

*** In this example, the CBO can't consider the index as the ALBUM_ID column does not have a NOT NULL constraint as so could potentially contain NULL values. The index therefore might not reference these rows.

```
SQL> SELECT * from big_dwh_table ORDER BY album_id;
```

1000000 rows selected.

Execution Plan

Plan hash value: 1027792380

Id	Operation	Name	Rows	Bytes	TempSpc	Cost (%CPU)	Time
0	SELECT STATEMENT		1000K	28M		9293 (1)	00:01:52
1	SORT ORDER BY		1000K	28M	91M	9293 (1)	00:01:52
2	TABLE ACCESS FULL	BIG_DWH_TABLE	1000K	28M		1104 (2)	00:00:14

*** By re-writing the query to ignore NULL values, the index can now be considered and indeed has been selected to retrieve all rows from the table thus eliminating the need for the sort operation

```
SQL> SELECT * from big_dwh_table WHERE album_id IS NOT NULL ORDER BY album_id;
```

1000000 rows selected.

Execution Plan

Plan hash value: 2432356315

Id	Operation	Name	Rows	Bytes	Cost(%CPU)	Time
0	SELECT STATEMENT		1000K	28M	7076 (1)	00:01:25
1	TABLE ACCESS BY INDEX ROWID	BIG_DWH_TABLE	1000K	28M	7076 (1)	00:01:25
* 2	INDEX FULL SCAN	BIG_DWH_ALBUM_ID_I	1000K		2106 (1)	00:00:26