Hands-on No. : 5

Topic : File IO,Stream IO,JDBC

Date : 08.08.2025

Solve the following problems

Question No.	Question Detail
1	You are required to develop a Java program that reads the contents of a text file using **BufferedReader and FileReader**, and performs the following tasks: **Requirements:** 1. **Accept the path** of a text file from the user. 2. **Read the content** of the file line by line. 3. **Count and display** the following: ○ Total number of **words** ○ Total number of **lines** ○ Total number of **characters** (including spaces) Sample Input: Suppose you have a text file named sample.txt with the following content: Java is a high-level programming language. It was originally developed by Sun Microsystems. Java is widely used for building enterprise-scale applications. Enter the path of the file: C:\Users\XXX\Documents\sample.txt Sample Output: Total lines: 3 Total words: 22 Total characters: 157
2	Create a Java program that copies the contents of one text file to another using **FileInputStream** and **FileOutputStream**. Requirements:

	• Read data from a file called source.txt.
	• Write that data into another file named destination.txt.
	• Handle exceptions properly:
	  ○ If the source file is missing, show a clear message (FileNotFoundException).
	  ○ If there's any issue during the reading or writing process, handle it using IOException.

3	You are required to write a Java program that reads the contents of a text file and replaces every occurrence of a specific word (e.g., "Java") with another word (e.g., "Python"). The updated content should then be saved to a new file. Requirements: Use BufferedReader to read the content from the source file. Use BufferedWriter to write the updated content to the destination file. The program should: • Take input for the source file name. • Ask for the word to be replaced (target word). • Ask for the replacement word. • Save the modified content into a new file (e.g., modified.txt).
4	Create a Java class named Person with the following attributes: • name (String) • age (int) • email (String) Your task is to serialize a Person object (or a list of Person objects) and save it to a file. Then, deserialize the object from the file and display the data. Requirements: • Use ObjectOutputStream to write the object(s) to a file. • Use ObjectInputStream to read the object(s) from the file. • Handle file path issues and exceptions gracefully (e.g., IOException, ClassNotFoundException).
5	You are required to create a Java application that interacts with a **MYSQL** database using **JDBC** to manage employee details. **Requirements:** 1. Create a **database** named company. 2. Inside the company database, create a table called employees with the following structure:

	○ emp_id (integer, primary key) ○ emp_name (varchar) ○ department (varchar) ○ salary (numeric) 3. Write a Java program to: ○ **Insert** employee records. ○ **Retrieve** and display all employees. ○ **Update** the salary of an employee based on emp_id. ○ **Delete** an employee record based on emp_id. 4. Use **PreparedStatement** for secure queries. 5. Handle **exceptions** such as SQLException, and make sure all connections are properly closed in a finally block or using try-with-resources.