

**PHPM 631 Assignment 4: EMR**  
**Assignment 4 - Due date: Submit on E-Campus by 11:59pm Sunday 2/26**

**Submission.** Submit on E-campus. See Requirements Section below for details

- Assignment 4 (2/27)
  - Part 1: Upload your one excel file with 5 sheets
  - Part 2: Upload your reflection essay

**Late Assignments:** Each student will be allowed one late assignment, due 7 days from the due date. NO other late assignments or make up will be accepted.

**Plagiarism:** If you consult any outside sources when doing your work, you are expected to further document these sources. Give credit where credit is due. Plagiarism will not be tolerated.

**Guideline for assignment grading (3%)**

- 70% (70 points): Bad (√ --) Did NOT follow all instructions
- 80% (80 points): Reasonable (√ -) Followed all instructions
- 90% (90 points): Good (√ ) Followed all instructions, and did good work
- 100% (100 points): Great (√ +) Followed all instructions and did great work

**Objective**

By the end of this assignment, you should be able to

- Describe common components of an EMR

**Assignment 4: EMR**

Now that you understand how your computer works, it's time you learn how to use it for health care. The most common application in health care is EMR. In this assignment, you will create a mock EMR using excel. Note, the only part of EMR we will be interested in is the core database. That is, what data needs to be collected and how should it be structured. We will be covering database systems in the next assignment. This is a short assignment prior to the database assignment to think about the "real world problem" of health care workflow before we get down to the technical details for writing SQL queries.

Make up a hypothetical practice. Could be any type of health care practice you want it to be. Then make up patients, visits, labs, and medication prescriptions. Keep your hypothetical practice small and simple so that the data you make up can be manually put together. This is just an exercise, so you don't have to capture everything into the database. Just think of the few most important data elements and tables. Each sheet in the excel file will be a table in your DB. Each column in a sheet is a variable in your table.

**Group Work**

You are encouraged to work in a team of 2 for Part 1 of this assignment (Not part 2). If you do, both of you will receive the same grade for this part of the assignment. If you do work as a group, **submit only one copy on blackboard**. BUT clearly name your excel file to indicate the name of the team members. You may choose to work along, but you will be expected to do the same amount of work as a two-person team.

**Required Submission**

1. Assignment 4 Part 1: 1 excel file with the following sheets. Whenever you are done.
  - a. **Patient sheet** with at least 10 patients.
    - i. Include at least 10 variables (columns) that you think should be in the patient table (e.g. dob, name), but you will probably want more.
    - ii. Try to keep is to under 20 columns. Choose what you think are the most important.
    - iii. Make sure to include patientID. In all other sheets, you should be referring to a patient by their patientID.

- b. **Visit sheet** with at least 7 patient visits.
    - i. There should be at least 1 patient who has two or more visits. Note that all patients with a visit, must be present in the patient sheet.
    - ii. Include at least 5 variables (columns) that you think are important to have for a visit (e.g. data of visit, Diagnosis)
  - c. **Lab sheet** with at least 10 lab results. Note that all patients with a visit, must be present in the patient sheet.
    - i. There should be at least 1 patient who has two or more lab results. Note that all patients, must be present in the patient sheet.
    - ii. Include at least 5 variables (columns) that you think are important to have for a lab (e.g. lab results)
  - d. **Medication prescription sheet** with at least 5 prescriptions. Note that all patients with a visit, must be present in the patient sheet.
    - i. There should be at least 1 patient who were prescribed two or more medications. Note that all patients, must be present in the patient sheet.
    - ii. Include at least 5 variables (columns) that you think are important (e.g. Name of medication prescribed, Dose, Frequency of use per day, Duration of prescription)
  - e. One more sheet (table) that you think would be important to have (e.g. System users, immunization, medical history). The table should have at least 5 columns.
  - f. If worked in group: one more sheet that briefly describes who did what
2. Assignment 4 Part 2: Reflection essay (Individual work. No group work allowed)
- a. Look at the figure from Take Away III slide: Key layers of the Internet from 2/13 lecture (Computers/Networks/Internet/WWW/Browsers/Search Engine/Content)
  - b. Write a short essay describing the different layers in the slide in your own words. Some layers can be described VERY briefly. You can write it in any form (e.g., essay, diary, bullet points, personal notes) that makes it easiest for you. Roughly, guideline on length would be 1000-3000 words. But try to let this be how ever long or short that makes sense to you.
  - c. Consider yourself as the main audience (not me or the TA). You are writing for yourself.
  - d. The main purpose of this assignment is for you to sit back, and try to build your own mental model of everything we discussed up to now. That is take the time to reflect on what you learned so far.
  - e. This is NOT a test of your knowledge. But to let you learn and let things sink in while it is still some what fresh in your mind.
  - f. This section will again be graded on a 4 point scale, with anyone who gives an honest effort most likely getting a 90 or 100 (for this part). So try to not stress about this assignment. I am not looking for a lot of technical details you can always look up on google. Just focus on your learning process and think about what you learned so far and reflect on it.