

Objectiv

1. SQL SELECT : Join
2. SQL SELECT : Left Join
3. GROUP BY + Having
4. Nested Queries

Practical Work

Part 1:

1. Open HSQLDB and type in the following Query:

```
SET DATABASE SQL SYNTAX MYS TRUE
```

2. We create the tables for the following Schema:

```
Persons( personid, name, lastname, email, phone, country_id )
Country(country_id, name, phonecode)
```

3. Type the following SQL command for : Persons

```
CREATE TABLE Persons(
  personid INT NOT NULL AUTO_INCREMENT,
  name VARCHAR(100) ,
  lastname VARCHAR(100) ,
  email VARCHAR(100) ,
  phone VARCHAR(100) ,
  country_id INT ,
  PRIMARY KEY(personid) ,
  UNIQUE(email)
);
```

4. Type the following SQL command for : Persons

```
CREATE TABLE IF NOT EXISTS Country (
  country_id int auto_increment primary key,
  name varchar(45) NOT NULL ,
  phonecode int NOT NULL
);
```

5. Insert the following data into the table using INSERT

```
insert into Country (country_id , name,phonecode) values
(1, 'USA',1) , (2, 'Britain',44) , (3, 'China',86) ,
(4, 'Denmark',45) , (5, 'Egypt',20) ;
```

6. To search for all data in the table Persons

```
INSERT INTO Persons
  (name, lastname,email,phone, country_id ) VALUES
('Jerry', 'Yang','jerry@yahoo.com', '091123' , 3),
('Larry', 'Page','larry@google.com','099911' , 2),
('Bill', 'Gates','bill@live.com','099901' , 1),
('Michael', 'Dell','michael@dell.com','5138' , 3),
('Pierre', 'Omidyar','pierre@ebay.com','4838' , 4),
('Charles', 'Flint','charles@ibm.com','3838' , 2),
('Lee', 'Byung-chull','lee@samsung.com','4838' , 5),
('Steve', 'Jobs','steve@apple.com','5838' , 1),
('Bill', 'Hewlett','bill@hp.com','6838' , 0) ;
```

7. To find people with their country name:

```
SELECT Persons.name, Persons.lastname, Country.name AS
countryname FROM Persons, Country
WHERE Persons.country_id=Country.country_id ;
```

8. To find people with their country name from USA:

```
SELECT Persons.name, Persons.lastname, Country.name AS
countryname FROM Persons, country
WHERE Persons.country_id=Country.country_id
AND Country.name = 'USA';
```

Part 2:

1. To find people with their country name using LEFT JOIN:

```
SELECT Persons.name, Persons.lastname, Country.name AS
countryname FROM Persons LEFT JOIN Country
ON Persons.country_id=Country.country_id ;
```

2. To find people with their country name from USA:

```
SELECT Persons.name, Persons.lastname, Country.name AS
countryname FROM Persons LEFT JOIN Country
ON Persons.country_id=Country.country_id
WHERE Country.name = 'USA' ;
```

Part 3:

1. Find the number of people grouped by country

```
SELECT Country.name AS countryname, COUNT(*) AS total
FROM Persons, Country
WHERE Persons.country_id=Country.country_id
GROUP BY Country.country_id ;
```

2. Find the countries with a minimum of 2 persons

```
SELECT Country.name AS countryname, COUNT(*) AS total
FROM Persons, Country
WHERE Persons.country_id=Country.country_id
AND total>1
```

OR

```
SELECT Country.name AS countryname, COUNT(*) AS total
FROM Persons, Country
WHERE Persons.country_id=Country.country_id
GROUP BY Country.country_id
HAVING count(Persons.personid) > 1
```

Part 4:

1. Find the people from China

```
SELECT * FROM Persons WHERE
country_id IN (
  SELECT country_id FROM Country WHERE name='China' );
```

You can download HSQLDB from :

www.learndb.com/down/hsqldb.jar

Homework

Answer the following questions:

1. <http://www.learndb.com/quiz1>
2. <http://www.learndb.com/quiz2>

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