**COP4710 – Theory and Structure of Databases**

**Summer 2016**

**Homework 1**

Due Sunday Night, May 15, 2016

***Eric Adams***

Give very short answers.

1. What makes a Relational Database “Relational” (Where does the name “Relational” come from)?

It comes from the word relation, which is a mathematical name for a type of set. This was used in Codd’s initial research report and set the tone for the relational database.

2. What is it called when data exists in a virtual world and doesn’t see the operating system or hardware?

This is called physical data independence.

3. What’s the difference between a Candidate Key and a Primary Key?

A candidate key is something that can be chosen as the primary key and there can be multiple per table. A primary key is used to identify a row in a table, and there can only be one primary key per table.

4. What’s the difference between a Primary Key and a Foreign Key?

A primary key is used to identify a row in its table, while a foreign key is used to connect rows from multiple tables.

5. Since a table has a Primary Key (like EmpNo), why would we care about Candidate Keys (like SSN)?

Candidate keys can be used to put a table in a different order, since it does just as good a job at identifying a row as the primary key.

6. We have two tables, Warehouse and Pallet. Here are their schemas:

Warehouse(WarehouseID, Address, City, State)

Pallet(PalletID, Weight, Height)

What can we add to the Pallet table so we know which warehouse it's in?

WarehouseID