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Project Proposal

Amazon is the world's largest online retailer, headquartered in Seattle, Washington. Amazon provides a wide range of products and services to millions of customers worldwide. They have more than 1.5 million employees and their annual revenues exceeding $638 billion in 2024. As a result, Amazon maintains a complex and data-driven e-commerce platform. To support continued growth and operational excellence, the company relies heavily on robust information systems for inventory management, customer transactions, and global logistics.

The proposed database will support Amazon’s core operations by managing critical data related to Customers, Products, Orders, Payments, Shipments, Employees, and Third-Party Sellers. Customers are registered with detailed contact information and may hold Prime memberships, which influence purchasing behavior and shipping preferences. Orders are linked to individual customers and include order dates, shipping addresses, and total amounts. The preferred payment method is recorded at the time of order placement, and detailed payment transactions are captured separately once the payment is processed. Products span high-demand categories such as consumer electronics, beauty and personal care, and home improvement supplies, each described by product name, category, price, and stock quantity.

The database will also contain information on third-party sellers who list their products through Amazon’s marketplace. Each seller is identified by a unique seller ID and is described by their business name, contact email, phone number, business address, registration date, and customer rating. Additionally, the database records whether a seller participates in the Fulfillment by Amazon (FBA) program. Third-party sellers are associated with the products they offer on the platform, and their sales performance is tracked to ensure compliance with Amazon’s quality and service standards.

Amazon employs a large and diverse workforce to manage its complex operations. Each employee is identified by an Employee ID and has associated information such as Name, Phone Number, and Date of Hire. Employees are assigned to specialized roles based on operational needs. Warehouse staff manage inventory and prepare shipments across fulfillment centers, ensuring products are ready for delivery. Delivery drivers handle last-mile deliveries, ensuring orders reach customers on time and in good condition. Customer service agents provide support through various service channels, assisting customers with inquiries, returns, and issue resolutions. Each role requires unique skills and responsibilities, contributing to Amazon’s highly efficient and customer-focused business operations.

Payments are processed through multiple methods, including credit cards, Amazon Pay, and third-party processors. Shipments are tracked with detailed carrier information, shipping dates, and tracking numbers, ensuring timely deliveries and customer satisfaction.

By implementing this system, Amazon will improve inventory management, optimize workforce allocation, and enhance decision-making through advanced operational analysis. The database supports detailed insights into sales trends, employee productivity, and logistics performance, further sustaining Amazon’s leadership in the global e-commerce market.