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**Question 1.**

1. Using the Airport KLX Table, describe an example that illustrates the insertion anomaly

A: When adding a new row to the table, we need to make sure that the information we are handling is consistent with existing rows. For example, if value “NULL” is added for any of the columns on the table, that will cause an insertion anomaly since none of the columns for this table should take in NULL as it’s value.

1. Using the AIRPORT KLX Table, describe an example that illustrates the deletion anomaly

A: Deletion anomaly is when there is a deleted record that may contain attributes that shouldn’t be deleted. For example, if Terminal A was to be deleted from the airline table, it will affect all the airlines that are assigned to Terminal A since airlines are assigned to one and only one terminal.

1. Using the AIRPORT KLX Table, describe an example that illustrates the modification anomaly

A: Modification anomaly is when incorrect data has been inserted and change must be made for the rows/tables/columns that contains the incorrect data. If new Terminal D opened but we added a terminal with terminal ID E, we would have to update all columns that lists Terminal E instead of D.

1. In the AIRPORT KLX Table, identify
2. Full (key) Functional Dependencies

A: AirlineID -> AirlineName

1. Partial (key) Functional Dependencies (if any)

A: Date -> NumberOfDepartingFlights

1. Transitive Functional Dependencies (if any)

A: Terminal ID -> NumberOfGates

**Question 2.**