Day 26

Assignment 6: Java 8 Date and Time API

Write a program that calculates the number of days between two dates input by the user."

A)

Java code:

```
import java.text.ParseException;

import java.text.SimpleDateFormat;

import java.util.Date;

import java.util.Scanner;

public class DaysBetweenDates {

   public static void main(String[] args) {

      Scanner scanner = new Scanner(System.in);=

      // Prompt the user to input the first date

      System.out.print("Enter the first date (YYYY-MM-DD): ");

      String inputDate1 = scanner.nextLine();


      // Prompt the user to input the second date

      System.out.print("Enter the second date (YYYY-MM-DD): ");

      String inputDate2 = scanner.nextLine();


      // Parse the input strings into Date objects

      Date date1 = parseDate(inputDate1);

      Date date2 = parseDate(inputDate2);
```

```java
        if (date1 != null && date2 != null) {

            // Calculate the difference in milliseconds

            long differenceInMillis = Math.abs(date2.getTime() - date1.getTime());


            // Convert milliseconds to days

            long daysBetween = differenceInMillis / (1000 * 60 * 60 * 24);


            // Display the result

            System.out.println("Number of days between " + inputDate1 + " and " + inputDate2 + " is: " +
daysBetween);

        } else {

            System.out.println("Invalid date format. Please enter dates in the format YYYY-MM-DD.");

        }

        scanner.close();

    }

    // Helper method to parse string date into Date object

    private static Date parseDate(String inputDate) {

        SimpleDateFormat dateFormat = new SimpleDateFormat("yyyy-MM-dd");

        try {

            return dateFormat.parse(inputDate);

        } catch (ParseException e) {

            return null;

        }

    }

}
```

Explanation:

We import necessary classes from java.text package for parsing dates and java.util.Scanner for user input.

The user is prompted to input the first date and the second date in the format "YYYY-MM-DD".

We define a helper method parseDate to parse the input string into a Date object using SimpleDateFormat.

We calculate the difference between the two dates in milliseconds.

We convert the milliseconds difference into days.

Finally, we display the result to the user.