Kiichigo

A Point-of-Sale system for the Raspberry Pi

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Chapter 1

Functional Requirements

1.1 Client-User

1. Track Inventory, including serial numbers
2. Create Transactions
3. Lookup Transactions
4. Lookup Customer History
5. Save Transactions (Hold and Layaway)
   Option to input item SN immediately or later
   Option to print hold/layaway sticker for each item
6. Print Receipts
7. Print Labels, including barcodes
8. Scan barcodes using USB scanner
9. Receive Inventory
10. Transfer Inventory Out
11. z report
12. x report
13. Generate Specific reports (Saved by manager)
14. cash drop
15. cash add (put money in register...)

16. Lookup item

    option for having levels of lookup

    first, show categories, then subcat, then subcat... until user doesn't select any subcat, then will show list of all items that fit all cat and subcat filters. will search by name (starting from beginning) from there, or can switch to "search by keyword" mode

1.2 Client-Manager

1. Create Users
2. Restrict User Privileges

   z/x reports

   cash drop/add

   Receive Inventory

   Transfer Inv. Out

   lookup customer history

3. Delete Users
4. Generate Reports (custom too)

   Recommended items to order

1.3 Client-Admin

1. Add New Terminal to Cluster
2. Remove Terminal from Cluster
3. e-mail alerts to admin about problems

   Terminal stops responding

   Suspicious Tx Void

4. Setup for Terminals is simple (plug it in and it asks if it's the first or not, etc)

1.4 Server Database

1. SQL Changes are done local, then broadcast
2. When client is idle, then synchronize received changes
3. big changes need to roll between clients so the load is spread (1->2; 1->3, 2->4; 1->5, 2->6, 3->7, 4->8, 5->9)
4. Backup mode for terminals (Just holds database and waits for a terminal to fail, when it will ask what terminal it should replace.)

1.5 Hardware

1. Compatible with wireless
2. Compatible with various printers
3. Compatible with barcode scanners
4. Compatible with Touchscreen (maybe...)
5. Compatible with employee card scanner

Chapter 2

Non-Functional Requirements

Chapter 3

Use Cases

Chapter 4

State Diagrams

Chapter 5

Database Schematic

Chapter 6

Class Diagrams

Chapter 7

Sequence Diagrams

Chapter 8

Test Cases