## **Indexing report**

*-Indexing is a data structure technique which allows you to quickly retrieve records from a database file.*

*-We can use indexing in our star schema model to optimize its performance and reduce the query processing and search for data from disk.*

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***1.The fact tables :***

*-We will use Bitmap indexes since fact tables has lots of rows and high cardinality which need a fast response time.*

*-Bitmap indexes are primarily intended for data warehousing applications where users query the data rather than update it. Also Bitmap indexing supports parallel create indexes and concatenated indexes.*

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***2.The dimension tables :***

-We will use Composite bitmap for low cardinality as it will make efficient use of memory and make the query fast as it will have binary values (0,1) instead of the actual data.

*\*****Composite bitmap suitable for :***-- gender   
-- channel\_type  
-- fair\_base\_type

-- promotion\_type  
-- booking\_type  
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-While B-tree for high cardinality data to make query faster as the columns will me very related and distinct.

*\*****B-tree suitable for :***

-- airport

-- flight\_num

-- city  
-- nationality

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\***we can also use DATE or DTTM index for our date dimensions.**

-- flight\_date

-- dept\_time

-- arrival\_date

-- arrival\_time

# Reference:

1. <https://docs.oracle.com/cd/A97630_01/server.920/a96520/indexes.htm>
2. <https://help.sap.com/docs/SAP_IQ/a8937bea84f21015a80bc776cf758d50/a72f4f5b84f21015abf2e649a0aada80.html?locale=en-US>
3. <https://www.youtube.com/watch?v=vvbU35610mI>