DBMS Revision

17.1 B

ER Example

- Notown Records has decided to store information about musicians who perform on its albums in a database.
- Each musician that records at Notown has an SSN, a name, an address, and a phone number.
- Each instrument that is used in songs recorded at Notown has a name (e.g., guitar, synthesizer, flute) and a musical key (e.g., C, B-flat, E-flat).
- Each album that is recorded on the Notown label has a title, a copyright date, a format (e.g., CD or MC), and an album identifier.
- Each song recorded at Notown has a title and an author.
- Each musician may play several instruments, and a given instrument may be played by several musicians.
- Each album has a number of songs on it, but no song may appear on more than one album.
- Each song is performed by one or more musicians, and a musician may perform a number of songs.
- Each album has exactly one musician who acts as its producer. A musician may produce several albums, of course.
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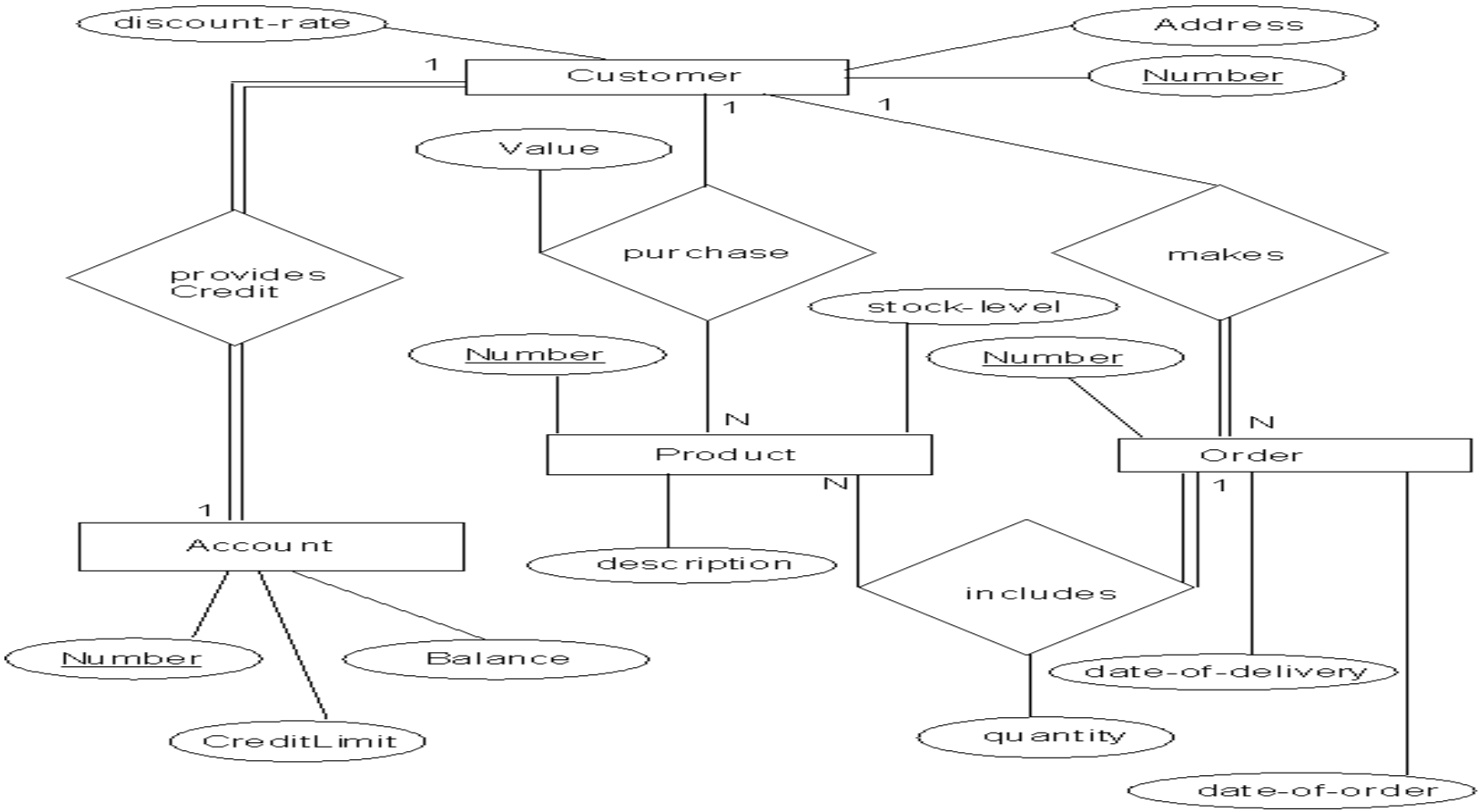
- Draw an ER diagram for the above scenario. Be sure to indicate all key and cardinality constraints and any assumptions that you make.

Convert the following ER Diagram to the Relational Model



Normalization….

HEALTH HISTORY REPORT

pet id	pet name	pet type	pet age	owner	visit date	Proc no	procedure
246	Rover	Dog	12	Sam Cook	Jan 13/2014 Mar 27/2014 Apr 02/2015	01 10 05	rabies vaccination examine and treat heart worm test
341	Jerry	Cat	4	Sam Cook	Jan 23/2014 Jan 13/2015	01 01	rabies vaccination rabies vaccination
519	Tweedy	Bird	2	Terry Kim	Apr 30/2014 Apr 30/2015	20 12	annual check up eye wash

Consider the above health history report. It can be converted to un-normalized form relational model as follows.

Pet [pet_id, pet_name, pet_type, pet_age, owner, (visitdate, procedure_no, procedure_name)]

Convert above un-normalized relation to Third Normal Form. **You must provide appropriate justifications/reasons for each change you make during the normalization process.**