga outlet, sila na bahala sa presyo nila. Basta kung ano napagagreehan naming, yun ang presyo namin. Kunwari may nag inquire, sabihin ko sa linggong to ganito presyo ng manga. So pag kukuha sila sa week na sinabi ko, yun ang presyo.

Q. So ano lang, may period of time lang po. So aside from purchasing, mga delivery, mga sales, tapos yung purchases/collections, kapag nakapagdeliver na ?

A: May period of time lang. Meron din kaming mga delivery na malalaki. Kunwari 2 tons. Pag ganon, magtatambak kami.

Q: Ano po nangyayari kapag nageexceed?

A: Wala, talaga pag-aantay.

Q: Saan po kayo usually nagdedeliver?

A: Ang out ko is SM, Puregold, Shopwise, S&R, pero hindi ako direct. Behind concessionaire ako.

Q: So sila lang po yung kumukuha ng fruits sa inyo? Sino po yung nagaaprove nun?

A: Oo. Sila na rin nagchcheck doon. Parang kami na supplier nila.

Q: Paano po kung kunwari itong fruits na ito this week ito yung price niyo, tapos, di pa siya nagsesell after next week, bigla po siya bumaba, so pano po yun?

A: Hindi na problema yun. Problema na ng outlet yun. Samin naman kapag may naiiwan, dinadala sa mga tinder sa palengke Sila na bahala magbenta.

Q: So far po yung pinakakailangan ikeep track ay yung mga inventory, delivery, purchases, sales, and collections po. Then kailangan niyo po makita yung daily report, weekly, tas monthly, tsaka yearly po. Tapos aside from that, sa sorting po ng fruits, pagdating ng fruits sa inyo, ano po yung instructions usually dun sa mga tauhan niyo po?

A: Kailangan macheck kung ilan, kung maayos ba, walang bugbog. Ganyan.

Q: Yun po yung ilalagay sa inventory?

A: Oo.

Q: Ano ginagawa po sa mga reject na fruits?

A: Ibabalik, hindi na babayaran. Iba na ang rate kapag nagdeliver kami at nareject.

Q: Paano po kapag may nareject na fruit naibabalik sa pinagawaan niyo po, paano niyo nalalaman kung magkano yung ibabalik sa inyo?

A: Dapat within 24 hours mabalik sya. Pag di sya nabalik kaagad, loss na namin yun.  
  
Q: So yung process niyo po everyday, parang first tatanggap kayo ng fruits dun sa supplier niyo, and then after po nun, ichecheck kung okay na lahat ng fruit o kung may reject, ibabalik agad, and after po nun sa gabi, didistribute niyo na sa outlet.

A: Oo. Parang ganyan Gawain ditto samin araw araw.

Q: Sa outlets po, kailan niyo po malalaman kung kelan magoorder? A week before or short notice a day before?

A: Depende yun sa kung gaano kalaki yung purchase order nila and kung anong mapapag agreehan.