DEVELOP A PROGRAM TO
STORE AND MAINTAIN
PERSONAL PROFILE
INFORMATION.
YOUR PROGRAM SHOULD ALLOW
A USER TO INTERACTIVELY QUERY
AND MANIPULATE THE PROFILE
INFORMATION

Capstone Project

Write a **menu driven program** called *project_base_file*.py that will allow the user to enter commands and process these commands until the quit command is entered.

The program will store and maintain personal profile information (using a List of Profile objects). Personal profile information will be stored in a text file that will be read in when the program commences.

Once the initial profile data has been read in from the file, the program should allow the user to interactively query and manipulate the profile information.

Input

When your program begins, it will read in personal profile information from a file called profiles.txt. This is a text file that stores profile information for the simple social network.

An example input file called profiles.txt *can be found in the folder.*

The person's given name, family name, email address, and gender are stored on one line and are separated by the space character as seen below. The very next line stores the person's current status. The number of friends (corresponding to email addresses) is stored on a separate line (below the

status), followed by the email addresses of the person's friends in the list of profiles (each email address is on a separate line as seen in Figure 1 below):

```
Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank
goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
4
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
```

Assume that all data is in the correct format.

After the program has stored the data (using a List of Profile objects), it will enter interactive mode as described in the following section.

Figure 1: *Profile information file format (`profiles.txt`).*

Interactive Mode

Your program should enter an interactive mode after the profile information has been read from the file. The following commands should be allowed:

1. **Summary:**
   Outputs the contents of the profile list as seen below in the section titled Screen Format.

2. **Add:**
   Prompts for and reads a person's email address. If the email address does not already exist (i.e. a match is not found on email address) in the profile list, prompts for and reads the rest of the person's details (given name, family name, gender and status) and adds the information to the profile list (note that the number of friends will be set to zero – no friends are read in at this point). A message is displayed to the screen indicating that the profile has been successfully added.

   The profile must be added after the last profile entry stored in the list. If the profile is already stored in the profile list, an error message is displayed.

3. **Remove:**
   Prompts for and reads the person's email address. If the email address (profile) is found, it is removed from the list of profiles and a message is displayed to the screen indicating that this has been done. If the profile is not found in the profiles list, an error message is displayed

   The deleted person's email address must also be removed from ALL profiles that are friends with the deleted profile. Remove the email address from all friends' lists.

4. **Search:**
   Prompts for and reads the person's email address and searches for the person in the profile list. If the person is found in the profile list, the person's details are displayed to the screen as seen below in the section titled Screen Format. If the person is not found in the profile list, an error message stating the person has not been found is displayed.

5. **Update:**

Prompts for reads the person's email address. If the email (profile) is not found in the profiles list, an error message is displayed to the screen. If the profile with matching email address is found, the following prompt is displayed:

```
    Update              given_name              family_name
[status|add_friend|remove_friend]:
```

If **status** is chosen, prompt for and read the new status; update the status accordingly.

If **add_friend** is chosen, prompt for and read the email address of the friend to add. If the friend's email address is not found in the list of profiles, display an error message to the screen. If the email address is found in the friends list (i.e. they are already friends), display an error message to the screen (duplicate entries are not allowed). Otherwise, add the email address to the friends list and display a message to the screen indicating that this has been done.

If **remove_friend** is chosen, prompt for and read the email address of the friend to remove. If the friend's email address is not found in the list of friends, display an error message to the screen. If the email address is found in the friends list, it is removed from the array of friends and a message is displayed to the screen indicating that this has been done.

6. **Quit:**
   Causes the program to quit, outputting the contents of the profile list (list of profile objects) to a file (see section '*Final Output*' below for format).

Note:

The program should display an appropriate message if a profile is not found matching a search criteria. Appropriate messages should also be displayed to indicate whether a command has been successfully completed.

Please refer to the sample output (at the end of this document) to ensure that your program is behaving correctly and that you have the correct output messages.

Each time your program prompts for a command, it should display the list of available commands. See the sample output (at the end of this document) to ensure that you have the output format correct.

For example:

```
Please enter choice [summary|add|remove|search|update|quit]:
```

Menu input should be validated with an appropriate message being displayed if incorrect input is entered.

Screen Format

The **summary** command (`display_summary()` function) should display the profile information in the following format:

```
===============================================================================
=
Profile Summary
===============================================================================
=
-------------------------------------------------------------------------------
-
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
-------------------------------------------------------------------------------
-
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
-------------------------------------------------------------------------------
-
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
-------------------------------------------------------------------------------
-
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (2):
    Katy Perry
    David Guetta
-------------------------------------------------------------------------------
-
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
-------------------------------------------------------------------------------
-
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
-------------------------------------------------------------------------------
-
Jimmy Fallon (m | jimmy@tonightshow.com)
```

```
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
-------------------------------------------------------------------------
-
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (4):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
-------------------------------------------------------------------------
-
=========================================================================
=
```

The **search** command should display individual profile information to the screen in the following format:

```
John Mayer (m | john@guitar.com)

- Waiting on the world to change!

- Friends (2):

    Katy Perry

    David Guetta
```

Final Output

When your program finishes (because you entered the quit command) your program should output the contents of the list of profiles to a file called `new_profiles.txt`.

The format of this file should exactly match that of the input file.

It is recommended that you develop this part of the assignment in the suggested stages.

It is expected that your solution WILL include the use of:

- Your solution in a file called *project_base*_social.py.

- The supplied profile.py module (that defines the Profile class). This is provided for you – **do NOT modify this file**.

- Profile objects and methods (as appropriate) from the Profile class definition. You are not required to implement the Profile class. This is provided for you (profile.py module) – **do NOT modify this file**.

- Appropriate and well constructed while and/or for loops. (Marks will be lost if you use break statements or the like in order to exit from loops).

- You **must** implement **each** function **or** call the appropriate function(s) defined in the list_function module (that you wrote in part A of this assignment).

- Appropriate if, if-else, if-elif-else statements (as necessary).

- The following functions:

    o read_file(filename, profile_list)

       This function takes a file name and reads the contents of that file into the profile_list (list) passed as a parameter into the function. The function returns the list of profile objects. You must use a loop in your solution. You **may** use String and/or List methods in this function only. You may find the String methods split() and strip() useful here.

    o write_to_file(filename, profile_list)

       This function will output the contents of the profile list (list of profile objects) to a file in the same format as the input file. The file will need to be opened for writing in this function (and of course closed once all writing has been done). The function accepts the filename of the file to write to and the list of profile objects. You must use a loop in your solution.

    o display_summary(profile_list)

       This function will take the list of profile objects as a parameter and will output the contents of the list to the screen. This function displays the information to the screen in the format specified in the assignment specifications under the section - 'Screen Format'. You must use a loop in your solution.

    o find_profile(profile_list, email)

       This function will take the person's email as input along with the list of profile objects (profile_list) and will return the position (index) of the person found in the profile_list. If the person is not found, the function returns -1. You **must** use a loop in your solution. You **must not** use list methods in your solution.

    o add_profile(profile_list)

       This function takes the list of profile objects as input. The function prompts for and reads the person's (to be added) email address. If the person already exists in the list of profiles,

display an error message to the screen. If the person does not exist in the profiles list, prompt for and read the person's given name, family name, gender and status. Create a new profile object with the information read in and add the profile object to the end of the list of profiles and displays a message to the screen indicating that a new person has been added to the profiles list. This function returns the list of profiles. You may use the `list_name.append(item)` method to add the new profile object to the list of profiles. You **must** call function `find_profile()` from this function.

- o remove_profile(profile_list)

  This function takes the list of profile objects as input. The function prompts for and reads the person's (to be removed) email address. If the person is not found in the list of profiles, display an error message to the screen. If the person does exist in the profiles list, this function removes the person's profile object and displays a message to the screen indicating that the person has been removed from the profiles list. Note: The deleted person's email address must also be removed from ALL profiles that are friends with the deleted profile. That is, remove the email address from all friends' lists (you may make use of the `profile.remove_friend(email)` method to do this). This function returns the list of profiles. You may use the `list_name.append(item)` method in this function. You **must** call function `find_profile()` from this function.

- Good programming practice:
  - o Consistent commenting, layout and indentation. You are to provide comments to describe: your details, program description, **all** variable definitions, **all** function definitions and every significant section of code.
  - o Meaningful variable names.

Your solutions **MAY** make use of the following:

- Built-in functions `int()`, `input()`, `print()`, `range()`, `open()`, `close()`, `len()` and `str()`.

- Concatenation (+) operator to create/build new strings.

- The `list_name.append(item)` method to update/create lists.

- Access the individual elements in a string with an index (one element only). i.e. `string_name[index]`.

- Access the individual elements in a list with an index (one element only). i.e. `list_name[index]`.

- `Profile` objects and methods (as appropriate).

- The `list_function.py` module (that you wrote in part A of this assignment). You may like to make use of some of the functions defined in the `list_function.py` module for this part of the assignment (as appropriate). Not all will be suitable or appropriate.

Your solutions **MUST NOT** use:

- Built-in functions (other than the `int()`, `input()`, `print()`, `range()`, `open()`, `close()` `len()` and `str()` functions).

- Slice expressions to select a range of elements from a string or list. i.e. `name[start:end]`.

- String or list methods (i.e. other than those mentioned in the 'MAY make use' of section above.

- Global variables as described in week 8 lecture.

- The use `break`, `return` or `continue` statements (or any other technique to break out of loops) in your solution – doing so will result in a significant mark deduction.

PLEASE NOTE: You are reminded that you should ensure that all input and output conform to the assignment specifications. If you are not sure about these details you should check with the sample output provided at the end of this document or post a message to the discussion forum in order to seek clarification.

It is recommended that you use the most current version of Python

Your programs MUST run using Python 3.*

It is recommended that you develop this part of the assignment in the suggested stages

Stage 1

To begin, download the provided files (available on the course website called `social.py` and `profile.py`) and re-name social.py *project_base_*`social.py`.

Define an empty list to store the profile information. For example:

```
profile_list = []
```

Stage 2

Create a profile object from class `Profile` (provided for you in the profile.py module).

> *Note:*
>
> *The profile.py module should be placed in the same*
>
> *Please do NOT modify the profile.py module.*

Import the **profile** module and create a profile object as seen below.

```
import profile

new_profile = profile.Profile("Bruce", "Wayne", "batman@batcave.com", "m", "fighting crime")

print(new_profile)
```

Make sure the program runs correctly. Once you have that working, back up your program.

> *Make sure you read the section titled:*
>
> *'Description of profile.py module'*
>
> *included in this document.*

Once you are sure that your program is working correctly, you can delete the above two statements – we just wanted to make sure it was working correctly!

Stage 3

Write the code for function `read_file()` and `display_summary()` as specified in the 'Practical Requirements' section above. Add code to call these two functions to ensure they are working correctly.

Stage 4

Now that you know the information is being correctly stored in your profile lists, write the code for function `write_to_file()` as specified in the 'Practical Requirements' section above. Add code to call this function to ensure it is working correctly.

Stage 5

Implement the interactive mode, i.e. to prompt for and read menu commands. Set up a loop to obtain and process commands.

Set up a loop to obtain and process commands.

Test to ensure that this is working correctly before moving onto the next stage. You do not need to call any functions at this point, you may simply display an appropriate message to the screen, for example:

Sample output:

```
Please enter choice [summary|add|remove|search|update|quit]: roger


Not a valid command - please try again.



Please    enter    choice    [summary|add|remove|search|update|quit]:
summary


In summary command



Please enter choice [summary|add|remove|search|update|quit]: add


In add command



Please    enter    choice    [summary|add|remove|search|update|quit]:
remove


In remove command
```

```
Please    enter    choice    [summary|add|remove|search|update|quit]:
search


In search command



Please    enter    choice    [summary|add|remove|search|update|quit]:
update


In update command



Please enter choice [summary|add|remove|search|update|quit]: quit
```

Menu input should be validated with an appropriate message being displayed if incorrect input is entered by the user.

Stage 6

Implement one command at a time. Test to ensure the command is working correctly before starting the next command.

Hint:
*Start with the **quit** and **summary** commands as they do not need you to add anything further to the file other than ensuring that the function calls are in the correct place.*

You should be able to see that for *most* commands there is a corresponding function(s).

For the remaining commands, the following implementation order is suggested (note: this is a guide only):

- `summary command (display_summary() function).`
- `search command (find_profile() function).`
- `add command (add_profile() function).`
- `remove command (remove_profile() function).`
- `update command.`

Stage 7

Ensure that you have validated all user input with an appropriate message being displayed for incorrect input entered by the user. Add code to validate all user input. Hint: use a while loop to validate input.

Stage 8

Finally, check the sample output and if necessary, modify your code so that:

- The output produced by your program **EXACTLY** adheres to the sample output provided.
- Your program behaves as described in these specs and the sample output provided.

(see section titled 'Sample Output – Part B' towards the end of this document)

The **profile.py** module provides a profile class definition called **Profile**. This class definition is to be used to create profile objects and is designed to be used for assignment 2 (part B) work. **Profile** objects will be used to store a person's personal profile information.

To make use of class Profile defined within the profile module, you will need to import the profile module as seen below:

```
import profile
```

To create a **Profile** object, with name (given and family), email, gender and status, you will need to do the following:

```
new_profile = profile.Profile("Bruce", "Wayne", "batman@batcave.com", "m", "fighting crime")
```

The above code constructs a Profile object storing personal profile information about Bruce Wayne.

`Profile(given_name, family_name, email, gender, status)`	Constructs a Profile object with given given_name, family_name, email, gender and status.

Profile Object Methods:

set_given_name(name)	Sets the person's given name.
get_given_name()	Returns the person's given name.
set_family_name(name)	Sets the person's family name.
get_family_name()	Returns the person's family name.
set_email(email)	Sets the person's email address.
get_email()	Returns the person's email address.
set_gender(gender)	Sets the person's gender.
get_gender()	Returns the person's gender.
set_status(status)	Sets the person's status.

set_status()	Returns the person's status.
set_number_friends(no_friends)	Sets the number of friends the person is friends with.
get_number_friends()	Returns the number of friends the person is friends with.
set_friends_list(friends_list)	Sets the friends list of email addresses.
get_friends_list()	Returns the friends list of email addresses.
__str__()	Returns the string representation of the Profile object.
add_friend(email)	Adds an email address to the person's list of friends (friends_list), only if the email doesn't already exist. No duplicate entries are allowed. Returns True if successful and False otherwise.
remove_friend(email)	Removes an email address from the person's list of friends (friends_list). Returns True if successful and False otherwise.
is_friend(email)	Determines whether the email passed in as a parameter exists in the friends_list, i.e. they are friends. Returns True if the email is found in the list of friends (friends_list) and False otherwise.

A Simple Example

 YOU CAN CONSTRUCT A PROFILE OBJECT AND CALL ITS METHODS AS SEEN IN THE FOLLOWING EXAMPLE:

```
import profile


# Create Profile object with given name "Bruce", family name "wayne", email
address "batman@batcave.com",
# gender "m" and status as "fighting crime".
new_profile1 = profile.Profile("Bruce", "Wayne", "batman@batcave.com", "m",
"fighting crime")

# Display the Profile object to the screen as specified by the __str__
method.
print(new_profile1)

# Create another Profile object
```

```python
new_profile2 = profile.Profile("Tony", "Stark", "tony@ironman.com", "m",
"talk to the hand")

# Add Tony Stark as friend of Bruce Wayne
new_profile1.add_friend("tony@ironman.com")

# Create yet another Profile object
new_profile3 = profile.Profile("Clark", "Kent", "superman@upupandaway.com",
"m", "flying high")

# Add superman as friend of Bruce Wayne
new_profile1.add_friend("superman@upupandaway.com")

# Add ironman as friend of Bruce Wayne
new_profile3.add_friend("tony@ironman.com")

# Display the Profile object to the screen as specified by the __str__
method.
print(new_profile1)

# Display the Profile object to the screen as specified by the __str__
method.
print(new_profile3)

# Update Clark Kent's status
new_profile3.set_status("kryptonite kaos")

# Display the Profile object to the screen as specified by the __str__
method.
print(new_profile3)

# Create list of superheros (Profile objects)
superhero_list = []

# Append profile objects to list
superhero_list.append(new_profile1)
superhero_list.append(new_profile2)
superhero_list.append(new_profile3)

print("\n\nDisplaying superhero_list:")

# Iterate over superhero list and display secret identity to screen
for superhero in superhero_list:
    print(superhero.get_given_name() + " " + superhero.get_family_name())
```

Output:

```
Bruce Wayne batman@batcave.com m
fighting crime
0

Bruce Wayne batman@batcave.com m
fighting crime
2
tony@ironman.com
superman@upupandaway.com

Clark Kent superman@upupandaway.com m
flying high
1
tony@ironman.com

Clark Kent superman@upupandaway.com m
kryptonite kaos
1
tony@ironman.com



Displaying superhero_list:
Bruce Wayne
Tony Stark
Clark Kent
```

PART B - SAMPLE OUTPUT

Sample output 1:

```
File     : batman001_social.py
Author   : Batman
Stud ID  : xx1673713004xx
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.


Please enter choice [summary|add|remove|search|update|quit]: asdf

Not a valid command - please try again.


Please enter choice [summary|add|remove|search|update|quit]: summary

===============================================================================
Profile Summary
===============================================================================
-------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
-------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
-------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
-------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (2):
    Katy Perry
    David Guetta
-------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
-------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
-------------------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
-------------------------------------------------------------------------------
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (4):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
-------------------------------------------------------------------------------
===============================================================================
```

```
Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.

Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
4
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
```

Sample output 2:

```
File    : batman001_social.py
Author  : Batman
Stud ID : xx1673713004xx
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.


Please enter choice [summary|add|remove|search|update|quit]: add

Please enter email address: john@guitar.com

john@guitar.com already exists in profiles.


Please enter choice [summary|add|remove|search|update|quit]: add

Please enter email address: homer@doh.com
Please enter given name: Homer
Please enter family name: Simpson
Please enter gender: m
Please enter current status: mmmmmm.... donuts....  :)

Successfully added homer@doh.com to profiles.
```

```
Please enter choice [summary|add|remove|search|update|quit]: summary

================================================================================
Profile Summary
================================================================================
--------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
--------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
--------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
--------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (2):
    Katy Perry
    David Guetta
--------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
--------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
--------------------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
--------------------------------------------------------------------------------
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (4):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
--------------------------------------------------------------------------------
Homer Simpson (m | homer@doh.com)
- mmmmmm.... donuts....  :)
- No friends yet...
--------------------------------------------------------------------------------
================================================================================

Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.

Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
```

```
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
4
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
Homer Simpson homer@doh.com m
mmmmmm.... donuts....  :)
0
```

Sample output 3:

```
File     : batman001_social.py
Author   : Batman
Stud ID  : xx1673713004xx
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.


Please enter choice [summary|add|remove|search|update|quit]: remove

Please enter email address: bruce.wayne@batcave.com

bruce.wayne@batcave.com is not found in profiles.


Please enter choice [summary|add|remove|search|update|quit]: remove

Please enter email address: robbie@football.com

Successfully removed robbie@football.com from profiles.


Please enter choice [summary|add|remove|search|update|quit]: summary

===============================================================================
Profile Summary
===============================================================================
-------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
-------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
-------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (1):
    Fox Mulder
```

```
-------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (2):
    Katy Perry
    David Guetta
-------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
-------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (4):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
-------------------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (1):
    Tony Stark
-------------------------------------------------------------------------------
===============================================================================

Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.

Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
1
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
4
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
1
tony@ironman.com
```

Sample output 4:

```
File     : batman001_social.py
Author   : Batman
Stud ID  : xx1673713004xx
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.
```

```
Please enter choice [summary|add|remove|search|update|quit]: search

Please enter email address: elvis@allshookup.org

elvis@allshookup.org is not found in profiles.


Please enter choice [summary|add|remove|search|update|quit]: search

Please enter email address: dguetta@willworkwithanyone.org

David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray


Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.

Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
4
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
```

Sample output 5:

```
File    : batman001_social.py
Author  : Batman
Stud ID : xx1673713004xx
```

```
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: robbie@football.com


Update Robbie Gray [status|add_friend|remove_friend]: add_friend

Please enter email address of friend to add: katy@perry.com

Added Katy updated profile is:
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (5):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
    Katy Perry

Please enter choice [summary|add|remove|search|update|quit]: summary

===============================================================================
Profile Summary
===============================================================================
-------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
-------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
-------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
-------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (2):
    Katy Perry
    David Guetta
-------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
-------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
-------------------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
-------------------------------------------------------------------------------
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (5):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
    Katy Perry
-------------------------------------------------------------------------------
```

```
================================================================================
Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: tony@ironman.com


Update Tony Stark [status|add_friend|remove_friend]: add_friend

Please enter email address of friend to add: homer@doh.com

homer@doh.com is not found in profiles.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: robbie@football.com


Update Robbie Gray [status|add_friend|remove_friend]: add_friend

Please enter email address of friend to add: john@guitar.com

John is already a friend.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: dana.scully@truth.com

dana.scully@truth.com is not found in profiles.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: robbie@football.com


Update Robbie Gray [status|add_friend|remove_friend]: add

Not a valid command - returning to main menu.


Please enter choice [summary|add|remove|search|update|quit]: summary

================================================================================
Profile Summary
================================================================================
--------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
--------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
--------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
--------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (2):
    Katy Perry
    David Guetta
--------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
--------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
```

```
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
----------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
----------------------------------------------------------------------
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (5):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
    Katy Perry
----------------------------------------------------------------------
======================================================================

Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.

Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
5
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
katy@perry.com
```

Sample output 6:

```
File    : batman001_social.py
Author  : Batman
```

```
Stud ID  : xx1673713004xx
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: fox@findthetruth.com


Update Fox Mulder [status|add_friend|remove_friend]: remove_friend

Please enter email address of friend to remove: lenny.kravitz@rock.com

lenny.kravitz@rock.com is not Fox's friend.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: john@guitar.com


Update John Mayer [status|add_friend|remove_friend]: remove_friend

Please enter email address of friend to remove: katy@perry.com

Removed katy@perry.com updated profile is:
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (1):
    David Guetta

Please enter choice [summary|add|remove|search|update|quit]: summary

===============================================================================
Profile Summary
===============================================================================
-------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
-------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
-------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
-------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Waiting on the world to change!
- Friends (1):
    David Guetta
-------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
-------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
-------------------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
-------------------------------------------------------------------------------
Robbie Gray (m | robbie@football.com)
```

```
- Training hard... can we win?  Yes we Ken!
- Friends (4):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
----------------------------------------------------------------------------
============================================================================

Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.

Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Waiting on the world to change!
1
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
4
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
```

Sample output 7:

```
File    : batman001_social.py
Author  : Batman
Stud ID : xx1673713004xx
Email ID : batman001
This is my own work as defined by the Codequest Academic Misconduct Policy.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: brad@pitt.com

brad@pitt.com is not found in profiles.


Please enter choice [summary|add|remove|search|update|quit]: update

Please enter email address: john@guitar.com
```

```
Update John Mayer [status|add_friend|remove_friend]: status

Please enter status update: Slow dancing in a burning room...

Updated status for John Mayer:
John Mayer (m | john@guitar.com)
- Slow dancing in a burning room...
- Friends (2):
    Katy Perry
    David Guetta


Please enter choice [summary|add|remove|search|update|quit]: summary

================================================================================
Profile Summary
================================================================================
--------------------------------------------------------------------------------
Fox Mulder (m | fox@findthetruth.com)
- The truth is out there!
- Friends (1):
    Tony Stark
--------------------------------------------------------------------------------
Tony Stark (m | tony@ironman.com)
- Saving the world is hard work - no time for friends.
- No friends yet...
--------------------------------------------------------------------------------
Phil Dunphy (m | phil@dunphy.com)
- wtf? = why the face?
- Friends (2):
    Robbie Gray
    Fox Mulder
--------------------------------------------------------------------------------
John Mayer (m | john@guitar.com)
- Slow dancing in a burning room...
- Friends (2):
    Katy Perry
    David Guetta
--------------------------------------------------------------------------------
Katy Perry (f | katy@perry.com)
- Waiting on John to change.
- Friends (3):
    John Mayer
    David Guetta
    Jimmy Fallon
--------------------------------------------------------------------------------
David Guetta (m | dguetta@willworkwithanyone.org)
- Will collaborate with anyone who has a heartbeat.
- Friends (5):
    Katy Perry
    John Mayer
    Tony Stark
    Fox Mulder
    Robbie Gray
--------------------------------------------------------------------------------
Jimmy Fallon (m | jimmy@tonightshow.com)
- I wish I was as good as Letterman, thank goodness he's retiring.
- Friends (2):
    Robbie Gray
    Tony Stark
--------------------------------------------------------------------------------
Robbie Gray (m | robbie@football.com)
- Training hard... can we win?  Yes we Ken!
- Friends (4):
    Jimmy Fallon
    Fox Mulder
    John Mayer
    Tony Stark
--------------------------------------------------------------------------------
================================================================================

Please enter choice [summary|add|remove|search|update|quit]: quit


-- Program terminating --


NOTE: Your program should output the following information to a file - new_profiles.txt.
```

```
Fox Mulder fox@findthetruth.com m
The truth is out there!
1
tony@ironman.com
Tony Stark tony@ironman.com m
Saving the world is hard work - no time for friends.
0
Phil Dunphy phil@dunphy.com m
wtf? = why the face?
2
robbie@football.com
fox@findthetruth.com
John Mayer john@guitar.com m
Slow dancing in a burning room...
2
katy@perry.com
dguetta@willworkwithanyone.org
Katy Perry katy@perry.com f
Waiting on John to change.
3
john@guitar.com
dguetta@willworkwithanyone.org
jimmy@tonightshow.com
David Guetta dguetta@willworkwithanyone.org m
Will collaborate with anyone who has a heartbeat.
5
katy@perry.com
john@guitar.com
tony@ironman.com
fox@findthetruth.com
robbie@football.com
Jimmy Fallon jimmy@tonightshow.com m
I wish I was as good as Letterman, thank goodness he's retiring.
2
robbie@football.com
tony@ironman.com
Robbie Gray robbie@football.com m
Training hard... can we win?  Yes we Ken!
4
jimmy@tonightshow.com
fox@findthetruth.com
john@guitar.com
tony@ironman.com
```