Main Flow(Process of Sale)

1. Customer swipes a credit card and enters ZIP code
2. Card validation takes place.
3. Customer immerses the fuel dispenser in the tank.
4. Customer selects grade of the fuel
5. Pumping mechanism handles automatic cutoff i.e. where to stop when tank is full.
6. Once the cutoff signal is received from pumping mechanism, flow of fuel stops and signal is received by System
7. Customer removes the fuel dispenser
8. System then generates bill and prints the receipt

Card Validation:

1. Customer swipes the card, we use external interface for card validation/authorization.
2. Card Validation system provides with customer Details such as Name, Bank Name and Card Number (in an encrypted form).
3. System maintains these details in order to use in “Inventory System” to maintain log

Display quantity of fuel and calculate running total :

1. System updates the “Quantity of fuel” field on physical Display panel every 0.1 gallon depending on current fuel quantity received from pumping mechanism
2. System receives current rate of fuel for selected grade from “Basic Information” system updated by System Administrator
3. System calculates total running amount (cost) depending on quantity and current rate and displays in “Running Total” field on physical Display panel.
4. Pumping mechanism sends a signal when tank is full or done with pumping enough fuel.
5. System then sends currently calculated”Running total” to Tax Calculation.

Tax Calculation

1. System receives “Running Total” from Display system when pumping fuel is done.
2. System administrator provides percentage of tax(%) to “Basic Information” system which is available for Bill generation dynamically
3. System then calculates tax based on percentage of tax(%) and “Running Total”
4. System generates total amount by adding tax amount to running total.

Maintaining/Fetching Log and generating receipt :

1. System takes Customer Personal Details like Name, Card Number(encrypted form), Bank Name etc. from Card Validation System.
2. System receives Transaction Details for particular customer from “Tax Calculation ” System such as running total, percentage of tax and Total Amount with tax, etc.
3. Timestamp, Personal Details and Transaction Details are saved to “Inventory System” and printed out as a receipt
4. System Administrator can fetch log details from “Inventory System” to solve any security related issues in future. It is updated dynamically with every transaction.