16 April 2020 at 12:30 pm **Final Test** **Winter 2020**

COMP 303 JAVA EE PROGRAMMING

1. RULES

During the practical test, all students are expected to follow the rules outlined below:

1. The final test will be monitored remotely by Proctortrack or in the virtual classroom.
2. Use of laptops or home computers and other materials:
    a. In the practical test, you are allowed to use any materials including slides, books, assignments/programs created by you or the solutions provided by the professor, Spring Documentation, and use of internet resources should be referenced. (URL link should be included in the code file).
    b. Only Laptop or Home PC with a single monitor should be used in the practical test.
    c. Code will be submitted in e-centennial Dropbox and check with the professor that the submission was successful before you leave the proctortrack system or the virtual classroom.
    d. Students are not allowed to use someone else's solutions – only solutions created by them or the professor.
    e. You should use proctortrack tool to complete this test. Students who failed to get proctortrack system access, you should be in the virtual classroom with turning your web cam and microphone on.
    f. Smart phones or cell phones are not used during the test and all social media or chatroom or video conferencing must be closed except the virtual classroom.

2. BE SURE TO READ THE FOLLOWING GENERAL INSTRUCTIONS CAREFULLY:

- This lab test must be completed individually by all the students. During the test any communication between or among students is not allowed.
- Sharing any form of final test information is considered as violating the exam rules.
- Read the submission guidelines and rules on page 3.
- You should attach the solution with output screen shots and then submit the project through Dropbox link on e-Centennial.
- Only one submission accepted through Dropbox and no other submissions accepted by email or other means.
- You should complete this lab test within a given time duration and no extra time will not be given.

3. INSTRUCTIONS AND TASKS

Students are asked to develop a spring boot web application for the below given scenario.

1. **Task 1:**
   You should create a database named "**PatientDB**" with a following table "**Patient**" and the field names given below. You should use appropriate data types:
   - PatientId – primary key, auto incremented
   - PatientName – should not be blank
   - DoctorName
   - E-Mail – email validation
   - BloodGroup
   - Weight (cm)
   - Height (kg) – should accept one digit fraction (69.5)

2. **Task 2:**

   Create a new Spring Boot Project named "**YourName_FinalTest**" with the following classes:

   a. **Entity class** to map the Patient table and the fields – use **JPA bean / Hibernate** annotations to do define class members and validations using appropriate annotations:
      - Entity class
      - Specify table name
      - Patient Id as a primary key and auto generated
      - Patient name should be required.
      - E-Mail value should be validated before input into table
      - Weight should have one digit fraction number (72.3)

   b. **Controller class** to map view files - this class should handle the followings:
      - Show all the patients available in Patient table
      - Add a new patient into Patient table
      - Check whether a patient (row) exists in Patient table or not (use an exists () method) and show the patient details.

   c. **Repository or Service** class(s) to implement CRUD repository methods.

3. **Task 3**
   Configure the **application.properties** file.

4. **Task 4:**
   Define view files as html file (like index.html using **thymeleaf template**) to perform the CRUD functionality.

4. ASSESSMENT RUBRICS

Defining a MySQL database and a table, and the configuration of the application.properties file. **Task 1 and 3**	15%
Defining an entity class to implement all the properties with appropriate data types and validations annotations. **Task 2 a**	15%
Defining a controller class to implement CRUD functionalities like add, show all and exists a row. **Task 2 b**	20%
Defining Repository or Service class to implement CRUD Repository methods **Task 2 c**	10%
Designing view thymeleaf or jsp files to provide user friendly forms and output pages with appropriate messages like validations, and user friendly messages. **Task 4**	35%
Screen shots	5%
Total	**100%**

5. SUBMISSION RULES

Submit your modules as zip files that are named according to the following rule:

YourName_StudentNumber_FinalTest.zip

Example: john_9000000_ FinalTest.zip

Solution or code must be submitted in e-centennial Dropbox and check with the professor that the submission was successful before you leave the exam. Wrong project submission or empty project submission or any other submission issues not considered once you left the exam. It's your responsibility to double check the project or solution before and after submission made. No email submissions accepted.

Negative points:

Negative or minus point will be given when you ignore the instructions stated in the exam paper and fail to debug the spring boot app (syntax errors, runtime errors in browser or URL mapping errors or MySQL database connections or SQL errors).

6. ACADEMIC INTEGRITY

All students must follow the academic honesty policies regarding Plagiarism and cheating on assignments, Quizzes or Tests. Centennial college's Academic Policy will be strictly enforced. To support academic honesty at Centennial College, all academic work submitted by students may be reviewed for authenticity and originality, with utilizing software tools.

Any practices are identified in student's solutions, the action will be taken based on the academic honesty policy.