COP3330C Module 1 Practice Exercise

For our first practice exercise we will apply some of the language features of Java 17 to a simple Java application.

Design and implement a Java program which displays a "Happy Birthday" greeting to a group of users.

1. Start by creating a class to represent a **User**. This class must include the following private attributes:

   - Last Name
   - First Name
   - Birth Month (integer, 1 for January, 12 for December)
   - Birth Day (integer -- month day, e.g. 1, 15, 31)

   - Provide an overloaded constructor and getters for each of these fields (no setters are necessary).
   - Provide a method which returns the user's "friendly name" as "FirstName LastName", e.g. "John Smith".
   - Provide an overridden toString method which displays the user's information in a readable format.

2. Create a main application class. I called mine "HappyBirthdayApp". This class will contain the application's main method. It must also include the following private attributes:

   - an **array** of **User** objects with a constant size declarator of **10**

   - Provide a method which returns a String containing the assembled birthday greeting for one user with the user's embedded name and birth date.
   - Provide an overridden toString method which returns a String containing the birthday greetings for all users in the array.
   - Provide a main method which instantiates an application object, inserts 3 random users into the class's array, then prints the birthday greetings for the users using the toString method.

Additional non-functional requirements:

- The application must use the **var** keyword at least once to demonstrate LVTI (Local Variable Type Inference).
- One or more **text blocks** must be used to format the birthday greeting to demonstrate the text blocks feature.
- All classes must be saved in a single .java file; only the application class should be declared public.
- Use the following package name for your application:

  package edu.fscj.cop3330c.birthday

There is no submission for this assignment, it is provided only for reference and practice.

Sample output is shown below. No user input is required for this application.

Today is 3/6.
Happy Birthday John Smith! Hope all of your birthday wishes come true!

Today is 12/3.
Happy Birthday Sarah Jones! Hope all of your birthday wishes come true!

Today is 7/5.
Happy Birthday Rodney Allen! Hope all of your birthday wishes come true!