CS 1073

FR03A

Assignment #6

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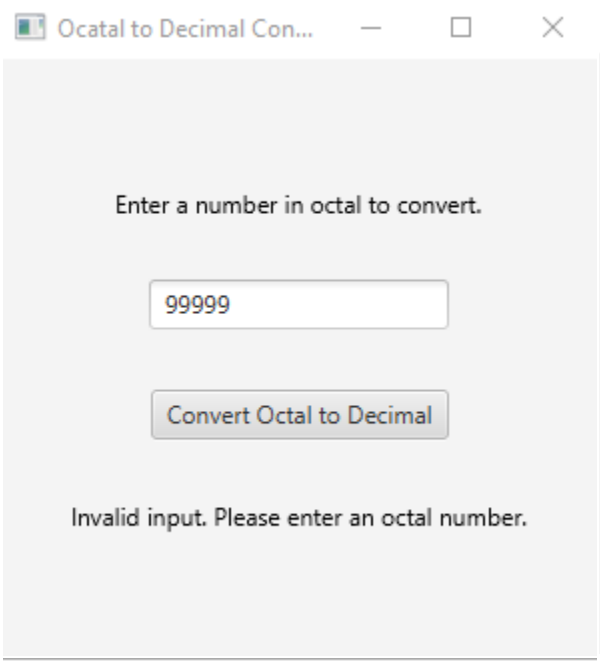
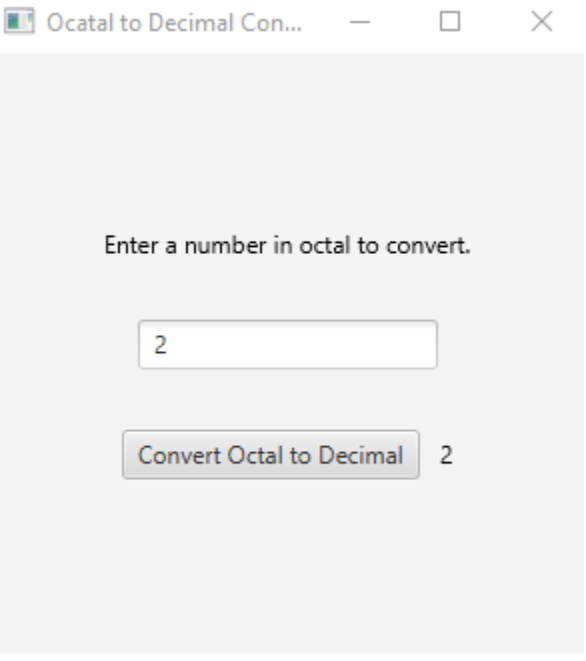
Section 1

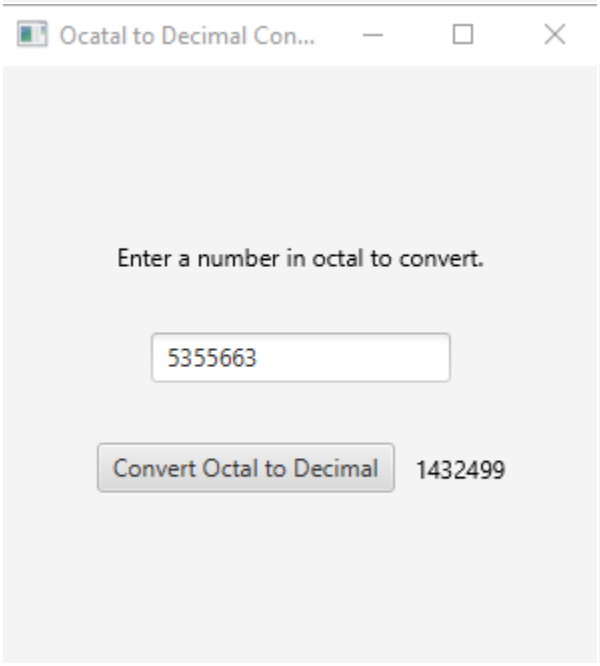
```
import javafx.application.Application;
import javafx.event.ActionEvent;
import javafx.geometry.Pos;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.scene.control.Label;
import javafx.scene.control.TextField;
import javafx.scene.layout.FlowPane;
import javafx.scene.text.Text;
import javafx.stage.Stage;
/**
 * @author Ethan McCarthy 3573807
 */
 public class Octal2DecimalGUI extends Application{
    private TextField inputField;
    private Text topText;
    private Text outpuText;

    public void start(Stage primaryStage){
        primaryStage.setTitle("Ocatal to Decimal Converter");

        Button convert = new Button("Convert Octal to Decimal");
        convert.setOnAction(this::convert2Decimal);

        inputField = new TextField();
        inputField.setPrefWidth(150);
        inputField.setOnAction(this::convert2Decimal);

        topText = new Text("Enter a number in octal to convert.");
        outpuText = new Text("Welcome to the converter app!");

        FlowPane pane = new FlowPane(topText, inputField, convert, outpuText);
        pane.setAlignment(Pos.CENTER);
        pane.setHgap(10);
        pane.setVgap(30);

        Scene scene = new Scene(pane, 300, 300);

        primaryStage.setScene(scene);
        primaryStage.show();
    }

    public void convert2Decimal(ActionEvent event){
```

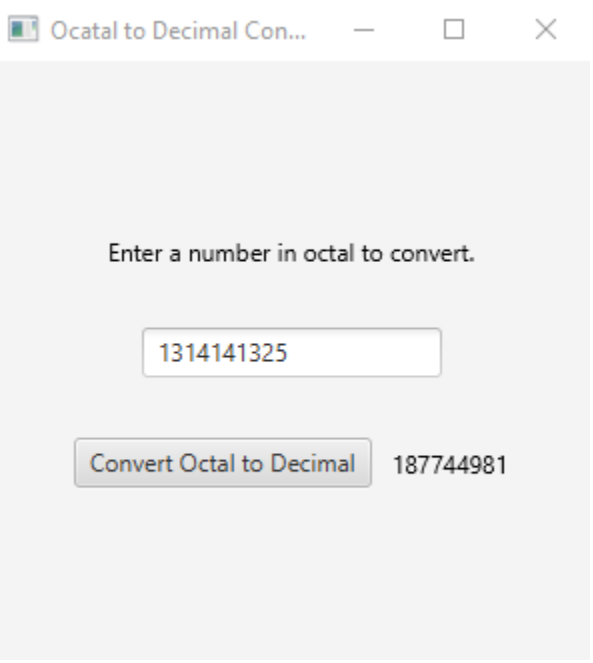
```
        boolean invalid = false;
        int decimal = 0;
        int count = 0;
        int numberIn = Integer.parseInt(inputField.getText());


        while (numberIn > 0){
            int x = numberIn % 10;
            if(x > 7){
                invalid = true;
                break;
            }

            decimal += (int) (x * Math.pow(8, count));
            numberIn = numberIn / 10;
            count++;
        }

        if (invalid){
            outpuText.setText("Invalid input. Please enter an octal number.");
        }
        else{
            outpuText.setText(decimal + "");
        }
    }
}
```

Section 2


Ocatal to Decimal Con...
Enter a number in octal to convert.
99999
Convert Octal to Decimal
Invalid input. Please enter an octal number.


Ocatal to Decimal Con...
Enter a number in octal to convert.
2
Convert Octal to Decimal
2


Ocatal to Decimal Con...
Enter a number in octal to convert.
5355663
Convert Octal to Decimal
1432499

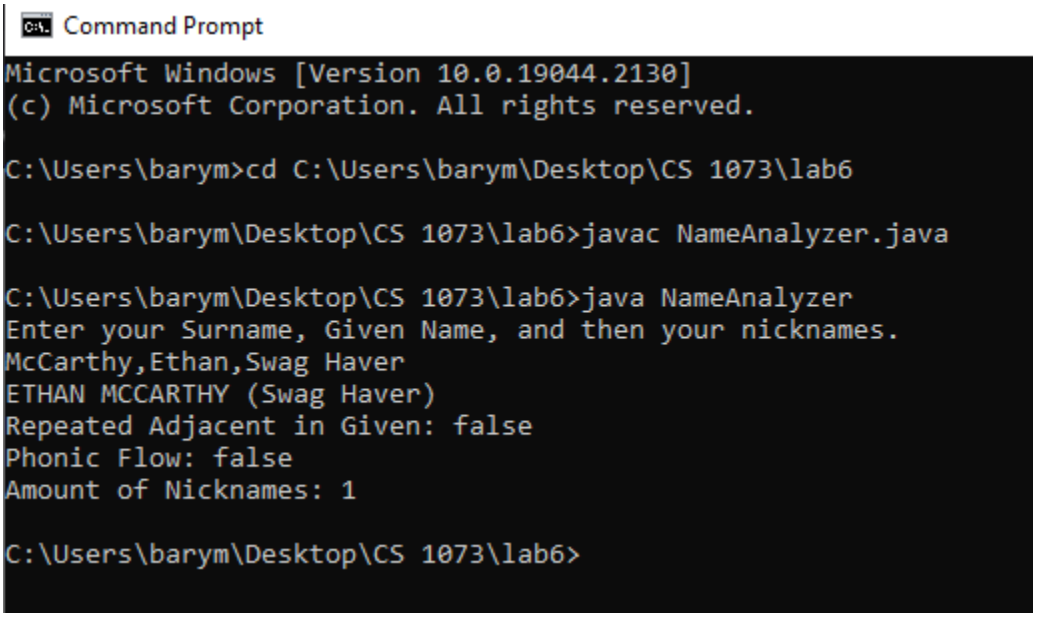

Ocatal to Decimal Con...
Enter a number in octal to convert.
1314141325
Convert Octal to Decimal
187744981

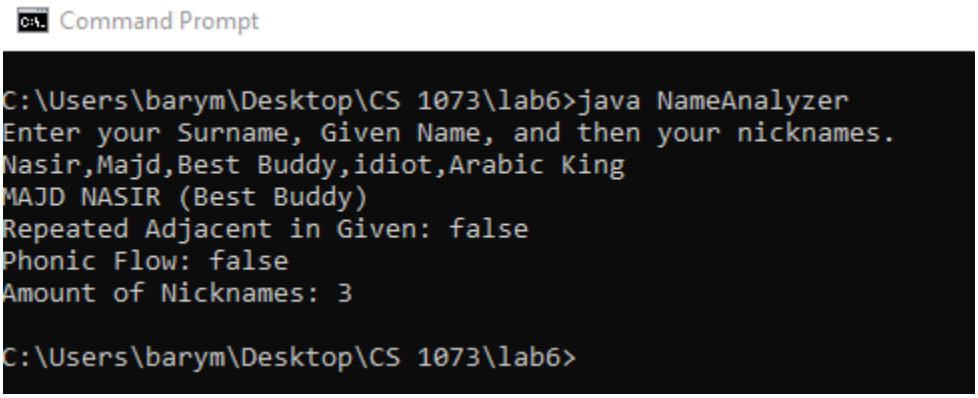
Section 3

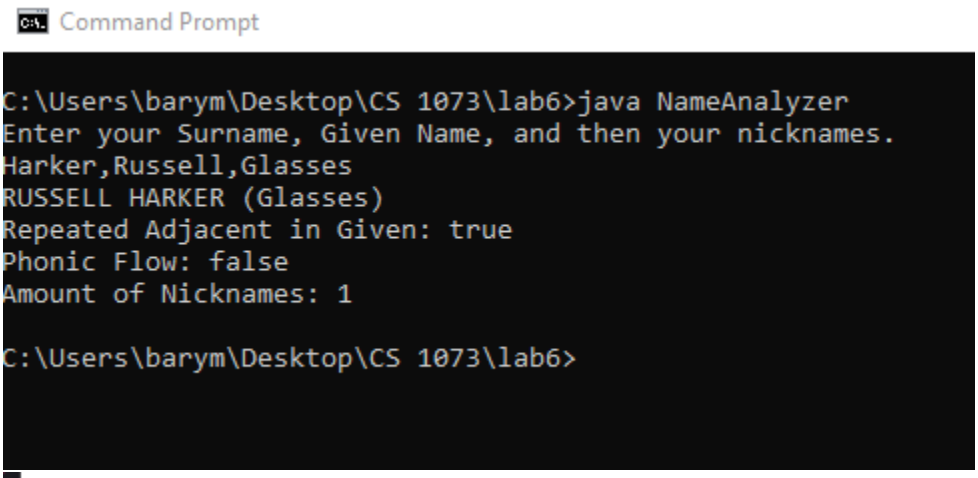
```java
import java.util.Scanner;
/**
 * @author Ethan McCarthy 3573807
 */

 public class NameAnalyzer{
    public static void main(String[] args){
        Scanner scan = new Scanner(System.in);

        boolean adjacent = false;
        boolean phonic = false;
        String longestName = "";

        System.out.println("Enter your Surname, Given Name, and then your
nicknames.");

        String input = scan.nextLine();

        int size = input.split(",").length;

        String[] items = input.split(",");

        for(int i = 1; i < items[1].length(); i++){
            char char1 = items[1].charAt(i);
            char char2 = items[1].charAt(i-1);

            if (char1 == char2){
                adjacent = true;
                break;
            }
        }

        if(items[1].charAt(items[1].length() - 1) == items[0].charAt(0 )){
            phonic = true;
        }

        for(int i = 2; i < size; i++){
            if(items[i].length() > longestName.length()){
                longestName = "(" + items[i] + ")";
            }

        }
```

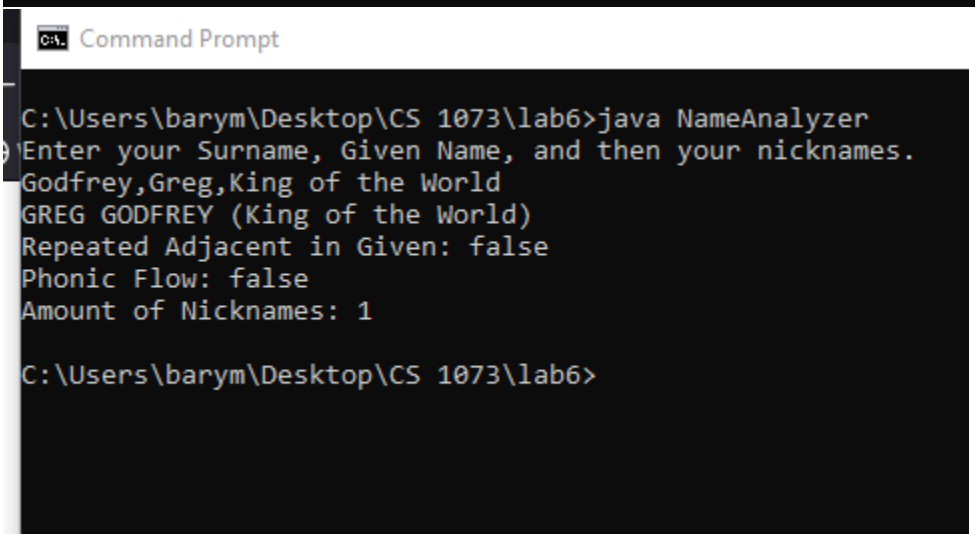
```
        System.out.println(items[1].toUpperCase() + " " + items[0].toUpperCase()
+ " " + longestName);
        System.out.println("Repeated Adjacent in Given: " + adjacent);
        System.out.println("Phonic Flow: " + phonic);
        System.out.println("Amount of Nicknames: " + (size - 2));

    }
 }
```

Section 4


Command Prompt
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.
C:\Users\barym>cd C:\Users\barym\Desktop\CS 1073\lab6
C:\Users\barym\Desktop\CS 1073\lab6>javac NameAnalyzer.java
C:\Users\barym\Desktop\CS 1073\lab6>java NameAnalyzer
Enter your Surname, Given Name, and then your nicknames.
McCarthy,Ethan,Swag Haver
ETHAN MCCARTHY (Swag Haver)
Repeated Adjacent in Given: false
Phonic Flow: false
Amount of Nicknames: 1
C:\Users\barym\Desktop\CS 1073\lab6>


Command Prompt
C:\Users\barym\Desktop\CS 1073\lab6>java NameAnalyzer
Enter your Surname, Given Name, and then your nicknames.
Nasir,Majd,Best Buddy,idiot,Arabic King
MAJD NASIR (Best Buddy)
Repeated Adjacent in Given: false
Phonic Flow: false
Amount of Nicknames: 3
C:\Users\barym\Desktop\CS 1073\lab6>


Command Prompt
C:\Users\barym\Desktop\CS 1073\lab6>java NameAnalyzer
Enter your Surname, Given Name, and then your nicknames.
Harker,Russell,Glasses
RUSSELL HARKER (Glasses)
Repeated Adjacent in Given: true
Phonic Flow: false
Amount of Nicknames: 1
C:\Users\barym\Desktop\CS 1073\lab6>


Command Prompt
C:\Users\barym\Desktop\CS 1073\lab6>java NameAnalyzer
Enter your Surname, Given Name, and then your nicknames.
Godfrey,Greg,King of the World
GREG GODFREY (King of the World)
Repeated Adjacent in Given: false
Phonic Flow: false
Amount of Nicknames: 1
C:\Users\barym\Desktop\CS 1073\lab6>