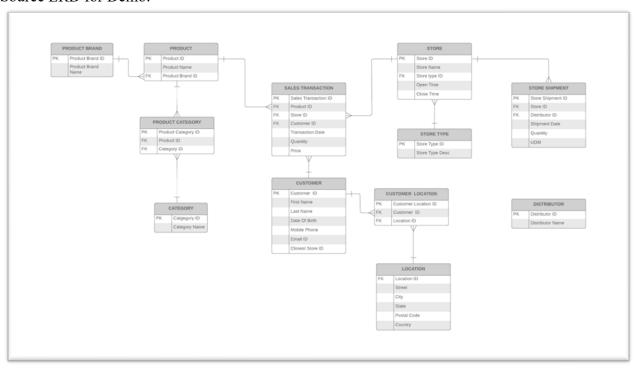
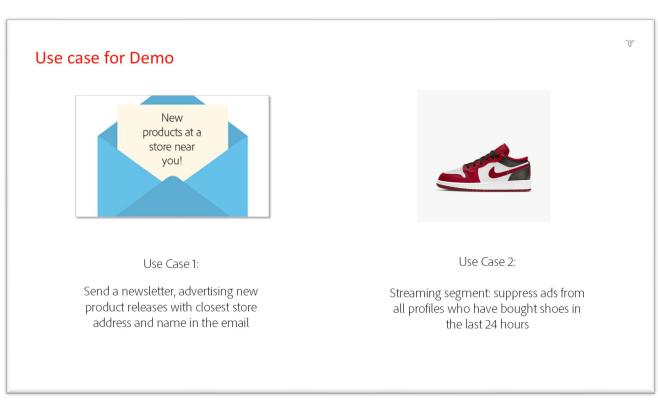
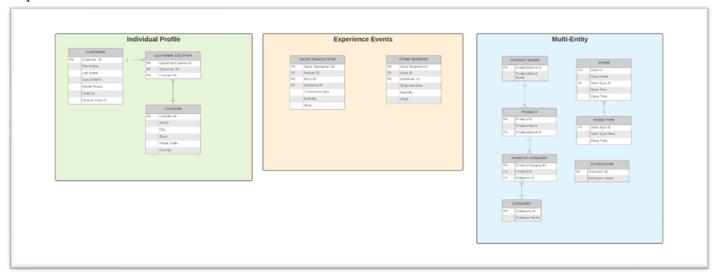
Source ERD for Demo:



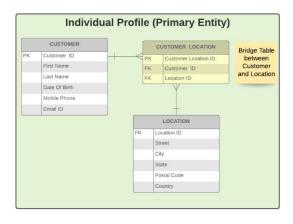


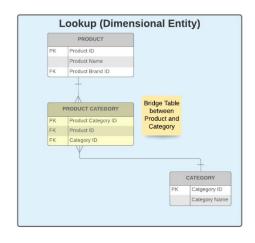
Step 1: Sort



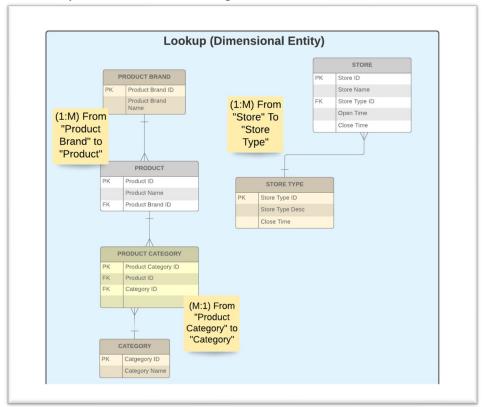
Step 2: Identify

2.1 Identify bridge tables

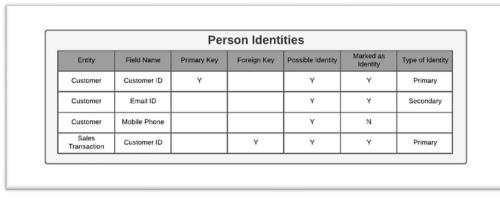




2.1 Identify 1:M & M:1 relationships

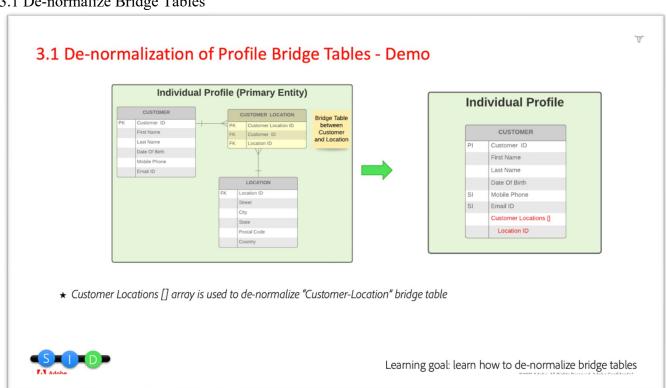


2.2 Identify person and non-person identities, and primary identities

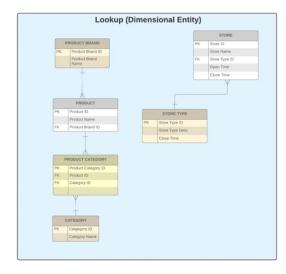


Non-Person Identities						
Entity	Field Name	Primary Key	Foreign Key	Possible Identity	Marked as Identity	Type of Identit
Product	Product ID	Y		Y	Υ	Primary
Product	Product Type ID		Y	N	N	
Store	Store ID	Υ		Y	Υ	Primary
Store	Store Type ID		Y	N	N	
Sales Transaction	Sales Transaction ID	Υ		N	N	
Sales Transaction	Product ID		Y	Y	Y	Reference / Relationship
Sales Transaction	Store ID		Y	Y	Y	Reference / Relationship

3.1 De-normalize Bridge Tables



3.1 De-normalization of Lookup Bridge Tables - Demo





- ★ Any helper table associated with a lookup table must be denormalized onto the lookup table, irrespective of the cardinality of the relationship
- ★ Examples:
 - ★ Brand Name & Category name are de-normalized onto the product schema because only one lookup hop is permitted from profile or event
 - ⋆ Product Category bridge table de-normalizes as a Product Categories [] array on the product because bridge tables are always de-normalized as arrays

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3.2 De-normalization for Personalization - Demo

- ★ Closest store name and address are added to support the personalization use case
- ★ Example:
 - ★ Send a newsletter email advertising new product releases with closest store address and name





Learning goal: learn how to de-normalize for personalization

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3.3 De-normalization for Streaming Segmentation - Demo

- ★ Data used in segmentation for streaming needs to either be denormalized on the profile or on the event
- **★** Example
 - ★ Streaming segment: suppress all profiles who have bought shoes in the last 24hours from advertisements.





Learning goal: learn how to de-normalize for streaming segmentation