IT Inventory Tracker
Project Deliverable
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Introduction

This project focuses on the **IT Inventory Tracker**. Managing devices and software licenses is essential for organizations. Effective management keeps tech resources organized and helps with productivity and compliance.

Current Problems: Data Management Issues:

1. **Duplicate Data**: Multiple entries for the same device or user create confusion.
2. **License Tracking Problems**: Manual management of software licenses leads to legal issues and unexpected costs.
3. **Poor Asset Tracking**: Organizations need a solid tracking system to avoid losing equipment and wasting resources.

These issues create significant challenges. For example, losing a device can result in unnecessary purchases.

Development Motivation

The main goal of this database is to boost data integrity and reduce redundancy. By using a centralized database, we can accurately keep track of users, devices, and software licenses. This approach helps address issues with duplicate entries and simplifies overall management.

Potential Benefits: The database provides several benefits:

● **Better Data Accuracy**: A single source minimizes errors.
● **Simplified License Management**: Easier tracking avoids compliance risks.
● **Improved Device Tracking**: A robust system prevents device loss and reduces unnecessary purchases.

Potential Users: Potential users of this database include:

● **IT Staff**: They can manage devices and licenses more easily.
● **Asset Managers**: Quick access to device information helps with resource management.
● **General Employees**: Better access to device and software information enhances collaboration.

This database can help organizations eliminate the frustrations of poor data management. A clear structure leads to more efficient operations.

Database Rules

1. **Device Assignments**
   a. Each user can have multiple devices, but each device belongs to only one user at a time. Administrators manage these assignments.
   b. Each device must have a unique asset tag.
2. **Software Licenses**
   a. Each software license is linked to a specific device, and a device can have multiple licenses.
   b. Administrators keep track of license renewals.
3. **Device Status**
   a. Each device has a status (active, inactive, or in maintenance) that can change based on maintenance records and service requests.
4. **Maintenance Records**
   a. Each device can have multiple maintenance records, including a maintenance ID, date, and description of work done.
5. **Vendors**
   a. Each device is linked to a vendor, which can supply multiple devices.
   b. Vendor information includes a unique vendor ID and name.
6. **Service Requests**
   a. Each device can have multiple service requests. A service request is linked to a device and a user and records the status of the request.
7. **Warranties**
   a. Each device can have one warranty, including its start and end dates.
8. **Locations**
   a. Each device is assigned to a specific location, which can have multiple devices.
9. Device Models
   a. Each device is linked to a specific device model, which is associated with a manufacturer.
10. **Device Assignments & Relationships**
    a. The **License Assignment** table serves as the associative entity linking **Devices**, **Software**, and **Users**. This resolves the ternary relationship issue by breaking it into manageable one-to-many relationships.

User Requirements

1. **User Roles**
   a. Users include Administrators, IT Staff, and Asset Managers.

     b. Access depends on user roles.
2. **Device Information Access**
     a. Users can view device status, assigned users, software licenses, and maintenance records.
3. **Reporting Options**
     a. Users can generate reports on device assignments and maintenance history.
4. **Search and Filter**
     a. Users can search for devices, users, and vendors.
5. **Update Rights**
     a. Users can update device information and add maintenance records. Administrators have the highest access level.

Entity Relation Diagram
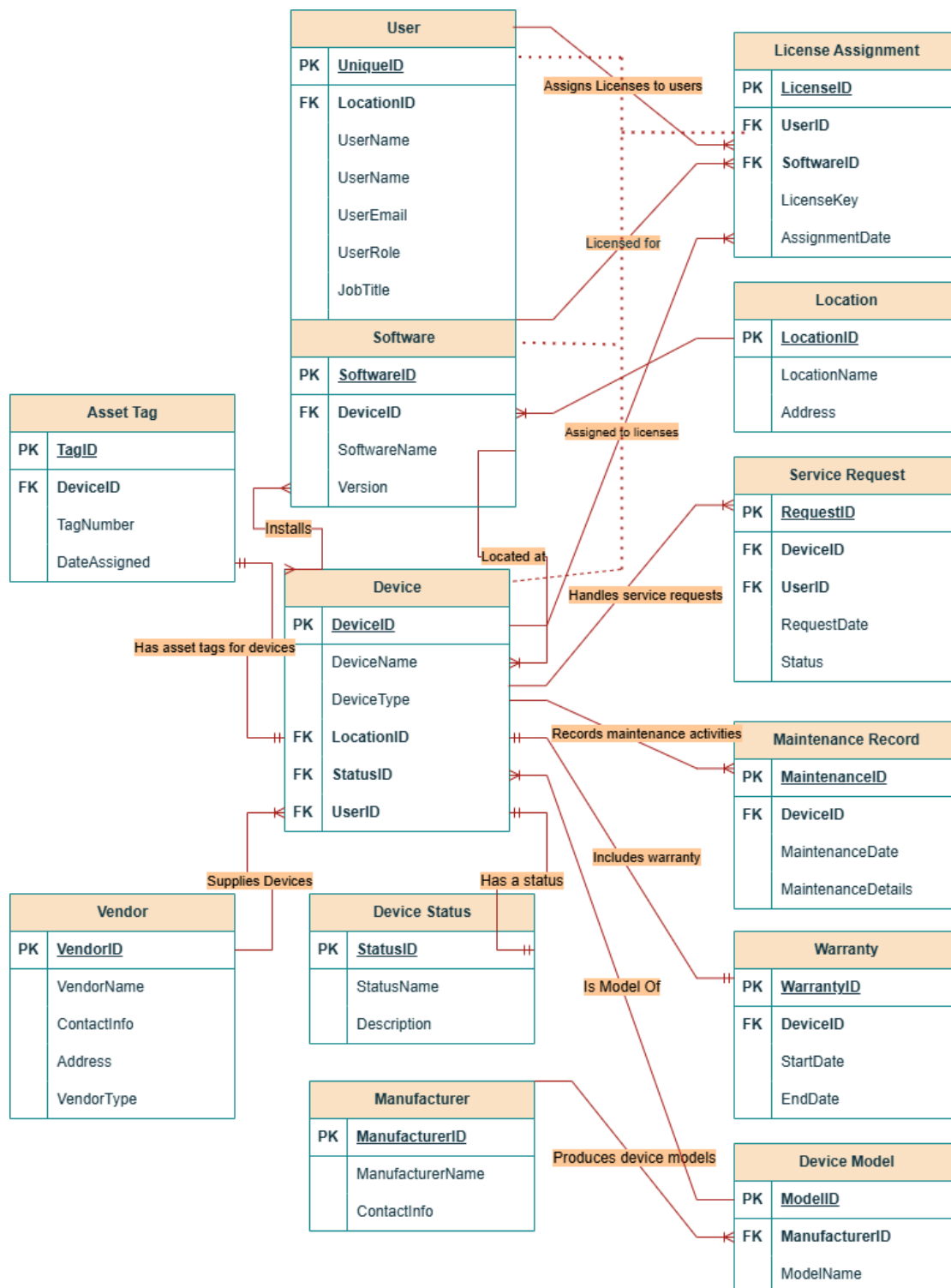
Entities:

1. **Users**
   - **Admins**: Manage access and permissions for devices and licenses.
   - **Regular Users**: Use devices, report issues, and request maintenance.
2. **Devices**
   - **Desktops**: Stationary computers used for work purposes.
   - **Laptops**: Portable computers for various tasks and use cases.
   - **Tablets**: Mobile devices used for specific applications.
3. **Licenses**
   - **Software Licenses**: Assigned to software installed on devices (captured in the **License Assignment** table).
   - **Shared Licenses**: Licenses that are shared by multiple users concurrently (tracked via **License Assignment**).
4. **Vendors**
   - **Software Vendors**: Companies that provide software.
   - **Hardware Vendors**: Suppliers of physical devices (e.g., computers, tablets).
5. **Locations**
   - **Office Locations**: Physical places where devices are primarily used.
   - **Storage Areas**: Locations where unused or spare devices are stored.
6. **Maintenance Records**
   - **Routine Maintenance**: Regular upkeep activities to ensure devices are functional.
   - **Repairs**: Documenting fixes performed on devices, either hardware or software-related.
7. **Service Requests**
   - **Technical Support Requests**: User-reported issues needing technical assistance.
   - **Maintenance Requests**: Requests for device upkeep and repairs (can be linked to **Maintenance Records**).

Relations:

User

UserID	LocationID	UserID	UserName	UserEmail	UserRole	JobTitle	Department

License Assignment

LicenseID	UserID	SoftwareID	LicenseKey	AssignmentDate

Asset Tag

TagID	DeviceID	TagNumber	DateAsssigned

Device

DeviceID	LocationID	StatusID	UserID	DeviceName	DeviceType	VendorID	DeviceModelID

Vendor

VendorID	VendorName	ContactInfo	Address	VendorType

Software

SoftwareID	DeviceID	SoftwareName	Version

Device Status

StatusID	StatusName	Description

Manufacturer

ManufacturerID	ManufacturerName	ContactInfo

Location

LocationID	LocationName	Address

Service Request

RequestID	DeviceID	UserID	RequestDate	Status

Maintenance Record

MaintenanceID	DeviceID	MaintenanceDate	MaintenanceDetails

Warranty

WarrantyID	DeviceID	StartDate	EndDate

Device Model

ModelID	ManufacturerID	ModelName

TABLES:

```
CREATE TABLE Location (
    LocationID INT AUTO_INCREMENT PRIMARY KEY,
    LocationName VARCHAR(100),
    Address VARCHAR(200)
);

CREATE TABLE Manufacturer (
    ManufacturerID INT AUTO_INCREMENT PRIMARY KEY,
    ManufacturerName VARCHAR(100),
    ContactInfo VARCHAR(200)
);

CREATE TABLE DeviceModel (
    ModelID INT AUTO_INCREMENT PRIMARY KEY,
    ManufacturerID INT,
    ModelName VARCHAR(100),
    FOREIGN KEY (ManufacturerID) REFERENCES Manufacturer(ManufacturerID)
);

CREATE TABLE DeviceStatus (
    StatusID INT AUTO_INCREMENT PRIMARY KEY,
    StatusName VARCHAR(50),
    Description TEXT
);

CREATE TABLE Vendor (
    VendorID INT AUTO_INCREMENT PRIMARY KEY,
    VendorName VARCHAR(100),
    ContactInfo VARCHAR(200),
    Address VARCHAR(200),
    VendorType VARCHAR(50)
);

CREATE TABLE User (
    UserID INT AUTO_INCREMENT PRIMARY KEY,
    LocationID INT,
    UserName VARCHAR(100),
    UserEmail VARCHAR(100),
```

```sql
    UserRole VARCHAR(50),
    JobTitle VARCHAR(100),
    Department VARCHAR(100),
    FOREIGN KEY (LocationID) REFERENCES Location(LocationID)
);
CREATE TABLE Device (
    DeviceID INT AUTO_INCREMENT PRIMARY KEY,
    LocationID INT,
    StatusID INT,
    UserID INT,
    DeviceName VARCHAR(100),
    DeviceType VARCHAR(100),
    VendorID INT,
    ModelID INT,
    FOREIGN KEY (LocationID) REFERENCES Location(LocationID),
    FOREIGN KEY (StatusID) REFERENCES DeviceStatus(StatusID),
    FOREIGN KEY (UserID) REFERENCES User(UserID),
    FOREIGN KEY (VendorID) REFERENCES Vendor(VendorID),
    FOREIGN KEY (ModelID) REFERENCES DeviceModel(ModelID)
);

CREATE TABLE Software (
    SoftwareID INT AUTO_INCREMENT PRIMARY KEY,
    DeviceID INT,
    SoftwareName VARCHAR(100),
    Version VARCHAR(50),
    FOREIGN KEY (DeviceID) REFERENCES Device(DeviceID)
);

CREATE TABLE LicenseAssignment (
    LicenseID INT AUTO_INCREMENT PRIMARY KEY,
    UserID INT,
    SoftwareID INT,
    LicenseKey VARCHAR(100),
    AssignmentDate DATE,
    AssetTag INT,
    FOREIGN KEY (UserID) REFERENCES User(UserID),
    FOREIGN KEY (SoftwareID) REFERENCES Software(SoftwareID)
);
```

```sql
CREATE TABLE Tag (
    TagID INT AUTO_INCREMENT PRIMARY KEY,
    DeviceID INT,
    TagNumber VARCHAR(50),
    DateAssigned DATE,
    FOREIGN KEY (DeviceID) REFERENCES Device(DeviceID)
);

CREATE TABLE ServiceRequest (
    RequestID INT AUTO_INCREMENT PRIMARY KEY,
    DeviceID INT,
    UserID INT,
    RequestDate DATE,
    Status VARCHAR(50),
    FOREIGN KEY (DeviceID) REFERENCES Device(DeviceID),
    FOREIGN KEY (UserID) REFERENCES User(UserID)
);

CREATE TABLE MaintenanceRecord (
    MaintenanceID INT AUTO_INCREMENT PRIMARY KEY,
    DeviceID INT,
    MaintenanceDate DATE,
    MaintenanceDetails TEXT,
    FOREIGN KEY (DeviceID) REFERENCES Device(DeviceID)
);

CREATE TABLE Warranty (
    WarrantyID INT AUTO_INCREMENT PRIMARY KEY,
    DeviceID INT,
    StartDate DATE,
    EndDate DATE,
    FOREIGN KEY (DeviceID) REFERENCES Device(DeviceID)
);
```

VALUES:

1. **Location Table**

INSERT INTO Location (LocationName, Address)
VALUES
('Headquarters', '123 Main St, Cityville, Countryland'),
('Branch Office', '456 Elm St, Townsville, Countryland'),
('Warehouse', '789 Storage Rd, Cityville, Countryland');

2. **Manufacturer Table**

INSERT INTO Manufacturer (ManufacturerName, ContactInfo)
VALUES
('ABC Tech', 'contact@abctech.com'),
('XYZ Electronics', 'support@xyzelectronics.com'),
('FutureTech', 'info@futuretech.com');

3. **Device Model Table**

INSERT INTO DeviceModel (ManufacturerID, ModelName)
VALUES
(1, 'Laptop Pro 2024'),
(2, 'Desktop Ultra 5000'),
(3, 'Smartphone 3000'),
(1, 'Tablet X1');

4. **Device Status Table**

INSERT INTO DeviceStatus (StatusName, Description)
VALUES
('Active', 'Device is currently in use and operational'),
('Inactive', 'Device is not currently in use but can be reactivated'),
('Under Repair', 'Device is being serviced or fixed');

5. **Vendor Table**

INSERT INTO Vendor (VendorName, ContactInfo, Address, VendorType)
VALUES
('Tech Supplier', '123-456-7890', '789 Tech Blvd, Tech City, Countryland', 'Hardware'),
('Software Solutions', '987-654-3210', '101 Software Rd, Dev City, Countryland', 'Software'),
('Smart Gadgets Inc.', '555-123-4567', '212 Innovation Ave, Silicon Valley, Countryland', 'Electronics');

6. User Table

INSERT INTO User (LocationID, UserName, UserEmail, UserRole, JobTitle, Department)
VALUES
(1, 'John Doe', 'john.doe@example.com', 'Admin', 'System Administrator', 'IT'),
(2, 'Jane Smith', 'jane.smith@example.com', 'User', 'Software Developer', 'Development'),
(3, 'Sam Brown', 'sam.brown@example.com', 'User', 'Warehouse Manager', 'Logistics');

7. Device Table

INSERT INTO Device (LocationID, StatusID, UserID, DeviceName, DeviceType, ModelID, VendorID)
VALUES
(1, 1, 1, 'Laptop Pro 2024', 'Laptop', 1, 1),
(2, 2, 2, 'Desktop Ultra 5000', 'Desktop', 2, 2),
(3, 3, 3, 'Smartphone 3000', 'Smartphone', 3, 3),
(1, 1, 1, 'Tablet X1', 'Tablet', 4, 1);

8. Software Table

INSERT INTO Software (DeviceID, SoftwareName, Version)
VALUES
(1, 'Microsoft Office', '2023'),
(2, 'Visual Studio', '2022'),
(3, 'Photoshop', '2024'),
(4, 'Slack', '3.0');

9. License Assignment Table

INSERT INTO LicenseAssignment (UserID, SoftwareID, LicenseKey, AssignmentDate, AssetTag)
VALUES
(1, 1, 'ABC123XYZ', '2024-01-01', 1001),
(2, 2, 'XYZ456ABC', '2024-02-01', 1002),
(3, 3, 'LMN789PQR', '2024-03-01', 1003),
(2, 4, 'DEF123GHI', '2024-04-01', 1004);

10. Tag Table (Asset Tag)

INSERT INTO Tag (DeviceID, TagNumber, DateAssigned)
VALUES
(1, 'TAG1001', '2024-01-01'),

(2, 'TAG1002', '2024-02-01'),
(3, 'TAG1003', '2024-03-01'),
(4, 'TAG1004', '2024-04-01');

11. Service Request Table

INSERT INTO ServiceRequest (DeviceID, UserID, RequestDate, Status)
VALUES
(1, 1, '2024-05-01', 'Open'),
(2, 2, '2024-06-01', 'Closed'),
(3, 3, '2024-07-01', 'Open'),
(4, 1, '2024-08-01', 'Closed');

12. Maintenance Record Table

INSERT INTO MaintenanceRecord (DeviceID, MaintenanceDate, MaintenanceDetails)
VALUES
(1, '2024-06-01', 'Replaced battery'),
(2, '2024-07-01', 'Updated software'),
(3, '2024-08-01', 'Fixed screen issue'),
(4, '2024-09-01', 'Installed new OS version');

13. Warranty Table

INSERT INTO Warranty (DeviceID, StartDate, EndDate)
VALUES
(1, '2024-01-01', '2025-01-01'),
(2, '2024-02-01', '2025-02-01'),
(3, '2024-03-01', '2025-03-01'),
(4, '2024-04-01', '2025-04-01');

TABLES (Screenshots):

1. Location Table:
DESC Location;
SELECT * FROM Location;

	LocationID	LocationName	Address
▶	1	Headquarters	123 Main St, Cityville, Countryland
	2	Branch Office	456 Elm St, Townsville, Countryland
	3	Warehouse	789 Storage Rd, Cityville, Countryland

2. Vendor Table:
DESC Vendor;
SELECT * FROM Vendor;

VendorID	VendorName	ContactInfo	Address	VendorType
1	Tech Supplier	123-456-7890	789 Tech Blvd, Tech City, Countryland	Hardware
2	Software Solutions	987-654-3210	101 Software Rd, Dev City, Countryland	Software
3	Smart Gadgets Inc.	555-123-4567	212 Innovation Ave, Silicon Valley, Countryland	Electronics

3. Device Status Table:
DESC DeviceStatus;
SELECT * FROM DeviceStatus;

StatusID	StatusName	Description
1	Active	Device is currently in use and operational
2	Inactive	Device is not currently in use but can be reactiv...
3	Under Repair	Device is being serviced or fixed

4. User Table:
DESC User;
SELECT * FROM User;

UserID	LocationID	UserName	UserEmail	UserRole	JobTitle	Department
1	1	John Doe	john.doe@example.com	Admin	System Administrator	IT
2	2	Jane Smith	jane.smith@example.com	User	Software Developer	Development
3	3	Sam Brown	sam.brown@example.com	User	Warehouse Manager	Logistics

5. Device Table:
DESC Device;
SELECT * FROM Device;

DeviceID	LocationID	StatusID	UserID	DeviceName	DeviceType	VendorID	ModelID
1	1	1	1	Laptop Pro 2024	Laptop	1	1
2	2	2	2	Desktop Ultra 5000	Desktop	2	2
3	3	3	3	Smartphone 3000	Smartphone	3	3
4	1	1	1	Tablet X1	Tablet	1	4

6. Software Table:

DESC Software;

SELECT * FROM Software;

SoftwareID	DeviceID	SoftwareName	Version
1	1	Microsoft Office	2023
2	2	Visual Studio	2022
3	3	Photoshop	2024
4	4	Slack	3.0

7. License Assignment Table:

DESC LicenseAssignment;

SELECT * FROM LicenseAssignment;

LicenseID	UserID	SoftwareID	LicenseKey	AssignmentDate	AssetTag
1	1	1	ABC123XYZ	2024-01-01	1001
2	2	2	XYZ456ABC	2024-02-01	1002
3	3	3	LMN789PQR	2024-03-01	1003
4	2	4	DEF123GHI	2024-04-01	1004

8. Device Model Table:

DESC DeviceModel;

SELECT * FROM DeviceModel;

ModelID	ManufacturerID	ModelName
1	1	Laptop Pro 2024
2	2	Desktop Ultra 5000
3	3	Smartphone 3000
4	1	Tablet X1

9. Manufacturer Table:

DESC Manufacturer;

SELECT * FROM Manufacturer;

ManufacturerID	ManufacturerName	ContactInfo
1	ABC Tech	contact@abctech.com
2	XYZ Electronics	support@xyzelectronics.com
3	FutureTech	info@futuretech.com

10. Tag Table (Asset Tag):

DESC Tag;
SELECT * FROM Tag;

TagID	DeviceID	TagNumber	DateAssigned
1	1	TAG1001	2024-01-01
2	2	TAG1002	2024-02-01
3	3	TAG1003	2024-03-01
4	4	TAG1004	2024-04-01

11. Service Request Table:

DESC ServiceRequest;
SELECT * FROM ServiceRequest;

RequestID	DeviceID	UserID	RequestDate	Status
1	1	1	2024-05-01	Open
2	2	2	2024-06-01	Closed
3	3	3	2024-07-01	Open
4	4	1	2024-08-01	Closed

12. Maintenance Record Table:

DESC MaintenanceRecord;
SELECT * FROM MaintenanceRecord;

MaintenanceID	DeviceID	MaintenanceDate	MaintenanceDetails
1	1	2024-06-01	Replaced battery
2	2	2024-07-01	Updated software
3	3	2024-08-01	Fixed screen issue
4	4	2024-09-01	Installed new OS version

13. Warranty Table:

```sql
DESC Warranty;
SELECT * FROM Warranty;
```

WarrantyID	DeviceID	StartDate	EndDate
1	1	2024-01-01	2025-01-01
2	2	2024-02-01	2025-02-01
3	3	2024-03-01	2025-03-01
4	4	2024-04-01	2025-04-01

Queries:

1. List of Devices with their Locations and Status

SELECT Device.DeviceName, Device.DeviceType, Location.LocationName,
DeviceStatus.StatusName
FROM Device
JOIN Location ON Device.LocationID = Location.LocationID
JOIN DeviceStatus ON Device.StatusID = DeviceStatus.StatusID;

DeviceName	DeviceType	LocationName	StatusName
Laptop Pro 2024	Laptop	Headquarters	Active
Tablet X1	Tablet	Headquarters	Active
Desktop Ultra 5000	Desktop	Branch Office	Inactive
Smartphone 3000	Smartphone	Warehouse	Under Repair

2. Users with their Assigned Devices and Software

SELECT User.UserName, User.UserEmail, Device.DeviceName,
Software.SoftwareName
FROM User
JOIN Device ON User.UserID = Device.UserID
JOIN LicenseAssignment ON User.UserID = LicenseAssignment.UserID
JOIN Software ON LicenseAssignment.SoftwareID = Software.SoftwareID;

UserName	UserEmail	DeviceName	SoftwareName
John Doe	john.doe@example.com	Laptop Pro 2024	Microsoft Office
John Doe	john.doe@example.com	Tablet X1	Microsoft Office
Jane Smith	jane.smith@example.com	Desktop Ultra 5000	Visual Studio
Jane Smith	jane.smith@example.com	Desktop Ultra 5000	Slack
Sam Brown	sam.brown@example.com	Smartphone 3000	Photoshop

3. Find Devices by Location

SELECT Device.DeviceName, Location.LocationName
FROM Device
JOIN Location ON Device.LocationID = Location.LocationID
WHERE Location.LocationName = 'Headquarters';

DeviceName	LocationName
Laptop Pro 2024	Headquarters
Tablet X1	Headquarters

4. Service Requests for Devices

SELECT DeviceName, RequestDate, UserName, Status
FROM ServiceRequest
JOIN Device ON ServiceRequest.DeviceID = Device.DeviceID

JOIN User ON ServiceRequest.UserID = User.UserID;

DeviceName	RequestDate	UserName	Status
Laptop Pro 2024	2024-05-01	John Doe	Open
Tablet X1	2024-08-01	John Doe	Closed
Desktop Ultra 5000	2024-06-01	Jane Smith	Closed
Smartphone 3000	2024-07-01	Sam Brown	Open

5. Count of Devices per Location

SELECT LocationName, COUNT(DeviceID)
FROM Device
JOIN Location ON Device.LocationID = Location.LocationID
GROUP BY LocationName;

LocationName	COUNT(DeviceID)
Headquarters	2
Branch Office	1
Warehouse	1

6. List Devices Assigned to a Specific User

SELECT DeviceName, DeviceType
FROM Device
WHERE UserID = 1;

DeviceName	DeviceType
Laptop Pro 2024	Laptop
Tablet X1	Tablet

7. Devices with Warranty and Maintenance Details

SELECT Device.DeviceName, Warranty.StartDate, Warranty.EndDate,
MaintenanceRecord.MaintenanceDate, MaintenanceRecord.MaintenanceDetails
FROM Device
JOIN Warranty ON Device.DeviceID = Warranty.DeviceID
JOIN MaintenanceRecord ON Device.DeviceID = MaintenanceRecord.DeviceID;

DeviceName	StartDate	EndDate	MaintenanceDate	MaintenanceDetails
Laptop Pro 2024	2024-01-01	2025-01-01	2024-06-01	Replaced battery
Desktop Ultra 5000	2024-02-01	2025-02-01	2024-07-01	Updated software
Smartphone 3000	2024-03-01	2025-03-01	2024-08-01	Fixed screen issue
Tablet X1	2024-04-01	2025-04-01	2024-09-01	Installed new OS version

8. Users and their Devices' Locations

SELECT User.UserName, User.UserEmail, Device.DeviceName,
Location.LocationName

FROM User
JOIN Device ON User.UserID = Device.UserID
JOIN Location ON Device.LocationID = Location.LocationID;

UserName	UserEmail	DeviceName	LocationName
John Doe	john.doe@example.com	Laptop Pro 2024	Headquarters
John Doe	john.doe@example.com	Tablet X1	Headquarters
Jane Smith	jane.smith@example.com	Desktop Ultra 5000	Branch Office
Sam Brown	sam.brown@example.com	Smartphone 3000	Warehouse

9. Devices with Software Installed

SELECT Device.DeviceName, Device.DeviceType, Software.SoftwareName,
Software.Version
FROM Device
JOIN Software ON Device.DeviceID = Software.DeviceID;

DeviceName	DeviceType	SoftwareName	Version
Laptop Pro 2024	Laptop	Microsoft Office	2023
Desktop Ultra 5000	Desktop	Visual Studio	2022
Smartphone 3000	Smartphone	Photoshop	2024
Tablet X1	Tablet	Slack	3.0

10. List All Users

SELECT UserName, UserEmail
FROM User;

UserName	UserEmail
John Doe	john.doe@example.com
Jane Smith	jane.smith@example.com
Sam Brown	sam.brown@example.com

11. Count the Total Number of Devices

SELECT COUNT(DeviceID) AS TotalDevices
FROM Device;

TotalDevices
4

12. Device Maintenance History

```sql
SELECT Device.DeviceName, MaintenanceRecord.MaintenanceDate,
MaintenanceRecord.MaintenanceDetails
FROM Device
JOIN MaintenanceRecord ON Device.DeviceID = MaintenanceRecord.DeviceID;
```

DeviceName	MaintenanceDate	MaintenanceDetails
Laptop Pro 2024	2024-06-01	Replaced battery
Desktop Ultra 5000	2024-07-01	Updated software
Smartphone 3000	2024-08-01	Fixed screen issue
Tablet X1	2024-09-01	Installed new OS version

13. Devices Needing Service (Shows service requests with an open status)

```sql
SELECT Device.DeviceName, ServiceRequest.RequestDate, User.UserName,
ServiceRequest.Status
FROM ServiceRequest
JOIN Device ON ServiceRequest.DeviceID = Device.DeviceID
JOIN User ON ServiceRequest.UserID = User.UserID
WHERE ServiceRequest.Status = 'Open';
```

DeviceName	RequestDate	UserName	Status
Laptop Pro 2024	2024-05-01	John Doe	Open
Smartphone 3000	2024-07-01	Sam Brown	Open

14. Total Devices per Status

```sql
SELECT DeviceStatus.StatusName, COUNT(Device.DeviceID) AS DeviceCount
FROM Device
JOIN DeviceStatus ON Device.StatusID = DeviceStatus.StatusID
GROUP BY DeviceStatus.StatusName;
```

StatusName	DeviceCount
Active	2
Inactive	1
Under Repair	1

15. Device Maintenance Count by Device

```sql
SELECT Device.DeviceName, COUNT(MaintenanceRecord.MaintenanceID) AS
MaintenanceCount
FROM Device
JOIN MaintenanceRecord ON Device.DeviceID = MaintenanceRecord.DeviceID
GROUP BY Device.DeviceName;
```

DeviceName	MaintenanceCount
Laptop Pro 2024	1
Desktop Ultra 5000	1
Smartphone 3000	1
Tablet X1	1

16. List of Vendors and the Devices They Supply

SELECT Vendor.VendorName, Device.DeviceName
FROM Vendor
JOIN Device ON Vendor.VendorID = Device.VendorID;

VendorName	DeviceName
Tech Supplier	Laptop Pro 2024
Tech Supplier	Tablet X1
Software Solutions	Desktop Ultra 5000
Smart Gadgets Inc.	Smartphone 3000

17. List Users with More Than One Device

SELECT User.UserName, COUNT(Device.DeviceID) AS DeviceCount
FROM User
JOIN Device ON User.UserID = Device.UserID
GROUP BY User.UserName
HAVING COUNT(Device.DeviceID) > 1;

UserName	DeviceCount
John Doe	2

18. Find Service Requests by Status

SELECT RequestDate, DeviceID, Status
FROM ServiceRequest
WHERE Status = 'Open';

RequestDate	DeviceID	Status
2024-05-01	1	Open
2024-07-01	3	Open

19. Devices by a Specific Type

SELECT DeviceName, DeviceType
FROM Device

WHERE DeviceType = 'Laptop';

DeviceName	DeviceType
Laptop Pro 2024	Laptop

20. List All Devices

SELECT DeviceName, DeviceType
FROM Device;

DeviceName	DeviceType
Laptop Pro 2024	Laptop
Desktop Ultra 5000	Desktop
Smartphone 3000	Smartphone
Tablet X1	Tablet