CSC 2310 Fall 2021
Laboratory Midterm
30 Points

You will be using the tutorial found at https://spring.io/guides/gs/rest-service/ as a starting point for your Laboratory Exam/Iteration 0 of the course project. You have 1 week from the beginning of your assigned laboratory time to complete this laboratory midterm.

The laboratory midterm includes 3 parts and evaluates your ability to work independently to configure your system and prepare a project for implementation:

- Spring Boot and Gitlab (10 points)
- Complete the Tutorial (10 points)
- Personalization and Project Prep (10 points)

The teaching assistants have been instructed to only provide answers to clarifying questions.

Preliminaries

Download and Install Maven: https://maven.apache.org/download.cgi

Also, Java Version 11 should be installed on your system.

Spring Boot and Gitlab (10 points)

Go to https://start.spring.io/ and configure a Spring Boot project as follows:

Project: Maven Project

Language: Java

Spring Boot: 2.5.5

Project Metadata

Group: edu.tntech.csc2310

Artifact: CoursePR

Name: Course Pre-Requisite System

Description: Project for CSC 2310 Fall 2021 – Course Pre-Requisite System

Packagename: edu.tntech.csc2310.fa2021

Packaging: Jar

Java: 11

Dependencies: Spring Web

Generate and unzip the downloaded code into a directory on your system (preferably one that you will be using for the rest of the semester for the project). The contents of your directory should look similar to the following if using Windows:

```
C:\Users\profg\Documents\dev\csc2310\coursepr>dir
 Volume in drive C is Windows-SSD
 Volume Serial Number is xxxx-xxxx

 Directory of C:\Users\profg\Documents\dev\csc2310\coursepr

10/17/2021  04:03 PM    <DIR>          .
10/17/2021  04:03 PM    <DIR>          ..
10/17/2021  04:03 PM               395 .gitignore
10/17/2021  04:03 PM    <DIR>          .mvn
10/17/2021  04:03 PM               891 HELP.md
10/17/2021  04:03 PM            10,070 mvnw
10/17/2021  04:03 PM             6,608 mvnw.cmd
10/17/2021  04:03 PM             1,233 pom.xml
10/17/2021  04:03 PM    <DIR>          src
               5 File(s)         19,197 bytes
               4 Dir(s)  162,865,676,288 bytes free
```

Login to https://gitlab.csc.tntech.edu and find your repository for the Course Pre-requisite Project. For example for user jgannod, the url is:

https://gitlab.csc.tntech.edu/csc2310-fa21-students/jgannod/jgannod-coursepr

Follow the directions for "Push an existing folder" using the directory that you copied the files for Spring Boot into and swapping the command

   git remote add origin git@gitlab.csc.tntech.edu:csc2310-fa21-students/yourid/yourid-coursepr.git

with

   git remote add origin https://gitlab.csc.tntech.edu/csc2310-fa21-students/yourid/yourid-coursepr.git

and replacing the string "yourid" with your own unique username.

Push your code to your repo with the message "Initial Commit"

Complete the Tutorial (10 points)

Follow the directions of the tutorial at https://spring.io/guides/gs/rest-service/ until you get the service working. When done, verify that you can run the application on the command-line by executing the following:

>   ./mvnw spring-boot:run

Use a browser to view the page at

   https://localhost:8080/greeting

   and

   https://localhost:8080/greeting?name=HarryPotter

Push your code to your repo with the message "Basic Tutorial".

Personalization and Project Prep (10 points)

The last step is to prep the project for the final course project. To do so, assuming you followed the instructions for the tutorial found at https://spring.io/guides/gs/rest-service/ make the following changes to the names of various classes, variables, and methods:

From	To
package com.example.restservice	package edu.tntech.csc2310.fa2021
class DemoApplication	class CoursePRApplication
class Greeting	class CoursePR
class GreetingController	class CoursePRGraph
@GetMapping("/greeting")	@GetMapping("/prerequisites")
public Greeting greeting	public CoursePR prerequisites
@RequestParam(value = "name", defaultValue = "World")	@RequestParam(value = "prefix", defaultValue = "CSC")
String name	String param
template = "Hello, %s!";	template = "yourid %s";

Test your solution by starting the service as before and pointing your browser to:

https://localhost:8080/prerequisites?prefix=MATH

Your service should display the string "yourid MATH".

Push your code to your repo with the message "Personalized Code".