

## **Homework/Lab Assignment 2b**

For this Lab assignment task 2b, you are required to create/setup and implement a Command-Line Interface (CLI) application project for a Patient Appointment Management System (PAMS), and include in your project: Build automation and CI/CD – Meaning you **MUST** use the following:

1. A Build tool (Maven or Gradle etc.)
2. A Code repository via Version Control system (i.e. Git and Github etc)
3. CI/CD Pipeline (e.g. using Github Action)

### **Problem Description and Tasks:**

Assume you have been employed as a Software Engineer to develop a Patients-Appointments booking and management CLI application for a hospital. The application will be used to register new Patients who are requesting to receive medical care, including the Patient's First Name, Last Name, Contact Phone Number, Email, Mailing Address and Date of Birth.

For the purpose of this lab assignment, simply create a CLI application project that uses Maven or Gradle. Add a class named, Patient, including the necessary data fields (attributes) as specified above. Make appropriate use of packages (or namespaces or modules to properly organize

your code). In an executable class named, PAMSApp, in the main method, add code to simply create an array of Patient objects (using the data given below).

Patient Id	First Name	Last Name	Phone No	Email	Mailing Address	Date of Birth
1	Daniel	Agar	(641) 123-0009	<a href="mailto:dagar@m.as">dagar@m.as</a>	1 N Street	1987-1-19
2	Ana	Smith		amsith@te.edu		1948-12-5
3	Marcus	Garvey	(123) 292-0018		4 East Ave	2001-9-18
4	Jeff	Goldbloom	(999) 165-1192	jgold@es.co.za		1995-2-28
5	Mary	Washington			30 W Burlington	1932-5-31

Then add code to convert the Patients data into JSON format and write the data out to a file in your local filesystem, sorted by the Patient's current Age, in descending order (i.e. Oldest Patient first, Youngest Patient last). Include each Patient's age in the JSON data output.

Next, setup CI/CD pipeline for the project and push the finished code to a repository on your GitHub account.

Next, create an executable artifact of the application (e.g. an executable JAR) and make a Release of it and publish it to your GitHub.

For submission, simply provide the repository URL, in your submission to this assignment item on Sakai.

Enjoy! 😊