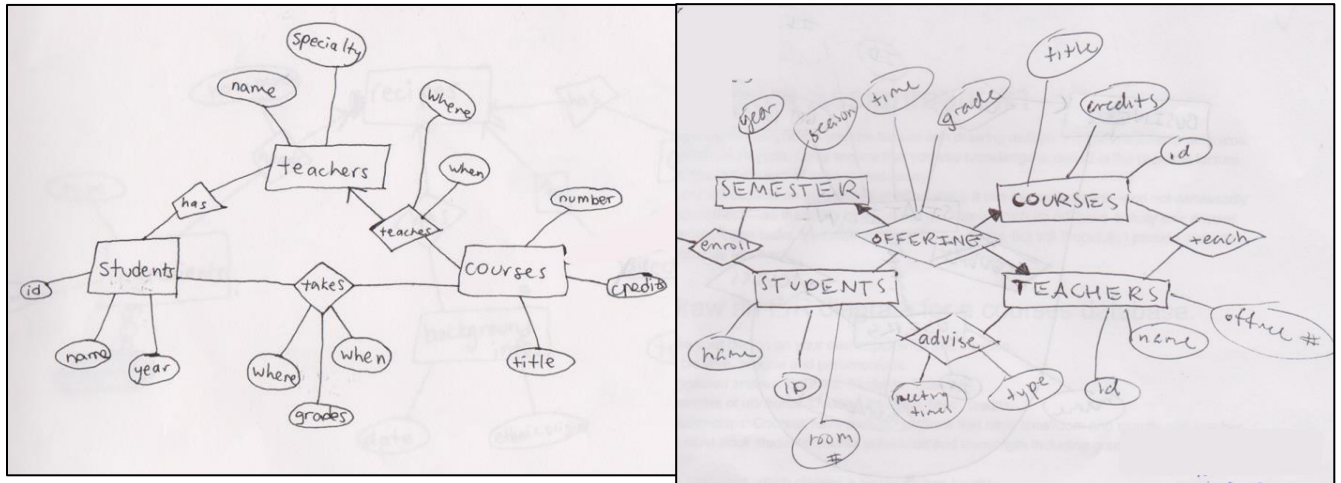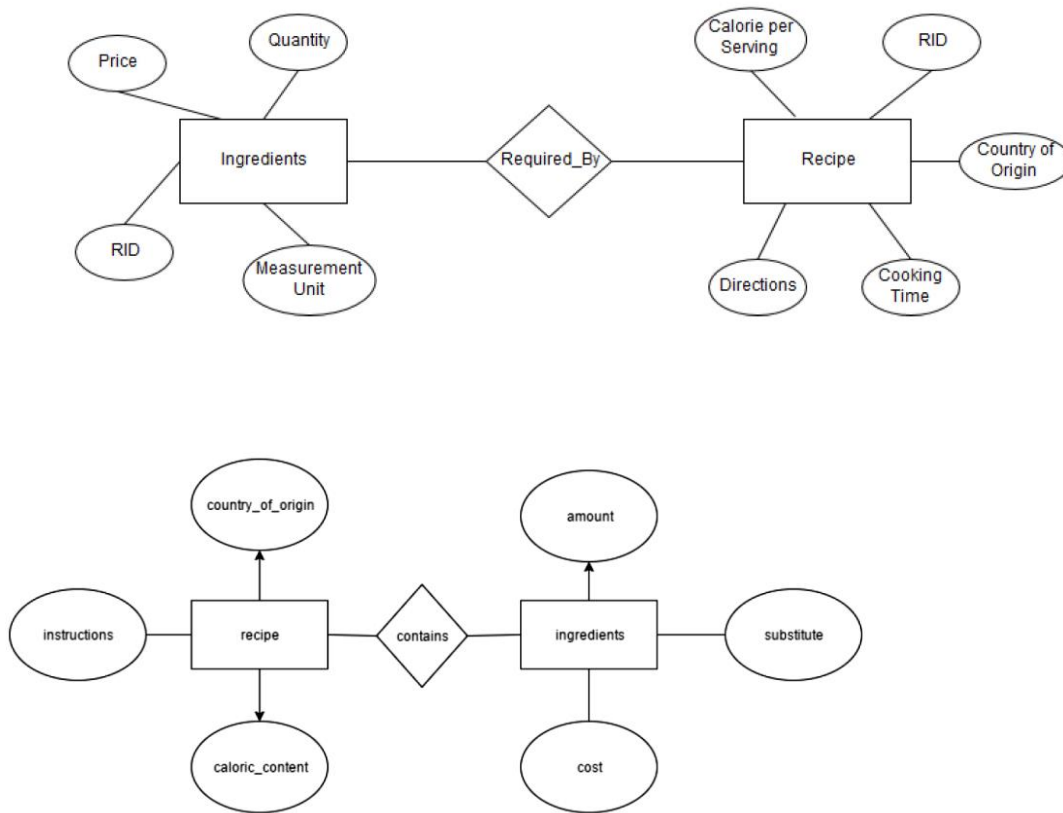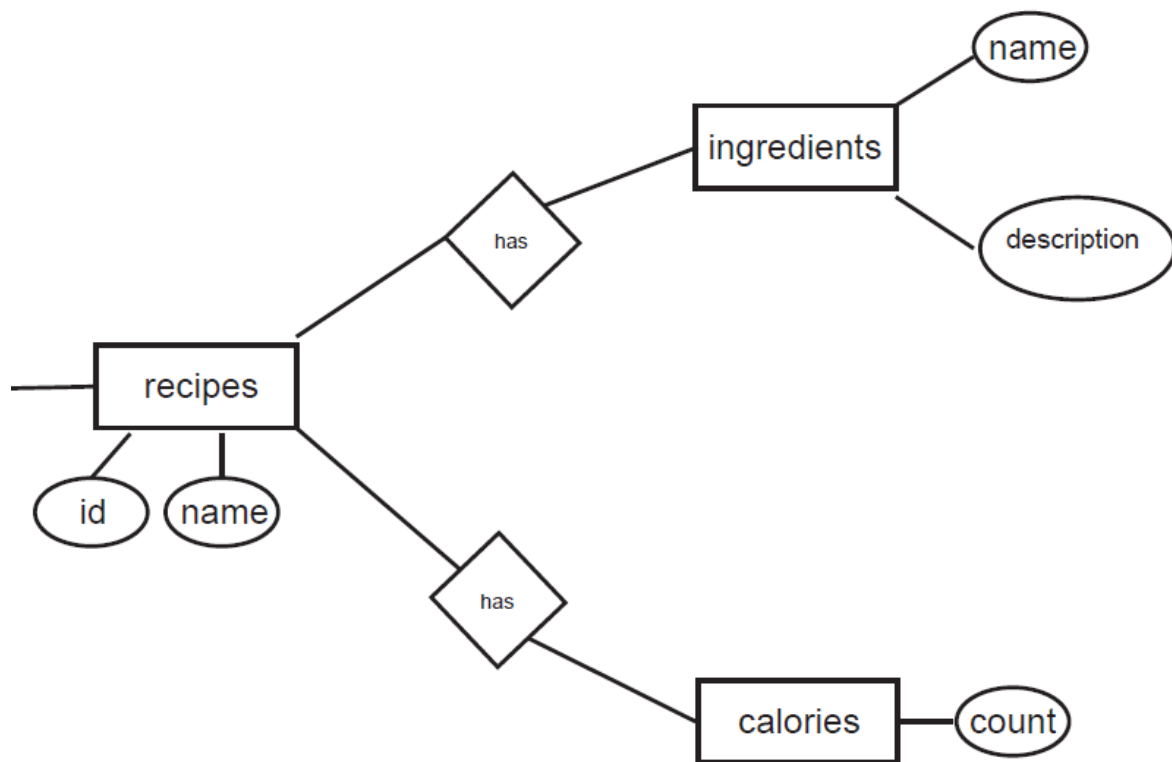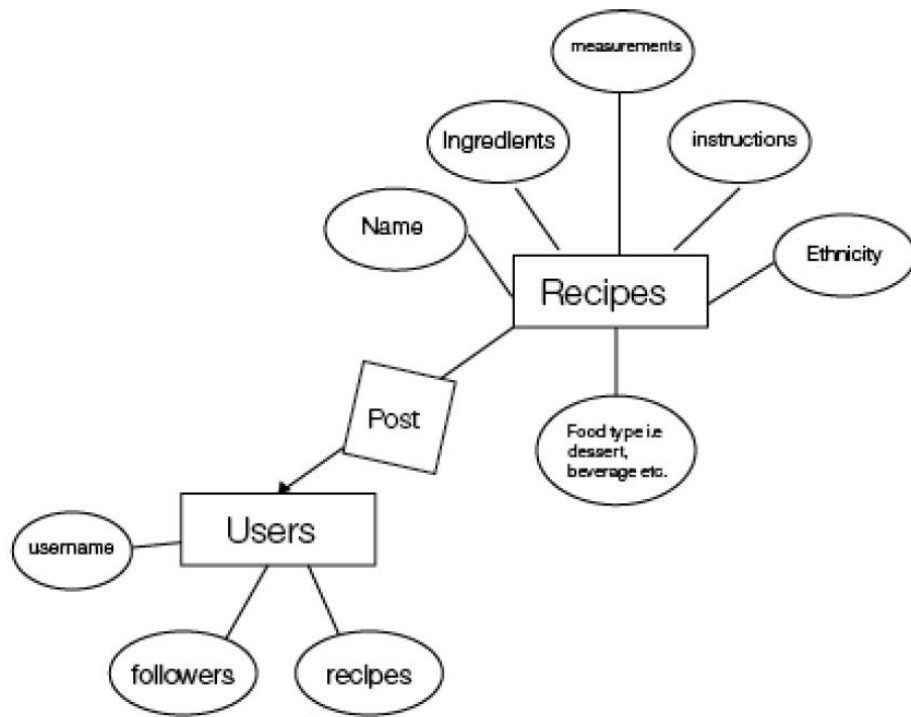# Exercises W 3:

Reading E/R diagrams. Subclasses

1. Identify problems in the following E/R diagrams for the University database

2. Identify problems in the following E/R diagrams for online recipe book

Recipes

- measurements
- Ingredients
- instructions
- Name
- Ethnicity
- Food type i.e dessert, beverage etc.

Post → **Users**

Users

- username
- followers
- recipes

ingredients

- name
- description

recipes — has — **ingredients**

recipes

- id
- name

recipes — has — **calories**

calories

- count

3. Recall an exercise from the last week?

"Suppose we have two kinds of doctors: hospital doctors and family physicians. In addition to the SIN, name, specialty, and years of experience, we want to record the hospital name for the hospital doctors, and the office address for the family physicians. There can be doctors that are working in a hospital who are at the same time family physicians in their free time. Also there can be doctors for whom we don't know whether they are working in a hospital and/or whether they are family physicians or whether they are not working at all. "

Below we have an E/R diagram for this scenario.
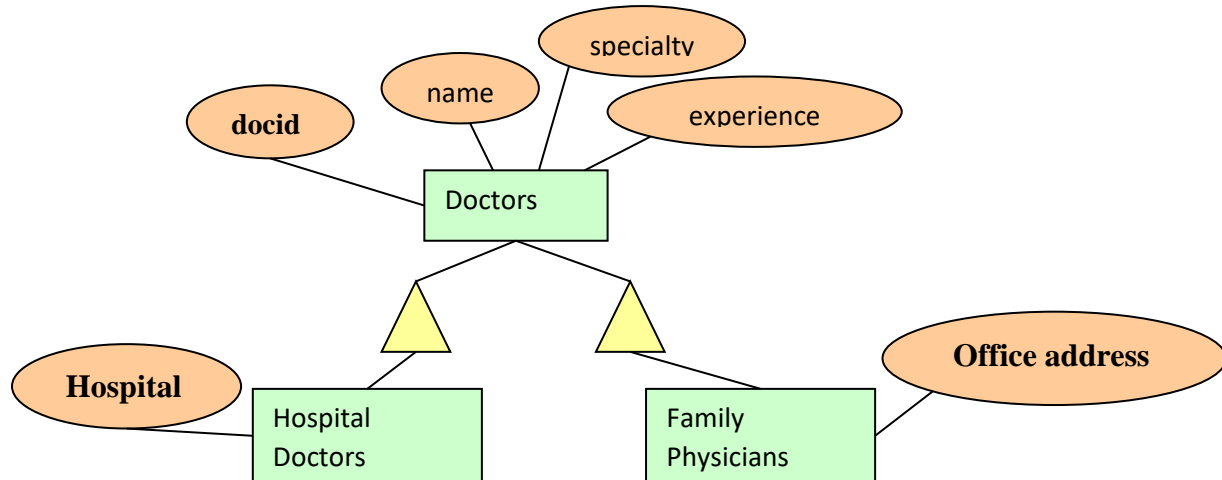
Convert the E/R diagram into relational schema using

   a. Object-oriented approach

   b. E/R approach

If we search for:

   a) A family doctor with a given name
   b) For all specialists by specialty
   c) For all doctors with less than 1 year in the field

Which of the 2 approaches above is more efficient?