Learning Plan: NHS Informatics Dashboard with SQL & Power BI

1. Overview

This guide will help you build a mini NHS Informatics dashboard using SQL and Power BI. You'll learn to analyse A&E visit data, structure it in SQLite, query it with SQL, and visualise insights using Power BI. The goal is to simulate performance-tracking tasks in a real-world NHS Informatics setting.

2. Skills & Knowledge Areas

- Understanding healthcare data structures

- SQL querying (SELECT, WHERE, GROUP BY, aggregates)

- Using SQLite to manage relational data

- Building interactive dashboards in Power BI

- Data visualisation best practices

- Communicating insights through charts and KPIs

3. Tools & Technologies

- SQLite / DB Browser: Database setup and management

- SQL: Core language for querying and analysing data

- Power BI Desktop: Visualise and build interactive dashboards

- Excel or CSV: Optional data import/export formats

4. Learning Path

A. Introduction to NHS Informatics

  - What is NHS Informatics?

  - Key healthcare metrics (e.g. 4-hour A&E target)

B. SQL & SQLite Basics

  - Installing DB Browser

  - Creating the ae_visits table

  - Writing queries for trends and performance

C. Power BI Fundamentals

  - Importing SQLite data

  - Creating line and bar charts

  - Using filters, KPIs, and tooltips

D. Building the Dashboard

  - Final layout design

  - Adding interactivity (slicers, tooltips)

  - Highlighting NHS 4-hour target

E. Enhancements & Portfolio Presentation

  - Adding dummy data (e.g., referral source)

  - Publishing online or exporting to PDF

  - Writing a one-slide summary of insights

5. How to Use This Guide

Treat each section like a module. As you complete a topic, check it off. Use ChatGPT to get help with tutorials, explanations, and exercises. Add notes or reflections as you progress to build a personal study journal.