The entity life history for booking

Question First normal form (1NF) means that Extra_Form entity must have a primary key. Duplicate field is removed. Second normal form (2NF) means that Bar_Lounge_Restaurant is put to the separate table and relationship between it and Extra_Form is created.

Third normal form (3NF). Following attributes that are not dependent upon the primary key:

Hotel, Bar_Lounge_Restaurant_ID, Date, Charge and Signature1. So they must be moved to separate table and relationship between it and Extra_Form must be created.

Boyce-Codd Normal Form (BCNF) differs from the 3NF only when there are more than one candidate keys and the keys are composite and overlapping. In case of Extra_Form it does not differ. Here is the conceptual schemas at each normal form:

E-R diagram

Question 2

Figure below shows the entity life history for Booking. A Booking's life begins with a " Booking creation", and ends with a " Booking end". In between, its " Booking life" consists of some " Booking events".

In between an Booking's definition and its end, Booking is subject to series of " Booking events". The iterative nature of " Booking events" is shown by the asterisk (*) in the upper right corner of that event's box. The set of events constitute Booking's " Booking life": " Booking Form is filled", " Room Schedule is filled with booking details ", " Reservation Diary is filled with booking details" and " Deposit is taken".

" Booking end" can occur either by " Rooms are released " or by " Cancellation". Anyone of them must be only one of the optional kinds listed, this is shown by the (o) in the upper right corner.