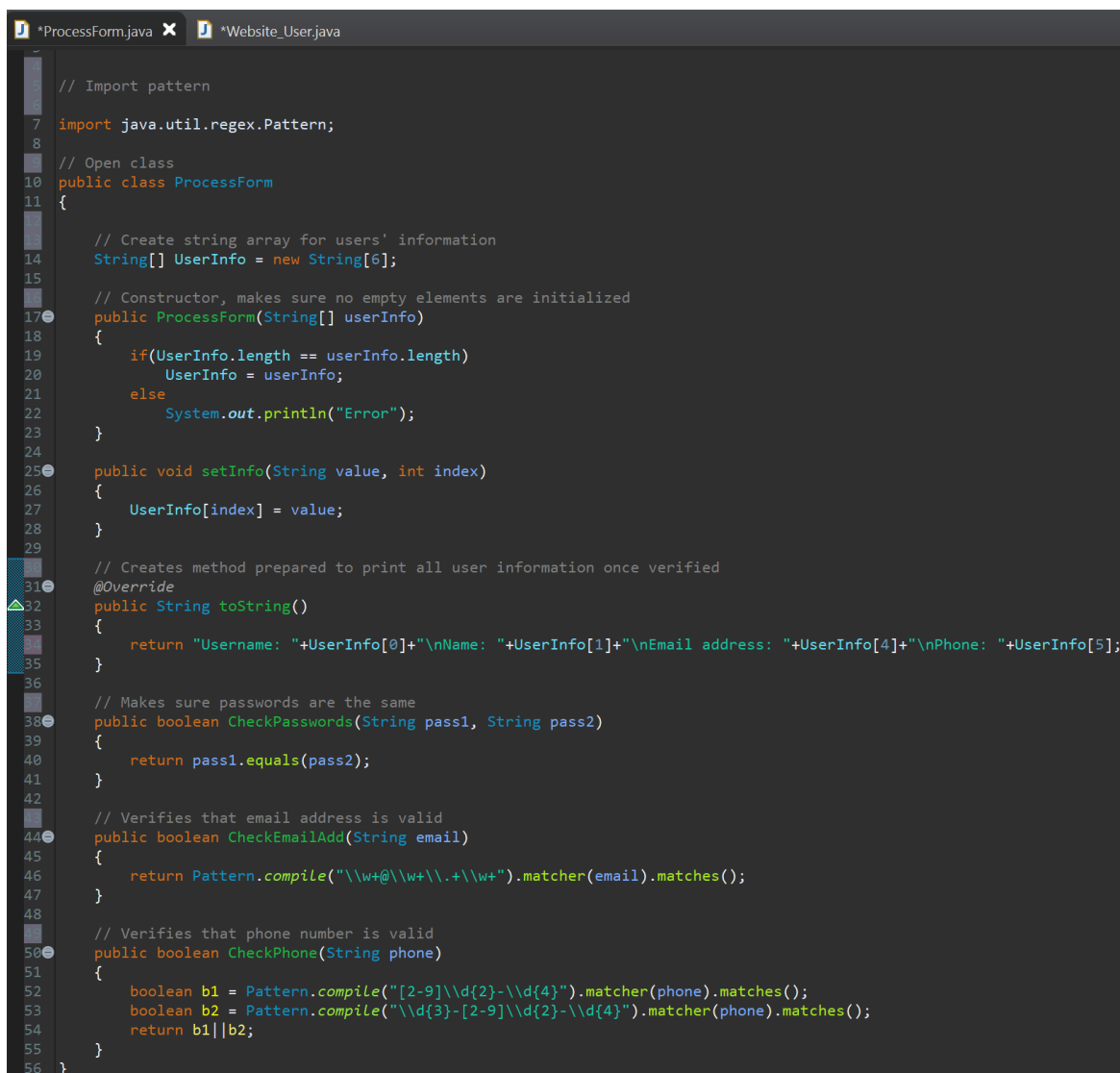Stone Barrett

Assignment 03

6/30/19

Problem 1: Sign Up

To begin with, I created the *ProcessForm* class which does most of the work behind the scenes. As prompted, this class initializes a string array to hold all of a user's information. The class also holds a few methods, the first of which obviously being the constructor uses the information array as a parameter and confirms that the instance variable is the same length as the entered or returns an error message if not. Next comes assigning the array values entered by the user, leading to the *toString* that prepares to print the information back to the user once everything is complete. From this point in the class, three Booleans are created that check whether the phone number and email address entered are valid formats and whether the password and password re-entry fields match.

The second class I made was the *Website_User*, which sets up the scanner and interacts with a user. After prompting the user for each type of information required, the program then verifies with *ProcessForm* that the email, phone, and passwords are valid. If the are not, the user is simply asked to try again. After all the information is verified, the program prints the *toString* created earlier.

Screenshots:

```java
// Import pattern

import java.util.regex.Pattern;

// Open class
public class ProcessForm
{

    // Create string array for users' information
    String[] UserInfo = new String[6];

    // Constructor, makes sure no empty elements are initialized
    public ProcessForm(String[] userInfo)
    {
        if(UserInfo.length == userInfo.length)
            UserInfo = userInfo;
        else
            System.out.println("Error");
    }

    public void setInfo(String value, int index)
    {
        UserInfo[index] = value;
    }

    // Creates method prepared to print all user information once verified
    @Override
    public String toString()
    {
        return "Username: "+UserInfo[0]+"\nName: "+UserInfo[1]+"\nEmail address: "+UserInfo[4]+"\nPhone: "+UserInfo[5];
    }

    // Makes sure passwords are the same
    public boolean CheckPasswords(String pass1, String pass2)
    {
        return pass1.equals(pass2);
    }

    // Verifies that email address is valid
    public boolean CheckEmailAdd(String email)
    {
        return Pattern.compile("\\w+@\\w+\\.+\\w+").matcher(email).matches();
    }

    // Verifies that phone number is valid
    public boolean CheckPhone(String phone)
    {
        boolean b1 = Pattern.compile("[2-9]\\d{2}-\\d{4}").matcher(phone).matches();
        boolean b2 = Pattern.compile("\\d{3}-[2-9]\\d{2}-\\d{4}").matcher(phone).matches();
        return b1||b2;
    }
}
```

```java
3
// Import scanner
import java.util.Scanner;

// Open class
public class Website_User
{

    // Main function
    public static void main(String[] args)
    {

        // Set up scanner
        Scanner sc = new Scanner(System.in);

        // Interface with user, prompting for information
        String[] userInfo = new String[6];
        System.out.println("Enter username:");
        userInfo[0] = sc.nextLine();
        System.out.println("Enter your name:");
        userInfo[1] = sc.nextLine();
        System.out.println("Enter password:");
        userInfo[2] = sc.nextLine();
        System.out.println("Re-enter password:");
        userInfo[3] = sc.nextLine();
        System.out.println("Enter email address:");
        userInfo[4] = sc.nextLine();
        System.out.println("Enter phone number:");
        userInfo[5] = sc.nextLine();

        // Checks with other class to verify email or prompt re-entry
        ProcessForm processForm = new ProcessForm(userInfo);
        while (!processForm.CheckEmailAdd(userInfo[4]))
        {
            System.out.println("Enter valid email address:");
            processForm.setInfo(sc.nextLine(),4);
        }

        // Checks with other class to verify password re-entry or prompt second attempt
        while (!processForm.CheckPasswords(userInfo[2],userInfo[3]))
        {
            System.out.println("Passwords didn't match.\nEnter password:");
            processForm.setInfo(sc.nextLine(),2);
            System.out.println("Re-enter password:");
            processForm.setInfo(sc.nextLine(),3);
        }

        // Checks with other class to verify phone number or prompt re-entry
        while (!processForm.CheckPhone(userInfo[5]))
        {
            System.out.println("Enter valid phone number (xxx-xxx-xxxx or xxx-xxxx):");
            processForm.setInfo(sc.nextLine(),5);
        }

        // Prints information
        System.out.print(processForm.toString());

        // Close scanner
        sc.close();
    }
}
```

Sample outputs:

```
<terminated> Website_User [Java Application] C:\Program Files\Java\jre1.8.0_211\bin\javaw.exe (Jun 30, 2019, 9:08:18 PM)
Enter username:
scbarr04
Enter your name:
Stone Barrett
Enter password:
pASSWORD!
Re-enter password:
pASSWORD!
Enter email address:
scbarr04@louisville.edu
Enter phone number:
859-585-6450
Username: scbarr04
Name: Stone Barrett
Email address: scbarr04@louisville.edu
Phone: 859-585-6450
```

```
<terminated> Website_User [Java Application] C:\Program Files\Java\jre1.8.0_211\bin\javaw.exe (Jun 30, 2019, 9:12:22 PM)
Enter username:
scbarr04
Enter your name:
Stone Barrett
Enter password:
pASSWORD!
Re-enter password:
passsword!
Enter email address:
scbarr@louisville
Enter phone number:
859-55-6450
Enter valid email address:
scbarr04@louisville.edu
Passwords didn't match.
Enter password:
pASSWORD!
Re-enter password:
pASSWORD!
Enter valid phone number (xxx-xxx-xxxx or xxx-xxxx):
859-585-6450
Username: scbarr04
Name: Stone Barrett
Email address: scbarr04@louisville.edu
Phone: 859-585-6450
```