

# Software Requirements Specification (SRS) Document

Delivery Cost & Time Optimization for Packaged Drinking Water  
Supply

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## Brief problem statement

Build a webapp/ android App for a SaaS platform for managing value chain profitably. Simplifying Subscription business by digitising deliveries. We have to suggest some sort of route optimization (if possible). One major part is the module responsible for calculation of bills.

## System requirements

System requirements include just a Regular PC with an editor to write code.

Technical requirements: MERN Stack (MongoDb , Express , React , Node)

## Users profile

Users of the platform include:

### 1. SW provider

Further divided into different categories

- Operational
- Commercial
- Customer care

### 2. SW Client / Owner

- Create a company profile with proper documents
- Create manager profiles

### 3. Manager / Admin

- Create Supervisor profiles

### 4. Supervisor

- Create vehicle profiles
- Create delivery team (driver, delivery boys) profiles
- Create a delivery route and list of delivery points every day
- Supervise the assigned deliveries
- Supervise the vehicle maintenance, fuel maintenance etc.

### 5. Delivery team (Driver, Delivery Boys)

- Deliver the stock

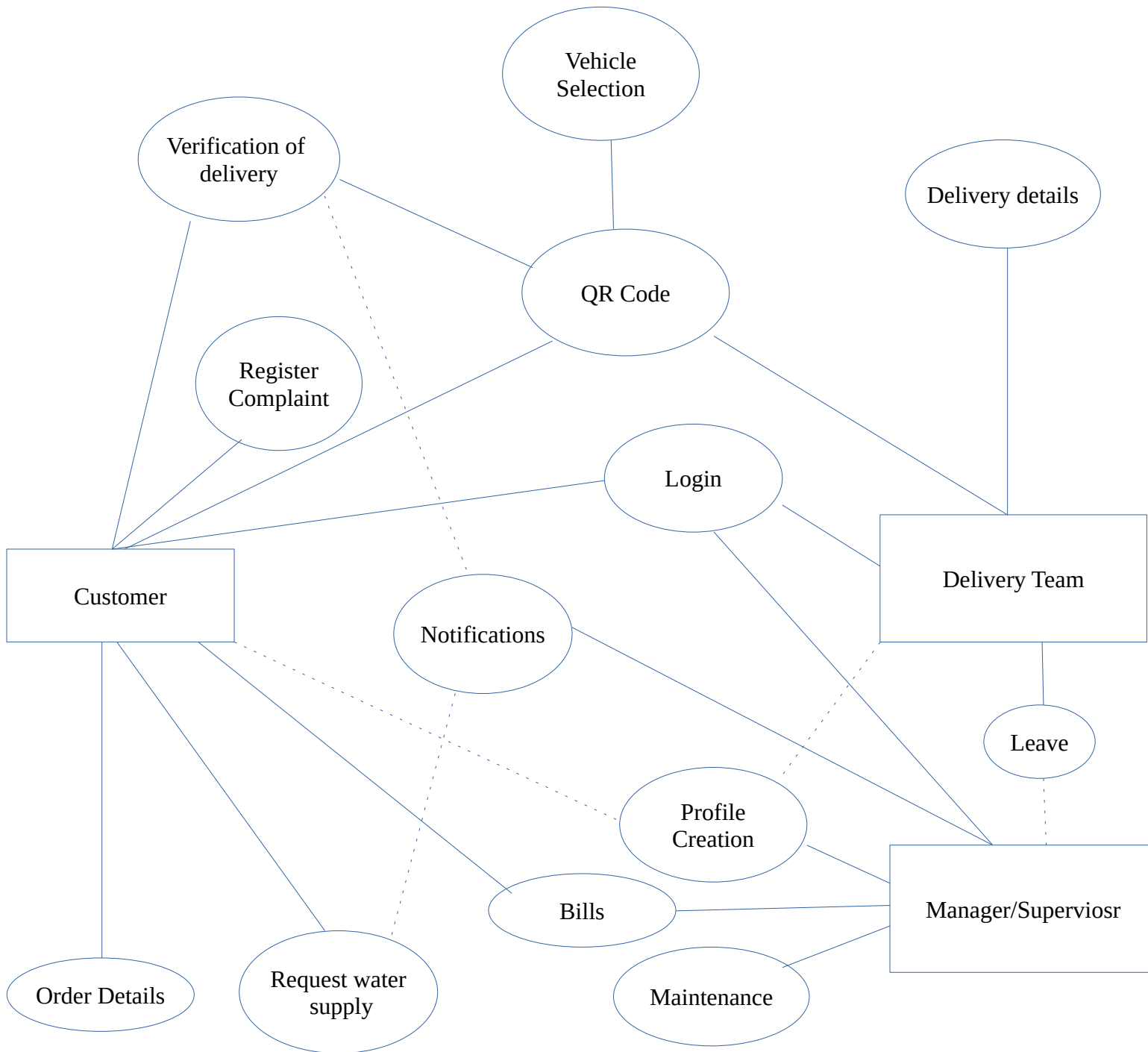
### 6. Customer

- Request water cans
- Check consumption and bills
- Raise complaints

## Feature requirements (described using use cases)

No .	User Case Name	Description	Release
1.	Profile Creation	Company profile creation → Manager profile → Supervisor Profile → (Delivery Team, Customer) Profiles.	
2.	Login	Each type of user should be able to login through the provided credentials.	
3.	Attendance	One's Attendance will be displayed, We can integrate it with bio-metric in future.	
4.	QR codes	QR codes will be generated for each of the vehicles which will be used further to generate regular trips and routes.	
5.	Trip Creation	When the QR code of a particular vehicle is scanned by the driver then both of them are bound to each other on that day with a Trip ID.	
6.	Trip – Delivery Boys	On scanning the QR code of a vehicle then the boy scanning will be bound to that particular vehicle on that day.	
7.	QR code (Customer)	Each of the customers will be given a QR code which will be scanned by the delivery team on delivery in order to fetch the details.	
8.	Modify routes	The Supervisor will be able to enter and delete a node from the daily routes.	
9.	On - delivery details	The delivery man will enter the required units of full cans and units of empty and damaged cans that will be received in return at the delivery point.	
10.	Customer approval	The customer will approve the details entered by the delivery team.	
11.	Bill generation	Bill has to be generated at regular intervals (monthly) for each customer.	
12.	Notifications	The customer will get a notification after the successful delivery of cans. The supervisor will get a notification from the delivery man if all full cans are delivered.	
13.	Request Water Cans	The customer can request water cans not originally scheduled on day in question.	
14.	Register Complaint	Customer can register a complaint if he/she faces any issue.	
15.	Vehicle Registration	Supervisor will enter the details of a vehicle then a QR code will be generated with successful registration of that vehicle.	

## Use case diagram



# Use case description

## 1. UC-01

<b>Use Case Number:</b>	UC-01
<b>Use Case Name:</b>	Profile Creation
<b>Overview:</b>	First the Company's account needs to be created which in turn will create the manager accounts. Manager will then create supervisor accounts. Supervisor is responsible for creation of delivery team's and customer accounts.
<b>Actors:</b>	Owner, Manager, Supervisor
<b>Pre condition:</b>	None
<b>Flow:</b>	Main Flow: 1. Successful account creation and storage of details in the database.
	Alternate Flows: 1. If failed on some validations then display error messages.
<b>Post Condition:</b>	Details secured successfully and the user should be able to login through these.

## 2. UC-02

<b>Use Case Number:</b>	UC-02
<b>Use Case Name:</b>	Login
<b>Overview:</b>	Each type of user( if registered already) should be able to login through the provided credentials(in case of manager, supervisor, delivery team, customer) should be able to login. For Owner he should be able to login through the his credentials.
<b>Actors:</b>	All Users
<b>Pre condition:</b>	Profile should be created before hand (successfully).
<b>Flow:</b>	Main Flow: 1. User enters the credentials and press login. 2. Credentials are verified against our database.

	3. Successful login if credentials matched.
	Alternate Flows: 1. Display error messages if credentials do not match or the user is not found.
<b>Post Condition:</b>	The User is now on the landing page of the webApp.

### 3. UC-03

<b>Use Case Number:</b>	UC-03
<b>Use Case Name:</b>	Attendance
<b>Overview:</b>	Each user will be able to view the daily attendance of him/her . We are currently just viewing it from the database. Populating the attendance's database should be handled by the bio-metric department.
<b>Actors:</b>	Supervisor, Delivery Team
<b>Pre condition:</b>	The Concerned User should be registered
<b>Flow:</b>	Main Flow: 1. The person arrives and punches bio-metric and the database gets updated. 2. Our App/WebApp will display the details
	Alternate Flows: None
<b>Post Condition:</b>	None

### 4. UC-04

<b>Use Case Number:</b>	UC-04
<b>Use Case Name:</b>	Vehicle QR code Generation
<b>Overview:</b>	Each of the vehicles when generated by the supervisor will be assigned a particular QR code, which will be used by delivery team on a daily basis to opt that particular vehicle on a particular day for a trip/route,
<b>Actors:</b>	Supervisor

<b>Pre condition:</b>	none
<b>Flow:</b>	Main Flow: 1. Supervisor creates a vehicle and adds its documents. 2. QR code is generated for it.
	Alternate Flows: Error will be displayed if any of the documents is out of date.
<b>Post Condition:</b>	A new vehicle is registered with the company.

## 5. UC-05

<b>Use Case Number:</b>	UC-05
<b>Use Case Name:</b>	Trip Creation
<b>Overview:</b>	A driver (registered) will scan the QR code of a vehicle then a trip ID will be generated for this pair.
<b>Actors:</b>	Driver and Vehicle
<b>Pre condition:</b>	Driver and vehicle should be registered with the company.
<b>Flow:</b>	Main Flow: 1. Driver scans the QR code. 2. Trip ID is generated.
	Alternate Flows: 1. Error if vehicle/ driver is not registered.
<b>Post Condition:</b>	Driver is assigned to a trip ID.

## 6. UC-06

<b>Use Case Number:</b>	UC-06
<b>Use Case Name:</b>	Trip – Delivery Boys
<b>Overview:</b>	The delivery boys will come and scan the QR codes of the vehicles and then will get coupled to that vehicle for that particular day. Moreover

	after this one of the routes designed by the supervisor will be allotted to this combo of vehicle driver and boy.
<b>Actors:</b>	Delivery Boy, Vehicle, Driver, Supervisor
<b>Pre condition:</b>	Route should be available before hand, Vehicle should be registered already.
<b>Flow:</b>	Main Flow: 1. Delivery boy will scan the QR code. 2. Delivery boy will be coupled and a route will be assigned to that trip.
	Alternate Flows: Vehicle should be active, Delivery boy should be registered with the vehicle.
<b>Post Condition:</b>	A trip will be generated with a route.

## 7. UC-07

<b>Use Case Number:</b>	UC-07
<b>Use Case Name:</b>	QR code - (Customer)
<b>Overview:</b>	Each of the customers when registered will be assigned a QR code which will be further used by the delivery team in order to complete deliveries and fetch details of the customers.
<b>Actors:</b>	Supervisor
<b>Pre condition:</b>	Supervisor should be registered with the company.
<b>Flow:</b>	Main Flow: 1. Supervisor will enter the details of the customer. 2. Customer gets registered.
	Alternate Flows: 1. If any of the details(required) are missing then display error messages.
<b>Post Condition:</b>	The customer will be provided with a QR code and login credentials.

## 8. UC-08

<b>Use Case Number:</b>	UC-08
<b>Use Case Name:</b>	Modify Routes
<b>Overview:</b>	The Supervisor will be able to add a new order/new location in an ongoing trip with a route. He will also be able to cancel a delivery.
<b>Actors:</b>	Supervisor
<b>Pre condition:</b>	Supervisor should be registered and the concerned route/trip should exist. Moreover the customer being added should be registered with the company.
<b>Flow:</b>	<p>Main Flow:</p> <ol style="list-style-type: none"> <li>1. Supervisor selects the route to edit.</li> <li>2. Add new node's info (location, quantity of cans to be delivered).</li> </ol>
	<p>Alternate Flows:</p> <ol style="list-style-type: none"> <li>1. He can, instead of adding , remove a per-existing node on their pathway.</li> <li>2. Error will be displayed if the customer does not exist.</li> </ol>
<b>Post Condition:</b>	Route will be modified.

## 9. UC-09

<b>Use Case Number:</b>	UC-09
<b>Use Case Name:</b>	Delivery Details Entry
<b>Overview:</b>	Delivery man will enter the required units of full cans and empty/damaged cans that are received in return
<b>Actors:</b>	Delivery Team
<b>Pre condition:</b>	Delivery Team should have scanned the QR code of the customer
<b>Flow:</b>	<p>Main Flow:</p> <ol style="list-style-type: none"> <li>1. The delivery man enters details of can exchange in assigned fields</li> </ol>
	<p>Alternate Flows:</p> <p>None</p>
<b>Post Condition:</b>	Details sent to customer for approval



## 10. UC-10

<b>Use Case Number:</b>	UC-10
<b>Use Case Name:</b>	Customer Approval
<b>Overview:</b>	Customer approved details entered by the delivery team
<b>Actors:</b>	Customer
<b>Pre condition:</b>	Delivery Team must already have submitted details of transaction
<b>Flow:</b>	Main Flow:  1. The customer will review the details which will be sent to his/her mobile  2. The customer will accept/decline the transaction  3. If the customer accepts, the transaction concludes
	Alternate Flows:  1. If not, the delivery man will have to re-enter the correct details
<b>Post Condition:</b>	Transaction recorded in database

## 11. UC-11

<b>Use Case Number:</b>	UC-11
<b>Use Case Name:</b>	Bill Generation
<b>Overview:</b>	Bill has to be generated at regular intervals, likely monthly for each customer
<b>Actors:</b>	Manager, Customer
<b>Pre condition:</b>	Enter the condition that must be true before the main flow is executed.
<b>Flow:</b>	Main Flow:  1. Manager decides date when bill is to be generated for each customer  2. Bill is generated on decided date
	Alternate Flows: None
<b>Post</b>	Bill is sent / available for viewing by manager and concerned customer

<b>Condition:</b>	
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## 12. UC-12

<b>Use Case Number:</b>	UC-12
<b>Use Case Name:</b>	Notifications
<b>Overview:</b>	The customer will get a notification after successful delivery of cans. The supervisor will get a notification from the delivery team if all full cans are delivered
<b>Actors:</b>	Customer Supervisor
<b>Pre condition:</b>	The delivery takes place successfully
<b>Flow:</b>	Main Flow: <ol style="list-style-type: none"> <li>1. The customer receives a log of the delivery details</li> <li>2. The supervisor receives a notification of the same</li> </ol>
	Alternate Flows:None
<b>Post Condition:</b>	None

## 13. UC-13

<b>Use Case Number:</b>	UC-13
<b>Use Case Name:</b>	Request Water Cans
<b>Overview:</b>	The customer can order / request water supply according to his requirement in case of emergencies
<b>Actors:</b>	Customer
<b>Pre condition:</b>	None
<b>Flow:</b>	Main (success) Flow: Customer requests emergency delivery
	Alternate Flows: INone
<b>Post Condition:</b>	Request must be brought to the supervisor

## 14. UC-14

<b>Use Case Number:</b>	UC-14
<b>Use Case Name:</b>	Registering Complaint
<b>Overview:</b>	The customer can send a complaint regarding any issue that he/she is facing
<b>Actors:</b>	Customer
<b>Pre condition:</b>	None
<b>Flow:</b>	Main Flow: 1. Customer registers a complaint.
	Alternate Flows: None
<b>Post Condition:</b>	The complaint is available for viewing by either the customer or the manager(tbd) and will be discussed with the customer at some point

## 15. UC-15

<b>Use Case Number:</b>	UC-15
<b>Use Case Name:</b>	Vehicle Registration
<b>Overview:</b>	Supervisor will register a vehicle along with all its details. Subsequently the vehicle will be assigned a QR code.
<b>Actors:</b>	Supervisor
<b>Pre condition:</b>	Supervisor should be registered with the company.
<b>Flow:</b>	Main Flow: 1. Supervisor will add details. 2. Vehicle is registered.
	Alternate Flows: 1.) Error is any of the docs is missing.
<b>Post Condition:</b>	Vehicle is successfully registered.