

- **Title:** DB Assignment 6
- **Your Name:** Deare
- **Date:** 2024/12/9

Effective Indexing: Indexes drastically reduce query times, much like shortcuts reduce travel time.

Greater Benefits for Larger Data: The larger the dataset, the more impactful the indexes are, helping queries run faster.

Query Improvements: Point queries show moderate speed improvements with indexes, while range queries benefit greatly, demonstrating the power of strategic indexing.

Query Type	Description	Dataset Size	Index Type	Microseconds
point query 1	retrieves all records from the accounts table where the branch is named 'Mianus' and the account type is 'Savings'.	150k	(branch_name, account_type)	2176
			none	2204
point query 2	counts the number of accounts in the 'RoundHill' branch with balances ranging from 1,000 to 50,000.	150k	(account_type, balance)	14305
			none	53613
range query 1	counts the number of accounts with the type	150k	(account_type, balance)	12797

	'Savings' that have a balance greater than 30,000.			
			none	26061
range query 2	retrieves all records from the accounts table where the account type is 'savings' and the balance is between 5,000 and 20,000.	150k	(account_type, balance)	28553
			none	41642
point query 1	retrieves all records from the accounts table where the branch is named 'Mianus' and the account type is 'Savings'.	100k	(branch_name, account_type)	2176
			none	62112
point query 2	counts the number of accounts in the 'RoundHill' branch with balances ranging from 1,000 to 50,000.	100k	(account_type, balance)	1603
			none	1877

range query 1	counts the number of accounts with the type 'Savings' that have a balance greater than 30,000.	100k	(account_type, balance)	12050
			none	26127
range query 2	retrieves all records from the accounts table where the account type is 'savings' and the balance is between 5,000 and 20,000.	100k	(account_type, balance)	37938
			none	44447
point query 1	retrieves all records from the accounts table where the branch is named 'Mianus' and the account type is 'Savings'.	50k	(branch_name, account_type)	25486
			none	60191
point query 2	counts the number of accounts in the	50k	(account_type, balance)	1927

	'RoundHill' branch with balances ranging from 1,000 to 50,000.			
			none	2041
range query 1	counts the number of accounts with the type 'Savings' that have a balance greater than 30,000.	50k	(account_type, balance)	12157
			none	29462
range query 2	retrieves all records from the accounts table where the account type is 'savings' and the balance is between 5,000 and 20,000.	50k	(account_type, balance)	28480
			none	42263