

SECTION 1

1)

Relation: shows the relationship of data stored in a format of tables, consists of rows and columns
(e.g. Tables EMP and DEPT in appendix 1 are both relations)

Attribute: a single field or columns in a relation/table
(e.g. DEPT has an attribute named DEPTNO)

Domain: the set of allowed values for each attribute
(e.g. DEPTNO in the table DEPT, has a domain of an integer)

Tuple: a single record or row of a relation/table
(e.g. EMP has a record containing:
EMPNO:7369, ENAME: SMITH, JOB: CLERK, MGR: 7902, HIREDATE: 1980-12-17, SAL: 800,
COMM: , DEPTNO: 20)

Degree: the number of attributes or columns that exists in the relation
(e.g. EMP has degree 8, DEPT has degree 3)

Cardinality: the number of tuples or rows that exists in the relation
(e.g. EMP has a cardinality of 14, DEPT has 4)

2)

Candidate Key: a minimal super key that cannot uniquely represent tuples in our tables with fewer attributes
(e.g. the EMPNO attribute in the table EMP and DEPTNO attribute in the table DEPT)

Primary Key: a candidate key chosen as the fundamental key to uniquely represent data in a relation
(e.g. the EMPNO candidate key and DEPTNO candidate key)

Foreign Key: another table's primary key
(e.g. EMP has a foreign key attribute named DEPTNO, which is a primary key for DEPT)

SECTION 2

3)

```
create database w19yang_DDL;
```

```
create table CATEGORY
(
    CatCode varchar(2),
    CatDesc varchar(10)
);
```

4)

```
create table EMPLOYEES
(
    Emp_num int(5),
    Lastname varchar(15),
    Firstname varchar(15),
    Job_class varchar(4)
);
```

5)

```
alter table EMPLOYEES
add EmpDate date,
add EndDate date;
```

```
6)
alter table EMPLOYEES
modify Job_class varchar(2);

7)
alter table EMPLOYEES
drop EndDate;

8)
rename table EMPLOYEES to JL_EMPS;
```

SECTION 3

```
9)
create database w19yang_1;

create table EMP
(
    EMPNO int(4) primary key,
    ENAME varchar(8),
    JOB varchar(9),
    MGR varchar(4),
    HIREDATE date,
    SAL varchar(4),
    COMM varchar(4),
    DEPTNO int(2)
);

create table DEPT
(
    DEPTNO int(2) primary key,
    DNAME varchar(10),
    LOC varchar(15)
);

10)
insert into EMP
(EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO)
values
(7369, 'SMITH', 'CLERK', '7902', '1980-12-17', '800', '', 20),
(7499, 'ALLEN', 'SALESMAN', '7698', '1981-02-20', '1600', '300', 30),
(7521, 'WARD', 'SALESMAN', '7698', '1981-02-22', '1250', '500', 30),
(7566, 'JONES', 'MANAGER', '7839', '1981-04-02', '2975', '', 20),
(7654, 'MARTIN', 'SALESMAN', '7698', '1981-09-28', '1250', '1400', 30),
(7698, 'BLAKE', 'MANAGER', '7839', '1981-05-01', '2850', '', 30),
(7782, 'CLARK', 'MANAGER', '7839', '1981-06-09', '2450', '', 10),
(7788, 'SCOTT', 'ANALYST', '7566', '1982-12-09', '3000', '', 20),
(7839, 'KING', 'PRESIDENT', '', '1981-11-17', '5000', '', 10),
(7844, 'TURNER', 'SALESMAN', '7698', '1981-09-08', '1500', '0', 30),
(7876, 'ADAMS', 'CLERK', '7788', '1983-01-12', '1100', '', 20),
```

```
(7900, 'JAMES', 'CLERK', '7698', '1981-12-03', '950', '', 30),  
(7902, 'FORD', 'ANALYST', '7566', '1981-12-03', '3000', '', 20),  
(7934, 'MILLER', 'CLERK', '7782', '1982-01-23', '1300', '', 10);
```

insert into DEPT

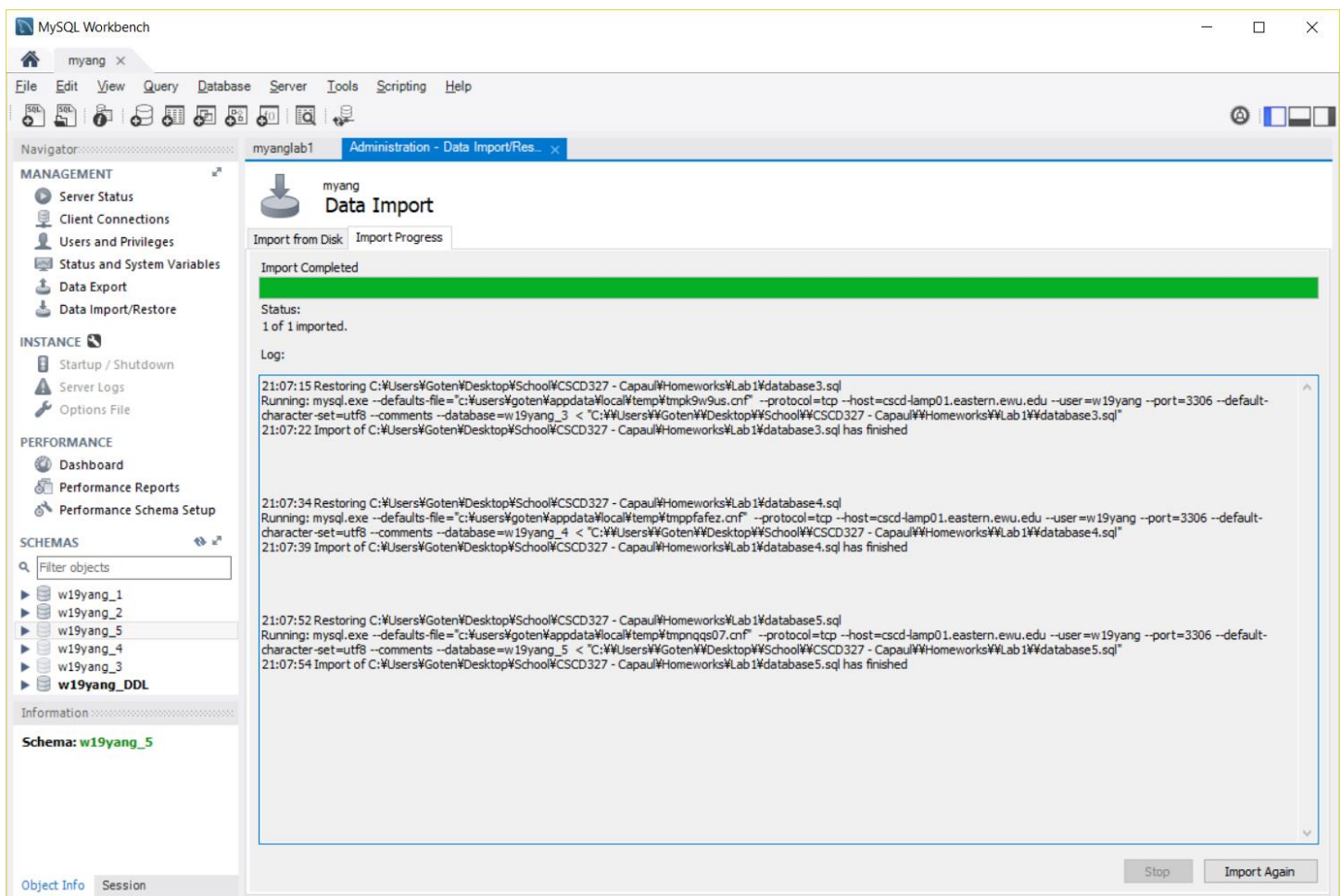
(DEPTNO, DNAME, LOC)

values

```
(10, 'ACCOUNTING', 'NEW YORK'),  
(20, 'RESEARCH', 'DALLAS'),  
(30, 'SALES', 'CHICAGO'),  
(40, 'OPERATIONS', 'BOSTON');
```

SECTION 4

create database w19yang_2;
create database w19yang_3;
create database w19yang_4;
create database w19yang_5;



Not really sure how to show that I did this, but here's a screenshot of my import log. I went to Server -> Data Import -> Pick import file and chose the correct database -> Import.