

# Filling Station Information Management System

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## **Student details:**

Batch 2-Year 2 semester 2

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## **Client:**

## **Functional Requirements**

### **1. Sales Stock Management**

- a. Sales details management
  - i. Feed sales details (pump meter reading, today's sales, accumulative sales)
  - ii. Generate receipts
  - iii. View sales history
- b. Purchase order management
  - i. Placed Purchase order details(order number, how order was placed, product ordered, quantity, stock in relevant tank at time of order, invoice no)
  - ii. Received order details(invoice no, vehicle no)
- c. Tank level management(stock levels in tanks)
- d. Lubricants and Gas stock management

- e. Inventory reports
  - i. Shift wise meter reading
  - ii. Date wise meter reading
  - iii. Product wise sales for a given time period
  - iv. Sales trend reports (weekly, hourly)
  - v. Daily sales record summary
  - vi. Predict requirements for next month, quarter, year

## **2. General Accounts Management**

- a. Copy total sales values to accounts
- b. Copy total purchase values to accounts
- c. Miscellaneous expenses management
- d. Final account reports
  - i. Profit and loss account (daily, monthly)
  - ii. Balance Sheet

## **3. Human Resource Management**

- a. Leave management and employee information management
  - i. Apply leaves
  - ii. Approve/reject leaves
  - iii. Daily attendance (through fingerprint reader or login-logout terminal)
  - iv. Employee enrollment
  - v. Report
    - employee wise leave summaries (pending approval, rejected, no-pay, remaining)
    - Employee wise daily attendance reports

#### **4. Employee salary details management**

- i. Perform / accept Additions (Overtime, bonus) and deductions (no-pay)
- ii. Shift wise job/task scheduling and assignment
- iii. Employee category wise salary details
- iv. Issue / print salary slips
- v. Employee wise salary payment status-salary summery report
- vi. ETF,EPF

#### **5. Customer details management**

- a. Customer or vehicle data related to credit sales
- b. Credit sales remaining and overdue details
- c. Customer loyalty points management for promotions and cross selling
- d. Vehicle Service status management

#### **6. Administrative Functions**

The system should only be accessed through authorized login accounts. There is limited number of employees and anonymous users cannot read any data in the system. Initially user accounts need to be created by the administrators (These are created with generated passwords which users must change at their first login). In the business model, there are two major types of users. They are Managers and pump operators / workers. They engage with the system for different purposes. Pump operators feed meter readings, sales details etc. while managers are interested in viewing overall sales status, trends, tanks with critical levels, employee leave approving etc. Therefore there should be separate user roles for them.

- a. Creating, modifying, removing user accounts (**Insert, Update, Delete**)
- b. Creating, modifying, removing user roles (**Insert, Update, Delete**)
- c. Grant, modify, revoke privileges to functions on user roles (**Insert, Update, Delete**)

e.g. Pump operators are not allowed to view financial statements such as profit loss accounts.

- d. Review and search for user login history(**Insert, Delete**)

## 7. System Metadata Management and Recovery Functions

To start using the system initial metadata must be present in the database. These metadata also need to be inserted to the system. Once inserted, they may need modifications or deletion with the time.

- a. Product details management

Product (oils, lubricants etc.) details which is independent from stock levels

- i. Insert a new product (**Insert**) – once inserted, the product should be visible in required interfaces

- Product code [117], Product name [Hyrax Ceypetco Supra], Product specification [API SJCF], retail price of a unit (9,185.00)

- ii. Remove existing product (**Delete**)

- iii. Modify details of existing product (**Update**)

- b. Create, modify, remove backup schedule

- i. Create a Full backup schedule to run on particular time at a particular date. Schedule details need to be saved (**Insert**)

- ii. Modify Schedule details (**Delete**)

- iii. Remove backup schedules (**Update**)

- c. Help documents on workflows.

## **8. Message Alerts Management and Sign-off Requests**

- a. Messages sent to users or terminals should be saved in the database with their read/unread status. Once a user read a message its status is saved in the DB as read. **(Update)**
  - i. Alerts (system alerts and SMS) on tanks at critical levels
  - ii. Alerts (system alerts and SMS) on each products at critical stock levels
  - iii. Messages on Daily Sales Summary
- b. User should be able to read his/her message history and clean / delete messages that are not necessary. **(Delete)**
- c. Managers are capable to create and send messages for the users / terminals on special offer days, special reminders, emergency alerts. Once he created the message and sent, it should be saved or inserted to the database for others to receive. **(Insert)**
- d. Pump operators should be able to get sign-off/approval/override from managers for overdue credit sales or bulk product sales through the system. The details of the sales should be able to send through the system and the created requests need to be saved in the database. Usually workers will send these details to managers or executives to get approvals efficiently. Since they are saved in the system, it can be tracked very easily in future needs. **(Insert)**