1. create a database called 'assignment' (Note please do the assignment tasks in this database)

mysql> CREATE DATABASE assignment;

Query OK, 1 row affected (0.42 sec)

2. Create the tables from assignment\_tables.sql and enter the records as specified in it.

3. Create a table called authors with the following columns

authorid , name

- choose appropriate datatypes for the columns

a) Insert the following data into the table

1, J K Rowling

2, Thomas Hardy

3, Oscar Wilde

4, Sidney Sheldon

5, Alistair Maclean

6, Jane Autsen

mysql> create table authors(authorid int, name varchar(255));

Query OK, 0 rows affected (2.02 sec)

mysql> insert into authors(authorid, name) values (1, "J K Rowling");

Query OK, 1 row affected (0.15 sec)

mysql> insert into authors(authorid, name) values (2, "Thomas Hardy");

Query OK, 1 row affected (0.16 sec)

mysql> insert into authors(authorid, name) values (3, "Oscar Wilde");

Query OK, 1 row affected (0.10 sec)

mysql> insert into authors(authorid, name) values (4, "Sidney Sheldon");

Query OK, 1 row affected (0.15 sec)

mysql> insert into authors(authorid, name) values (5, "Alistair Maclean");

Query OK, 1 row affected (0.10 sec)

mysql> insert into authors(authorid, name) values (6, "Jane Autsen");

Query OK, 1 row affected (0.14 sec)

mysql> select \* from authors;

+----------+------------------+

| authorid | name |

+----------+------------------+

| 1 | J K Rowling |

| 2 | Thomas Hardy |

| 3 | Oscar Wilde |

| 4 | Sidney Sheldon |

| 5 | Alistair Maclean |

| 6 | Jane Autsen |

+----------+------------------+

6 rows in set (0.06 sec)

b) Add a couple of authors of your choice

mysql> select \* from authors;

+----------+----------------------+

| authorid | name |

+----------+----------------------+

| 1 | J K Rowling |

| 2 | Thomas Hardy |

| 3 | Oscar Wilde |

| 4 | Sidney Sheldon |

| 5 | Alistair Maclean |

| 6 | Jane Autsen |

| 7 | Sun Zu |

| 8 | Niccolo Macchiavelli |

+----------+----------------------+

8 rows in set (0.00 sec)

c) Change 'Alistair Maclean' to 'Alastair McNeal'

mysql> update authors set name = "Alastair McNeal" where authorid = 5;

Query OK, 1 row affected (0.13 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from authors;

+----------+----------------------+

| authorid | name |

+----------+----------------------+

| 1 | J K Rowling |

| 2 | Thomas Hardy |

| 3 | Oscar Wilde |

| 4 | Sidney Sheldon |

| 5 | Alastair McNeal |

| 6 | Jane Autsen |

| 7 | Sun Zu |

| 8 | Niccolo Macchiavelli |

+----------+----------------------+

8 rows in set (0.07 sec)

4. Create a table called Books with the following columns

bookid, title, authorid

- choose appropriate datatypes for the columns

mysql> create table books(bookid int, title varchar(255), authorid int);

Query OK, 0 rows affected (1.21 sec)

a) Insert the following records

1,Harry Potter and the Philosopher's Stone,1

2,Harry Potter and the Chamber of Secrets,1

3,Harry Potter and the Half-Blood Prince,1

4,Harry Potter and the Goblet of Fire,1

5,Night Without End,5

6,Fear is the Key,5

7,Where Eagles Dare,5

8,Sense and Sensibility,6

9,Pride and Prejudice,6

10,Emma,6

11,Random Book,22

mysql> insert into books(bookid, title, authorid) values (1,"Harry Potter and the Philosopher's Stone",1),

-> (2,"Harry Potter and the Chamber of Secrets",1),

-> (3,"Harry Potter and the Half-Blood Prince",1),

-> (4,"Harry Potter and the Goblet of Fire",1),

-> (5,"Night Without End",5),

-> (6,"Fear is the Key",5),

-> (7,"Where Eagles Dare",5),

-> (8,"Sense and Sensibility",6),

-> (9,"Pride and Prejudice",6),

-> (10,"Emma",6),

-> (11,"Random Book",22);

Query OK, 11 rows affected (0.12 sec)

Records: 11 Duplicates: 0 Warnings: 0

mysql> select \* from books;

+--------+------------------------------------------+----------+

| bookid | title | authorid |

+--------+------------------------------------------+----------+

| 1 | Harry Potter and the Philosopher's Stone | 1 |

| 2 | Harry Potter and the Chamber of Secrets | 1 |

| 3 | Harry Potter and the Half-Blood Prince | 1 |

| 4 | Harry Potter and the Goblet of Fire | 1 |

| 5 | Night Without End | 5 |

| 6 | Fear is the Key | 5 |

| 7 | Where Eagles Dare | 5 |

| 8 | Sense and Sensibility | 6 |

| 9 | Pride and Prejudice | 6 |

| 10 | Emma | 6 |

| 11 | Random Book | 22 |

+--------+------------------------------------------+----------+

11 rows in set (0.06 sec)

b) Delete 'Random Book' from the table.

mysql> delete from books where bookid = 11;

Query OK, 1 row affected (0.12 sec)

mysql> select \* from books;

+--------+------------------------------------------+----------+

| bookid | title | authorid |

+--------+------------------------------------------+----------+

| 1 | Harry Potter and the Philosopher's Stone | 1 |

| 2 | Harry Potter and the Chamber of Secrets | 1 |

| 3 | Harry Potter and the Half-Blood Prince | 1 |

| 4 | Harry Potter and the Goblet of Fire | 1 |

| 5 | Night Without End | 5 |

| 6 | Fear is the Key | 5 |

| 7 | Where Eagles Dare | 5 |

| 8 | Sense and Sensibility | 6 |

| 9 | Pride and Prejudice | 6 |

| 10 | Emma | 6 |

+--------+------------------------------------------+----------+

10 rows in set (0.05 sec)

5. Rename the table Books to Favbooks and Authors to Favauthors.

mysql> alter table books RENAME to favbooks;

Query OK, 0 rows affected (1.11 sec)

mysql> alter table authors RENAME to favauthors;

Query OK, 0 rows affected (0.63 sec)

mysql> show tables;

+----------------------+

| Tables\_in\_assignment |

+----------------------+

| favauthors |

| favbooks |

+----------------------+

2 rows in set (0.07 sec)

6. Create the following tables. Use auto increment wherever applicable

a. Products

product\_id - primary key

product\_name - cannot be null and only unique values are allowed

description

supplier\_id - foreign key of supplier table

mysql> create table Products(product\_id int, product\_name varchar(255) NOT NULL, description varchar(255), supplier\_id int, PRIMARY KEY(product\_id), UNIQUE (product\_name), FOREIGN KEY(supplier\_id) REFERENCES Suppliers(supplier\_id));

Query OK, 0 rows affected (1.65 sec)

mysql> describe Products;

+--------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+-------+

| product\_id | int | NO | PRI | NULL | |

| product\_name | varchar(255) | NO | UNI | NULL | |

| description | varchar(255) | YES | | NULL | |

| supplier\_id | int | YES | MUL | NULL | |

+--------------+--------------+------+-----+---------+-------+

4 rows in set (0.09 sec)

b. Suppliers

supplier\_id - primary key

supplier\_name

location

mysql> create table Suppliers(supplier\_id int, supplier\_name varchar(255), location varchar(255), PRIMARY KEY(supplier\_id));

Query OK, 0 rows affected (0.69 sec)

mysql> describe suppliers;

+---------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------------+--------------+------+-----+---------+-------+

| supplier\_id | int | NO | PRI | NULL | |

| supplier\_name | varchar(255) | YES | | NULL | |

| location | varchar(255) | YES | | NULL | |

+---------------+--------------+------+-----+---------+-------+

3 rows in set (0.57 s

c. Stock

id - primary key

product\_id - foreign key of product table

balance\_stock

mysql> create table Stock(id int, product\_id int, balance\_stock int, PRIMARY KEY(id), FOREIGN KEY(product\_id) REFERENCES Products(product\_id));

Query OK, 0 rows affected (1.14 sec)

mysql> describe stock;

+---------------+------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------------+------+------+-----+---------+-------+

| id | int | NO | PRI | NULL | |

| product\_id | int | YES | MUL | NULL | |

| balance\_stock | int | YES | | NULL | |

+---------------+------+------+-----+---------+-------+

3 rows in set (0.13 sec)

7. Enter some records into the three tables.

mysql> insert into suppliers(supplier\_id, supplier\_name, location) values (100, "Amazon", "Bangalore"),

-> (200, "Flipkart", "Delhi"),

-> (300, "Snapdeal", "Mumbai");

Query OK, 3 rows affected (0.32 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into products(product\_id, product\_name, description, supplier\_id)

-> values

-> (1, "Notebook", "Ruled", 100),

-> (2, "Diary", "Blank",200),

-> (3, "Book", "Text",300);

Query OK, 3 rows affected (0.22 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> insert into stock(id, product\_id, balance\_stock) values

-> (1001, 1, 5000),

-> (1002, 2, 4000),

-> (1003, 3, 3000);

Query OK, 3 rows affected (0.18 sec)

Records: 3 Duplicates: 0 Warnings: 0

8. Modify the supplier table to make supplier name unique and not null.

mysql> alter table suppliers ADD CONSTRAINT UNIQUE (SUPPLIER\_NAME);

Query OK, 0 rows affected (1.34 sec)

Records: 0 Duplicates: 0 Warnings: 0

9. Modify the emp table as follows

a. Add a column called deptno

mysql> alter table emp ADD(deptno int);

Query OK, 0 rows affected (0.55 sec)

Records: 0 Duplicates: 0 Warnings: 0

b. Set the value of deptno in the following order

deptno = 20 where emp\_id is divisible by 2

mysql> update emp set deptno = 20 where (emp\_no%2);

Query OK, 50 rows affected (0.17 sec)

Rows matched: 50 Changed: 50 Warnings: 0

deptno = 30 where emp\_id is divisible by 3

mysql> update emp set deptno = 30 where (emp\_no%3);

Query OK, 67 rows affected (0.10 sec)

Rows matched: 67 Changed: 67 Warnings: 0

deptno = 40 where emp\_id is divisible by 4

mysql> update emp set deptno = 40 where (emp\_no%4);

Query OK, 75 rows affected (0.24 sec)

Rows matched: 75 Changed: 75 Warnings: 0

deptno = 50 where emp\_id is divisible by 5

mysql> update emp set deptno = 50 where (emp\_no%5);

Query OK, 80 rows affected (0.15 sec)

Rows matched: 80 Changed: 80 Warnings: 0

deptno = 10 for the remaining records.

mysql> update emp set deptno = 10 where emp\_no = NULL;

Query OK, 0 rows affected (0.07 sec)

Rows matched: 0 Changed: 0 Warnings: 0

10. Create a unique, hash index on the emp\_id column.

mysql> create index emp\_index on emp(emp\_no);

Query OK, 0 rows affected (0.90 sec)

Records: 0 Duplicates: 0 Warnings: 0