Simple SQL

Elements of Databases
September 11, 2017

Announcements:

- Today: Practice problems will use Athena & LucidChart
- Very important: Secure AWS account credentials
- Still looking for project partner?

1)What does SQL stand for?

A)Strong Query Language
B)Structured Question Language
C)Strong Question Language
D)Structured Query Language

2) SELECT statement is used to:

A)Update data in a table
B)Retrieve data from table(s)
C)Create a table
D)None of the above

3) The OR operator displays a record if at least one of the stated conditions is TRUE:

A)TRUE
B)FALSE

4) Which keyword is used to remove duplicates in a result (queried using SELECT) table?

A)DIFFERENT
B)UNIQUE
C)DISTINCT
D)None of the above

5) PostgreSQL supports array slicing and storing/querying JSON data

A)TRUE
B)FALSE

SQL

Data Manipulation Language (DML) statements

SELECT

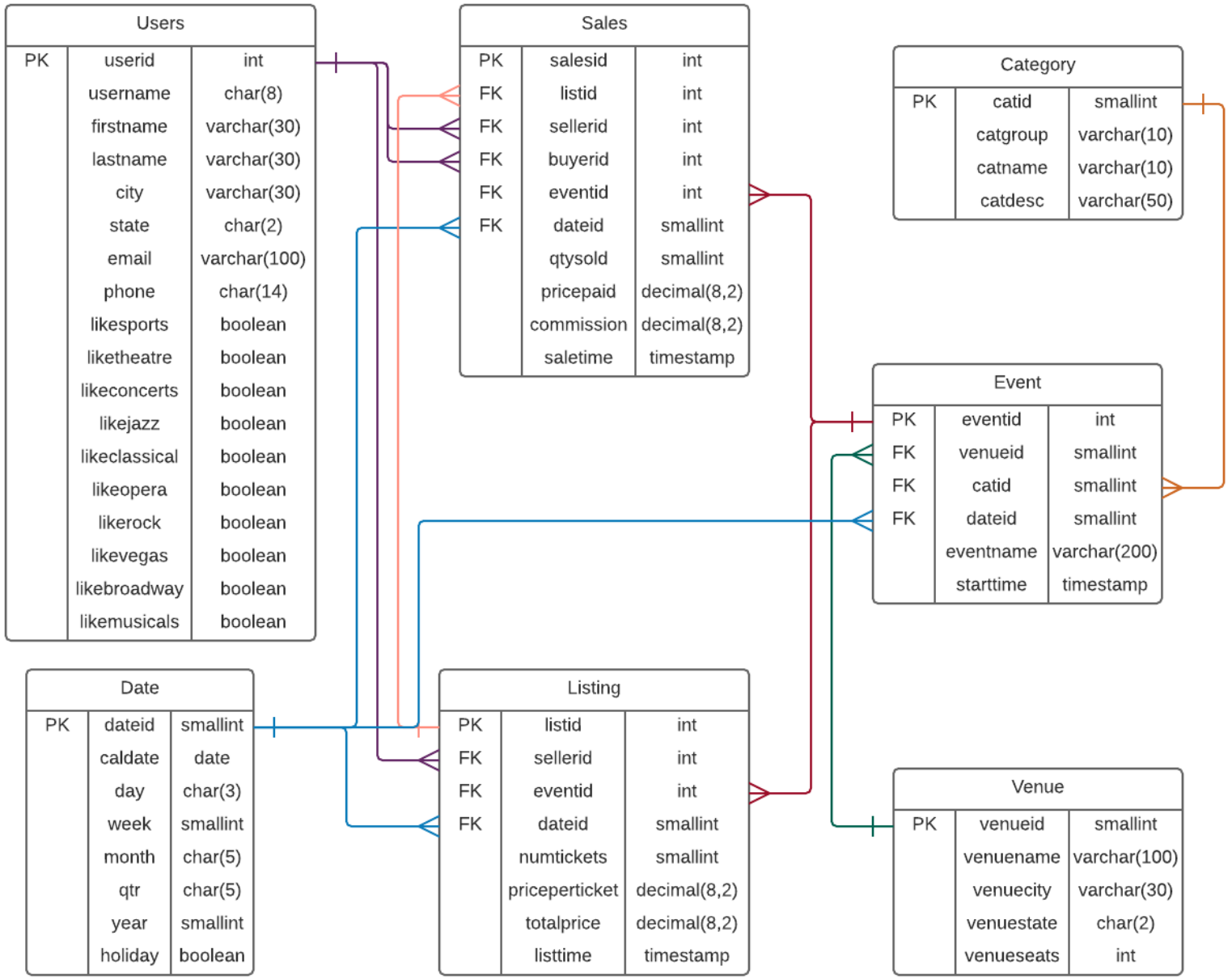
INSERT / UPDATE / DELETE

Data Definition Language (DDL) statements

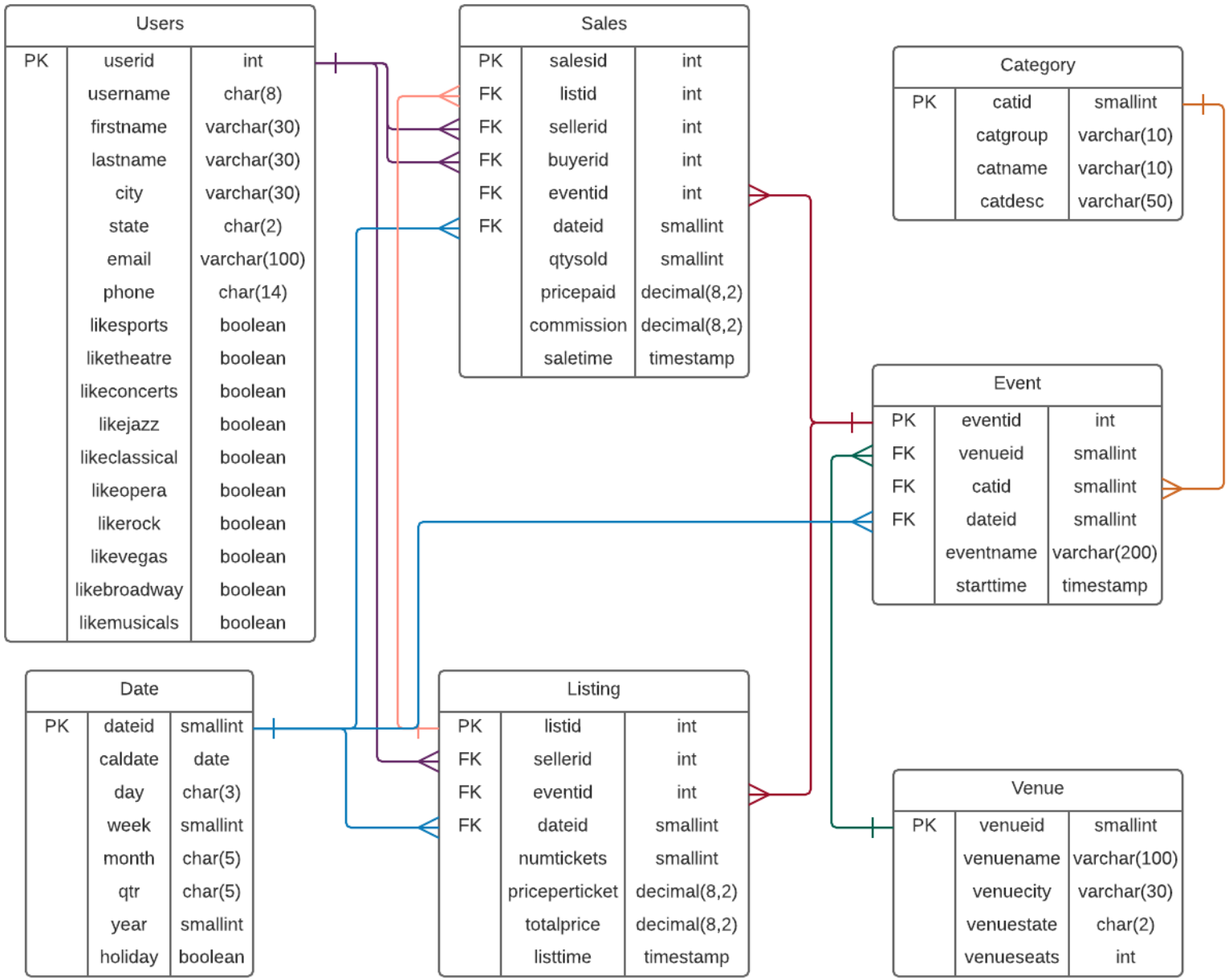
CREATE / ALTER / DROP

GRANT / REVOKE

ERD Example

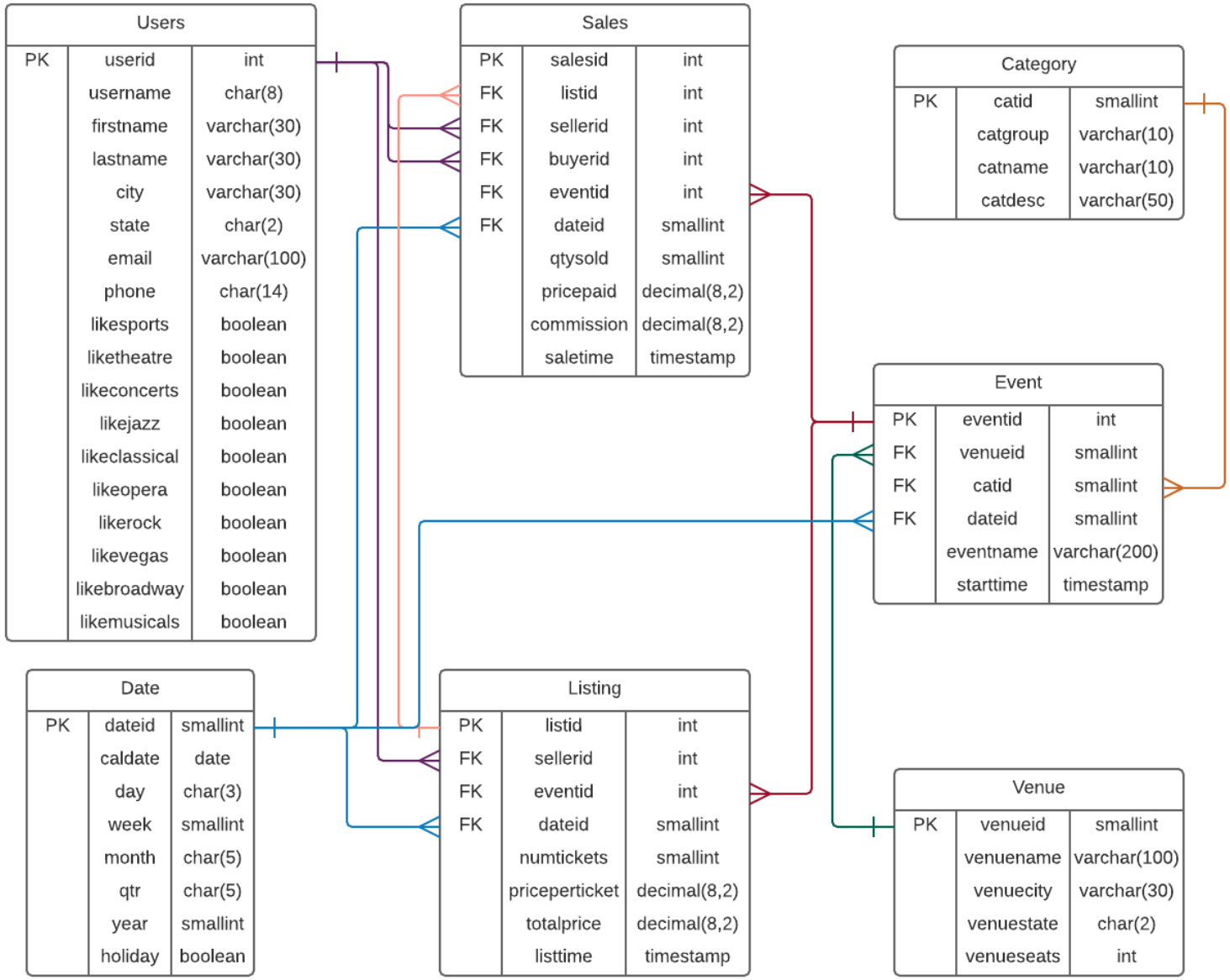

Users
PK userid int
username char(8)
firstname varchar(30)
lastname varchar(30)
city varchar(30)
state char(2)
email varchar(100)
phone char(14)
likesports boolean
liketheatre boolean
likeconcerts boolean
likejazz boolean
likeclassical boolean
likeopera boolean
likerock boolean
likevegas boolean
likebroadway boolean
likemusicals boolean
Sales
PK salesid int
FK listid int
FK sellerid int
FK buyerid int
FK eventid int
FK dateid smallint
qtysold smallint
pricepaid decimal(8,2)
commission decimal(8,2)
saletime timestamp
Category
PK catid smallint
catgroup varchar(10)
catname varchar(10)
catdesc varchar(50)
Event
PK eventid int
FK venueid smallint
FK catid smallint
FK dateid smallint
eventname varchar(200)
starttime timestamp
Date
PK dateid smallint
caldate date
day char(3)
week smallint
month char(5)
qtr char(5)
year smallint
holiday boolean
Listing
PK listid int
FK sellerid int
FK eventid int
FK dateid smallint
numtickets smallint
priceperticket decimal(8,2)
totalprice decimal(8,2)
listtime timestamp
Venue
PK venueid smallint
venuename varchar(100)
venuecity varchar(30)
venuestate char(2)
venueseats int

ERD & DDL




```
create table Users
(
  userid int primary key,
  username char(8),
  firstname varchar(30),
  lastname varchar(30),
  city varchar(30),
  state char(2),
  email varchar(100),
  phone char(14),
  likesports boolean,
  liketheatre boolean,
  likeconcerts boolean,
  ...
  likemusicals boolean
);
```

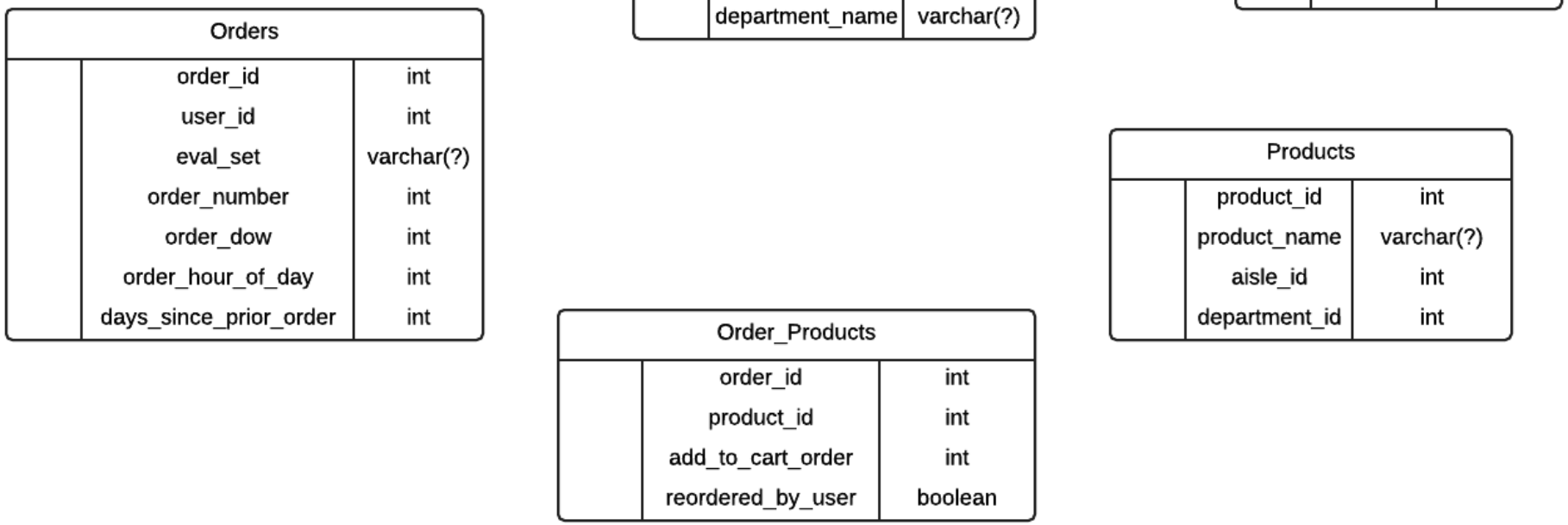
ERD & DDL



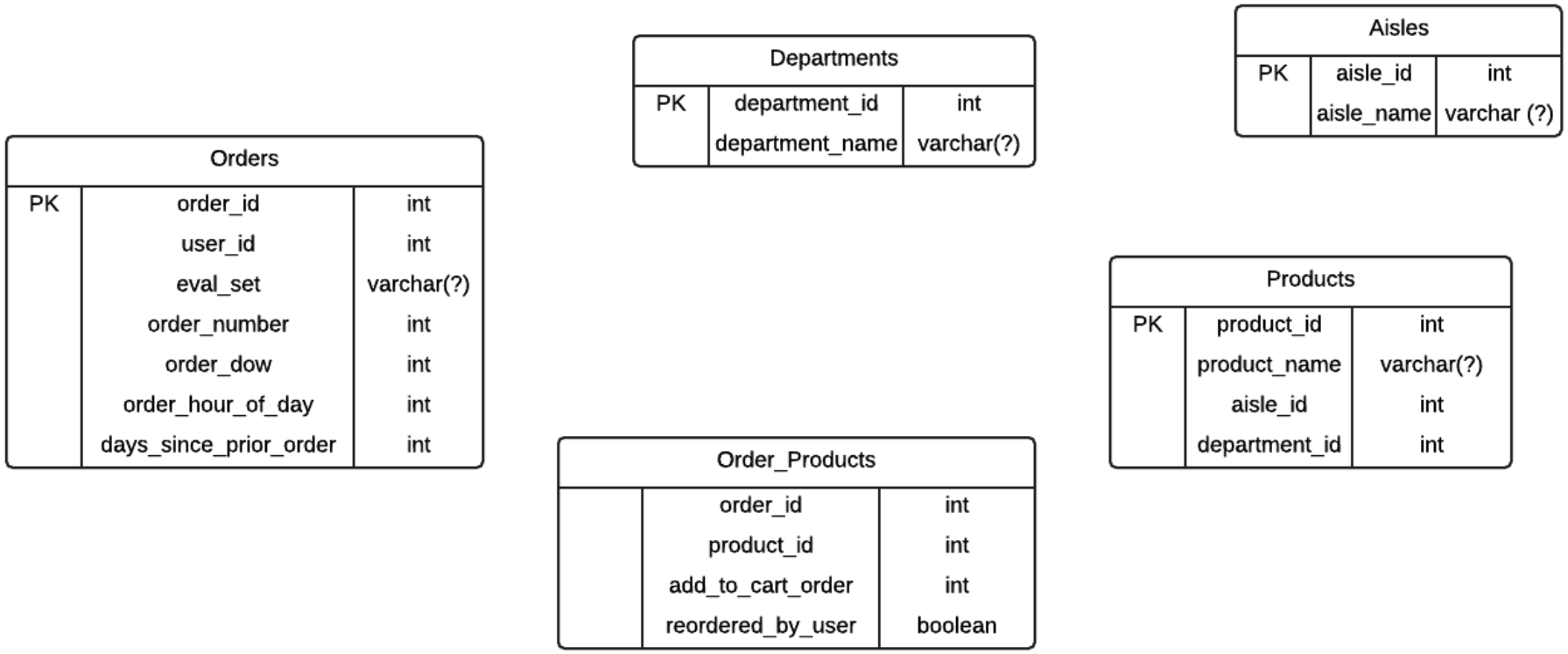

```
create table Sales
(
  salesid int primary key,
  listid int,
  sellerid int,
  buyerid int,
  eventid int,
  dateid smallint,
  qtysold smallint,
  pricepaid decimal(8,2),
  commission decimal(8,2),
  salestime timestamp,
  foreign key (listid)
   references Listing(listid),
  foreign key (sellerid)
   references Users(userid),
  foreign key (buyerid)
   references Users(userid),
  ...
);
```

Athena Demo

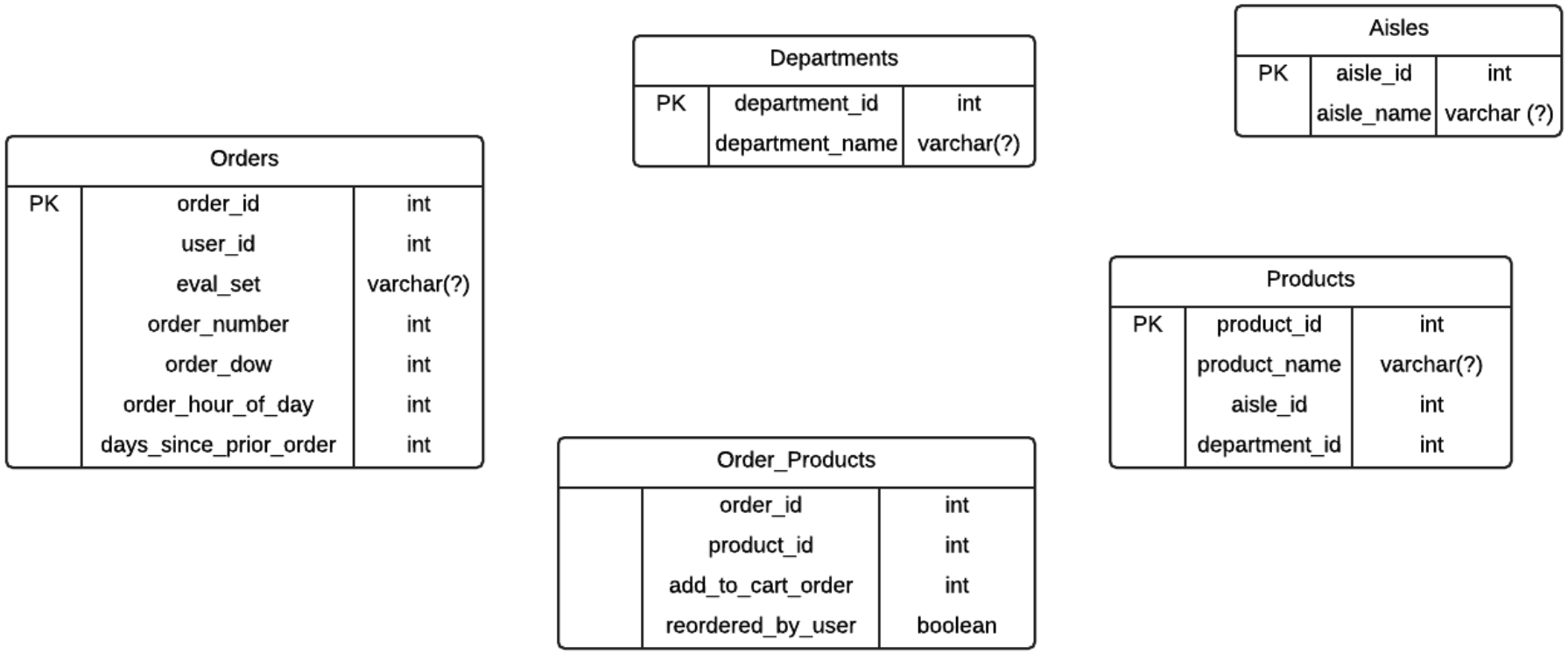
Instacart Entities



Practice Problem 1: Find the PK for Order_Products

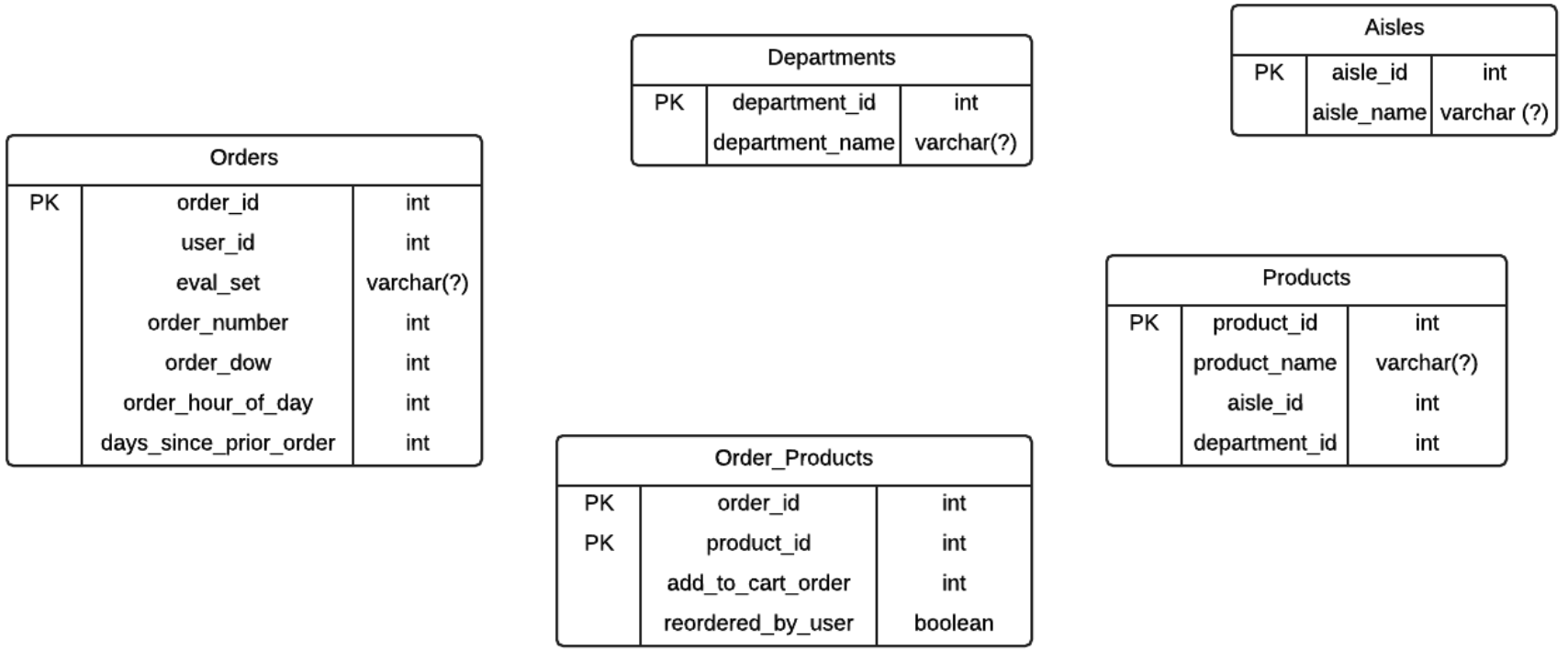


Practice Problem 1: Find the PK for Order_Products



A. order_id B. add_to_cart_order C. product_id D. order_id, product_id E. order_id, product_id, add_to_cart_order

Practice Problem 1: Solution



A. order_id B. add_to_cart_order C. product_id **D. order_id, product_id** E. order_id, product_id, add_to_cart_order