**Summer**

14

**279 de la durantaye**

Kitscan

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Documentation for the Kitscan project.

08

**Fall**

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Description

# Objectives

Device that allows users to inventory their pantry and other foods (refrigerator, freezer) and propose meals based on current on-hand items, prepare weekly grocery lists. The user would have to scan items coming IN the pantry, as well as scan them OUT to keep the inventory current.

The scanning device would have at least two buttons, IN and OUT, which would also serve as the power-on/wake-up button. The device would shutdown after a fixed time period, allowing the user to scan OUT or IN multiple items without having to press the button again.

A hardware power off switch is required for maintenance, or during outages.

The user would go to a website to manage his preferences, inventory, print his reports (grocery list, current inventory with quantities, find and create recipes).

External sites providing UPC code information and recipes would be used to integrate/complete information in the database. If a new item is scanned and not currently recognized, a query to an external database would populate our own database.

# Main uses

* Pantry inventory
* Grocery planner
* Meal planner (Based on recipe, make a list of ingredients to buy (missing)
* Meal designer (Based on the ingredients I have, what can i make?)

# Equipment used

* Web Server (internet based) and MongoDB
* Rasberry Pi
* Barcode reader

# Client Features

* Create an account
* Login
* View Inventory

# Barcodes

The product will support all of the following types of symbologies :

* EAN-8
* EAN-13
* UPC-A
* UPC-E

Planning

# External ressources

* Outpan.com (Product database)
* Eandata.com (Product database)
* Yummly (Recipe database)
* Jquery (Javascript framework)
* Node.js (Javascript framework)
* Bootstrap(Javascript framework)
* MongoDB (Database)

# Server

* Uses port 8443 (HTTPS)
  + All communications with the server must be authenticated with a SSL certificate
  + server.key passphrase : tiredoftoasts
  + client.key passphrase : pantryplanner
* Servers logs information into the server.log file
* Runs on NodeJs

Troubleshooting

# Error codes

## 100

Invalid request

Generic error code stating that the request sent to the server could not be treated1

## 101

Invalid request : Invalid barcode

The barcode must be one of the supported types.

## 102

Invalid request : Invalid scanner ID

The scanner ID corresponds to the MAC Address of the scanner converted to decimal. It must not be negative, nor must it be higher than the decimal value of FFFFFFFFFFFF.

## 103

Invalid request : Invalid input type

The scanner only has the option between IN(1) and OUT(0). If a message is sent and isn’t one of these two values, this is the associated error code.

## 104

Invalid request : Invalid transaction number

Each scanner has a personnal transaction number that increments after each transaction with the server. The transaction number must be a positive number.

## 105

Invalid request : Transaction already exists

The transaction number is used in case an item is sent more than once due to communication problems with the server. If the server has already logged the Scanner ID/Transaction number combination before, the transaction is dropped and this error message is sent.

## 106

Invalid request : The scanner X has not been registered yet

The scanner has not been registered and isn’t associated with any user in the database.

## 107

Can’t connect to the local database

The server can’t connect with the local dabase.

## 108

Can’t connect to the server

The scanner can’t reach the server.

## 109

You are trying to remove an item that doesn't exist in your inventory.

The user has tried removing an item that he never had.

## 999

Product X doesn’t exist in local database

Product X doesn’t exist in online dtabase

The product information isn’t available. This is a message to be sent to the client explaining to him that he should put that item aside and complete its description online.

## 333

The request has been successfully processed.

This code is sent to the scanner when the request has been successfully processed and there has been no errors along the way.