

This is a project to be done by groups. The groupings in the previous projects should be followed.

General Instruction:

1. Create a project in IntelliJ IDEA with the following naming convention:  
<class code><last names of the members (in alphabetical order)>FinalGroupProject  
e.g. *9300AranetaAyalaMontelibanoTanFinalGroupProject*
2. Create a package within this project named “**prog2.finalgroup**”. All classes needed for this activity should be placed within this package.
3. Create a directory (folder) named “**res**” within this project. All data, font, image and other files used or referenced by your program must be placed in this directory. Note: **data.csv** must be placed in this directory.

Problem Description:

Given **data.csv**, write a program that processes the data within the file into “useful” pieces of information. The CSV (comma separated values) file contains the following information about citizens living in a certain community (last name, first name, email address, address, age, type of residency, district number, and gender). Processing may involve sorting, filtering, generating a summarized value, etc. The interface of the program to be created has to be graphical (with menu options).

Other details:

- a. The address of a citizen in the file may or may not be enclosed in double quotes. Double quotes will be present if a comma (,) is present in the address of a person. See the examples below (data shown are of the first two rows in the file):

File opened using a spreadsheet

Colleen	Joyner	commodo.auc	Ap #697-1279 Nullam Road	30 Resident	4 Female
Fay	Parker	augue.ut.lacu	P.O. Box 234, 6576 Et, Ave	24 Resident	4 Female

File opened using Notepad

Colleen,Joyner,commodo.auctor@elementumat.net,Ap #697-1279 Nullam Road,30,Resident,4,Female  
Fay,Parker,augue.ut.lacus@egetvarius.edu,"P.O. Box 234, 6576 Et, Ave",24,Resident,4,Female

Notice that the second data contains a comma in the address hence the address is enclosed in double quotation marks.

- b. The type of residency will either be a resident or non-resident since it is possible for one person to be staying in a place solely because of work but his residence remains to be somewhere else.
- c. With the given data, you are to create a class called Citizen having the following field details:

Citizen

- String fullName

- String email

- String address

- int age

- boolean resident

- int district

- char gender

Notes on what values the fields will be storing:

→ The **fullName** field will be a combination of the first name and last name (separated by a space)

→ **address** field should not contain double quotes

→ **resident** field should hold true if the citizen is a resident and false if otherwise

→ **gender** field should store M for males and F for females

- d. The **Citizen** class must implement the **Comparable** interface (java.lang.Comparable).
- e. **Your program must show at least five useful outputs/information** that can be generated out of your data. Ensure further that the nature of processing the data are NOT the same for all the outputs (i.e. all outputs are on counting – male/female citizens, population of citizens per district, number of senior citizens).
- f. Create **MyProgramUtility** class. This contains the code that will convert the input file (**data.csv**) into a list of **Citizen** objects and processes the list to come up with useful information similar to the sample programs provided to you. Note: Make sure that the different methods of this class will return some value that will eventually be used by methods of this class or from another class.
- g. Create **MyProgram** class. This class will contain the main method and also the code that generates the GUI (Graphical User Interface). For this activity, ensure that the creation of the GUI components is hard coded (don’t use the utility available within IntelliJ IDEA or Scene Builder to create your GUI).

- h. Create a short presentation video (about 5 minutes). As in the previous group projects, your should video should present an overview of the project (Introduce the names of group members and main contribution, objective of the project, design overview, program execution demonstration.)