Project Title: Digital Twin for Port Operations Optimization

Project Overview:
The Digital Twin project creates a virtual replica of PSA's port operations to simulate, predict, and optimize real-world port processes. By using real-time data, the digital twin models various port activities, including container handling, equipment usage, and logistics flow. This allows PSA to test different scenarios, identify inefficiencies, and experiment with new strategies to improve operations before implementing changes in the actual port.

Key Features:

- **Real-Time Simulation: Create a real-time digital twin of the port to monitor and simulate operations.**

- **Scenario Testing: Test different strategies for container management, resource allocation, and scheduling without disrupting real-world operations.**

- **Optimization Insights: Identify bottlenecks, underutilized resources, and opportunities for cost savings and improved efficiency.**

- **Predictive Maintenance: Predict equipment failures and maintenance needs, reducing downtime and ensuring smooth operations.**

Project Goals:

- **Optimize port operations by identifying inefficiencies and testing new strategies in a risk-free digital environment.**

- **Improve resource utilization, reduce operational costs, and increase overall efficiency.**

- **Enhance predictive maintenance and reduce downtime.**