Java Examination

Instructions. Every question <u>must</u> be a separate project. You may use any IED that you like. Intelij, Eclipse etc. Remember to create the correct code structure, readable comments and code efficiency. Please send all your code files in a <u>zipped folder</u> and title it with your "First_Last Name".

Section 1: Spring Boot Questions:

Instructions: For your answers, <u>exclude the target folder when zipping the project</u>. Create only 1 spring boot project.

1. Spring Boot Application Exam – Multi-threading, Web Scraping, RESTful Web Service, Caching

    a. Create a spring boot application that web scrapes data from a REST Client and save it to the database. Apply multi-threading when scraping data.

    b. URL: https://jsonplaceholder.typicode.com/

        i. Please go to Routes section and scrape posts and comments data.

2. Create rest-end point that displays the posts and comments data.

3. Implement Redis or any in-memory caching in the 2 Spring Boot Application.

Section 2: Logical Questions

Instructions: Every <u>question should be a separate Java class file</u>. Only <u>submit the .java files</u>. Zip the files.

-> PrimeNumberTest.java   -> AlphabetCharacter.java   -> FibonacciSeries.java   -> StringReverse.java

-> SwapNumbers.java   -> GetFileSizeInBytes.java   -> ReverseStringWithStack.java

-> PowerOfNumber.java

Basic to intermediate level questions

1. Write a function to check whether a number is Prime or not.

2. Write a function to check whether a character is alphabet.

3. Display Fibonacci series. (Fibonacci series is a series where the next term is the sum of the previous two terms).

4. Write a Java program to reverse a string without using String inbuilt function.

5. How to swap two numbers without using temporary variable.

Intermediate to advanced level questions

6. How to get a file's size in bytes?

7. How to reverse a string using stack?

8. Calculate the distance between two points?

9. Calculate power of a number.