

# Advanced Programming Assignment-1 report

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### Developing Plan

For this mini network I will create the following lists to store the profile information:

- Name lists
- Age lists
- Status lists
- Friends lists
- Parents lists
- Children lists
- Image lists

I will initial with 9 people in the system, every person will have name and age. Some of them will have status at the beginning, because status is optional in this scanio, so it is not necessary for everyone to have it. But there will be 3 methods to display, set and remove the status for the people. I will also give some people an array of friends at the beginning, the friends array will be defined at friends class, because each person can have many friends, so in the Friends List, each element is an array. So as Parents List and Children List. There will also be some methods to display, add and remove friends, but there will be some limitations, because as the assignment description mentioned that age matters when making friends in this mini network. Some of the methods will be able to show the people's parents or children. Furthermore, I will have two profile pictures for people to choose(one is cat the other one is dog), but not compulsory. In the Image List, I only save the number of the picture which the people picked, in the driver class, I will have "if else" to decide which picture to display on this person's profile

The initial profiles of the people in the system will be set as:

| Name  | Age  | Image  | Status           | Friends   | Parents     | Children |
|-------|------|--------|------------------|-----------|-------------|----------|
| Alice | 28   | 1(cat) | Blonde hair      | Don,Eddie | null        | Gary     |
| Bob   | 29   | 2(dog) | Big muscles      | Eddie     | null        | Gary     |
| Cathy | 25   | 1(cat) | Vegetarian       | null      | null        | Helen    |
| Don   | 33   | 2(dog) | Love cats        | Alice     | null        | Helen    |
| Eddie | 43   | 1(cat) | Super dog people | Alice,Bob | null        | Ivan     |
| Fiona | 38   | 2(dog) | Play guitar      | null      | null        | Ivan     |
| Gary  | 6    | 1(cat) | Play piano       | Helen     | Alice,Bob   | null     |
| Helen | 4    | 2(dog) | Like candy       | Gary      | Cathy,Don   | null     |
| Ivan  | 1    | 1(cat) | Born in Japan    | null      | Eddie,Fiona | null     |
| ....  | .... |        | ....             | ....      | ....        | ....     |

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## Structure Description

I will have the following classes in my program:

- **MiniNet class**, which is for the user to operate the system. It can use every public methods from other classes by creating objects and calling their methods.
- **Name class**, define the variables of Name and methods will be used in NameList class
- **NameList class**, the subclass of Name class. It can create a list to store names for every person in the system
- **Age class**, define the variables of Age and methods will be used in AgeList class
- **AgeList class**, the subclass of Age class. It can create a list to store the Age for every person in the system
- **Image class**, define the variables of picture number, and methods will be used in ImageList class
- **ImageList class**, the subclass of Image class. It can create a list to store the picture number for every person in the system
- **Status class**, define the variables of statuses, and methods will be used in StatusesList class
- **StatusesList class**, the subclass of Status class. It can create a list to store statuses for every person in the system
- **Friends class**, define the array of Friends and methods will be used in FriendsList class
- **FridendsList class**, the subclass of Friends class. It can create a list to store the friends array for every person in the system
- **Parents class**, define the array of Parents and methods will be used in ParentsList class
- **ParentsList class**, the subclass of Parents class. It can create a list to store the parents array for every person in the system
- **Children class**, define the array of Children and methods will be used in ChildrenList class
- **ChildrenList class**, the subclass of Children class. It can create a list to store the children array for every person in the system

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## UML Diagram

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## Operating Explanation

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## **Discussion and comments**

**JiaQi Tang s3598284(contribution 100%):**

Through this assignment I learned how to design and implement a project with a team.