Assignment: IOT Vending Machine
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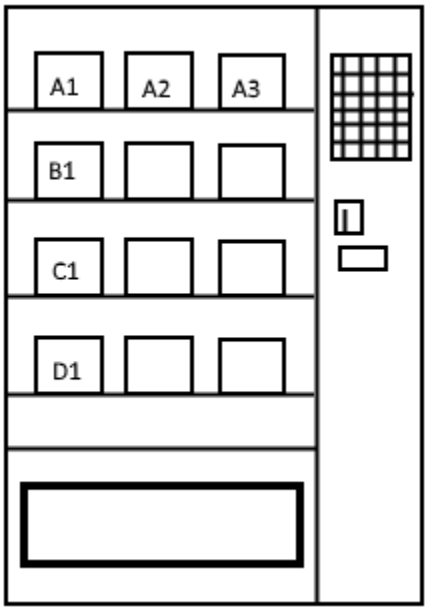
Date: 01/01/2020

IOT Vending Machine



Directions:

Please read all the information below. Come up with a testing plan that guards against regression and identify potential areas of high risk. Please provide (2) sample test cases.

←Keypad

←Coin return

←→ VendAPI(VendPoints)

Currently everything is connected to the internet or a local intranet. Why not connect a vending machine?

Networked vending machines are their own device and can be connected like how printers are connected.

A server can host software that searches for vending machines on a network (for example on a school campus).

Key points

- Simple API for ease of use.
- VendAPI(tm) accessible through REST (V)endpoints(tm).
- Can be networked with other IOT-Vend devices.

USER (V)endpoints

Inventory calls

Name,Type, return Values

GetInventory()	GET	Returns all inventory in the specified device.
GetInventory(x,y)	GET	Returns inventory of specified coordinate.
GetInventory(x)	GET	Returns inventory for specified row.
GetInventory(y)	GET	Returns inventory for specified column.

User calls

Name | Type | return Values | notes

Login(uname, password)	POST	Returns sessionID(sessionID) for user.
CreateUser(uname, password, emailaddress)/	POST	Returns success
Logout(sessionID) / POST /	POST	Returns success or failure in logout

Order calls

Name | Type | return Values | notes

OrderItem(x,y,sessionID) PUT /	PUT	Returns successful if order can be placed or failure if order cannot be placed (inventory is out, or user has placed too many orders for the same item)
ListOrders(sessionID,[CLAIMED, UNCLAIMED,CANCELED,ALL])	GET	Returns a JSON list of all orders in a list by date or filtered view.
CancelOrders(OrderCode)	POST	Takes order code that would otherwise be used to retrieve an order.
*RetrieveOrder(OrderCode)	POST	Takes order code and returns tasty snack/beverage.

* only used on machine via the keypad (see Diagram).

Acceptance criteria.

- Only 3 items can be reserved at one time per user.
- Items can be reserved up to 1 hour ahead of retrieving.
- User can only reserve item twice in a row If time runs out on first reservation. If user has claimed an item, they can order again
- Unclaimed orders will have key codes
- Key codes are alpha numeric in the following pattern (# + 5 AN chars) Example: ”#5A31E”
- Background process runs that checks to see if the 1-hour time limit has expired.

Product had these questions; can we do them?

- Can we show a list of orders by the user?
- Output previous orders plus unclaimed orders?

Database Structure

USER

UID| Uname | Pass | Email

INVENTORY

InvID | InvName | InvCount | InvReserved | X/Y

ORDERS

OID | UID | DateTime | Claimed | Code

ORDER_ITEMS

OID | InvID

SESSION (Unimplemented)

SessionID | UID

Testing Tools

- Simple UI that allows selection of User Endpoint(dropdown)
- Checkbox that can be checked to include System Endpoints
- Value box (Text Field) User input is Comma delimited list for all values required
- Submit button.
- Text output box for each call on another screen (Not shown)