**Databases Narrative**  
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This artifact is a web application I originally created as a final project for the CS 340: Advanced Programming Concepts course. This project was initially designed to demonstrate my capabilities in building full-stack applications that effectively handle both frontend and backend operations. It was a web application built using Python's Dash framework, and its purpose was to process an input dataset and display it in various formats such as a table, pie chart, and map.I selected this project for my ePortfolio because it demonstrates my ability to build full-stack applications and showcase my versatility as a developer.  
  
For this enhancement, I transitioned the project from Python to JavaScript to leverage more effective tools and libraries for web-based visualizations, such as Plotly.js and Chart.js. This change also made the code portable, positioning it as a starter codebase for future web application development. This enhancement not only highlights my understanding of web application functionality and the interaction between frontend and backend components but also emphasizes my adaptability as a developer by successfully employing both Python and JavaScript to achieve my project goals. The use of a .txt file as the data source enhances the application’s portability, allowing future developers to easily adapt and expand upon it as a web app starter pack. The comments throughout the code further support this aim by providing guidance on connecting the code to a database, facilitating full-stack development.

The enhancement process taught me valuable lessons about flexibility in development. While developing the Java version of the project, I encountered challenges in finding suitable plugins for the map and pie chart visualizations. However, JavaScript provided a more robust selection of libraries and a dynamic framework that mirrored the capabilities of Python, making the development process smoother and more efficient. This experience reinforced the importance of being open to alternative approaches when faced with obstacles, highlighting the need to evaluate when to refactor or pivot rather than persist with a less effective solution.

Overall, this enhancement illustrates my ability to design and evaluate computing solutions, utilize innovative tools, and adapt to the evolving demands of development. The creation of a portable web application demonstrates my commitment to delivering professional-quality solutions that are coherent, technically sound, and appropriately adapted to various audiences. This aligns with Course Outcome 2, as I designed, developed, and delivered a web application that serves as a ready-made, coherent starter for future projects. The thoughtful documentation and comments not only aid understanding but also enhance collaboration, fulfilling Course Outcome 1. Furthermore, the transition to JavaScript exemplifies my completion of Course Outcome 4, showcasing my ability to employ innovative solutions that enhance application functionality.  
  
Outcome One: Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision-making in the field of computer science. This outcome is fulfilled through the clear documentation and comments included in the code, which facilitate understanding and collaboration for future developers.  
  
Outcome Two: I Designed, developed, and delivered professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts in this enhancement by creating a portable web application that serves as a starter for web applications, I ensured that it is not only coherent but also technically sound, providing a resource for future developers.

Outcome Four: Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals. This outcome is achieved through the transition from Python to JavaScript and the incorporation of advanced visualization libraries, showcasing your ability to employ innovative solutions to enhance application functionality.