Lab#3 – Read and Write ( Txt file)

Objective:

In this lab, you will learn how to read from and write to a text file using the Scanner and PrintWriter classes in Java. The example will involve managing COVID-19 vaccine records. By the end of this lab, you will be able to:

1. Read vaccine records from a text file using Scanner.
2. Write new vaccine records to a text file using PrintWriter.
3. Handle file-related exceptions.

Scenario:

You are tasked with managing a simple record of people who have received the COVID-19 vaccine. The records include the person's name, the type of vaccine received, and the number of doses taken.

Steps:

* Create a New Java Project
* Open your IDE
* Create a new Java project and name it VaccineRecordSystem.
* Create a Text File for Input
* In your project directory, create a text file named vaccine\_records.txt.

 Create a Class for File Operations

* In your project, create a new class called VaccineFileHandler.
* Add two methods to this class:
* readFromFile(): This method will read the vaccine records from vaccine\_records.txt.
* writeToFile(): This method will add new vaccine records to a file called updated\_vaccine\_records.txt.

 Read from a File Using Scanner

* In the readFromFile() method:
  + Use the Scanner class to open and read the vaccine\_records.txt file.
  + Read the file line by line and display the records (name, vaccine type, number of doses) on the console.

Write to a File Using PrintWriter

* In the writeToFile() method:
* Use the PrintWriter class to write new vaccine records to updated\_vaccine\_records.txt.
* Allow the user to input the name, vaccine type, and number of doses, then save this information to the file.

Test the Methods

* In your main() method:
* Call the readFromFile() method to display the existing vaccine records.
* Call the writeToFile() method to add new vaccine records (e.g., "Eve, Pfizer, 2").
* After adding new records, call readFromFile() again to display the updated records from updated\_vaccine\_records.txt.

Error Handling

* Ensure that your code handles exceptions like FileNotFoundException for both reading and writing.

Submission:

* Submit the following:
* Java class files (VaccineFileHandler.java and any other files you created).
* A screenshot showing the console output before and after writing new data.