Assignment 1

Title: Write Data to CSV File

Problem Statement:
Write student details (id, name, marks) into a CSV file named students.csv.

Conditions:

- Use FileWriter

- Data format:

- id,name,marks

- 101,Ravi,78

- 102,Anita,85

Expected Outcome:
CSV file should be created and data should be stored correctly.

Assignment 2

Title: Read CSV File and Display Data

Problem Statement:
Read all records from students.csv and display them on the console.

Conditions:

- Use FileReader and BufferedReader

- Split each line using comma (,)

Expected Outcome:
All rows should be printed.

Assignment 3

Title: Display Students with Marks Greater Than 60

Problem Statement:
Read students.csv and display only students whose marks are greater than 60.

Conditions:

- Convert marks to integer

- Use if condition

Expected Outcome:
Only eligible students should be printed.

Assignment 4

Title: Count Number of Records in CSV File

Problem Statement:
Count how many student records are present in students.csv.

Conditions:

- Ignore header line
- Use counter variable

Expected Outcome:
Total number of students displayed.

Assignment 5

Title: Search Student by Name

Problem Statement:
Search a student by name from students.csv.

Conditions:

- Use equalsIgnoreCase()
- Display full record if name matches

Expected Outcome:
Matching student details printed.

Assignment 6

Title: Display Students Who Failed

Problem Statement:
Display students whose marks are less than 40.

Conditions:

- Use if (marks < 40)

- Read from CSV file

Expected Outcome:
Only failed students printed.

Assignment 7

Title: Calculate Average Marks

Problem Statement:
Read marks from students.csv and calculate average marks.

Conditions:

- Sum all marks

- Divide by number of students

Expected Outcome:
Average marks displayed.

Assignment 8

Title: Copy Passed Students to New CSV File

Problem Statement:
Read students.csv and write students with marks ≥ 50 into passed_students.csv.

Conditions:

- Use FileWriter

- Maintain CSV format

Expected Outcome:
New CSV file created with passed students only.

Assignment 9

Title: Validate CSV Data While Reading

Problem Statement:
Skip records where marks field is empty or invalid.

Conditions:

- Use try-catch for NumberFormatException

- Ignore invalid rows

Expected Outcome:
Only valid records processed.

Assignment 10

Title: Display Topper Details

Problem Statement:
Find and display the student with highest marks from students.csv.

Conditions:

- Compare marks

- Track maximum value

Expected Outcome:
Topper name and marks printed.

Sample CSV File (students.csv)

id,name,marks

101,Ravi,78

102,Anita,85

103,Sunil,35

104,Priya,92

105,Aman,45