**TechConnect Pro Network Architecture Design**

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**Github URL: https://github.com/gmogilicharla/Project**

**SQL environment (Windows)**

**TechConnect Pro Network Architecture Design**

**Task 1:**

**List of entities and their descriptions**

1. Products
   * Product ID (Numeric)
   * Product Name (Text)
   * Category (Text)
   * Price (Numeric)
   * Description (Text)

**Description:** The "Products" entity represents the various electronic items, laptop accessories, and gadgets sold by TechConnect Pro. It includes attributes such as Product ID to uniquely identify each product, Product Name to specify the name of the product, Category to categorize products (e.g., electronics, accessories), Price for the product's cost, and Description to provide additional details about the product.

1. Suppliers
   * Supplier ID (Numeric)
   * Supplier Name (Text)
   * Location (Text)
   * Contact Information (Text)
   * Products Supplied (Text)

**Description:** The "Suppliers" entity represents the companies from which TechConnect Pro sources raw materials like electronic components, plastic casings, and batteries. It includes attributes such as Supplier ID to uniquely identify each supplier, Supplier Name to specify the name of the supplier, Location to indicate where the supplier is based, Contact Information for supplier contacts, and Products Supplied to list the types of raw materials provided by the supplier.

1. Employees
   * Employee ID (Numeric)
   * Employee Name (Text)
   * Role (Text)
   * Location (Text)
   * Contact Information (Text)

**Description:** The "Employees" entity represents the workforce of TechConnect Pro, including product engineers, sales and marketing specialists, customer support personnel, and logistics professionals. It includes attributes like Employee ID to uniquely identify each employee, Employee Name for their name, Role to define their job within the company, Location to specify their office location, and Contact Information for reaching out to employees.

1. Locations
   * Location ID (Numeric)
   * Location Name (Text)
   * Address (Text)
   * City (Text)
   * State (Text)

**Description:** The "Locations" entity represents the different offices and distribution centers of TechConnect Pro, such as San Francisco, New York City, Los Angeles, and Seattle. It includes attributes like Location ID for unique identification, Location Name to specify the name of the office or distribution center, Address for its physical location, City, and State to provide location details.

1. Network Devices
   * Device ID (Numeric)
   * Device Name (Text)
   * Type (Text)
   * Location (Text)
   * IP Address (Text)

**Description:** The "Network Devices" entity represents the various devices within TechConnect Pro's network architecture, including web servers, firewalls, application servers, and more. It includes attributes like Device ID to uniquely identify each network device, Device Name for its name, Type to specify the type of device (e.g., Web Server, Firewall), Location to indicate where it is situated in the network, and IP Address for device-specific network addressing.

**Task 2:**

1. Products Table

|  |  |
| --- | --- |
| **Column Name** | **Data Type** |
| ProductID | INT |
| ProductName | NVARCHAR(MAX) |
| Category | NVARCHAR(255) |
| Price | DECIMAL(10, 2) |
| Description | NVARCHAR(MAX) |

1. Suppliers Table

|  |  |
| --- | --- |
| **Column Name** | **Data Type** |
| SupplierID | INT |
| SupplierName | NVARCHAR(MAX) |
| Location | NVARCHAR(255) |
| ContactInformation | NVARCHAR(MAX) |
| ProductsSupplied | NVARCHAR(MAX) |

1. Employees Table

|  |  |
| --- | --- |
| **Column Name** | **Data Type** |
| EmployeeID | INT |
| EmployeeName | NVARCHAR(MAX) |
| Role | NVARCHAR(255) |
| Location | NVARCHAR(255) |
| ContactInformation | NVARCHAR(MAX) |

1. Locations Table

|  |  |
| --- | --- |
| **Column Name** | **Data Type** |
| LocationID | INT |
| LocationName | NVARCHAR(MAX) |
| Address | NVARCHAR(MAX) |
| City | NVARCHAR(255) |
| State | NVARCHAR(255) |

1. Network Devices Table

|  |  |
| --- | --- |
| **Column Name** | **Data Type** |
| DeviceID | INT |
| DeviceName | NVARCHAR(MAX) |
| Type | NVARCHAR(255) |
| Location | NVARCHAR(255) |
| IPAddress | NVARCHAR(15) |