For Database called PetStore

CREATE TABLE SALES\_REP (

REP\_ID CHAR (2) PRIMARY KEY,

FIRST\_NAME CHAR (20),

LAST\_NAME CHAR (20),

ADDRESS CHAR (20),

CITY CHAR (15),

STATE CHAR (2),

POSTAL CHAR (5),

CELL\_PHONE CHAR (12),

COMMISSION DECIMAL (7, 2),

RATE DECIMAL (3, 2))

INSERT INTO SALES\_REP (REP\_ID, FIRST\_NAME, LAST\_NAME) VALUES ('25', 'Donna', 'Sanchez')

INSERT INTO SALES\_REP VALUES ('15', 'Donna', 'Smith', '312 Oak Rd', 'Powell', 'WY', '82440', '307-982-8401', 14912.92, 0.04);

INSERT INTO SALES\_REP VALUES ('20', 'Daniel', 'Jackson', '19 Lookout Dr', 'Elk Butte', 'WY', '82433', '307-833-9481', 0.00, 0.04)

INSERT INTO SALES\_REP VALUES ('10', 'Richard', 'Miller', '87 Pikes Dr', 'Ralston', 'WY', '82440', '307-406-4321', 20872.11, 0.06)

INSERT INTO SALES\_REP VALUES ('05', 'Susan', 'Garcia', '42 Mountain Ln', 'Cody', 'WY', '82414', '307-824-1245', 12743.16, 0.04)

CREATE TABLE CUSTOMER (

CUST\_ID CHAR (3) PRIMARY KEY,

FIRST\_NAME CHAR (20) NOT NULL,

LAST\_NAME CHAR (20) NOT NULL,

ADDRESS CHAR (20),

CITY CHAR (15),

STATE CHAR (2),

POSTAL CHAR (5),

EMAIL CHAR (25),

BALANCE DECIMAL (7, 2),

CREDIT\_LIMIT DECIMAL (7, 2),

REP\_ID CHAR (2)

)

INSERT INTO CUSTOMER

VALUES ('125', 'Joey', 'Smith', '17 Fourth St', 'Cody', 'WY', '82414', 'jsmith17@example.com', 80.68, 500.00, '05');

INSERT INTO CUSTOMER

VALUES ('182', 'Billy', 'Rufton', '21 Simple Cir', 'Garland', 'WY', '82435', 'billyruff@example.com', 43.13, 750.00, '10');

INSERT INTO CUSTOMER

VALUES ('227', 'Sandra', 'Pincher', '53 Verde Ln', 'Powell', 'WY', '82440', 'spinch2@example.com', 156.38, 500.00, '15');

INSERT INTO CUSTOMER

VALUES ('294', 'Samantha', 'Smith', '14 Rock Ln', 'Ralston', 'WY', '82440', 'ssmith5@example.com', 58.60, 500.00, '10');

INSERT INTO CUSTOMER VALUES ('314','Tom', 'Rascal', '1 Rascal Farm Rd',

'Cody', 'WY', '82414', 'trascal3@example.com', 17.25, 250.00, '15');

INSERT INTO CUSTOMER

VALUES ('375', 'Melanie', 'Jackson', '42 Blackwater Way', 'Elk Butte', 'WY', '82433', 'mjackson5@example.com', 252.25, 250.00, '05');

INSERT INTO CUSTOMER

VALUES ('435', 'James', 'Gonzalez', '16 Rockway Rd', 'Wapiti', 'WY', '82450', 'jgonzo@example.com', 230.40, 1000.00, '15');

INSERT INTO CUSTOMER

VALUES ('492', 'Elmer', 'Jackson', '22 Jackson Farm Rd', 'Garland', 'WY', '82435', 'ejackson4@example.com', 45.20, 500.00, '10'); INSERT INTO CUSTOMER VALUES ('543', 'Angie', 'Hendricks', '27 Locklear Ln', 'Powell', 'WY', '82440', 'ahendricks7@example.com', 315.00, 750.00,'05'); INSERT INTO CUSTOMER VALUES ('616', 'Sally', 'Cruz', '199 18th Ave', 'Ralston', 'WY', '82440', 'scruz5@example.com', 8.33, 500.00, '15'); INSERT INTO CUSTOMER VALUES ('721', 'Leslie', 'Smith', '123 Sheepland Rd', 'Elk Butte', 'WY', '82433', 'lsmith12@example.com', 166.65, 1000.00,'10'); INSERT INTO CUSTOMER VALUES ('795', 'Randy', 'Blacksmith', '75 Stream Rd', 'Cody', 'WY', '82414', 'rblacksmith6@example.com', 61.50, 500.00, '05');

CREATE TABLE INVOICES (

INVOICE\_NUM CHAR(5) PRIMARY KEY, INVOICE\_DATE DATE, CUST\_ID CHAR(3)

)

INSERT INTO INVOICES VALUES ('14216','2021-11-15', '125');

INSERT INTO INVOICES VALUES ('14219','2021-11-15', '227');

INSERT INTO INVOICES VALUES ('14222','2021-11-16', '294');

INSERT INTO INVOICES VALUES ('14224','2021-11-16', '182');

INSERT INTO INVOICES VALUES ('14228','2021-11-18', '435');

INSERT INTO INVOICES VALUES ('14231','2021-11-18', '125');

INSERT INTO INVOICES VALUES ('14233','2021-11-18', '435');

INSERT INTO INVOICES VALUES ('14237','2021-11-19', '616');

CREATE TABLE ITEM(

ITEM\_ID CHAR (4) PRIMARY KEY,

DESCRIPTION CHAR (30),

ON\_HAND DECIMAL (4, 0),

CATEGORY CHAR (3),

LOCATION CHAR (1),

PRICE DECIMAL (6, 2)

)

INSERT INTO ITEM VALUES ('AD72', 'Dog Feeding Station', 12, 'DOG', 'B', 79.99);

INSERT INTO ITEM

VALUES ('BC33', 'Feathers Bird Cage (12x24x18)', 10, 'BRD', 'B', 79.99);

INSERT INTO ITEM

VALUES ('CA75', 'Enclosed Cat Litter Station', 15, 'CAT', 'C', 39.99);

INSERT INTO ITEM

VALUES ('DT12', 'Dog Toy Gift Set', 27, 'DOG', 'B', 39.99);

INSERT INTO ITEM

VALUES ('FM23', 'Fly Mask with Ears', 41, 'HOR', 'C', 24.95);

INSERT INTO ITEM

VALUES ('FS39', 'Folding Saddle Stand', 12, 'HOR', 'C', 39.99);

INSERT INTO ITEM

VALUES ('FS42', 'Aquarium (55 Gallon)', 5, 'FSH', 'A', 124.99);

INSERT INTO ITEM

VALUES ('KH81', 'Wild Bird Food (25 lb)', 24, 'BRD', 'C',19.99);

INSERT INTO ITEM

VALUES ('LD14', 'Locking Small Dog Door', 14, 'DOG', 'A', 49.99);

INSERT INTO ITEM

VALUES ('LP73', 'Large Pet Carrier', 23, 'DOG', 'B', 59.99);

INSERT INTO ITEM

VALUES ('PF19', 'Pump & Filter Kit', 5, 'FSH', 'A', 74.99);

INSERT INTO ITEM

VALUES ('QB92', 'Quilted Stable Blanket', 32, 'HOR', 'C', 119.99);

INSERT INTO ITEM

VALUES ('SP91', 'Small Pet Carrier', 18, 'CAT', 'B', 39.99);

INSERT INTO ITEM

VALUES ('UF39', 'Underground Fence System', 7, 'DOG', 'A', 199.99);

INSERT INTO ITEM

VALUES ('WB49', 'Insulated Water Bucket', 34, 'HOR', 'C', 79.99);

CREATE TABLE INVOICE\_LINE (

INVOICE\_NUM CHAR(5),

ITEM\_ID CHAR(4),

QUANTITY DECIMAL(3,0),

QUOTED\_PRICE DECIMAL(6,2),

PRIMARY KEY (INVOICE\_NUM, ITEM\_ID)

)

INSERT INTO INVOICE\_LINE VALUES ('14216','CA75', 3, 37.99);

INSERT INTO INVOICE\_LINE VALUES ('14219','AD72', 2, 79.99);

INSERT INTO INVOICE\_LINE VALUES ('14219','DT12', 4, 39.99);

INSERT INTO INVOICE\_LINE VALUES ('14222','LD14', 1, 47.99);

INSERT INTO INVOICE\_LINE VALUES ('14224','KH81', 4, 18.99);

INSERT INTO INVOICE\_LINE VALUES ('14228','FS42', 1, 124.99);

INSERT INTO INVOICE\_LINE VALUES ('14228','PF19', 1, 74.99);

INSERT INTO INVOICE\_LINE VALUES ('14231','UF39', 2, 189.99);

INSERT INTO INVOICE\_LINE VALUES ('14233','KH81', 1, 19.99);

INSERT INTO INVOICE\_LINE VALUES ('14233','QB92', 4, 109.95);

INSERT INTO INVOICE\_LINE VALUES ('14233','WB49', 4, 74.95);

INSERT INTO INVOICE\_LINE VALUES ('14237','LP73', 3, 54.95);

Procedural Progrmamin (what and how)

SQL up to this point was non-procedural

--QUERIES BEGIN HERE-----------------------------------------------------

--how many items are in the category Dog

SELECT COUNT(ITEM\_ID) itemCount FROM ITEM WHERE CATEGORY = 'Dog';

--find the total number of the store customers and the total of their balances

SELECT COUNT(CUST\_ID) NumCustomers, SUM(BALANCE) sumOfBalances FROM CUSTOMER;

--find the sum of all the balances, average balance, maximum balance, and minimum balance of all customers

SELECT AVG(BALANCE) avgBalance, MAX(BALANCE) maxBalance, MIN(BALANCE) minBalance FROM CUSTOMER;

--find the number of each customer that currently have an open order. List each customer only once

SELECT DISTINCT CUST\_ID FROM INVOICES

--count the number of each customer that currently have an open order list each customer once

SELECT COUNT(CUST\_ID) FROM INVOICES;

--count the number of customers that currently have invoices

SELECT COUNT(CUST\_ID) custID FROM INVOICES WHERE CUST\_ID IS NOT NULL ;

--list the item ID of each item in the category HOR

SELECT ITEM\_ID itemID FROM ITEM WHERE CATEGORY = 'HOR';

-- list the invoice number that contains an invoice line for an item in category HOR

SELECT INVOICE\_NUM FROM INVOICE\_LINE WHERE ITEM\_ID IN (SELECT ITEM\_ID FROM ITEM WHERE CATEGORY = 'HOR');

--for the baove = rather than IN will work only for 1 to 1 comparisons

--List customer ID, firstName, lastName, and the balances for customer whose balance exceeds the average balance of all customers

SELECT CUST\_ID,FIRST\_NAME, LAST\_NAME, BALANCE FROM CUSTOMER WHERE BALANCE > (SELECT AVG(BALANCE) FROM CUSTOMER);

--For each sales rep, list the repID, the average balance, of the rep's customers

SELECT s.REP\_ID, AVG(BALANCE) avgBalance FROM SALES\_REP s JOIN CUSTOMER c ON s.REP\_ID = c.REP\_ID GROUP BY s.REP\_ID;

SELECT REP\_ID, AVG(BALANCE) FROM CUSTOMER GROUP BY REP\_ID; --saleh's soln

--expand previous question: but list only the reps whos customers have an average balance greater than $100

SELECT REP\_ID , AVG(BALANCE) FROM CUSTOMER GROUP BY REP\_ID HAVING AVG(BALANCE) > 100;

--list each credit limit and the number of customers having each credit limit

SELECT COUNT(CUST\_ID) CountcustID, CREDIT\_LIMIT FROM CUSTOMER GROUP BY CREDIT\_LIMIT;

--expand the previous query to list only the credit limit held by more than two customers

SELECT COUNT(CUST\_ID) CountcustID, CREDIT\_LIMIT FROM CUSTOMER GROUP BY CREDIT\_LIMIT HAVING COUNT(CUST\_ID) > 2 ;