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1. Any bookings made by passengers must be assigned to a cabin, however a cabin is not necessarily occupied by a passenger to be recorded in the database.
2. Any bookings must be assigned to a particular cruise, however a cruise does not require a booking for its information to be recorded in the database.
3. Any cruise must be assigned to a ship, but a ship does not need to be assigned to a cruise for its information to be recorded in the database.
4. A cruise port entity is only recorded when there are instances of a cruise ship landing at a port.

**Explanation of why the surrogate key booking\_id was chosen:**

There is no primary key in the model that consists of more than two attributes. Out of the three entities with a composite primary key, BOOKING is the weakest entity as both attributes of its primary key are foreign key, which makes BOOKING have an identifying relationship with both PASSENGER and CRUISE. Hence, I added the surrogate key booking\_id for BOOKING in order for it to become a strong entity that can exist without depending on both PASSENGER and CRUISE.

I used AI in the following ways:

**(i) generate ideas or structure suggestions, for assistance with understanding core concepts, or other substantial foundational and preparatory activity for the assessment.**

I used Copilot (<https://copilot.microsoft.com>) to help understand the terms used in the assignment in detail, which includes lookup tables and surrogate keys.