COSC1295 Advanced Programming S1/2018
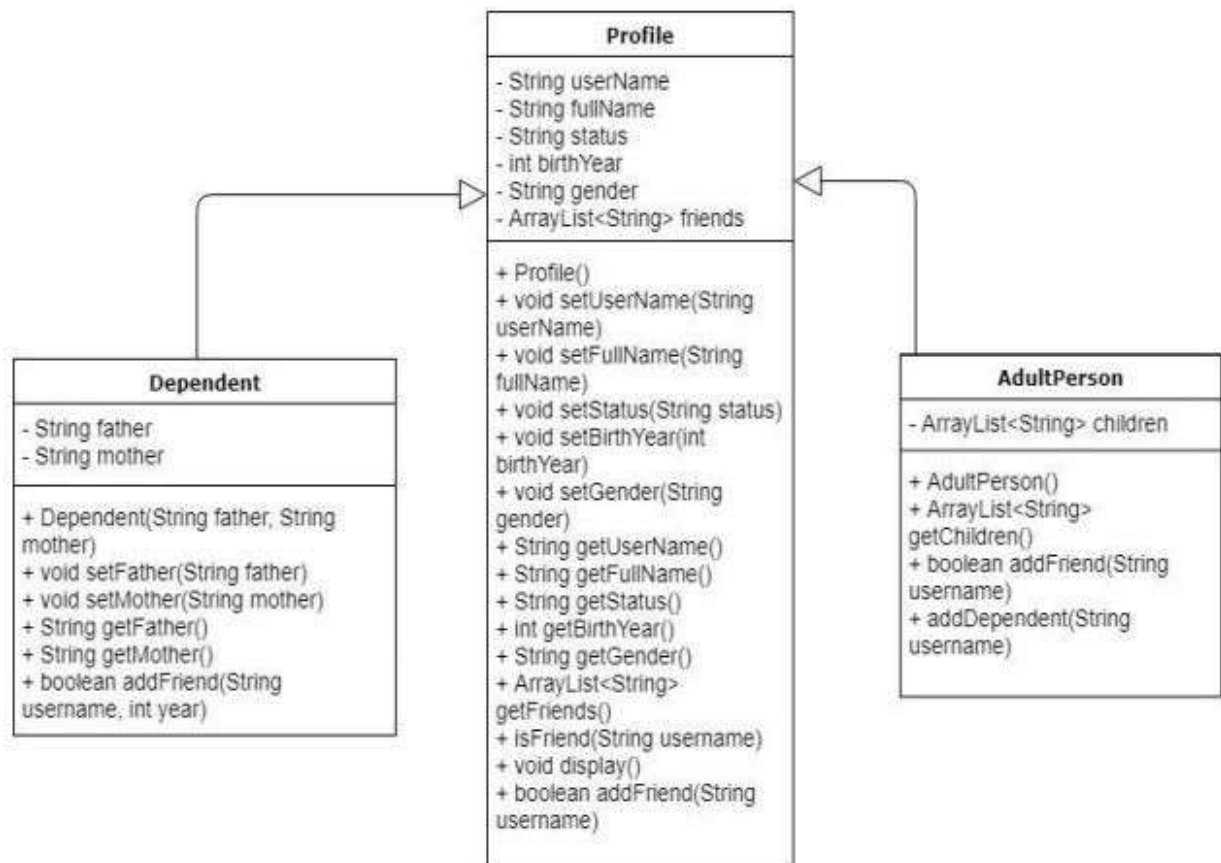## Assignment 1

Abdullah Omar Alsahafi   **s3593438**
50% contribution

Abdulrahman Nafeye Alsubhi   **s3578164**
50% contribution

Design
Class diagram of the program

Explanation of how design will be able to store the profile information.

The MiniNet program is consist of 5 classes. MiniNet class, which is the starting point of the program, Driver class Profile, AdultPerson and Dependent class. The concept of inheritance is used here, and for this, The Profile class is used a base class and AdultPerson and Dependent are the derived classes of Profile class. The Driver class utillises two arrays, one for AdultPerson profiles and second for Dependent profiles.

Explanation of how class hierarchy will facilitate the network management.

There are only three classes used in this program. Two classes are inherited from one class. When started, the MiniNet class is executed, which will call the Driver class. The Driver class will then utilises other three classes (Profiles, AdultPerson and Dependent) to work.

Explanation of process by which program can maintain the networks and find connections more efficiently.

The main program, when started, will display the 7 menu like options. These menu will lets the user of the program to
- List everyone on the network, only display AdultPerson or onlyDisplay Dependents
- Add an AdultPerson or a Dependent to the network
- Select a AdultPerson or a Dependent by his/her username

When the user selects a profile, the program will show another sub menu to the user to let the user to
- Display, update or delete the profile
- Display all friends, children or parents of profile
- Connect with another profile and check for a relation with another profile

The program is using some data from the java code to enable the proper functioning of the program. The data is random but this data is added by following all the rules provided in the document. The age restrictions of Dependents was also kept in mind while using the data. The process of the program is very simple, it uses two arrays, each for one type of Profile. The random data is also loaded in these two arrays. All the changes to the profiles will also make through these arrays. When user choose an option from the program, the program will guide the user through all process.