# SKI AND SNOWBOARD RENTAL AND SHOP

By Laura Florez

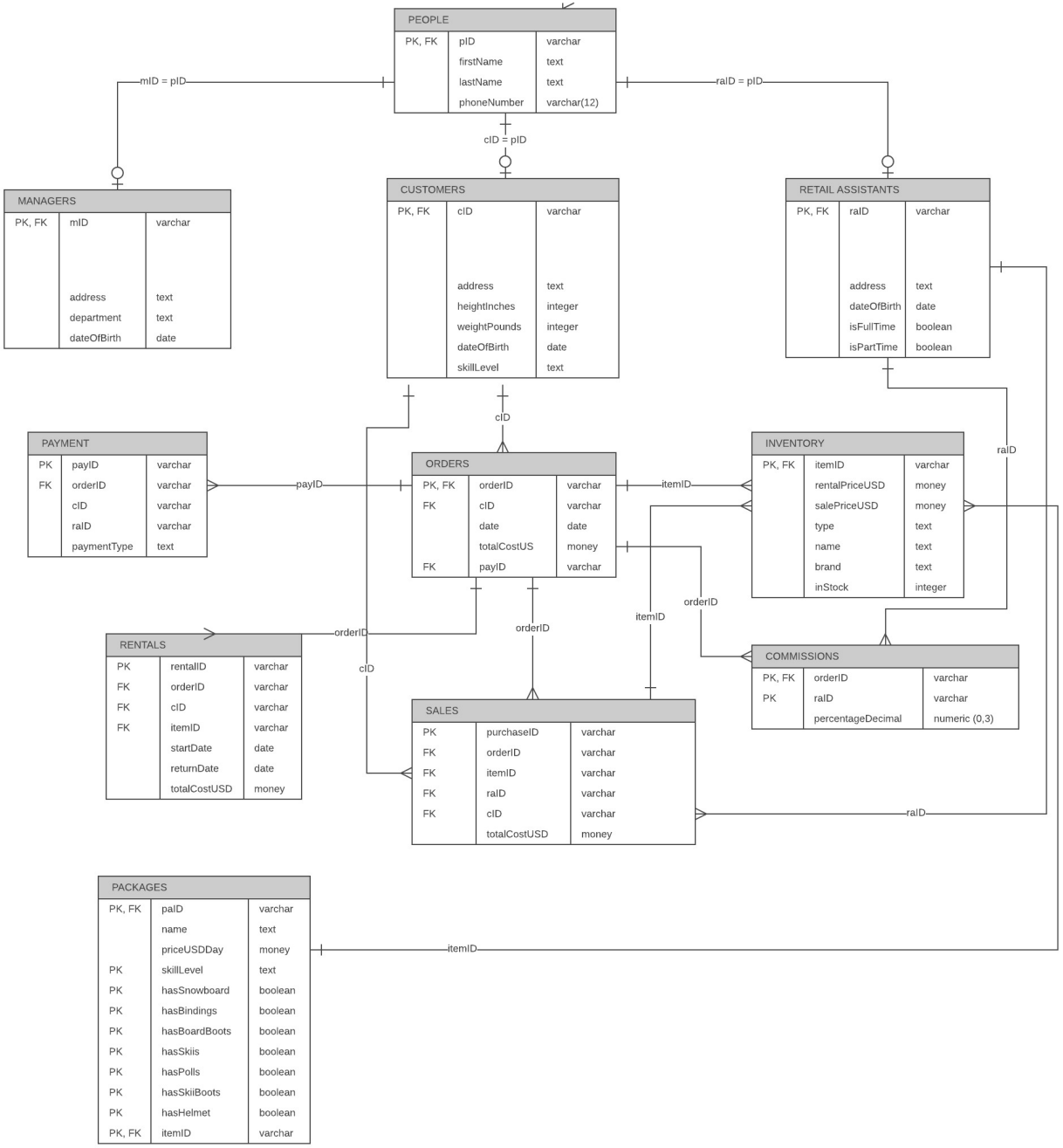
# EXECUTIVE SUMMARY

- Keeping up with inventory can be hard, specially with many different types of items being kept in storage. Many times items get lost or miscounted. This database design has been created in order to facilitate an easier way to keep track of inventory.

- The database has been designed based on a shop that does rentals and sells snowboarding and skiing gear. The store offers different packages that offer different amounts of gear based on the customer's age and skills levels. The customer has the opportunity to later purchase the gear that he or she used.

- The store will be able to keep track of what items are rented and sold, while also monitoring those items' movement in the inventory. The store will be able to keep track of the finances and commissions for any of their retail assistants. The database will have more features.

# ENTITY RELATIONSHIP DIAGRAM



# PEOPLE TABLE

- The table keeps track of any person's basic information, either customer, retail assistant or manager, that has been part of the database

```
CREATE TABLE People (
 pID varchar not null,
firstName text,
lastName text,
phoneNumber varchar(12),
primary key (pID)
);
```

| | pid character varying | firstname text | lastname text | phonenumber character varying(12) |
|---|---|---|---|---|
| 1 | p01 | Sarah | Jenkins | 203-322-4456 |
| 2 | p02 | Angela | Brown | 845-234-6796 |
| 3 | p03 | Ryan | Lant | 845-123-0954 |
| 4 | p04 | Kara | Park | 860-104-6788 |
| 5 | p05 | Rachel | Campbell | 914-111-3345 |
| 6 | p06 | Erin | Kelly | 213-109-0713 |
| 7 | p07 | Eric | Diaz | 631-657-3956 |
| 8 | p08 | Sara | Sanchez | 203-100-0234 |
| 9 | p09 | Daniela | Hollis | 203-520-7420 |
| 10 | p10 | Christina | Loya | 860-060-2092 |

# MANAGERS TABLE

- The table keeps track of anybody considered a manager, which entitles being the supervisor for a retail assistant

```
CREATE TABLE Managers (
  mID varchar not null references People(pID),
 department text,
  dateOfBirth date,
  primary key (mID)
);
```

| | mid<br>character varying | address<br>text | department<br>text | dateofbirth<br>date |
|---|---|---|---|---|
| 1 | p03 | 752 Black Bear Rd, Jamaica VT | Snowboarding | 1967-01-03 |
| 2 | p07 | 876 Lake Road, Dover VT | Skiing | 1975-03-21 |

# RETAIL ASSISTANTS

- The table keeps track of any person consider a retail assistant, which would include helping customers either renting or purchasing equipment

```
CREATE TABLE Retail_Assistants (
 raID varchar not null references People(pID),
address text,
 dateOfBirth date,
 isFullTime boolean,
 isPartTime boolean,
primary key (raID)
);
```

| | raid<br>character varying | address<br>text | dateofbirth<br>date | isfulltime<br>boolean | isparttime<br>boolean |
|---|---|---|---|---|---|
| 1 | p01 | 432 Main Street, Dover VT | 1996-12-19 | f | t |
| 2 | p02 | 88 Circle Drive, Jamaica VT | 1988-01-05 | t | f |
| 3 | p04 | 90 Circle Drive, Jamaica VT | 1987-01-05 | t | f |

# CUSTOMERS TABLE

- The table keeps track of any person considered a customer by purchasing or renting any gear

```
CREATE TABLE Customers (
 cID varchar not null references People(pID) ,
address text,
 heightInches integer,
 weightPounds integer,
 dateOfBirth date,
 skillLevel text,
 primary key (cID)
);
```

Output pane

Data Output | Explain | Messages | History

| | cid character varying | address text | heightinches integer | weightpounds integer | dateofbirth date | skilllevel text |
|---|---|---|---|---|---|---|
| 1 | p05 | 32 North Rd, Poughkeepsie NY | 64 | 130 | 1979-07-07 | Beginner |
| 2 | p06 | 21 Hollywood Rd, Los Angeles CA | 66 | 150 | 1981-04-20 | Advanced |
| 3 | p08 | 1 Whispering Way, Brookfield CT | 62 | 120 | 1994-03-27 | Intermediate |
| 4 | p09 | 9 Candlewood Rd, New Milford CT | 66 | 145 | 1996-12-18 | Intermediate |
| 5 | p10 | 7 Milton Rd, Litchfield CT | 60 | 120 | 1994-11-19 | Beginner |

# ORDERS TABLE

- The table keeps track of anything the customers placed an order for

```
CREATE TABLE Orders (
  orderID varchar not null unique,
  cID varchar not null references Customers(cID),
  date date,
  totalCostUS money,
primary key (orderID)
);
```

| | orderid character varying | cid character varying | date date | totalcostus money |
|---|---|---|---|---|
| 1 | o01 | p05 | 2000-11-12 | $120.00 |
| 2 | o02 | p06 | 2000-01-23 | $100.00 |
| 3 | o03 | p08 | 2002-02-22 | $120.00 |
| 4 | o04 | p09 | 2010-03-20 | $150.00 |
| 5 | o05 | p10 | 2011-10-12 | $160.00 |
| 6 | o06 | p05 | 2000-11-12 | $200.00 |

# PAYMENT TABLE

- The table keeps track of all payments made for the orders by the customers

```
CREATE TABLE Payment(
  payID varchar not null unique,
  orderID varchar not null references Orders(orderID),
  cID varchar not null references Customers(cID),
  raID varchar not null references Retail_Assistants(raID),
  paymentType text,
  primary key (payID)
);
```

| | payid character varying | orderid character varying | cid character varying | raid character varying | paymenttype text |
|---|---|---|---|---|---|
| 1 | pt01 | o01 | p05 | p02 | credit card |
| 2 | pt02 | o02 | p06 | p02 | credit card |
| 3 | pt03 | o03 | p08 | p04 | credit card |
| 4 | pt04 | o04 | p09 | p01 | check |
| 5 | pt05 | o05 | p10 | p04 | cash |
| 6 | pt06 | o06 | p05 | p02 | debit card |

# INVENTORY TABLE

- The table keeps track of all items in the shop, regardless if they are bought or rented

```
CREATE TABLE Inventory (
  itemID varchar not null unique,
  rentalPriceUSD money,
  salePriceUSD money,
  type text,
  name text,
  brand text,
);
```

Data Output | Explain | Messages | History

| | itemid character varying | rentalpriceusd money | salepriceusd money | type text | name text | brand text | instock integer |
|---|---|---|---|---|---|---|---|
| 1 | i0001 | $10.00 | $100.00 | snowboard | black raven | Burton | 100 |
| 2 | i0002 | $10.00 | $120.00 | snowboard | fast lion | Burton | 100 |
| 3 | i0003 | $10.00 | $150.00 | snowboard | fast lion 2.0 | Burton | 100 |
| 4 | i0004 | $10.00 | $200.00 | snowboard | ZPX | Burton | 100 |
| 5 | i0005 | $10.00 | $80.00 | ski | Bolt100 | Solomon | 100 |
| 6 | i0006 | $10.00 | $130.00 | ski | Plowers | Solomon | 100 |
| 7 | i0007 | $10.00 | $50.00 | ski | FlyThrough | Solomon | 100 |
| 8 | i0008 | $10.00 | $210.00 | helmet | G124 | Giro | 100 |
| 9 | i0009 | $10.00 | $30.00 | helmet | G098 | Giro | 100 |
| 10 | i0010 | $10.00 | $30.00 | helmet | G000 | Giro | 100 |
| 11 | i0011 | $10.00 | $30.00 | helmet | G567 | Giro | 100 |
| 12 | i0012 | $10.00 | $30.00 | helmet | G037 | Giro | 100 |
| 13 | i0013 | $10.00 | $30.00 | helmet | G987 | Giro | 100 |
| 14 | i0014 | $10.00 | $20.00 | boardBoots | BB-X | Burton | 100 |
| 15 | i0015 | $10.00 | $25.00 | boardBoots | BB-S | Burton | 100 |
| 16 | i0016 | $10.00 | $40.00 | boardBoots | BB-P | Burton | 100 |
| 17 | i0017 | $10.00 | $15.00 | skiBoots | SB-5 | Solomon | 100 |
| 18 | i0018 | $10.00 | $25.00 | skiBoots | SB-6 | Solomon | 100 |
| 19 | i0019 | $10.00 | $30.00 | skiBoots | SB-0 | Solomon | 100 |
| 20 | i0020 | $10.00 | $40.00 | Bindings | X12 | Burton | 100 |
| 21 | i0021 | $10.00 | $40.00 | Bindings | X05 | Burton | 100 |
| 22 | i0022 | $10.00 | $40.00 | Bindings | X04 | Burton | 100 |
| 23 | i0023 | $10.00 | $30.00 | poles | PX453 | Solomon | 100 |
| 24 | i0024 | $10.00 | $30.00 | poles | PX546 | Solomon | 100 |

OK.

# SALES TABLE

- The table keeps track of the items that are purchased by the customer

```
CREATE TABLE Sales (
  purchaseID varchar not null unique,
  orderID varchar not null references Orders(orderID),
  itemID varchar not null references Inventory(itemID),
  raID varchar not null references Retail_Assistants(raID),
  cID varchar not null references Customers(cID),
  totalCostUSD money,
  primary key (purchaseID)
);
```

| | purchaseid character varying | orderid character varying | itemid character varying | raid character varying | cid character varying | totalcostusd money |
|---|---|---|---|---|---|---|
| 1 | po001 | o01 | i0001 | p02 | p05 | $100.00 |
| 2 | po002 | o02 | i0002 | p02 | p06 | $120.00 |
| 3 | po003 | o03 | i0003 | p04 | p08 | $150.00 |
| 4 | po004 | o04 | i0004 | p01 | p09 | $200.00 |

# RENTALS TABLE

- The table keeps track of all items or packages that customers rented

```
CREATE TABLE Rentals (
 rentalID varchar not null unique,
 orderID varchar not null references Orders(orderID),
 cID varchar not null references Customers(cID),
 paID varchar not null references Packages((paID),
 startDate date,
 returnDate date,
 totalCostUSD money,
 primary key (rentalD, paID)
 );
```

# PACKAGES TABLE

- The table keeps track of what items each package has to offer to the customer

```
CREATE TABLE Packages (
  paID varchar not null,
  name` text,
  priceUSD money,
  skillLevel text not null,
  hasSnowboard boolean not null,
  hasBindings boolean not null,
  hasBoardBoots boolean not null,
  hasSkiis boolean not null,
  hasPolls boolean not null,
  hasSkiiBoots boolean not null,
  hasHelmet boolean not nill,
  itemID varchar not null references Invetnory(itemID(,
  primary key (paID, skillLevel, hasSnowboard, hasBindings, hasBoardBoots, hasSkiis,
hasPolls,
  hasSkiiBoots, `hasHelmet),
);

CREATE TYPE skillLevel AS ENUM ('Beginner' , 'Intermediate', 'Advanced');
```

| | paid character varying | name text | priceusd money | skilllevel text | hassnowboard boolean | hasbindings boolean | hasboardboots boolean | hasskiis boolean | haspolls boolean | hasskiiboots boolean | hashelmet boolean | itemid character varying |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | pa001 | bronzePack | $40.00 | beginner | t | t | t | f | f | f | t | i0001 |
| 2 | pa001 | bronzePack | $40.00 | beginner | t | t | t | f | f | f | t | i0008 |
| 3 | pa001 | bronzePack | $40.00 | beginner | t | t | t | f | f | f | t | i0014 |
| 4 | pa001 | bronzePack | $40.00 | beginner | t | t | t | f | f | f | t | i0020 |
| 5 | pa002 | silverPack | $60.00 | intermediate | t | t | t | f | f | f | t | i0002 |
| 6 | pa002 | silverPack | $60.00 | intermediate | t | t | t | f | f | f | t | i0009 |
| 7 | pa002 | silverPack | $60.00 | intermediate | t | t | t | f | f | f | t | i0015 |
| 8 | pa002 | silverPack | $60.00 | intermediate | t | t | t | f | f | f | t | i0021 |
| 9 | pa003 | goldPack | $80.00 | advanced | t | t | t | f | f | f | t | i0003 |
| 10 | pa003 | goldPack | $80.00 | advanced | t | t | t | f | f | f | t | i0010 |
| 11 | pa003 | goldPack | $80.00 | advanced | t | t | t | f | f | f | t | i0016 |
| 12 | pa003 | goldPack | $80.00 | advanced | t | t | t | f | f | f | t | i0022 |
| 13 | pa004 | redPack | $40.00 | beginner | f | f | f | t | t | t | t | i0005 |
| 14 | pa004 | redPack | $40.00 | beginner | f | f | f | t | t | t | t | i0011 |
| 15 | pa004 | redPack | $40.00 | beginner | f | f | f | t | t | t | t | i0017 |
| 16 | pa004 | redPack | $40.00 | beginner | f | f | f | t | t | t | t | i0023 |
| 17 | pa005 | bluePack | $60.00 | intermediate | f | f | f | t | t | t | t | i0006 |
| 18 | pa005 | bluePack | $60.00 | intermediate | f | f | f | t | t | t | t | i0012 |
| 19 | pa005 | bluePack | $60.00 | intermediate | f | f | f | t | t | t | t | i0018 |
| 20 | pa005 | bluePack | $60.00 | intermediate | f | f | f | t | t | t | t | i0024 |
| 21 | pa006 | yellowPack | $80.00 | advanced | f | f | f | t | t | t | t | i0007 |
| 22 | pa006 | yellowPack | $80.00 | advanced | f | f | f | t | t | t | t | i0013 |
| 23 | pa006 | yellowPack | $80.00 | advanced | f | f | f | t | t | t | t | i0019 |
| 24 | pa006 | yellowPack | $80.00 | advanced | f | f | f | t | t | t | t | i0025 |

# COMISSIONS TABLE

- The table keeps track of how much money is earned by a retail assistant based of the total cost of a customer's order

```
CREATE TABLE Comissions (
  orderID varchar not null references Orders(orderID),
  raID varchar not null references Retail_Assistants(raID),
  percentageDecimal numeric (0,3),
  primary key (orderID, raID)
);
```

Output pane

Data Output | Explain | Messages | History

| | orderid character varying | raid character varying | percentagedecimal numeric(4,3) |
|---|---|---|---|
| 1 | o01 | p02 | 0.030 |
| 2 | o02 | p02 | 0.050 |
| 3 | o03 | p04 | 0.050 |
| 4 | o04 | p01 | 0.050 |