1. **What is indexing and when would you want to use it?** An index is similar to one you would find in a book that tells you what’s located on different pages in a book. So, an index will help the database take a shortcut and have it look at an ordered list which references the content allowing MongoDB to query much faster. You’d want to use an index anytime you have a lot of data so that it can get/find what it needs much faster.
2. **What is index cardinality and why is it important?** Index cardinality is a unique way that values are stored in specified columns within an index. This is important because it cardinality helps regulate the ideal query plan for each query each value of indexes are an estimate so this really helps to make sure that it is planned out correctly. It also helps decide weather to use the index or not in the joined operations.
3. **When should you not use indexes?** Indexes should not be used when there’s small data tables and also when columns are being manipulated often. There are also several other reasons as well.

**Bibliography**

Bradshaw, S., Chodorow, K., & Brazil, E. (2019). MongoDB The Definitive Guide. Sebastopol, CA: O'Reilly Media, Inc.