

CSE 490C, Programming Assignment 2, Due Friday, November 2, 2018, at 11:59 pm

For this assignment, you will be building a global goods software application. This assignment has a written portion and a programming portion, worth 50% each. This assignment has to be done individually. You will need to submit a .zip file, containing both your code and write up document, through Canvas and demo your assignment to TAs.

Global Goods Software Application. Global goods software generally boils down to managing a database through a web interface. Examples of global goods software include: OpenLMIS (logistics management), OpenMRS (medical records system), and DHIS2 (health indicator reporting). For this assignment, you will prototype an immunization registry, which is used to track the vaccinations of children. Please note, however, that this is a preferred/recommended option, and you are free to implement other ideas if you run it by the instructor or TAs first. Some global goods software applications were discussed in class on October 17th. You can read more about them from the [lecture slides](#).

Write-up specifications: In about 750 words, describe:

- The context of your system (country, how immunizations are tracked currently, what other sorts of national information systems they use, stakeholders in the system)
- The back-end components of your system (type of database, database structure, validation/flow of information)
- The front-end components and use cases of your system (how a nurse might enter information or know if someone is overdue for a vaccine, how parents can track their children's immunizations)
- Justifications for all design decisions (e.g., back-end records, database structure, interaction flows, front-end user interface layout, labels for text input fields)

Programming specifications: Develop an immunization registry that successfully fulfills the following requirements:

- 10 example records
- Collects and stores information about immunizations as needed within a patient's lifetime
- Updates single or multiple record(s) after they have been collected

- Provides immunization information, scheduled immunizations, and overdue immunizations upon specification of patient's first name, last name, and birth date
- Generates an aggregate report based on a use case that you can decide (e.g., getting names of all patients with incomplete immunizations, a report of immunizations within each age group)
- Has an intuitive user interface

Please note that you do not have to create a completely functional system:

- This assignment can be a proof of concept where someone using the system can get an idea of how it would ideally work.
- You do not have to worry about administrative logic, such as creating user IDs, user onboarding, etc. You can focus on the business logic, such as what information the system collects, how users access the information, etc.

Submission: You should submit the code through Canvas in a .zip file (firstname_lastname.zip) by the due date. Make sure to add your name, student ID, and comments within the code to explain your implementation. If you include external APIs, header files or packages, make sure to briefly explain their need and use in the implementation.

Demo: Each student will then be required to give a short demo of their code to the TAs (sign-ups for demos will be announced soon). We will inspect the code to ensure that it is original and reasonably matches up to the functionality of the system as shown in the demo. Demos will be graded based on the following criteria:

- Clear and comprehensive presentation of design and implementation details during the demo.
- No serious complications or obviously missing components of the system.

Note: We have zero tolerance for plagiarism. Plagiarism will result in either a zero or disciplinary action. Ask the TAs or the instructor if you have any questions about collaboration. In general, asking other students how they went about the assignment is appropriate, but copying code or writing code for someone is not.