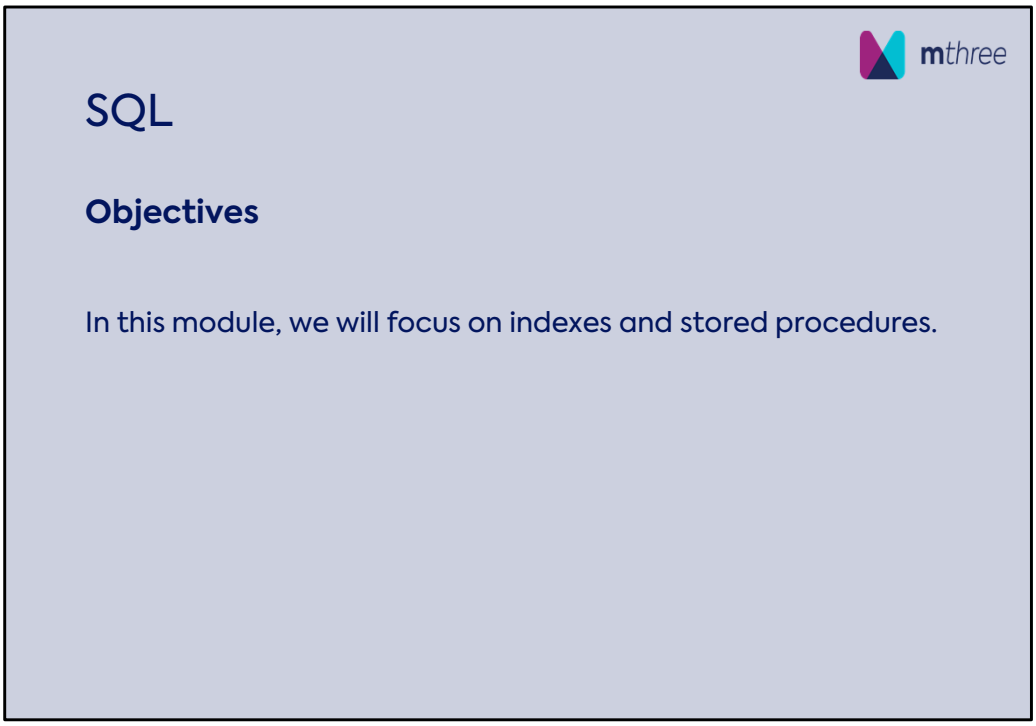
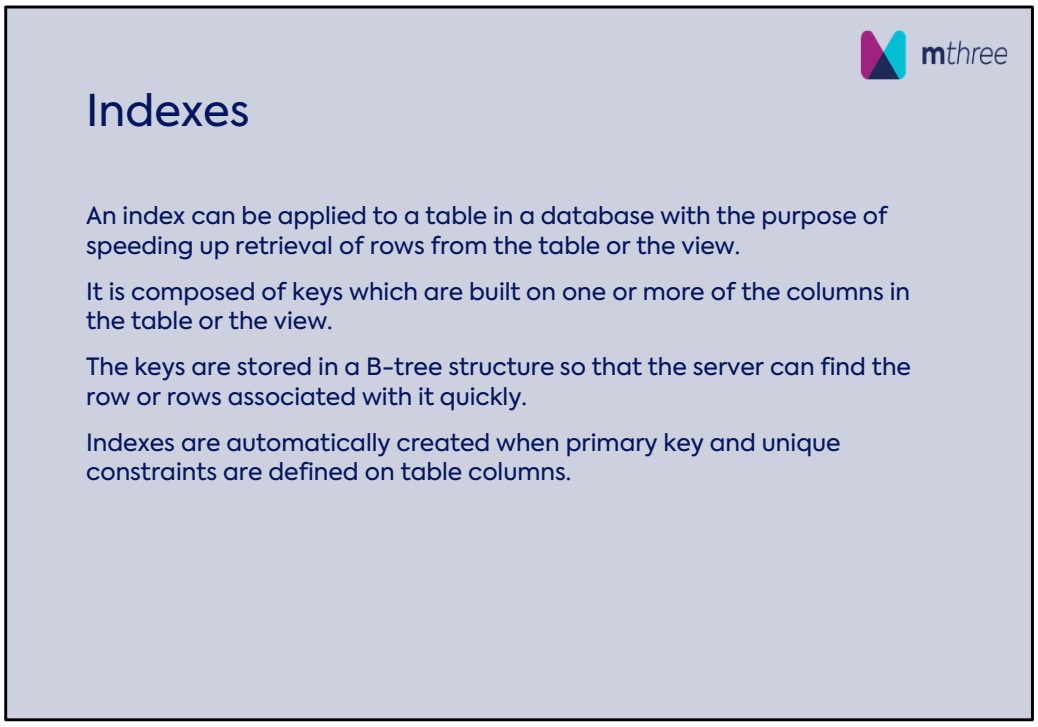
Mthree Alumni Training

# Module 5: SQL and Finance

- Indexes
- Stored procedures

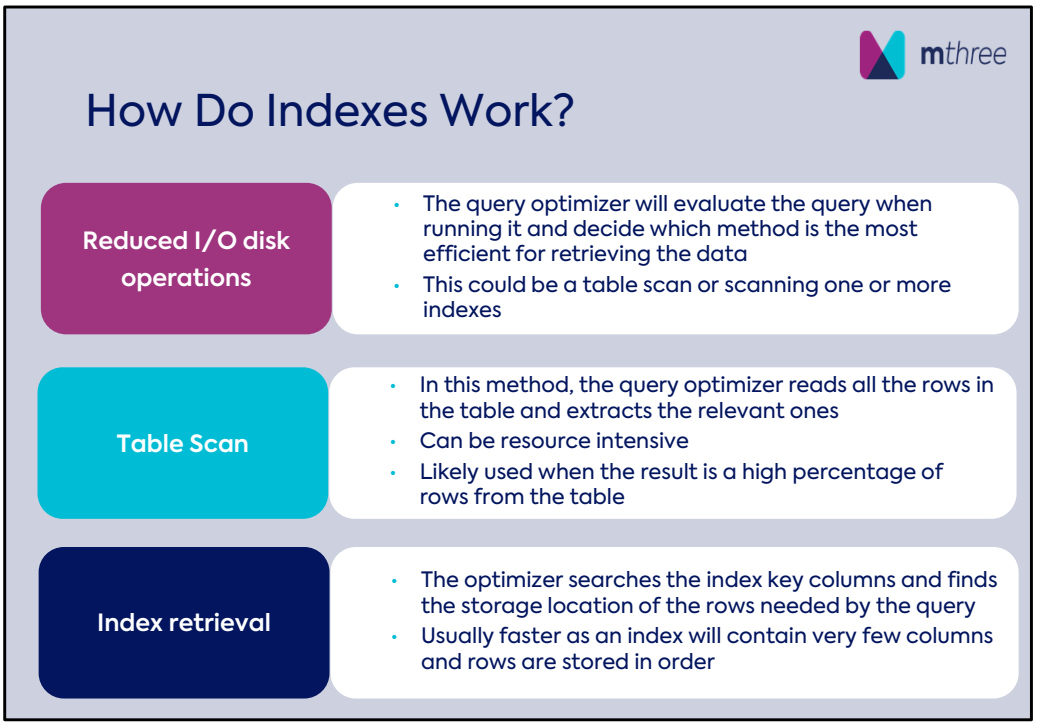



**Trainer Notes**
Indexes and stored procedures will be critical in understanding the day to day of databases that you will be running/supporting.




**Trainer/Trainee Notes**

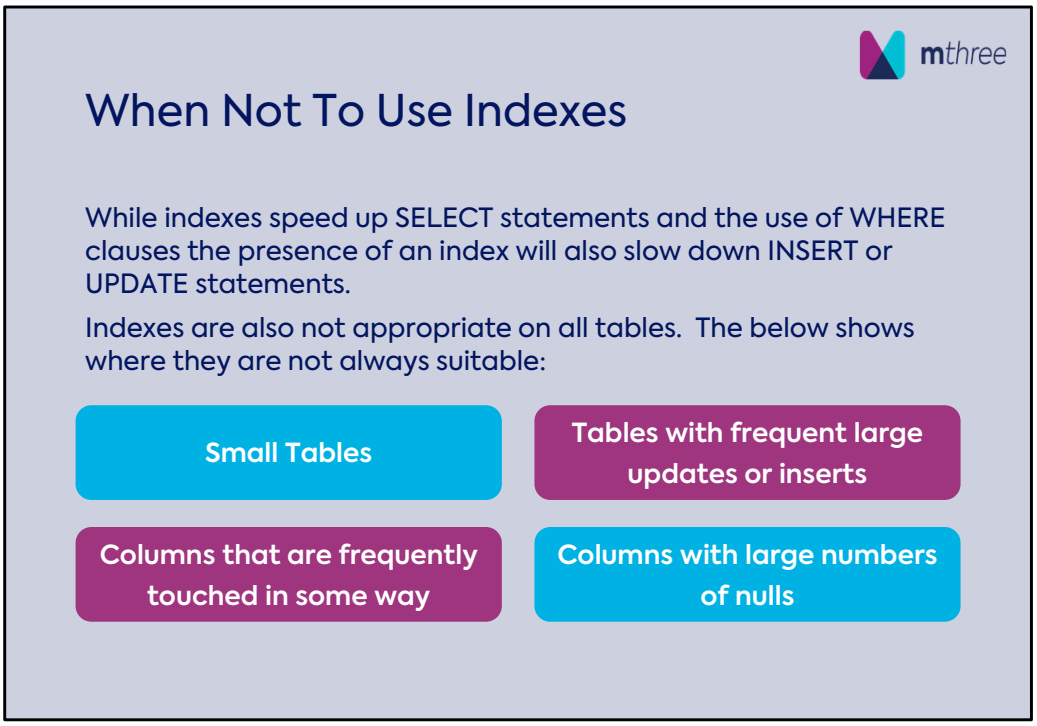
Real life production databases can be huge. And with the requirement of storing data for several years for regulatory reasons it is important that you can be efficient as possible in your queries on the database. Indexes will help with retrieval.




**Trainer/Trainee Notes**

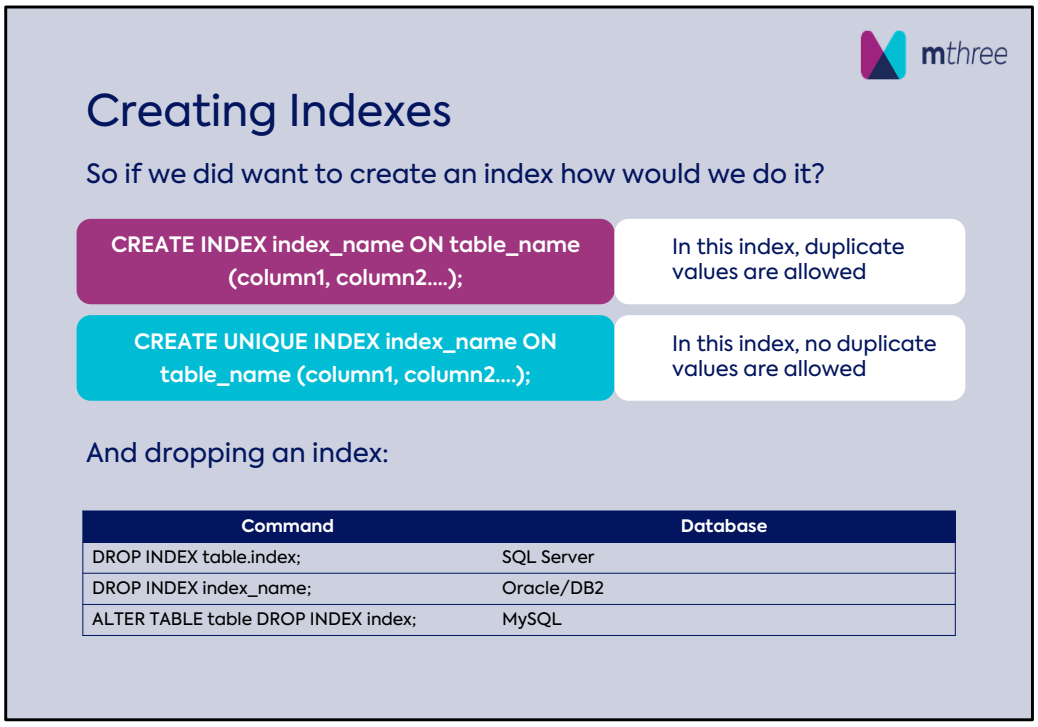
Reducing the number of disk accesses will speed up queries and also reduce the impact on system resources

Think about indexes like the back of a book index



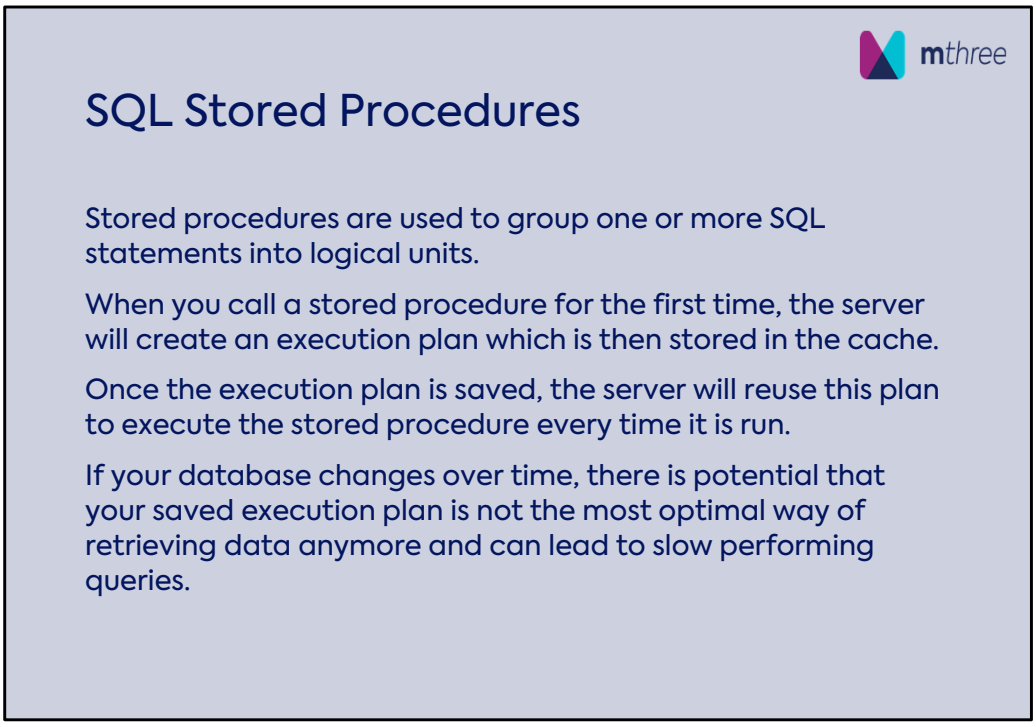

**Trainer/Trainee Notes**

Unless you are developing databases, I would not expect production support staff to have to create indexes but it is important to know about their existence.



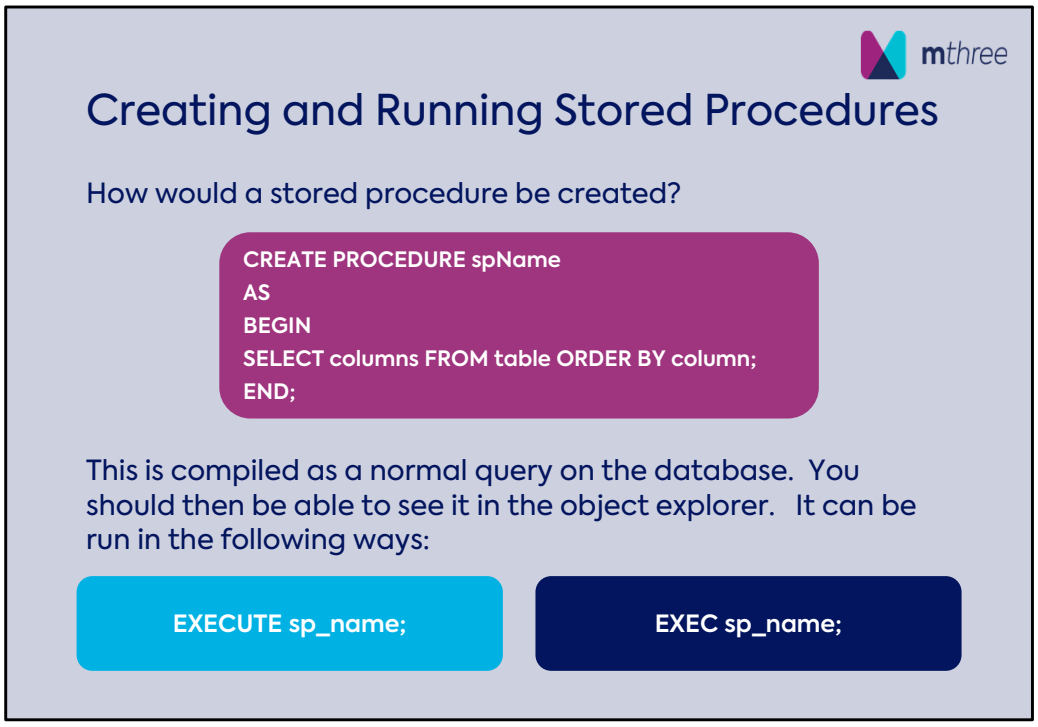

**Trainer/Trainee Notes**

Here you can see that creating an index is very easy on the column you wish, and dropping the index is also pretty simple across the various database types.



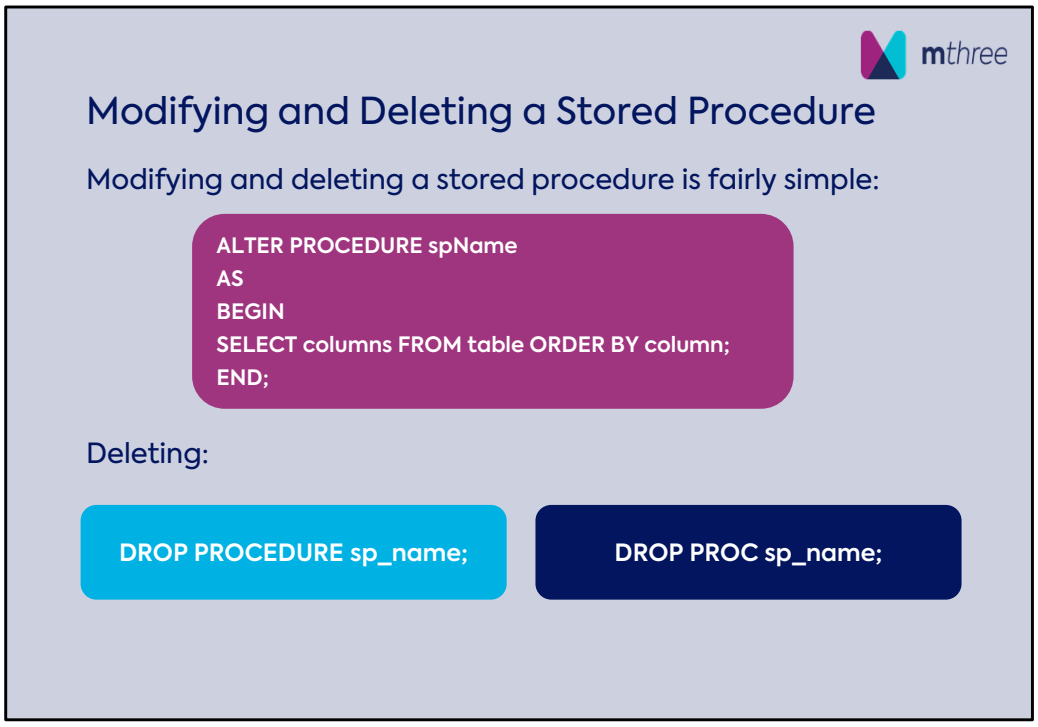

**Trainer/Trainee Notes**

Execution plans not performing are often the root cause of performance issues on a database. A DBA will have tools to analyse the query plans to understand where the inefficiencies lie. A execution plan can be deleted which will force the engine to recalculate and hopefully create a more efficient query and result.



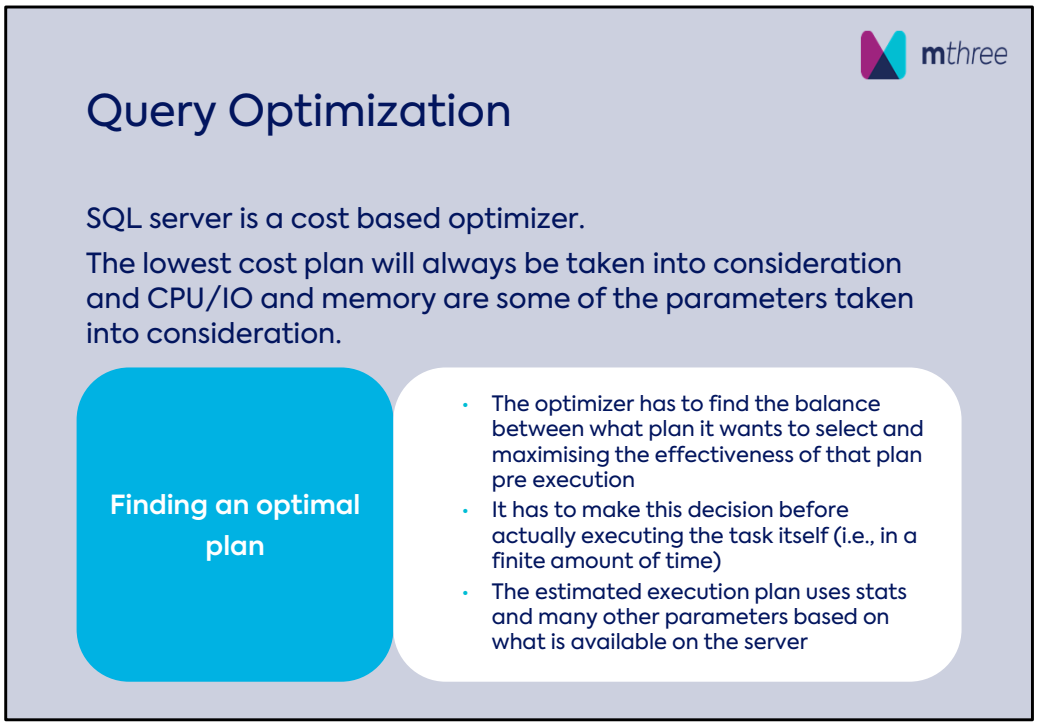

**Trainer/Trainee Notes**

Having a high level understanding of stored procedures and execution plans is important.




**Trainer/Trainee Notes**

Check with the database version you are running what the correct syntax is. Also be very careful deleting a stored procedure or altering it as multiple people may well be using it as well as the application itself.




**Trainer/Trainee Notes**

Statistics are important here – if the statistics on a database are stale, it will potentially cause the wrong plan to be chosen and executed. Often DBAs will need to refresh the statistics if performance issues are seen