SQL Practice (Winter Break Home Work)

Q. 1 to 3 in the practical file

1.

```
CREATE TABLE employees
( employee_number int NOT NULL,
  last_name char(50) NOT NULL,
  first_name char(50) NOT NULL,
  salary int,
  dept_id int,
  CONSTRAINT employees_pk PRIMARY KEY (employee_number)
);

INSERT INTO employees
(employee_number, last_name, first_name, salary, dept_id)
VALUES
(1001, 'Smith', 'John', 62000, 500);

INSERT INTO employees
(employee_number, last_name, first_name, salary, dept_id)
VALUES
(1002, 'Anderson', 'Jane', 57500, 500);

INSERT INTO employees
(employee_number, last_name, first_name, salary, dept_id)
VALUES
(1003, 'Everest', 'Brad', 71000, 501);

INSERT INTO employees
(employee_number, last_name, first_name, salary, dept_id)
VALUES
(1004, 'Horvath', 'Jack', 42000, 501);
```

Q.1 Update the Salary of all employees by 20%.

Q.2 Print the Employee details in the decreasing order of their salary.

2.

```
CREATE TABLE suppliers
( supplier_id int NOT NULL,
  supplier_name char(50) NOT NULL,
  city char(50),
  state char(25),
  CONSTRAINT suppliers_pk PRIMARY KEY (supplier_id)
);

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(100, 'Microsoft', 'Redmond', 'Washington');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(200, 'Google', 'Mountain View', 'California');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(300, 'Oracle', 'Redwood City', 'California');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(400, 'Kimberly-Clark', 'Irving', 'Texas');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(500, 'Tyson Foods', 'Springdale', 'Arkansas');
```

```
INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(600, 'SC Johnson', 'Racine', 'Wisconsin');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(700, 'Dole Food Company', 'Westlake Village', 'California');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(800, 'Flowers Foods', 'Thomasville', 'Georgia');

INSERT INTO suppliers
(supplier_id, supplier_name, city, state)
VALUES
(900, 'Electronic Arts', 'Redwood City', 'California');
```

Q.1 Display the states (without repeatation) from the supplier table.

Q.2 Add a column Country in the table and set the value “USA”.

3.

```
CREATE TABLE customers
( customer_id int NOT NULL,
  last_name char(50) NOT NULL,
  first_name char(50) NOT NULL,
  favorite_website char(50),
  CONSTRAINT customers_pk PRIMARY KEY (customer_id)
);

CREATE TABLE orders
( order_id int NOT NULL,
  customer_id int,
  order_date date,
  CONSTRAINT orders_pk PRIMARY KEY (order_id)
);

INSERT INTO customers
(customer_id, last_name, first_name, favorite_website)
VALUES
(4000, 'Jackson', 'Joe', 'techonthenet.com');

INSERT INTO customers
(customer_id, last_name, first_name, favorite_website)
VALUES
(5000, 'Smith', 'Jane', 'digminecraft.com');

INSERT INTO customers
(customer_id, last_name, first_name, favorite_website)
VALUES
(6000, 'Ferguson', 'Samantha', 'bigactivities.com');

INSERT INTO customers
(customer_id, last_name, first_name, favorite_website)
VALUES
(7000, 'Reynolds', 'Allen', 'checkyourmath.com');

INSERT INTO customers
(customer_id, last_name, first_name, favorite_website)
VALUES
(8000, 'Anderson', 'Paige', NULL);
```

```
INSERT INTO customers
(customer_id, last_name, first_name, favorite_website)
VALUES
(9000, 'Johnson', 'Derek', 'techonthenet.com');

INSERT INTO orders
(order_id, customer_id, order_date)
VALUES
(1,7000,'2016/04/18');

INSERT INTO orders
(order_id, customer_id, order_date)
VALUES
(2,5000,'2016/04/18');

INSERT INTO orders
(order_id, customer_id, order_date)
VALUES
(3,8000,'2016/04/19');

INSERT INTO orders
(order_id, customer_id, order_date)
VALUES
(4,4000,'2016/04/20');

INSERT INTO orders
(order_id, customer_id, order_date)
VALUES
(5,null,'2016/05/01');
```

Q.1 Display the customer detail as Last name and First Name from the table above.
Q.2 Display the orders placed by “Smith” and “Reynolds” (Hint: Use both tables for the query)

These questions in Homework notebook

(Pre-requisits: Learn about GROUP BY,HAVING and AGGREGATE FUNCTIONS)

https://www.datacamp.com/community/tutorials/group-by-having-clause-sql

https://docs.thunderstone.com/site/texisman/summarizing_values.html

1.

Consider the tables *FLIGHTS* & *FARES*. Write SQL commands for the statements (i) to (iv) and give the outputs for SQL queries (v) & (vi).

Table : FLIGHTS

FNO	SOURCE	DEST	NO_OF_FL	NO_OF_STOP
IC301	MUMBAI	BANGALORE	3	2
IC799	BANGALORE	KOLKATA	8	3
MC101	DELHI	VARANASI	6	0
IC302	MUMBAI	KOCHI	1	4
AM812	LUCKNOW	DELHI	4	0
MU499	DELHI	CHENNAI	3	3

Table : FARES

FNO	AIRLINES	FARE	TAX
IC301	Indian Airlines	9425	5%
IC799	Spice Jet	8846	10%
MC101	Deccan Airlines	4210	7%
IC302	Jet Airways	13894	5%
AM812	Indian Airlines	4500	6%
MU499	Sahara	12000	4%

(i) Display flight number & number of flights from Mumbai from the table flights.

(ii) Arrange the contents of the table flights in the descending order of destination.

(iii) Increase the tax by 2% for the flights starting from Delhi.

(iv) Display the flight number and fare to be paid for the flights from Mumbai to Kochi using the tables, Flights & Fares, where the fare to be paid =fare+fare*tax/100.

(v) SELECT COUNT(DISTINCT SOURCE) FROM FLIGHTS;

(vi) SELECT FNO, NO_OF_FL, AIRLINES FROM FLIGHTS,FARES
WHERE SOURCE='DELHI' AND FLIGHTS.FNO=FARES.FNO

2.

Consider the table TEACHER given below. Write commands in SQL for (1) to (4) and output for (5) to (8)

TEACHER

ID	Name	Department	Hiredate	Category	Gender	Salary
1	Tanya Nanda	SocialStudies	1994-03-17	TGT	F	25000
2	Saurabh Sharma	Art	1990-02-12	PRT	M	20000
3	Nandita Arora	English	1980-05-16	PGT	F	30000
4	James Jacob	English	1989-10-16	TGT	M	25000
5	Jaspreet Kaur	Hindi	1990-08-01	PRT	F	22000
6	Disha Sehgal	Math	1980-03-17	PRT	F	21000
7	Siddharth Kapoor	Science	1994-09-02	TGT	M	27000
8	Sonali Mukherjee	Math	1980-11-17	TGT	F	24500

i. To display all information about teachers of PGT category.

ii. To list the names of female teachers of Hindi department.

iii. To list names, departments and date of hiring of all the teachers in ascending order of date of joining

iv. To count the number of teachers in English department.

v. SELECT MAX(Hiredate) FROM Teacher;

vi. SELECT DISTINCT(category) FROM teacher;

vii. SELECT COUNT(*) FROM TEACHER WHERE Category = "PGT"

viii. SELECT AVG(Salary) FROM TEACHER group by Gender;