Lab07

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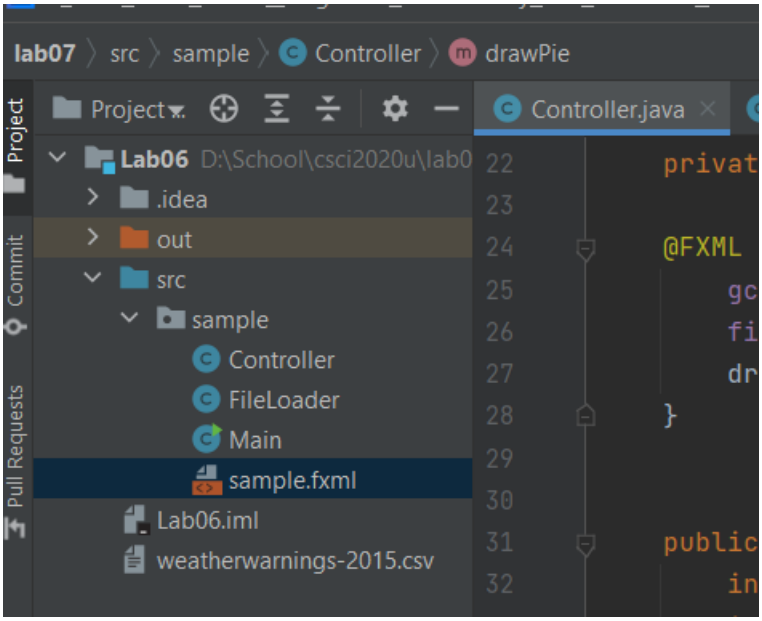
Local Repository



Github Repository

https://github.com/shayne-lewis/csci2020u_shaynelewis/tree/master/lab07

FileLoader.java

```java
package sample;

import java.io.*;
import java.util.Map;
import java.util.TreeMap;

public class FileLoader {
    private String filename;
    private int totalWords = 0;
    private Map<String, Integer> wordCounts = new TreeMap<String, Integer>();
    private Map<String, Double> percentCounts = new TreeMap<String, Double>();

    public Map<String, Double> getPercentCounts() {
        return percentCounts;
    }

    public FileLoader(String filename){
        this.filename = filename;
    }

    public void loadFile(){
        String line = "";

        try{
            BufferedReader br = new BufferedReader(new FileReader(this.filename));
            while ((line = br.readLine())!=null){
                String[] columns = line.split( regex: ",");
                //System.out.println(line);
                if(wordCounts.containsKey(columns[5])){
                    int prevValue = wordCounts.get(columns[5]);
                    wordCounts.put(columns[5], prevValue + 1);
                } else {
                    wordCounts.put(columns[5], 1);
                }

                totalWords++;
            }

        } catch (FileNotFoundException e){
            e.printStackTrace();
        } catch (IOException e) {
            e.printStackTrace();
        }
        percentMapping();
    }

    public void percentMapping(){
        for(Map.Entry<String, Integer> entry : wordCounts.entrySet()){
            String name = entry.getKey();
            Double val = new Double(entry.getValue());
            percentCounts.put(name, (val / totalWords));
        }
    }
}
```

Controller.java

```java
public class Controller {
    @FXML private Canvas mainCanvas;
    @FXML private GraphicsContext gc;
    private FileLoader file = new FileLoader( filename: "weatherwarnings-2015.csv");
    private static Color[] pieColours = { Color.AQUA, Color.GOLD, Color.DARKORANGE, Color.DARKSALMON, Color.LAWNGREEN, Color.PLUM};

    @FXML public void initialize(){
        gc = mainCanvas.getGraphicsContext2D();
        file.loadFile();
        drawPie( x: 150,  y: 50, file.getPercentCounts(), pieColours);
    }


    public void drawPie(int x, int y, Map<String, Double> percentCounts, Color[] colors){
        int i = 0;
        int a = 50;
        double startAng = 0;
        for(Map.Entry<String, Double> entry : file.getPercentCounts().entrySet()){
            gc.setFill(colors[i]);
            i++;
            double endAng = startAng + entry.getValue() * 360;
            System.out.println("startAngle = " + startAng + "\n endAngle = " + endAng);
            gc.fillArc( v: x+200, y, v2: 200, v3: 200,startAng, v5: endAng - startAng, ArcType.ROUND);
            startAng = endAng;
            gc.fillRect( v: x-30,  v1: a+10,  v2: 20,  v3: 10);
            gc.setFill(Color.BLACK);
            gc.fillText(entry.getKey(),x, v1: a+20);
            a += 30;
        }
    }
}
```

Main.java and sample.fxml were unchanged from lab06. They just created and instantiated the canvas.

Output Window