What is an Index?

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In SQL databases, an index is a data structure which allows to you perform fast queries on specific columns in a table. You select the columns that you want included in the index and run your searches on the index — rather than on the entire dataset.

In DynamoDB, 2 types of Index are supported to help speed-up your DynamoDB queries:

- Local Secondary Index
- Global Secondary Index

Local Secondary Index

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Local Secondary Index

- Can only be created when you are creating your table
- You cannot add, remove, or modify it later
- It has the same Partition Key as your original table
- But a different Sort Key
- Gives you a different view of your data, organised according to an alternative Sort Key
- Any queries based on this Sort Key are much faster using the index than the main table
- e.g. Partition Key : User ID
  Sort Key : account creation date

Global Secondary Index

Global Secondary Index

- You can create when you create your table, or add it later
- Different Partition Key as well as a Different Sort Key
- So gives a completely different view of the data
- Speeds up any queries relating to this alternative Partition and Sort Key
- e.g. Partition Key : email address
  Sort Key : last log-in date

DynamoDB Indexes - Exam Tips

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- Indexes enable fast queries on specific data columns.
- Give you a different view of your data, based on alternative Partition / Sort Keys
- Important to understand the differences

Local Secondary Index	Global Secondary Index
Must be created at when you create your table	Can create any time - at table creation or after
Same Partition Key as your table	Different Partition Key
Different Sort Key	Different Sort Key