**SCG Technology Developer Test**

**Candidates : Kittitat Chainonthi**

Design solution for scenario centralize system of vending machine company with technology

Conditions

1. Customers can buy products from vending machine. When they buy any product, the numbers of product should be decrease from the machine
2. System admins have to know all vending machine locations
3. When existing product quantity is less than 10, the vending machine will send any signals to the system admin. (You can design the signals you want to use such as Line, E-Mail, notification on website, etc.)

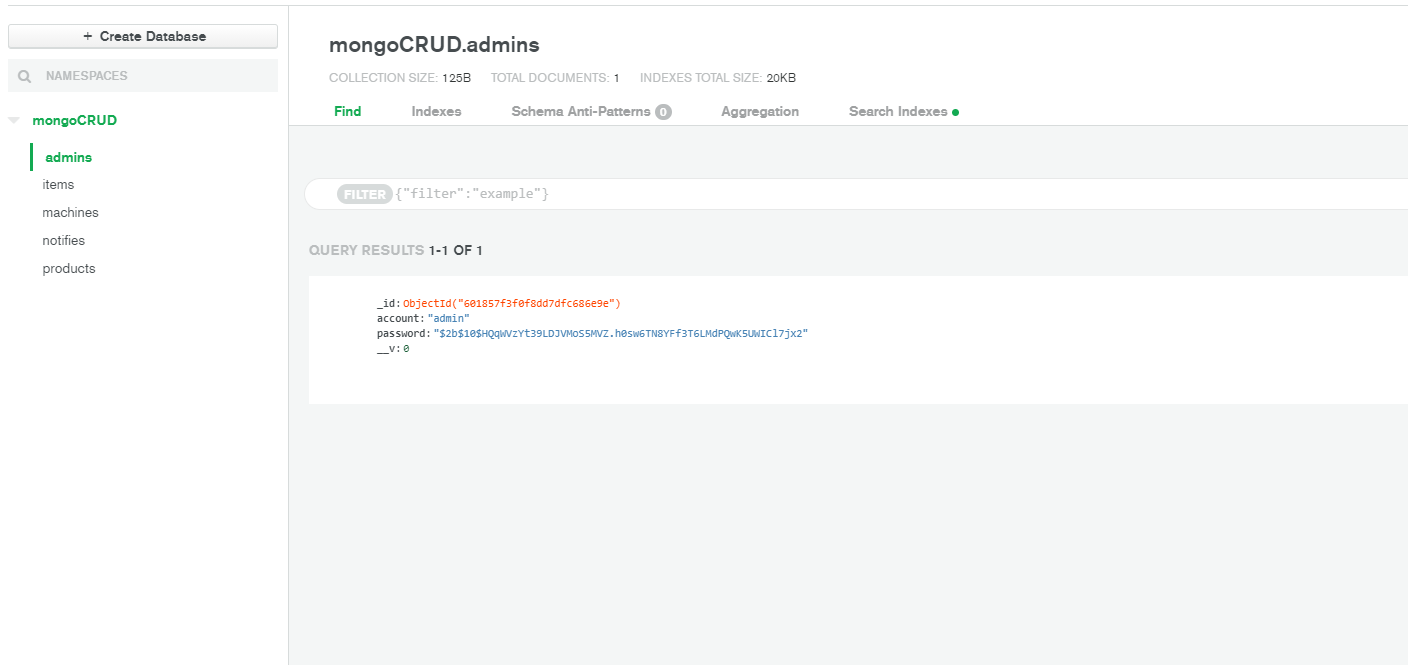
Technology Stack plan

Front-end : Nuxt.js framework for Vue.js with Vuetify CSS freamwork

Back-end : Node.js with Express.js

Database : MongoDB nosql Database

Working Step

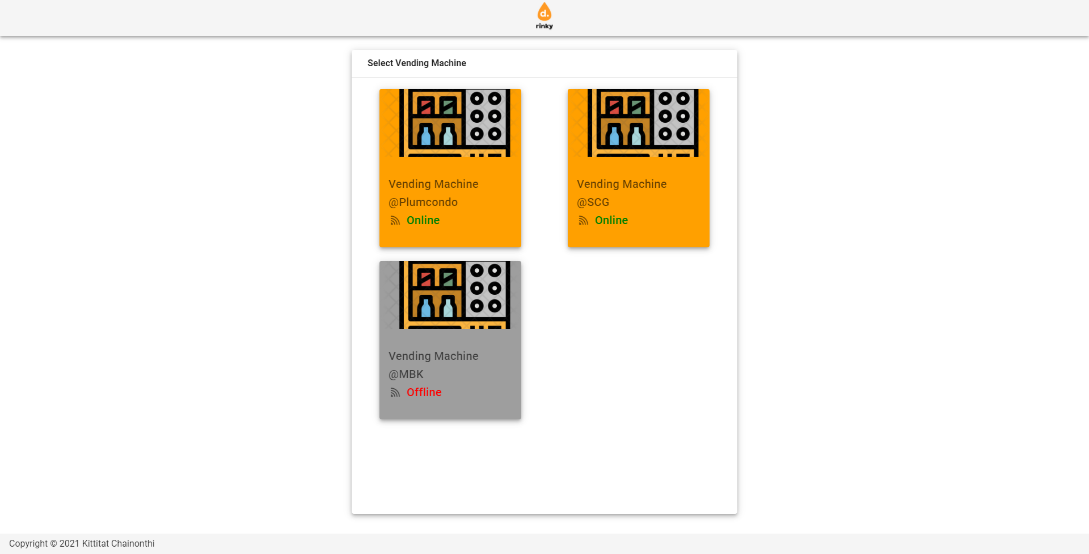
1. Start with back end design API route and Database collection

Database collection and schema

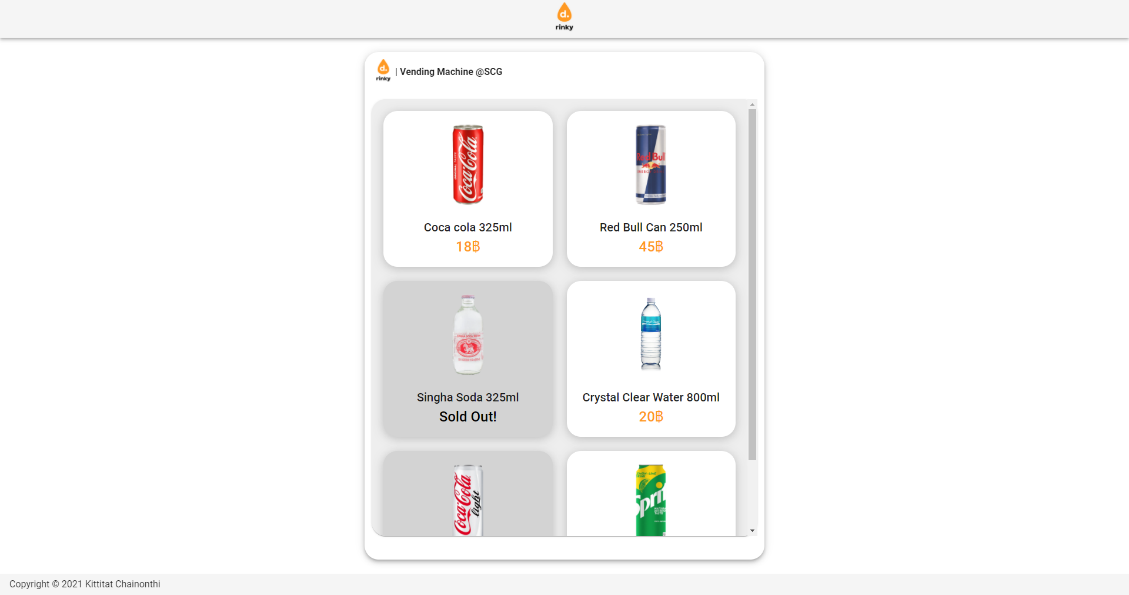
1. Design route for API all parameters will pass validation by JOI
   1. Route “api/admin” path use for admin signup login and logout use Bcrpyt for hash admin password and JWT to generate token for login auth.
   2. Route “api/machines” path use for manage all machine action form front-end create , update , delete get item or buying item from user will use this path.
   3. Route “api/notify” path use for manage all notification on application to push or delete notify will handle by this route.
   4. Route “api/products” path use for manage product in admin system create , update , delete product will handle by this route.



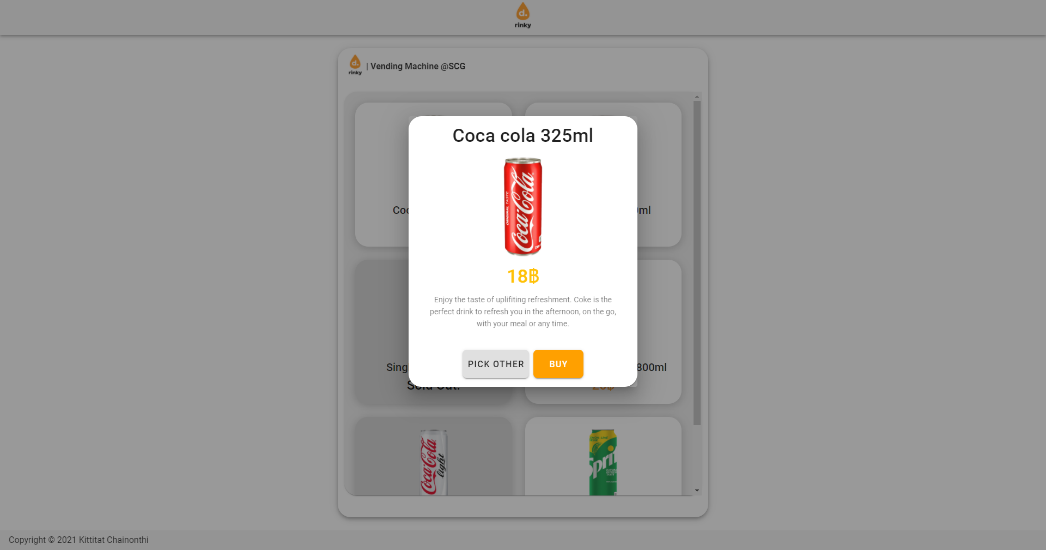
1. Design and implement for client side.
   1. Use Nuxt.js and Vuetify for this project starting with vending machine interface.



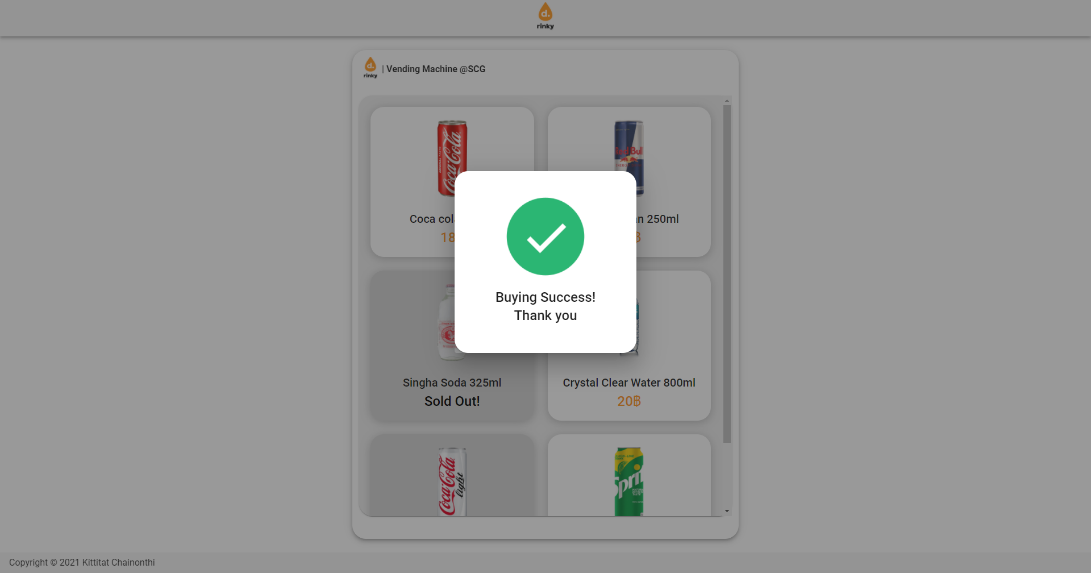
Vending Machine select to go to main application.



Main Application page vending machine UI with product assume require touch screen.

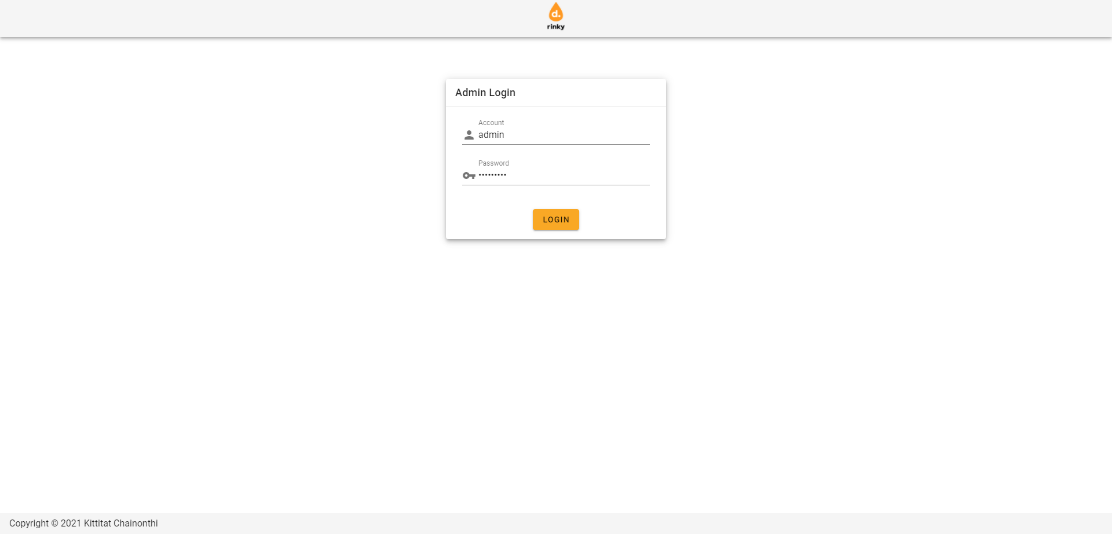


User buying product.



Application success screen when user confirm and purchased.

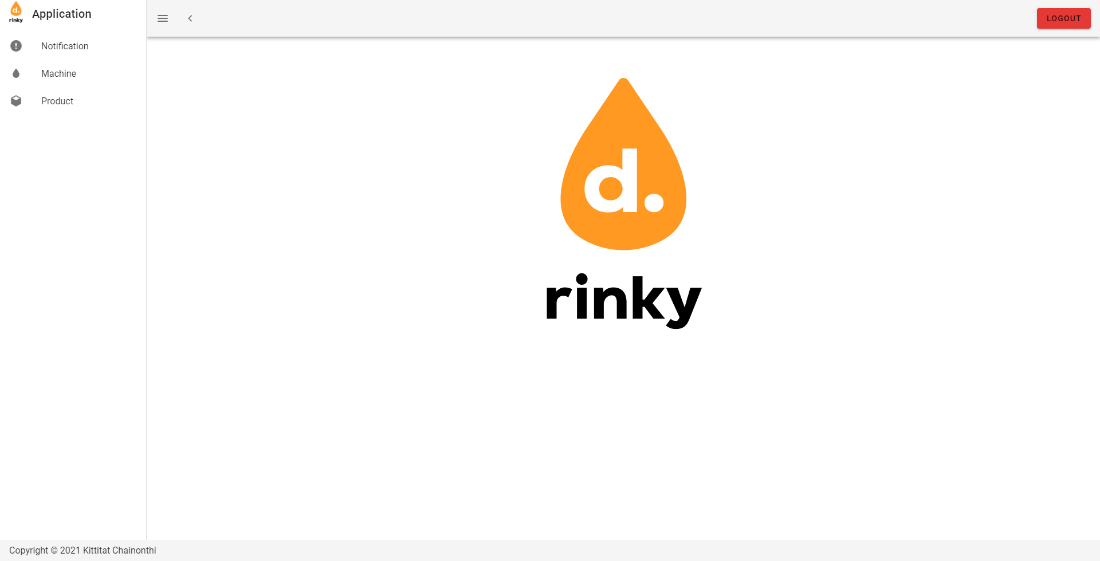
* 1. Design admin page to manage all vending machine and product that will met the solution for centralize system.



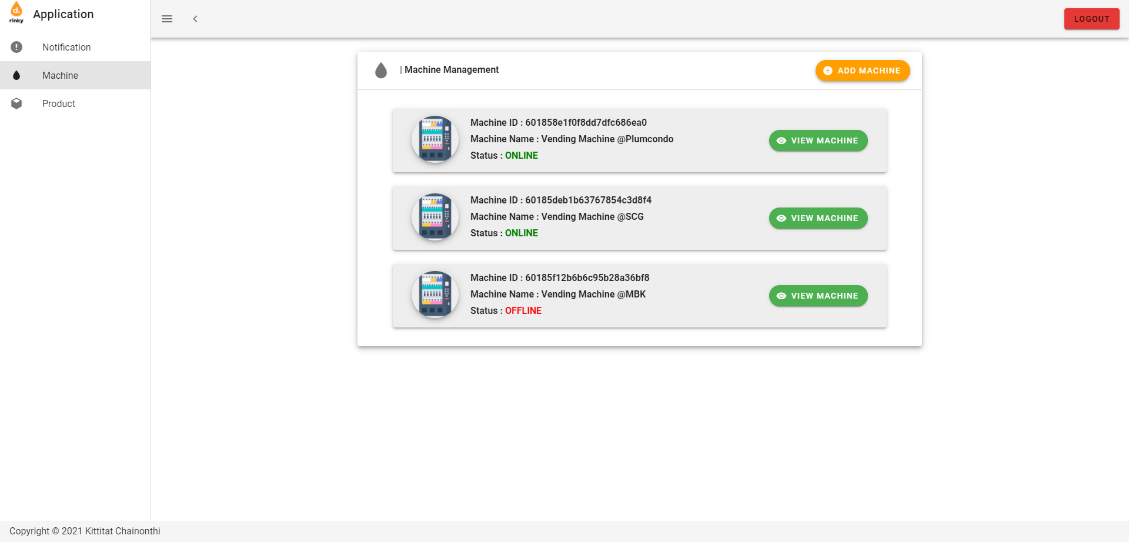
Admin login page

\*in case of testing system

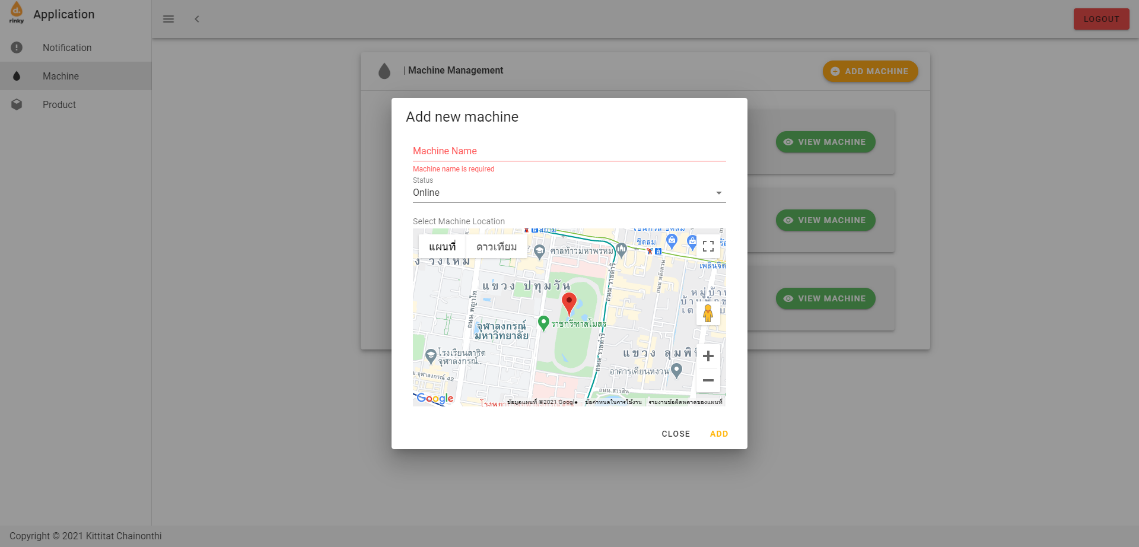
**Username : admin , Password: admin1234**



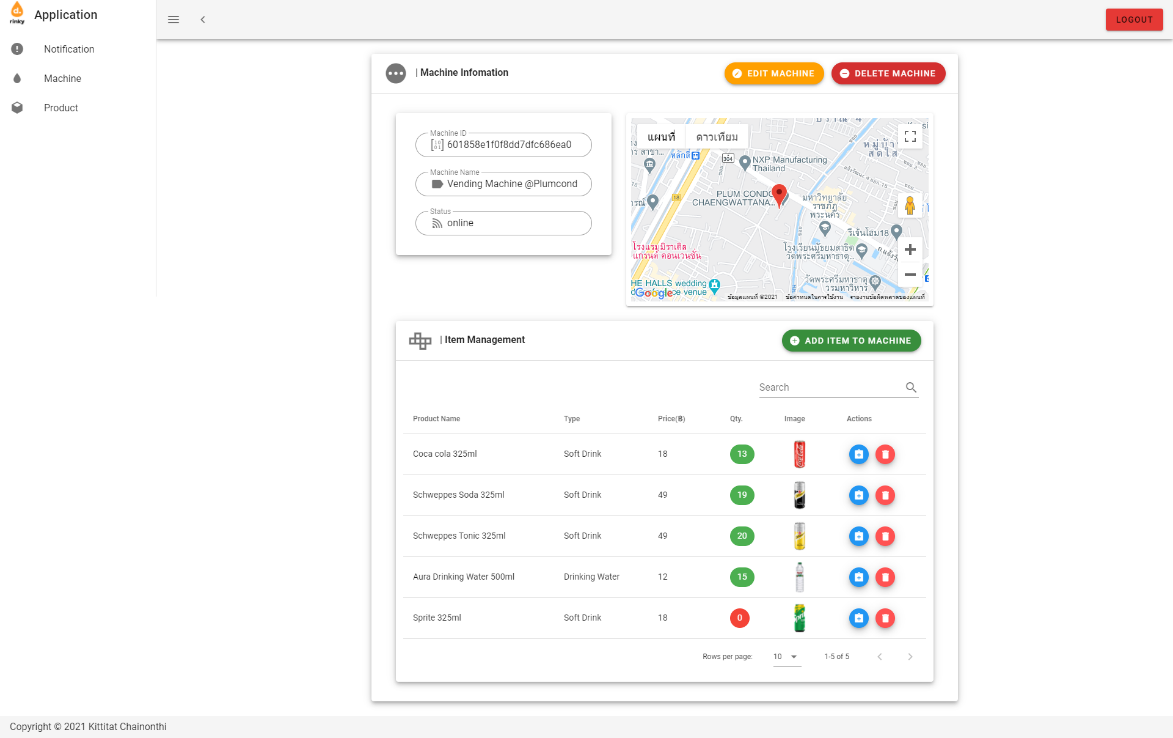
Main landing page of admin system



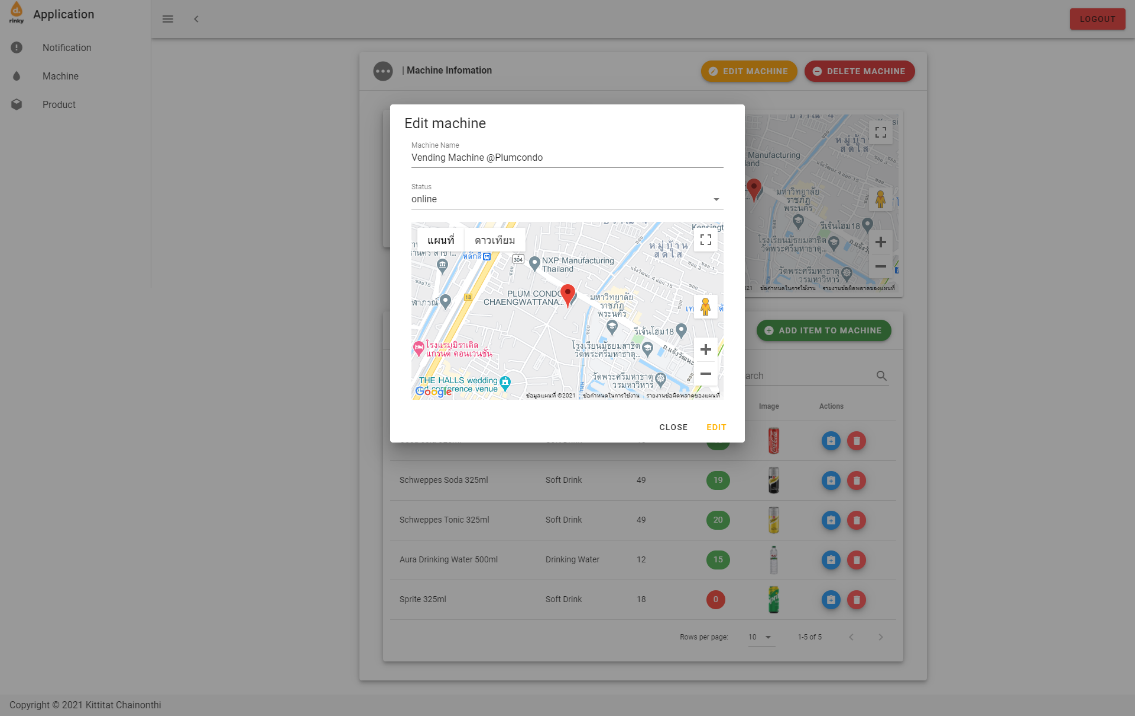
Machine management page that will show all machine in system and status



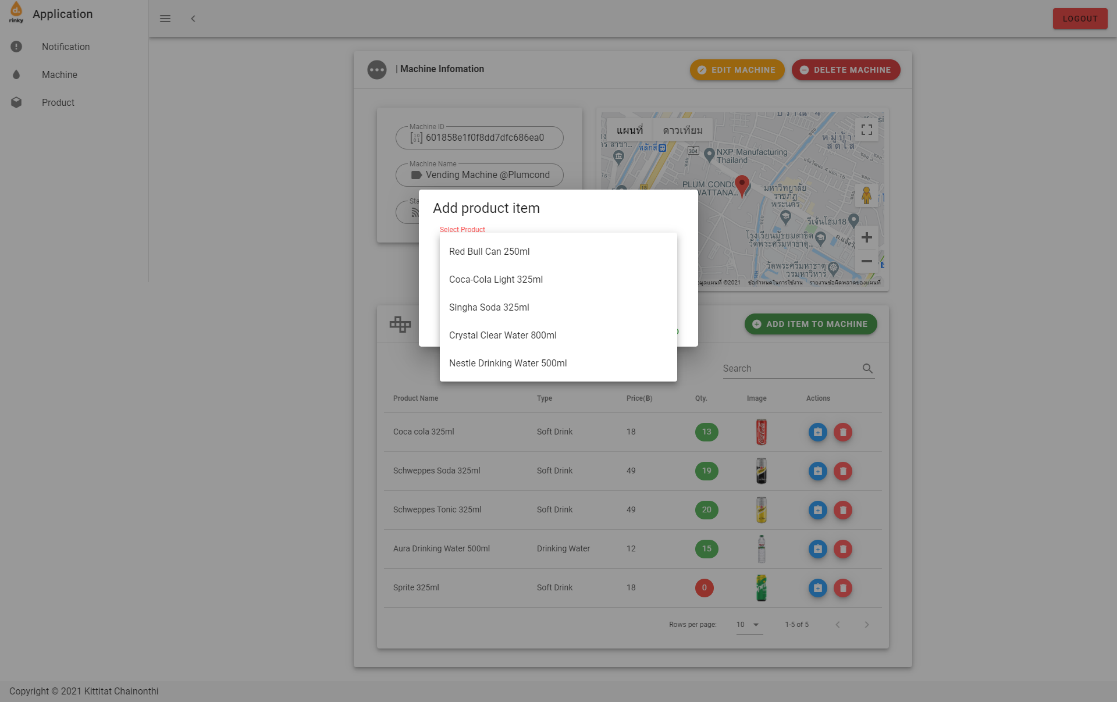
At this page admin can add new machine in system and select location of this machine. That will met this second condition **“system admin know all machine location”**



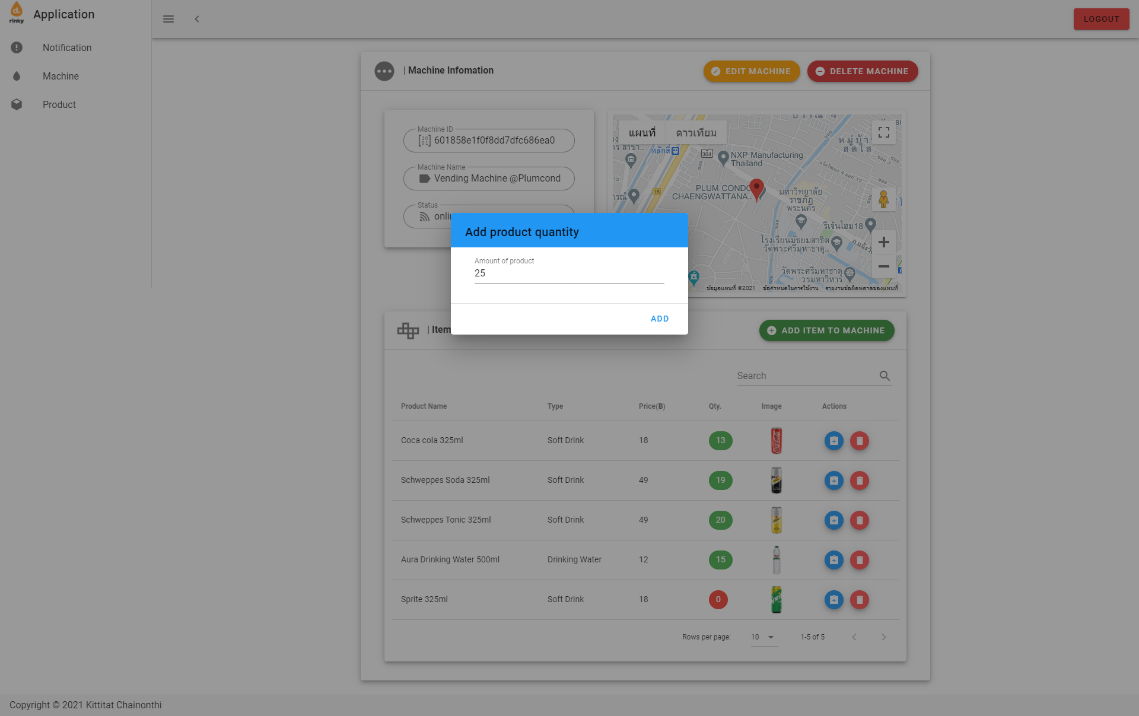
Machine information this page will display all info machine name , status , location and all item product in this machine. That item will decreased when user buy and product from machine. This design for the first condition “**The numbers of product should be decrease from the machine**”



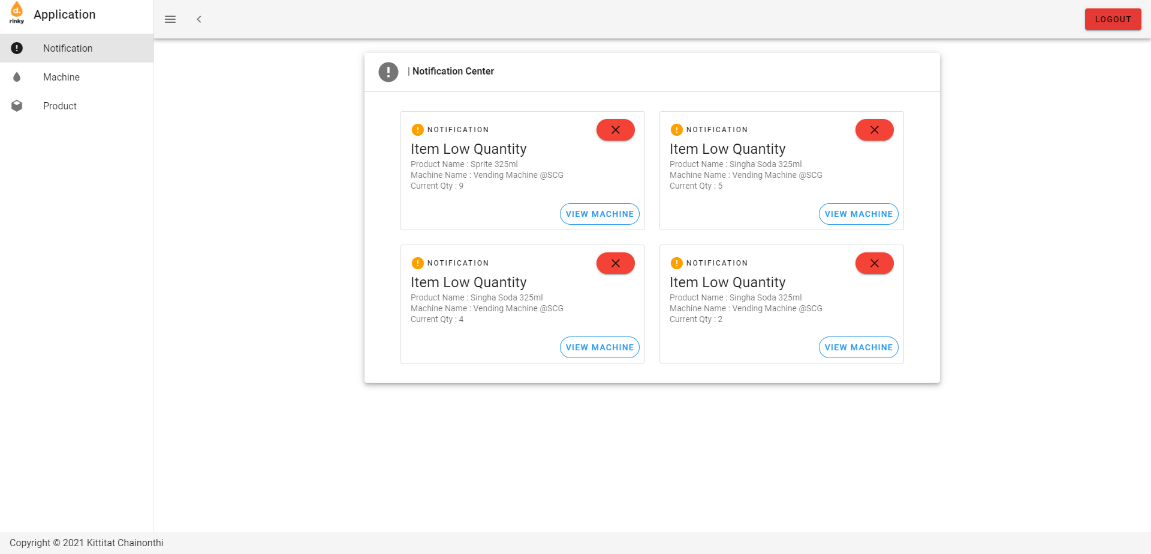
Edit machine info



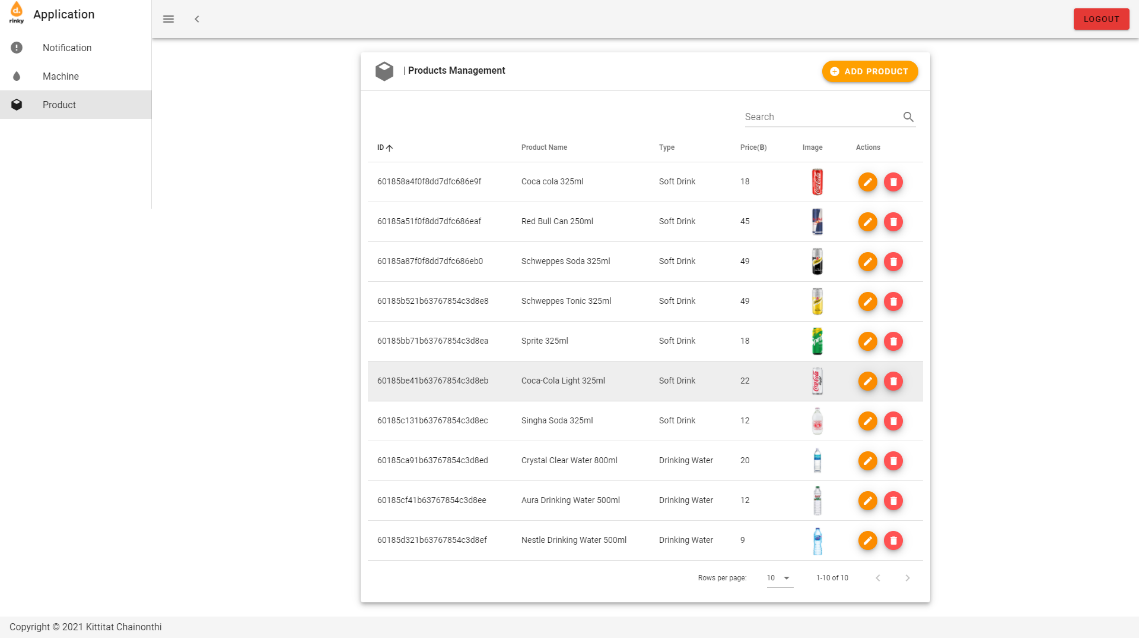
Add new product to machine this will follow the product that registry in admin system.



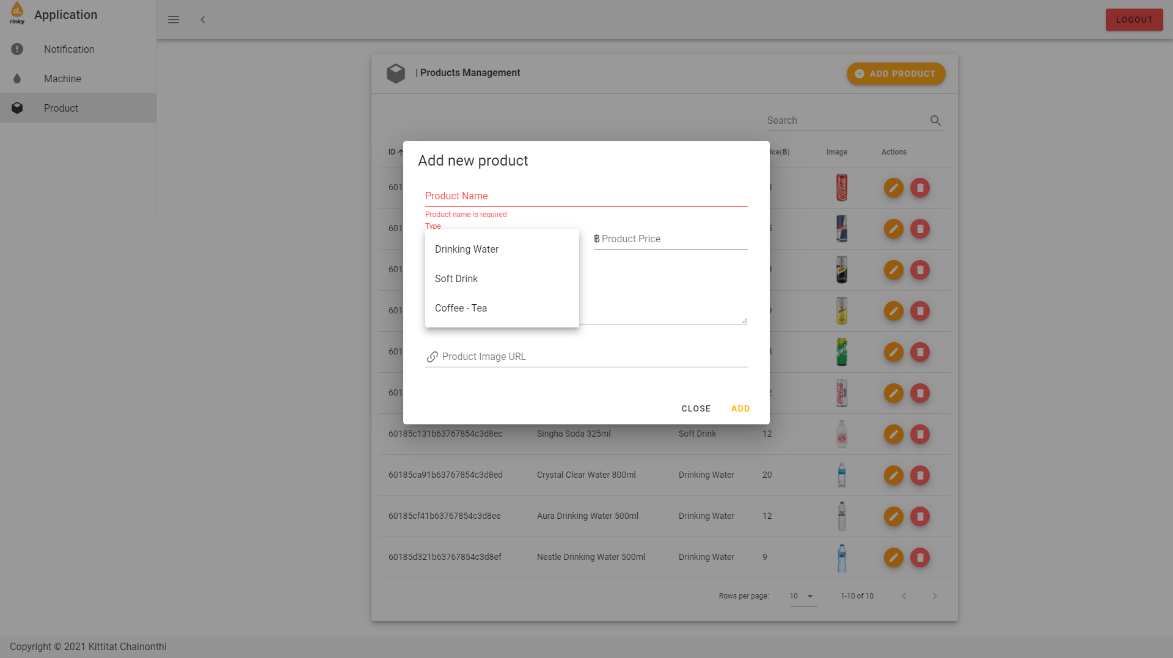
In case of ran out of item admin can fill up and add in admin system



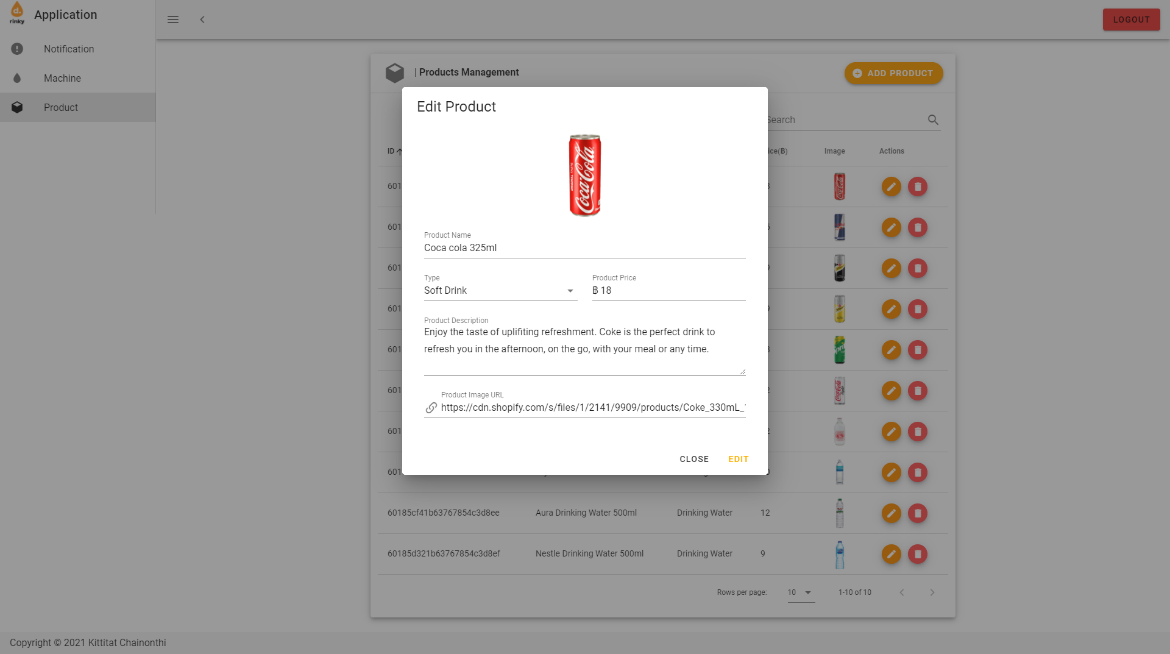
Notification Center Page this page will notify the item for all machine that amount less than 10 , you can go to machine management from this page. This design for the last condition **“When existing product quantity is less than 10, the vending machine will send any signals to the system admin.”**



Product management page you can create , update ,delete that product that you want to buy in vending machine



Add new product insert product info and image here.



Product Edit