Lab 6 - SQL Solutions

1. List all the items sorted alphabetically.
SELECT name FROM store ORDER BY name;

2. Then list only the first 3.
SELECT name FROM store limit 3;

3. Then the last 3.
SELECT name FROM store ORDER BY name DESC limit 3;

4. List only the items that are more than $1 per unit price.
SELECT name,price FROM store where price > 1;

5. List all the items with their extended price (quantity * price).
SELECT price*qty as "extended price" FROM store;

6. List the total cost of all the items in the store.
SELECT SUM(price*qty) FROM store;

7. How many different items do we have in the store?
SELECT COUNT(distinct name) FROM store;

8. List all the CS classes.
SELECT course.name FROM course INNER JOIN Dept ON
course.department_id = Dept.Id WHERE Dept.name = "CSC";

9. What is the total enrollment over all the classes?
SELECT SUM(count) FROM enrollment;

10. How many different classes are taught?
SELECT COUNT(distinct id) FROM course;

11. How many different departments are there?
SELECT COUNT(distinct name) FROM Dept;

12. List all the classes in the database, with the department name and the class name on the same line, e.g. CSC 111, CSC 112, ..., EGR 250, ... CHM 111.
SELECT CONCAT(Dept.name,' ',course.name) AS coursename FROM course INNER JOIN Dept ON course.department_id = Dept.id;

13. List the name of the CS classes so that they are output as "CSC111", "CSC112", etc...(in other words, concatenate department with class number.)
SELECT CONCAT(Dept.name,course.name) FROM course INNER JOIN Dept ON course.department_id = Dept.id WHERE Dept.name = "CSC";

14. List all the information in the database, where each class appears on 1 line, along with its department, and its enrollment.
SELECT course.id, course.name, course.department_id, Dept.name, Enrollment.count FROM course INNER JOIN Dept ON course.department_id = Dept.id INNER JOIN Enrollment ON course.id = Enrollment.id;

15. Use a tool to create an E-R Diagram of these tables.

course
- 🔑 id INT(1)
- ◇ name VARCHAR(4)
- ◇ department_id INT(1)
- 🔑 enrollment_id INT(1)
- ◆ department_id1 INT(1)

Indexes
- PRIMARY
- fk_course_enrollment1_idx
- fk_course_department1_idx

enrollment
- 🔑 id INT(1)
- ◇ count INT(1)

Indexes

department
- 🔑 id INT(1)
- ◇ name VARCHAR(3)

Indexes
- PRIMARY

store
- 🔑 id INT(1)
- ◇ name VARCHAR(40)
- ◇ qty INT(1)
- ◇ price FLOAT

Indexes