MySQL

Exercise 1: Create and Insert into a Table

1. Create a table: Write a SQL statement to create a simple table **countries_YOUR NAME** including columns person_name, country_name and state
2. Write a SQL statement to insert a record with your own value into the table **countries_YOUR NAME**

Exercise 2: Extract data from databases on UCSC sever

1. Connect to a MySQL database at genome-mysql.cse.ucsc.edu. Login into BINF server and type

```
> mysql --user=genome --host=genome-mysql.cse.ucsc.edu -A
```

2. Choose a database called **hg19**

```
> USE hg19;
```

3. Shows the columns and their types in a table called **knownGene**

```
> DESCRIBE knownGene;
```

4. Select the first 100 rows in **knownGene** table

```
> SELECT name, chrom, strand, txStart, txEnd, proteinID FROM hg19.knownGene LIMIT 100;
```

Exercise 3: Export query data to a file

1. Create a text file called **getGene**. Open a unix terminal and type

```
> touch getGene
```

2. Copy and paste the follow MySQL code into **getGene**

```
SELECT name, chrom, strand, txStart, txEnd, proteinID FROM hg19.knownGene LIMIT 100;
```

3. Export query data to a file

```
> mysql --user=genome --host=genome-mysql.cse.ucsc.edu -A < getGene > ucscGene.txt
```

Question 1. Submit the ucscGene.txt

Exercise 4: Load data in a file to a table

1. Create a table called **genes_YOUR NAME** including columns name, chrom, strand, txStart, txEnd, proteinID
   ”

2. Load data in a file to a table

```
> LOAD DATA LOCAL INFILE "ucscGene.txt" INTO TABLE genes_YOUR NAME FIELDS TERMINATED BY "\t";
```

Question 2 *(Bonus for undergraduate students)*. If table **genes_YOUR NAME** already exist, will the above MySQL command overwrite table **genes_YOUR NAME**?