

Assignment 1

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1. a. I know HTML very well, so I skip it.
b. HTTP request to www.cs.umb.edu/cs637/hw1.html:

```
GET /cs637/hw1.html HTTP/1.1
Host: www.cs.umb.edu
```

HTTP response from www.cs.umb.edu/cs637/hw1.html:

```
HTTP/1.1 200 OK
Date: Fri, 13 Sep 2019 16:45:42 GMT
Server: Apache/2.4.18 (Ubuntu) OpenSSL/1.0.2g mod_wsgi/4.3.0 Python/

<html>
  <head>
    <meta http-equiv="content-type" content="text/html; charset=
    <meta name="generator" content="HTML Tidy for Windows (vers
    <title>CS637 hw1</title>
  </head>
  <body>
    ***
    ***
    ***
  </body>
</html>
```

2. 1-4:

```
SELECT winner
FROM nobel
WHERE yr >= 2000
      AND subject = 'Peace'
```

- 1-7:

```
SELECT winner
FROM nobel
WHERE winner LIKE 'john%'
```

- 2-2:

```
SELECT NAME
FROM world
WHERE gdp / population > (SELECT gdp / population
```

```
FROM world
WHERE NAME = 'United Kingdom')
AND continent = 'Europe'
```

2-4:

```
SELECT name, population
FROM world
WHERE population > (SELECT population
                     FROM world
                     WHERE name = 'Canada')
AND population < (SELECT population
                  FROM world
                  WHERE name = 'Poland')
```

2-6:

```
SELECT name FROM world
WHERE gdp > ALL(
    SELECT gdp FROM world
    WHERE continent = 'Europe' AND
    gdp IS NOT NULL
)
```

3-2:

```
SELECT DISTINCT continent
FROM world
```

3-4:

```
SELECT Count(name)
FROM world
WHERE area >= 1000000
```

3-6:

```
SELECT continent , Count(name) FROM world GROUP BY continent
```

4-3:

```
SELECT id, title, yr FROM movie
WHERE title LIKE '%Star Trek%'
ORDER BY yr
```

4-6:

```
SELECT name
FROM   actor
      join casting
        ON actor.id = casting.actorid
      join movie
        ON movie.id = casting.movieid
WHERE  casting.movieid = 11768
```

4-7:

```
SELECT name
FROM   actor
      join casting
        ON actor.id = casting.actorid
      join movie
        ON movie.id = casting.movieid
WHERE  movie.title = 'Alien'
```

4-9:

```
SELECT title
FROM   movie
WHERE  id IN (SELECT movieid
              FROM   actor
                  join casting
                    ON ( id = actorid )
              WHERE  name = 'Harrison Ford'
                  AND ord != 1)
```

3. a. Script:

```
Script started on Sun 15 Sep 2019 09:24:34 PM EDT
yiweiyao@topcat:~/cs637$ mysql -u yiweiyao -o [Kp
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4602
Server version: 5.6.33-0ubuntu0.14.04.1 (Ubuntu)
```

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Type 'help;' or '\h' for help. Type '\c' to clear the current input

```
mysql> use yiweiyaodb
```

```

Database changed
mysql> CREATE TABLE t1 (id INT , message VARCHAR(40));
Query OK, 0 rows affected (0.37 sec)

mysql> INSERT INTO TABLE t1 VALUES(1, 'first row ');
Query OK, 1 row affected (0.06 sec)

mysql> INSERT INTO t1 VALUES(2, 'second row ');
Query OK, 1 row affected (0.06 sec)

mysql> SELECT * FROM t1
-> ;
+-----+-----+
| id    | message    |
+-----+-----+
| 1     | first row  |
| 2     | second row |
+-----+-----+
2 rows in set (0.00 sec)

mysql> exit
Bye
yiweiyao@topcat:~/cs637$ exit
exit

```

Script done on Sun 15 Sep 2019 09:26:53 PM EDT

b. I have loaded your mysql database on topcat with the script successfully. Here is my script:

```

Script started on Sun 15 Sep 2019 09:38:27 PM EDT
yiweiyao@topcat:~/cs637/hw1$ mysql -u yiweiyao -p
Enter password:
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4606
Server version: 5.6.33-0ubuntu0.14.04.1 (Ubuntu)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input

mysql> source my_guitar_shop1.sql
Database changed
Query OK, 0 rows affected (0.34 sec)

Query OK, 0 rows affected (0.37 sec)

```

Query OK, 0 rows affected (0.29 sec)

Query OK, 3 rows affected (0.09 sec)
Records: 3 Duplicates: 0 Warnings: 0

Query OK, 10 rows affected (0.16 sec)
Records: 10 Duplicates: 0 Warnings: 0

```
mysql> exit
Bye
yiweiyao@topcat:~/cs637/hw1$ exit
exit
```

Script done on Sun 15 Sep 2019 09:39:14 PM EDT

4. a. Here is my program:

```
<?php
    $investment = 1000;
    $interest_rate = .1;
    $years = 25;
    $future_value = $investment;

    for ($i = 1; $i <= $years; $i++) {
        $future_value = ( $future_value + ($future_value * $interes
    }

    echo "future value: ".$future_value;
?>
```

I have run it successfully. Here is my result:

```
Script started on Mon 16 Sep 2019 11:51:55 AM EDT
yiweiyao@topcat:~/cs637/hw1$ php future_value.php
future value: 10834.705943388

yiweiyao@topcat:~/cs637/hw1$ exit
exit
```

Script done on Mon 16 Sep 2019 11:52:06 AM EDT

b. By changing the variable `$error_message` in the following code block, it can display a different error message. for example

```
11     if ($investment === FALSE ) {
12         $error_message = 'Please reenter a vaild number at In
13     }
```

Now if a user does not enter a number at Investment filed, it will display a new error message 'Please reenter a valid number at Investment filed' rather than 'Investment must be a valid number.'

5. I have set up my DevelopmentSetup successfully and no problems encountered.