

6.

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CREATE TABLE Calendar (  
    CalId VARCHAR2(16),  
    CalDay NUMERIC,  
    CalMonth NUMERIC,  
    CalYear NUMERIC,  
    CalWeek NUMERIC,  
    CONSTRAINT CalPK PRIMARY KEY (CalId)  
);  
  
CREATE TABLE Product (  
    ProdNo VARCHAR2(16),  
    ProdType VARCHAR2(64),  
    ProdCategory VARCHAR2(64),  
    CONSTRAINT ProdPK PRIMARY KEY (ProdNo, ProdType)  
);  
  
CREATE TABLE Franchise (  
    FrNo VARCHAR2(16),  
    FrRegion VARCHAR2(64),  
    FrZip NUMERIC,  
    FrModelType VARCHAR2(64),  
    CONSTRAINT FrNo PRIMARY KEY (FrNo)  
);  
  
CREATE TABLE Customer2 (  
    CustNo VARCHAR2(16),  
    CustType VARCHAR2(64),  
    CustZip NUMERIC,  
    CustMembershipType VARCHAR2(64),  
    BecameAMember VARCHAR2(16),  
    RegisteredAt VARCHAR2(16),  
    CONSTRAINT CustPK PRIMARY KEY (CustNo),  
    CONSTRAINT BecameAMemberFK FOREIGN KEY (BecameAMember)  
        REFERENCES Calendar (CalId),  
    CONSTRAINT RegisteredAtFK FOREIGN KEY (RegisteredAt)  
        REFERENCES Franchise (FrNo)  
);  
  
CREATE TABLE RevenueFact (  
    RevFactNo VARCHAR2(16),  
    RevFactSalesAmt NUMERIC,  
    PurchasedOn VARCHAR(16),  
    FromSaleOf VARCHAR2(16),  
    CONSTRAINT RevFactPK PRIMARY KEY (RevFactNo),  
    CONSTRAINT FromSaleOfFK FOREIGN KEY (FromSaleOf)  
        REFERENCES RevenueFact (RevFactNo),
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CONSTRAINT PurchasedOnFK FOREIGN KEY (PurchasedOn)
REFERENCES Calendar (CalId)
);
```

Mappings:

- a. Product: Either merchandise, services, or events (denoted by the ProdType). The ID's are from the respective operational tables for merchandise and services, or a default value for events. The ProdType is used in the key to maintain entity integrity. The ProdCategory is mapped from the merchandise type or the service category or a default value for events.
- b. Calendar: Dates for revenue facts and also membership dates. Revenue fact purchase dates are mapped from the Sale table, ServPurch table or the event spreadsheet. The year -> month -> day are hierarchical dimensions. The week belongs to a separate hierarchy week -> day.
- c. Customer: Member customers, anonymous customers, and corporate customers (for events) denoted by CustType. CustType is used in the key to maintain entity integrity. Member customer ID, names, zips, franchise (when applicable), membership dates and membership types are mapped from the member table. Corporate customer ID, names, franchise, and possibly the zip are mapped (or derived) from the event spreadsheet. All fields - including the ID for anonymous customers - have non-strict relationships to the fact table that will need to be resolved with default values.
- d. Franchise: Related to membership or event revenue. ID, Region, Zip and ModelType are mapped from the Franchise table or derived from the event spreadsheets. Region and ZIP could have a hierarchical relationship Region -> Zip.
- e. Revenue: This is the unit sale for services purchased and events, or the quantity times the selling price for merchandise