1. Step1:
   1. Retrieve the total number of patients, maximum weight of patients as well as patients’ average height.  
      select count(\*) as ‘Number of Patients’, max(weight) as ‘Max Weight’, avg(height) as ‘Average Height’ from Patient;

|  |  |  |
| --- | --- | --- |
| Number of Patients | Max Weight | Average Height |
| 4 | 201 | 67.0000 |

* 1. Retrieve patients whose height is greater than 70 with their names, medicines and medicine start date in format ‘mm-dd-yyy’.  
     select Patient\_Name, Med\_Name, date\_format(Start\_Date, '%m-%d-%Y') as Start\_Date  
     from Patient as p, Medicine as m  
     where p.Patient\_ID = m.Patient\_ID and height > 70;

|  |  |  |
| --- | --- | --- |
| Patient\_Name | Med\_Name | Start\_Date |
| Bart | ALCOHOL PREP PAD | 09-12-1998 |
| Bart | ALCOHOL 1.4% LIQUID | 05-03-2000 |
| Bart | ALCOHOL PREP PAD | 11-08-2006 |

* 1. Run the SQL statement with and without the where clause and describe the difference.  
     The difference between the two results is that the statement with the where clause restricted the row matchups on the same Patient\_IDs. So the statement without the where clause matched every row in Patient with every row in Medicine.

1. Load *DEMO08Q1.TXT*, *DRUG08Q1.TXT*, and *REAC08Q1.TXT* into a database named *MedicalData* as three tables *demo08q1*, *drug08q1*, and *reac08q1*, respectively.
   1. The .bat file:  
      @ECHO off  
      ::   
      :: Uses the MySQL monitor to run the SQL scripts that create

:: and populate the tables in the sample database.

"C:\Program Files\MySQL\MySQL Server 5.7\bin\mysql" -u root -p < "C:\Users\cvalle\Desktop\create-and-load.sql"

ECHO.

ECHO If no error message is shown, the databases named PatientDatabase was created successfully.

ECHO.

:: Display 'press any key to continue' message

PAUSE

* 1. The .sql script:  
     /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* SQL script file used to create the database named MedicalData

\* and load its tables from text files.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

DROP DATABASE IF EXISTS MedicalData;

CREATE DATABASE MedicalData;

USE MedicalData;

/\*\* Create the Demo table \*\*/

create table demo08Q1

(

ISR MEDIUMINT UNSIGNED NOT NULL,

CASE\_NUM INT NOT NULL,

I\_F\_COD ENUM('I','F') NOT NULL,

FOLL\_SEQ varchar(255),

IMAGE varchar(255) NOT NULL,

EVENT\_DT DATE,

MFR\_DT DATE,

FDA\_DT DATE NOT NULL,

REPT\_COD enum('EXP','PER','DIR') NOT NULL,

MFR\_NUM varchar(255),

MFR\_SNDR varchar(255),

AGE MEDIUMINT,

AGE\_COD enum('DEC','YR','MON','WK','DY','HR'),

GNDR\_COD enum('UNK','M','F','NS'),

E\_SUB enum('Y','N') NOT NULL,

WT SMALLINT UNSIGNED,

WT\_COD enum('KG','LBS','GMS'),

REPT\_DT DATE,

OCCP\_COD enum('MD','PH','OT','LW','CN'),

DEATH\_DT DATE,

TO\_MFR enum('Y','N'),

CONFID enum('Y','N'),

REPORTER\_COUNTRY varchar(255) NOT NULL

);

load data local infile "C:/Users/cvalle/Desktop/DEMO08Q1.TXT"

into table demo08q1

fields terminated by '$'

(ISR, CASE\_NUM, I\_F\_COD, @vFOLL\_SEQ, IMAGE, @vEVENT\_DT, @vMFR\_DT, @vFDA\_DT,

REPT\_COD, @vMFR\_NUM, @vMFR\_SNDR, @vAGE, @vAGE\_COD, @vGNDR\_COD,E\_SUB, @vWT, @vWT\_COD,

@vREPT\_DT, @vOCCP\_COD, @vDEATH\_DT, @vTO\_MFR, @vCONFID, REPORTER\_COUNTRY)

set

FOLL\_SEQ = nullif(@vFOLL\_SEQ, ''),

EVENT\_DT = case when @vEVENT\_DT = '' then null else STR\_TO\_DATE(@vEVENT\_DT, '%Y%m%d') end,

MFR\_DT = case when @vMFR\_DT = '' then null else STR\_TO\_DATE(@vMFR\_DT, '%Y%m%d') end,

FDA\_DT = STR\_TO\_DATE(@vFDA\_DT, '%Y%m%d'),

MFR\_NUM = nullif(@vMFR\_NUM, ''),

MFR\_SNDR = nullif(@vMFR\_SNDR, ''),

AGE = nullif(@vAGE, ''),

AGE\_COD = nullif(@vAGE\_COD, ''),

GNDR\_COD = nullif(@vGNDR\_COD, ''),

WT = nullif(@vWT, ''),

WT\_COD = nullif(@vWT\_COD, ''),

REPT\_DT = case when @vREPT\_DT = '' then null else STR\_TO\_DATE(@vREPT\_DT, '%Y%m%d') end,

OCCP\_COD = nullif(@vOCCP\_COD, ''),

DEATH\_DT = case when @vDEATH\_DT = '' then null else STR\_TO\_DATE(@vDEATH\_DT, '%Y%m%d') end,

TO\_MFR = nullif(@vTO\_MFR, ''),

CONFID = nullif(@vCONFID, '');

/\*\* Create the Drug table \*\*/

create table drug08Q1

(

ISR MEDIUMINT UNSIGNED NOT NULL,

DRUG\_SEQ INT UNSIGNED NOT NULL,

ROLE\_COD ENUM('PS','SS','C','I'),

DRUGNAME varchar(255) NOT NULL,

VAL\_VBM enum('1','2') NOT NULL,

ROUTE varchar(255),

DOSE\_VBM varchar(255),

DECHAL enum('Y','N','U','D'),

RECHAL enum('Y','N','U','D'),

LOT\_NUM varchar(255),

EXP\_DT DATE,

NDA\_NUM MEDIUMINT UNSIGNED

);

load data local infile "C:/Users/cvalle/Desktop/DRUG08Q1.TXT"

into table drug08q1

fields terminated by '$'

(ISR, DRUG\_SEQ, ROLE\_COD, DRUGNAME, VAL\_VBM, @vROUTE,

@vDOSE\_VBM, @vDECHAL, @vRECHAL, @vLOT\_NUM, @vEXP\_DT, @vNDA\_NUM)

set

ROUTE = nullif(@vROUTE, ''),

DOSE\_VBM = nullif(@vDOSE\_VBM, ''),

DECHAL = nullif(@vDECHAL, ''),

RECHAL = nullif(@vRECHAL, ''),

LOT\_NUM = nullif(@vLOT\_NUM, ''),

EXP\_DT = case when @vEXP\_DT = '' then null else STR\_TO\_DATE(@vEXP\_DT, '%Y%m%d') end,

NDA\_NUM = nullif(@vNDA\_NUM, '');

/\*\* Create the Reaction table \*\*/

create table reac08q1

(

ISR MEDIUMINT UNSIGNED NOT NULL,

PT varchar(255) NOT NULL

);

load data local infile "C:/Users/cvalle/Desktop/REAC08Q1.TXT"

into table reac08q1

fields terminated by '$';

1. Find one and only one SQL statement for each query problem.
   1. Retrieve the number of spontaneous reports in which the reported patient is female.   
      select count(\*) as ‘Number of Females in the Demographic table’ from demo08q1 where GNDR\_COD = 'F';

|  |
| --- |
| Number of Females in the Demographic table |
| 59770 |

* 1. Retrieve the reports in which both drug “SELBEX” and adverse reaction “BRONCHITIS” are reported. Include ISR#, drug name, and adverse reaction.  
     select reac.ISR as 'ISR#', DRUGNAME as 'Drug Name', PT as 'Adverse Reaction'

from reac08q1 as reac

join drug08q1 as drug on reac.ISR = drug.ISR

where DRUGNAME like '%SELBEX%'

and PT like '%BRONCHITIS%';

|  |  |  |
| --- | --- | --- |
| ISR# | Drug Name | Adverse Reaction |
| 5487689 | SELBEX | BRONCHITIS |
| 5491477 | SELBEX | BRONCHITIS |
| 5491529 | SELBEX | BRONCHITIS |

* 1. Retrieve the number of reports in which both drug “SELBEX” and adverse reaction “BRONCHITIS” are reported.  
     select count(reac.ISR) as 'Number of patients taking Selbex that got Bronchitis'

from reac08q1 as reac   
join drug08q1 as drug on reac.ISR = drug.ISR  
where DRUGNAME like '%SELBEX%'  
and PT like '%BRONCHITIS%';

|  |
| --- |
| Number of patients taking Selbex that got Bronchitis |
| 3 |