AP Computer Science — Activity – ElfName

BACKGROUND

A common *meme* is using a name generator to determine your name in some new context: "What's Your Vampire Name?" "What's Your Middle Earth Name?" etc. These name generators typically use your own personal information (name, birth month, etc.) as the source for generating a new name.

'Tis the season! Here's an Elf Name generator algorithm that was published online at one point.

OBJECTIVE

In this assignment you'll be writing the class `ElfName`, which will create a first and last *elf name* similar to the ones described above, based on a given real first name and birth month.

PROCEDURE

1. **Examine ElfNameRunner**
   Use the `ElfNameRunner` class included below as a guide in considering how to implement your `ElfName` class.

2. **Consider how to implement the elf name translation process**
   Clearly the elven first names and last names depend on the values provided to the class, but you don't want to write 26 `if-else` statements for the first name and 12 more `if-else` statements for the last name.

   Here's a better strategy...

3. **Identify instance variables for your elf name.**

4. **Create additional Arrays that will be used by the ElfName class.** Create an Array of 26 values for the elf first name, and another Array of 12 values for the elf last name. You should also create a String called `alphabet` that has the 26 letters of the alphabet stored in it.

5. **Write a constructor for your ElfName.**
   a. The constructor for the ElfName class will take a person's name and the number of their birth month (1-12) as parameters.
   b. Use the month number to identify the corresponding Elf last name.
   c. To get the Elf's first name, take the person's first name and identify the *index of the initial letter in the* `alphabet` *String*. (Ie. the initial of my first name is "R," which is the 18th letter in the alphabet). That will correspond with the 18th element in the Array of Elf first names. To do this, you can use the `indexOf()` method.

6. **Write methods as needed for the class.** The runner calls two methods that you need to write.

REFERENCES

```
/**
 * The ElfNameRunner class asks the user for a firstName and birthMonth,
 * constructs an ElfName object for those values, and displays a corresponding
 * ElfName, both first and last.
 * @author Richard White
 * @version 2016-12-10
 */

import java.util.Scanner;

public class ElfNameRunner
{
    public static void main(String[] args)
    {
        Scanner in = new Scanner(System.in);
        String input = "y";
        while (input.substring(0,1).equals("y"))
        {
            System.out.print("Enter a first name: ");
            String firstName = in.next();
            System.out.print("... and enter a birth month (1-2): ");
            int birthMonth = in.next();
            ElfName elf = new ElfName(firstName, birthMonth);
            System.out.println("Your elf name is...");
            System.out.println(elf.getFirstName() + " " + elf.getLastName());
            System.out.print("\nWanna go again ('y')?");
            input = in.next();
        }
        System.out.println("Happy Holidays!");
    }
}
```