1. Briefly describe the artifact. What is it? When was it created?

**My Azure SQL server database (BudgetTracker) was created as long term way to store a large amount of data related to credit card transactions. Working alongside the AzureBudgetLoader.py script, this database is inserted with data, to which my Power Bi dashboards can effectively reference to visualize key data points. I created this artificact in February of 2025.**

1. Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in algorithms and data structure? How was the artifact improved?

**I decided to select this artifact because it checked many of the aspects related to database design. I believed that there was much that could be improved in this table and database setup to better handle queries and data loading.**

**Enhancements that have been added are as follows:**

* Added indexing on BudgetTracker table
  + Improves query performance
* Added trigger/stored procedure to catch any duplicated data when inserting
* Created table (DuplicateTransactions) to store the duplicated data
* Created View (vw\_BudgetTracker\_NoDuplicates)

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I was able to meet the course outcomes I had planned to meet as follows:

* **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 (software engineering/design/database)**

1. Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?

**During this process I created a new SQL table, a new stored procedure, trigger, and view. I was also able to create a trigger that was able to run my stored procedure when data was inserted from my python script. I also added an index on the BudgetTracker table so that queriying can perform better when using my Power Bi report. Some challenges that I faced during this process was trying to create the stored procedure to catch duplicates when new data was inserted. Initially, I accidentally truncated my entire table, requiring me to created an altered python script that reloaded my files from my archive folder.**