Port Management System
User Roles & Responsibilities

1. Port Director: Top decision-maker of the port.
Responsibilities: Reviews high-level reports (ship traffic, cargo flow, revenue). Approves strategic policies, expansions, and partnerships. Ensures compliance with government and international trade bodies.

2. Deputy Port Director (Operations Head) Role: Second-in-command, oversees daily port operations.
Responsibilities: Coordinates all operational departments. Monitors berth usage, workforce deployment, and customs clearance. Escalates issues to Port Director if required. ⚙️
Operational Roles (Department Managers)

3. Harbor Master Role: Manages ships and berth allocation.
Responsibilities: Approves ship docking schedules. Allocates berths based on ship size and availability. Tracks arrivals, departures, and waiting times.

4. Customs & Compliance Officer Role: Manages cargo clearance and legal compliance.
Responsibilities: Inspects containers for restricted goods. Updates clearance status in PMS. Ensures duties and taxes are collected.

5. Cargo & Warehouse Manager Role: Oversees storage and cargo handling.
Responsibilities: Assigns containers to storage locations. Tracks warehouse occupancy. Prevents misplacement or loss of cargo.

6. Logistics & Transport Coordinator Role: Handles inland cargo transportation.
Responsibilities: Assigns containers to trucks, trains, or river transport. Tracks delivery schedules and delays. Ensures smooth handover to freight forwarders.

7. Workforce & Safety Manager Role: Manages dock workers and safety compliance.
Responsibilities: Prepares worker shift schedules. Assigns tasks (loading/unloading, crane operations). Tracks safety incidents, overtime, and welfare.

8. Finance & Billing Officer Role: Handles financial operations.
Responsibilities: Generates invoices for berth fees, customs, and storage. Tracks revenue, pending payments, and overdue bills. Provides financial reports to Director and Deputy Director.

9. System Admin (IT Department) Role: Maintains and secures PMS.
Responsibilities: Creates and manages user accounts. Assigns access permissions. Handles backups, database performance, and security.

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10. Shipping Companies (Agents) Role: External users booking berths for vessels. Responsibilities: Submit ship arrival requests and cargo manifests. Receive berth allocation updates. Access invoices for port service charges.

11. Exporter (Outbound Client) Role: Businesses sending goods abroad. Responsibilities: Track container status before export. Monitor customs clearance progress. Check expected departure times.

12. Importer (Inbound Client) Role: Businesses receiving goods. Responsibilities: Track arrival of shipments. Check customs clearance updates. Monitor container storage and delivery schedules.

13. Suppliers & Equipment Vendors Role: Provide cranes, forklifts, fuel, repair services, etc. Responsibilities: Respond to port supply requests. Deliver equipment or resources. Submit invoices and track payment status.

Basic End-to-End WorkFlow

→ Shipping Companies (book berth & submit request)
→ Harbor Master (allocate berth, approve docking)
→ Ship Arrival (vessel docks)
→ Customs & Compliance Officer (inspect cargo, request documents, clear for duty)
↔ Importer / Exporter (provide docs, track clearance)
→ Cargo & Warehouse Manager (assign storage, track container placement)
↔ Importer / Exporter (monitor container location & status)
→ Storage (hold cargo securely)
→ Logistics & Transport Coordinator (assign trucks/trains, schedule movement)
↔ Importer / Exporter (receive delivery updates / confirm pickup)
→ Workforce & Safety Manager (supports Harbor Master, Cargo Manager, Logistics with manpower & safety compliance)
→ Suppliers & Vendors (provide cranes, fuel, forklifts, repairs)
→ Finance & Billing Officer (issues invoices, receives payment confirmation, reports revenue)
→ Deputy Port Director (coordinates departments, resolves escalations, reports status)
→ Port Director (reviews reports, approves policies, ensures compliance).

Meanwhile:
System Admin (parallel role, ensures PMS accounts, security, performance for all users).

Basic Interaction Map

Shipping Companies ↔ Harbor Master
Harbor Master → Ship Arrival
Ship Arrival → Customs Officer
Customs Officer ↔ Importers / Exporters
Customs Officer → Cargo & Warehouse Manager
Cargo & Warehouse Manager ↔ Importers / Exporters
Cargo Manager → Storage
Storage → Logistics & Transport Coordinator
Logistics Coordinator ↔ Importers / Exporters
Workforce Manager ↔ Harbor Master / Cargo Manager / Logistics Coordinator
Finance Officer ↔ Shipping Companies / Importers / Exporters / Vendors
Finance Officer → Deputy Director → Port Director
Suppliers & Vendors ↔ Workforce Manager / Logistics Coordinator / Finance Officer
System Admin ↔ All Users

Deputy Port Directors ↔ Harbor Master / Customs Officer / Cargo Manager / Logistics Coordinator / Finance Officer / Workforce Manager/Port Director