**Homework 1**

**Name**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Question 0 (SQL Environment Setup, 15pts)**

* Downloading Virtual Box and the corresponding virtual machine image
* Setup your lab environment according to the instruction in “Lab Environment Setup.pdf” and “MySQL Connection.pdf”
* Note: If you use the virtual machine image “cs317-lab”, you already have MySQL installed.

**What to submit**: the screenshots of a successful connection of MySQL using MySQL Workbench.

**For Question 1 and 2, you only need to submit your SQL scripts for each question. You can verify your script with your own MySQL database.**

**Question 1 (35 pts)**: Log into the database and create a table (relation) “**persons**” with the following attributes. You should select appropriate data type for each attribute.

Table name = “Person”,

Attributes:

P\_Id, primary key, not null

LastName, not null

FirstName

Address

**Question 2 (20 pts)**: Add an attribute “Phone”, CHAR(16) to the table “Person” with default value as “unlisted”

**Question 3 (30 pts):** Here is declaration of a relation **R**:

CREATE TABLE R(

a INT,

b VARCHAR(20),

c INT,

PRIMARY KEY (a, b)

);

R(a,b) currently contains the four tuples (0,’alice’,1), (1,’bob’,5), (2,’tom’,4), and (3,’jack’,5). Does R allow us to insert a new tuple (2,’alice’,1)? How about (1,’bob’,12)? Why?