Core Java Assignment

Problem Statement

Requirements:

1. Store the information about following courses in Java (in-memory) using POJOs and Collections framework. Consider the following courses offered to the students.

Course Id	Name	Difficulty level	Duration
C1	Java basics	Low	3 hrs
C2	Advanced Java Tutorial	Medium	4 hrs
C3	SQL developers course	Medium	4 hrs
C4	DevOps Tutorial	High	5 hrs

2. Similarly store information about students as follows.

Student Id	Name	Login password
S101	John	abcd
S102	Daniel	mnop

3. Develop a **Console application in Java** for course enrollment and tracking system with following functionalities.
   - After starting the application, students should land on the home page where they can login using their name and password. Students should be allowed to login only if the entered password matches.

   - After successful login, provide a list of available course details to students. Also prompt the following options to students to select their next intended action.
     a. Display all courses
     b. View enrolled courses
     c. Enroll in a new course
     d. Clock-in time
     e. View Summary
     f. Exit

   Students should press a,b,c,d,e or f respectively for performing the above actions. After completing any of the above actions except 'Exit" the same options

should be displayed and the cycle should be repeated until the student chooses to exit.
The functionality for each of the above options is explained in detail below.

- Display all courses
  Display the list of all courses in the tabular format as given above in Requirements point number 1.

Course Id	Name	Difficulty level	Duration
C1	Java basics	Low	3 hrs
C2	Advanced Java Tutorial	Medium	4 hrs
C3	SQL developers course	Medium	4 hrs
C4	DevOps Tutorial	High	5 hrs

- View enrolled courses
  Display the information about courses in which the logged in student is enrolled in the following format.

  Student name: John
  Student Id: S101

Course Id	Course Name	Enrollment date
C1	Java basics	22 Jan 2022

  Note: Table border and formatting is not mandatory. A simple text format should suffice.

- Enroll in a new course:
  Student enters the id of the course in which he/she wants to enroll. The console output should be as follows.
  NOTE: Perform the necessary backend actions in Java to complete the enrollment.

  Enter course Id:
  C1 <This is input from the student>
  You are successfully enrolled in Java Basics!

- Clock-in time
  Add the amount of time spent to an enrolled course. Following is the example of

console output.

NOTE: Perform the necessary backend actions in Java to complete the enrollment.

Enter course Id:
C1 <This is input from the student>
Enter time spent:
2 <This is input from the student>
You have successfully clocked-in 2 hrs to Java Basics!

- <u>View Summary</u>
  This option should display the summary of enrolled courses and the status of completion in the following format.

  Student name: John
  Student Id: S101

Course Id	Course Name	Duration	Time spent	Completion %
C1	Java Basics	3	1	33.33
C2	Advanced Java Tutorial	4	2	50

  Note: Table border and formatting is not mandatory. A simple text format should suffice.

- <u>Exit:</u>
  Perform logout action for the user. Prompt the login for the new user.