Week-3 Problems

I. Create University database by copying it from other user.

II. Write SQL Select Statements for the following simple queries that retrieve data from a single table:

1. Find the details of all students.
2. Find the department names of instructors.
3. Find the names of all the instructors from Biology department
4. Find the names of all instructors in the Computer Science department who have salaries greater than $70,000.
5. Find the names of courses in Computer science department which have 3 credits
6. Find the names of the instructors, their present salaries and the resulting salaries if they were given a 10% raise.
7. Find the names of instructors with salary amounts between $90,000 and $100,000,
8. Find all instructors whose salary is unknown.
9. Find the names of all departments whose building name includes the substring 'Watson'.
10. Find departments whose names contain the string "sci" as a substring, regardless of the case.
11. List the names of all instructors in the Physics department in alphabetic order.
12. List the entire *instructor* relation in descending order of *salary*. If several instructors have the same salary, order them in ascending order by name.

III. Write SQL queries for retrieving data from multiple tables using Joins:

1. Find all possible combinations of instructors and the courses they teach.
2. Retrieve the names of all instructors, along with their department names and department building name.
3. Find the names of instructors who have taught at least one course.
4. For the student with ID 12345 (or any other value), show all course_id and title of all courses registered for by the student.
5. Find instructor names and course identifiers for instructors in the Computer Science department.
6. For all instructors in the university who have taught some course, find their names and the course ID of all courses they taught.
7. Find the names of all instructors whose salary is greater than at least one instructor in the Biology department. Or Find the names of all instructors who earn more than the lowest paid instructor in the Biology department.
8. Find full details of instructors who teach at least one course.
9. Find the instructor names and the courses they taught for all instructors in the Biology department who have taught some course.
10. Find the set of all courses taught either in Fall 2009 or in Spring 2010, or both.
11. Find all courses taught in the Fall 2009 semester but not in the Spring 2010 semester.
12. Find the names of all students who have taken any Comp. Sci. course ever. (there should be no duplicate names)
13. Display the IDs of all instructors who have never taught a course. (Don't write nested query)