**Brandon Fowler**

**CSCD 327-02**

**Lab # 1**

**1. a.** Relations are associations among multiple entities. Attributes are data-types that together describe an entity or relation. Domain refers to unique values which a data element may contain. A tuple is a record of data types in a table that describe an entity or relation. Degree is the number of columns in a table. Cardinality is the number of rows in a table.

**1. b.**  Examples of each term using the two tables EMP and DEPT: An example of relation between these two tables, is the connection that an employee works at a certain department. An attribute from the EMP table is EMPNO. The domain in the DEPTNO column is integers. An example of a tuple is any given row or set in the table, for example {7369, SMITH, CLERK, 7902, 1980-12-17, 800, , 20}. The degree of the EMP table is 8. The cardinality of the EMP table is 14.

**2. a.** A candidate key is a super key that cannot be broken down into subsets and remain a super key; and is therefore a minimal super key. A primary key is a chosen candidate key, usually chosen based on the mostly likely one that won't change. A foreign key is a primary key from another table.

**2. b.** Possible candidate keys in the EMP table are EMPNO and ENAME. A good, possible primary key, that should not change, is EMPNO. An example of a foreign key in the EMP table, is DEPTNO.

**3.** CREATE TABLE CATEGORY(CatCode varchar(2),CatDesc varchar(10));

**4.** CREATE TABLE EMPLOYEES(Job\_class varchar(4),Emp\_num int(5),Firstname varchar(15), Lastname varchar(15));

**5**. ALTER TABLE EMPLOYEES ADD EmpDate DATE; ALTER TABLE EMPLOYEES ADD EndDate DATE;

**6.** ALTER TABLE EMPLOYEES modify Job\_class varchar(2);

**7.** ALTER TABLE EMPLOYEES drop column EndDate;

**8.** ALTER TABLE EMPLOYEES RENAME TO JL\_EMPS;

**9.** CREATE TABLE EMP(EMPNO int(4),ENAME varchar(15),JOB varchar(15),MGR int(4),HIREDATE DATE,SAL int(4),COMM int(4),DEPTNO int(2)); CREATE TABLE DEPT(DEPTNO int(2),DNAME varchar(15),LOC varchar(15));