User Stories, Use Cases and Technical Tasks

1) User Story: As a Dispatcher, I want to assign deliveries to drivers online and monitor their progress throughout the day so that I can coordinate a streamlined and reliable delivery operation.
   1. Use Case Title: Dispatcher assigning delivery drivers and monitoring progress
   2. Actors: Dispatcher
   3. Precondition: Delivery data is entered into the system. Dispatcher has valid credentials to login and access the system.
   4. Steps:
       4.1. Dispatcher logs into the system
       4.2. Dispatcher views and selects the shipment.
       4.3. Dispatcher assigns an available driver for delivery.
       4.4. System links the driver to shipment and updates the driver's route.
       4.5. System generates and assigns a tracking ID for each shipment.
       4.6. System trigger notification to customer with updated shipment details.
       4.7. Dispatcher monitors real-time delivery progress and the driver's GPS location on a map.
   5. Postcondition: Dispatcher can assign deliveries to drivers and monitor their progress in real-time.
   6. Technical Tasks:
       6.1. Build dispatcher login module.
       6.2. Develop backend for driver assignment and shipment tracking.
       6.3. Create UI for assigning shipments and monitoring progress.
       6.4. Integrate real-time GPS tracking for drivers.
       6.5. Send notifications to customers upon dispatch assignment.
       6.6. Test the dispatcher functionality and tracking updates.
2) User Story: As a Driver, I want to view updated routes in real-time so that I can ensure efficient and timely delivery without delays.
   1. Use Case Title: Driver route optimization
   2. Actors: Driver
   3. Precondition: Driver has valid credentials to login and access delivery schedule
   4. Steps:
       4.1. Driver logs into the mobile app.
       4.2. Driver selects assigned deliveries and route.
       4.3. System monitors real-time shipment updates, drivers location, traffic congestions etc. and dynamically optimises the delivery route.
       4.4. Driver marks deliveries as completed or reports issues via the app.
       4.5. System update delivery status and triggering notifications to customers as email or text.
   5. Postcondition: Driver receives updated route details on their mobile app in real-time.
   6. Technical Tasks:
       6.1. Build driver login module.
       6.2. Create a mobile-friendly app UI for assigned deliveries and routes.
       6.3. Integrate GPS tracking and traffic data APIs.
       6.4. Implement real-time route optimization algorithm.
       6.5. Enable status updates (Like "Delivery completed") on the app.

6.6. Trigger notifications to customers upon delivery completion.

6.7. Test the route optimization and delivery status updates.

3) User Story: As a Customer, I want to check the status of shipment online so that I don't have to call the logistics company for updates.

    1. Use Case Title: Customer Shipment Tracking

    2. Actors: Customer

    3. Precondition: Customer has valid credentials to login and access the portal.

    4. Steps:

        4.1. Customer logs into the portal

        4.2. Customer enters the tracking ID

        4.3. System fetches and displays real-time shipment status.

    5. Postcondition: Customer can view the real-time shipment status.

    6. Technical Tasks:

        6.1. Develop customer login module.

        6.2. Build backend API for real-time shipment tracking.

        6.3. Integrate shipment tracking with the frontend UI.

        6.4. Create a user interface for tracking status.

        6.5. Test the shipment tracking feature.

4) User Story: As a Customer, I want to receive automated notifications about the package delivery status so that I do not have to request for updates.

    1. Use Case Title: Customer receiving notifications

    2. Actors: Customer

    3. Precondition: Customer providing e-mail/contact number for notifications.

    4. Steps:

        4.1. System monitors delivery progress continuously and send delivery milestones (like "Order on the way" or "Order Delivered") to the customer as email/text.

    5. Postcondition: Customer can receive automated notifications about delivery.

    6. Technical Tasks:

        6.1. Set up a notification system (email and / or SMS).

        6.2. Integrate notifications with shipment updates.

        6.3. Test notification delivery.

5) User Story: As a Customer, I want to reschedule deliveries or add special instructions online so that I can manage unexpected circumstances and experience a smooth delivery process.

    1. Use Case Title: Customer rescheduling deliveries and/or adding special instructions (Like "Deliver Next Day" , or "Leave package at the back door")

    2. Actors: Customer

    3. Precondition: Customer has valid credentials to login and access portal

    4. Steps:

        4.1. Customer logs in to the portal.

        4.2. Customer selects the order.

        4.3. Customer updates delivery slot or adds special remarks.

        4.4. System validates and saves the changes made by the customer.

        4.5. System updates and optimizes the delivery routes if necessary.

    5. Postcondition: System can reflect the updates made by the customer related to delivery rescheduling or special instructions.

    6. Technical Tasks:

        6.1. Create a UI for rescheduling deliveries or adding instructions.

        6.2. Build backend logic to handle delivery rescheduling requests.

6.3.   Integrate with route optimization and notification systems.

6.4.   Update the dispatcher and driver systems with new instructions.

6.5.   Test rescheduling and special instruction functionality.

6) User Story: As a Manager, I want to view reports so that I can improve efficiency of the delivery process.

1.   Use Case Title: Manager viewing reports

2.   Actors: Manager

3.   Precondition: Manager has valid credentials to login and access the system

4.   Steps:

     4.1.   Manager logs into the system.

     4.2.   Manager selects a report on available delivery metrics like delivery times, delays, fuel usage.

     4.3.   System processes, generates and displays the report.

5.   Postcondition: Manager can view reports on available delivery metrics.

6.   Technical Tasks:

     6.1.   Develop manager login module.

     6.2.   Create backend logic for generating reports.

     6.3.   Build UI for report generation and visualization.

     6.4.   Test report accuracy and presentation.

Product Backlog

ID	User Story	Story Points	Priority
U01	As a Dispatcher, I want to assign deliveries to drivers online and monitor their progress throughout the day so that I can coordinate a streamlined and reliable delivery operation.	2	1 (High)
U02	As a Driver, I want to view updated routes in real-time so that I can ensure efficient and timely delivery without delays.	3	2 (High)
U03	As a Customer, I want to check the status of shipment online so that I don't have to call the logistics company for updates.	2	3 (High)
U04	As a Customer, I want to receive automated notifications about the package delivery status so that I do not have to refresh status for updates.	1	4 (Medium)
U05	As a Customer, I want to reschedule deliveries or add special instructions	3	5 (Medium)

	online so that I can manage unexpected circumstances and experience a smooth delivery process.		
U06	As a Manager, I want to view reports so that I can improve efficiency of the delivery process.	2	6 (Medium)
U07	As a Manager, I want the system to generate invoices or integrate with QuickBooks so that financial processes are streamlined.	3	7 (Low)
U08	As a Manager, I want the system to store delivery logs for at least six months so that we can comply with local transportation regulations.	1	8 (Low)

Sprint Backlog

Sprint 1 (2 Weeks)

User Story	Tasks	Estimation (Hours)
U01-As a Dispatcher, I want to assign deliveries to drivers online and monitor their progress throughout the day so that I can coordinate a streamlined and reliable delivery operation.	Build dispatcher login module.	8
	Develop backend for driver assignment.	11
	Create UI for assigning shipments.	9
	Integrate real-time GPS tracking for drivers.	15
	Test the dispatcher functionality.	8
U02-As a Driver, I want to view updated routes in real-time so that I can ensure efficient and timely delivery without delays.	Build driver login module.	8
	Create a mobile-friendly app UI for routes.	12
	Implement real-time route optimization algorithm.	11
	Test the route optimization.	8

Sprint 2 (2 weeks)

User Story	Tasks	Estimation (Hours)
U03-As a Customer, I want to check the status of shipment online so that I don't have to call the logistics company for updates.	Develop customer login module.	14
	Build backend API for real-time shipment tracking.	20
	Integrate shipment tracking with the frontend UI.	8
	Create a user interface for tracking status.	14
	Test the shipment tracking feature.	8
U04-As a Customer, I want to receive automated notifications about the package delivery status so that I do not have to refresh status for updates.	Set up notification system (email and / or SMS).	10
	Integrate notifications with shipment updates.	14
	Test notification delivery.	8

Sprint 3 (2 Weeks)

User Story	Tasks	Estimation (Hours)
U05-As a Customer, I want to reschedule deliveries or add special instructions online so that I can manage unexpected circumstances and experience a smooth delivery process.	Create a UI for rescheduling deliveries.	14
	Build backend logic to handle delivery rescheduling requests.	18
	Update the dispatcher and driver systems with new instructions.	10
	Test rescheduling functionality.	8
U06-As a Manager, I want to view reports so that I can improve efficiency of the delivery process.	Develop manager login module.	12
	Create backend logic for generating reports.	14
	Build UI for report visualization.	12
	Test reporting feature	8

Challenges faced while translating client's requirements into Scrum artifacts.

Scrum requires the client requirements to be understood accurately and fully in order to define user stories. Investing in good user stories is essential to eliminate problems and effective planning. User stories have to be converted into technical tasks which require experience in software development. Estimation of the effort or the hours required to complete the tasks upfront is also a challenge without similar project experience. Prioritizing the tasks requires efficient communication with the product owner while taking consideration into the dependencies of building those parts. Planning the sprints is critical to ensure effective use of time, resources and achieve sprint goals and deliver shippable increments.