

## 2012/10/16 Software Studio Lab3

### Honor Code

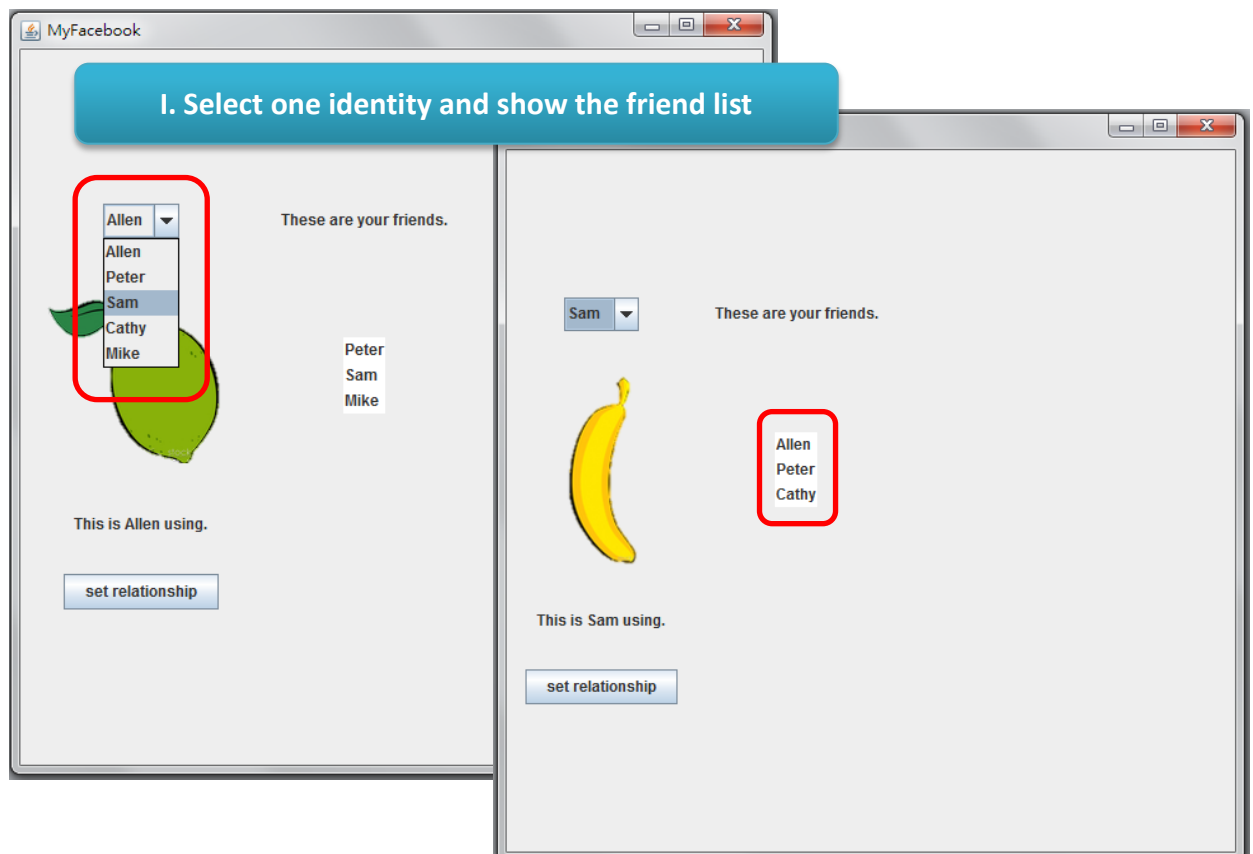
Any cheating will be handled seriously in compliance with the university rules. All assigned work is expected to be individual, except where explicitly written otherwise (e.g., term project). You are encouraged to discuss with your classmates; however, what you hand in should be your own work.

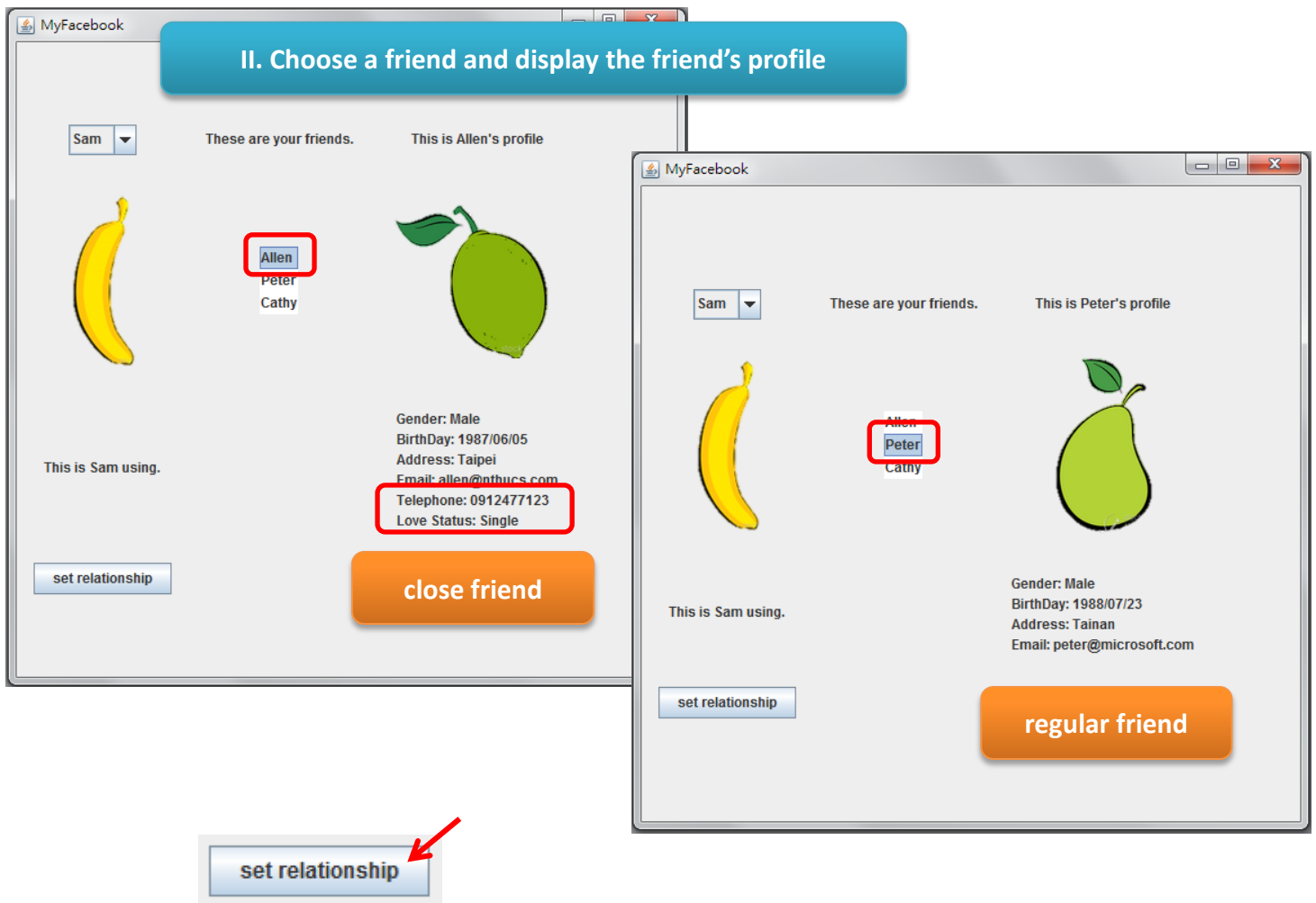
#### 1. (75%) MyFacebook

Create a graphical user interface to show personal and friends' profiles. The user can change the relationships between people by using this program. The personal data and relationships are the same as the second question of Lab2. This program has two frames: "MyFacebook" and "Set Relationship."

#### In the "MyFacebook" frame:

This frame should let the user select one identity first, and then show the friend list of this user identity. After selecting one friend from the friend list, the frame will display this friend's profile. Same to the design of the previous version of MyFacebook that we described in Lab 2, a person's regular friend can only see part of this person's profile. Only a person's close friend can see the whole profile.





### In the "Set Relationship" frame:

The program should let the user select one identity first, and then show the rest of people in MyFacebook and the relationship between the selected identity and the others. Visualize relationships among people with line segments of different colors. There are three kinds of relationship, no relationship (stranger), regular friend, and close friend. The user can change the relationships between a selected identity and other people by clicking on the radio buttons. If the relationship between two people is no relationship (stranger), then their relationship could not be changed. Once the relationships are changed, the visualization of the relationship and the profile in "MyFacebook" will also change. All the changes should stay effective until the whole system is terminated. Note that closing the "Set Relationship" window frame shouldn't shut the whole program down. The program should only terminate when the "MyFacebook" window is closed.

III. Click “set relationship”,  
then show another window to set relationships

a. choose one identity to set his/her  
relationship with others

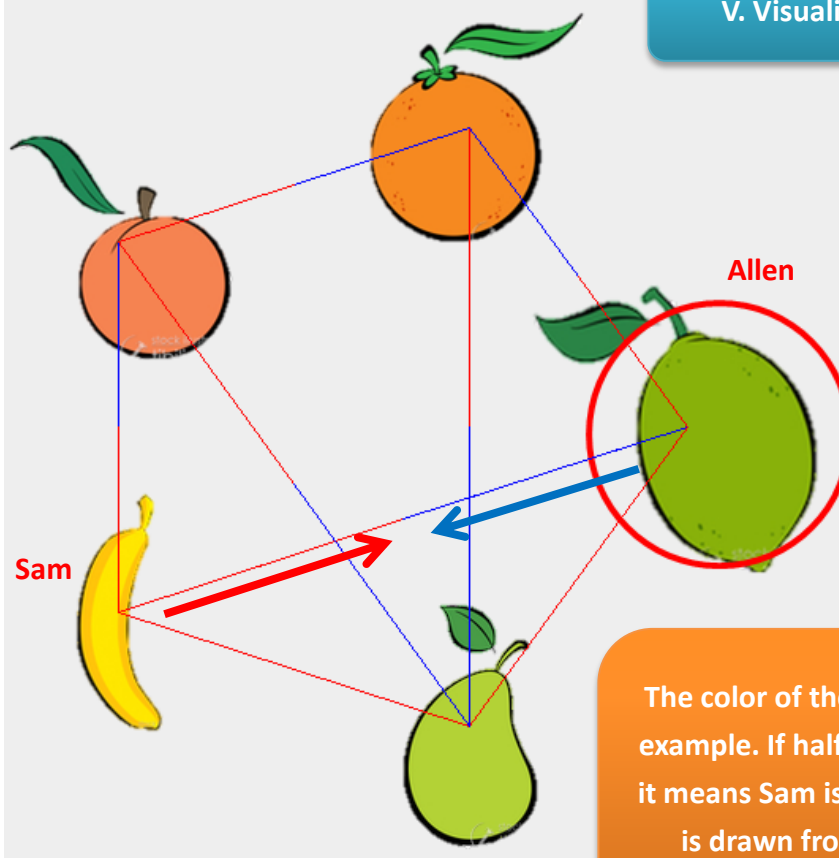
b. the one which is chosen  
should be marked

c. set relationship

The screenshot shows a window titled "Set Relationship". On the left, there is a list of identities: Allen, Peter, Sam, Cathy, and Mike. A red arrow points to "Allen". In the center, there are three sections for setting relationships. The first section is for "Peter" with options "regular friend" (selected) and "closed friend". The second section is for "Sam" with options "regular friend" and "closed friend" (selected). The third section is for "Cathy" with the option "stranger" (selected). The fourth section is for "Mike" with options "regular friend" (selected) and "closed friend". A red arrow points to the "regular friend" option for Mike. On the right, there is a diagram of fruit characters connected by red and blue lines. A red circle highlights a green pear character, and a red arrow points to it from the "Set Relationship" window.

V. Visualize the relationships

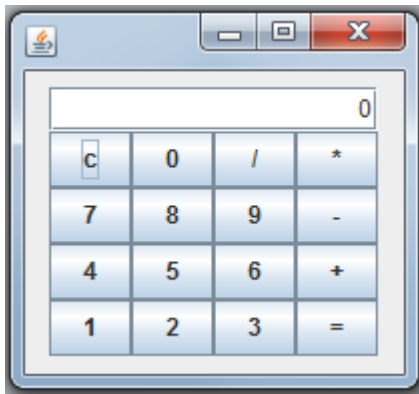
The color of the line has different meaning. Take “Allen” for example. If half of the line drawn from Allen to Sam is BLUE, it means Sam is a close friend of Allen. The other half, which is drawn from Sam to Allen, is RED, it means Allen is a regular friend of Sam.



**Requirements of this system- The system should allow the user to do the following operations:**

- I. Select one identity and show the friend list
- II. Choose a friend and show the profile
- III. Click “set relationship”, and then show another window for the configuration and visualization of relationships.
  - a. Choose one person to set others’ relationships to this person
  - b. The one which is chosen should be marked on the visualization
  - c. Set the relationship between people
- IV. Visualize the relationship by drawing lines of different colors.  
Once a relationship is changed, the line segment corresponding to the relationship should also change. (**RED: regular friend, BLUE: close friend**)


2. (25%) Implement a calculator. This calculator only needs to handle integer operations. (addition, subtraction, multiplication, division(the result will be an integer))  
(You can arrange the calculator’s button in your own way.)




press	show
1	1
1+	1
1+2	2
1+2+	3
1+2+3	3
1+2+3+	6
1+2+3+c	0
1+2=	3
1+2=+	3
1+2=+5	5
1+2=+5=	8
7/4*2-5=	-3

注意事項：

1. **Deadline: 2012/10/28 23:59 (10/29 00:00~23:59 交者，成績\*0.8)**
2. 交作業時，請按照以下格式標示清楚題號：

 學號\_Lab3\_1

 學號\_Lab3\_2

請在各題的資料夾放入**整個 project 資料夾**、**export 後的 runnable .jar file**、**Readme.txt**

再將這些資料夾一起壓縮成“學號\_Lab1.zip”，

將壓縮檔上傳至 <http://lms.nthu.edu.tw/> 軟體實驗的作業區

3. 每個.java 檔內，第一行請用註解加上學號、姓名及題號。
4. 程式碼務必要有**註解**，說明你解題的方法。(此項也列為評分標準之一)
5. Readme 請包含執行步驟(條列式)、遇到的困難及解決方法。