AYJ Graduate Information System
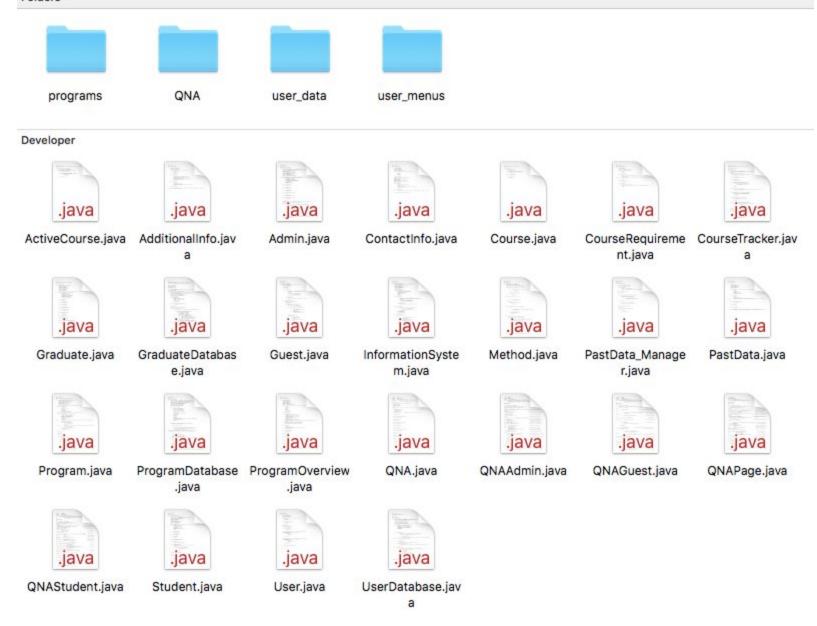
User Manual

Program Configuration

To enable the Information System, make sure that your folder contains all necessary programs and files listed below.

- ActiveCourse.java
- AdditionalInfo.java
- Admin.java
- ContactInfo.java
- Course.java
- CourseRequirement.java
- CourseTracker.java
- Graduate.java
- GraduateDatabase.java
- Guest.java
- InformationSystem.java
- InformationSystemRunner.java
- Method.java
- PastData.java
- PastData_Manager.java
- Program.java
- ProgramDatabase.java
- ProgramOverview.java
- QNA.java
- QNAAdmin.java
- QNAGuest.java
- QNAPage.java
- QNAStudent.java
- Student.java
- User.java
- UserDatabase.java

- Within the "QNA" subfolder, you should have the following files:
  - Active QNAs.txt
  - Category.txt
  - Inactive QNAs.txt
  - QNA Admin Menu.txt
  - QNA Guest Menu.txt
  - QNA Student Menu.txt
- Within the "programs" subfolder, you should have the following files:
  - program_database_menu.txt
  - program_menu.txt
  - program_overview.txt
  - sort.txt
- Within the "user_data" subfolder, you should have the following files:
  - admin_list.txt
  - graduate_list.txt
  - student_list.txt
- Within the "user_menus" subfolder, you should have the following files:
  - Admin_Menu.txt
  - Admin_Menu_UpdateStudentInfo.txt
  - Guest_Menu.txt
  - Main_Menu.txt
  - Student_Menu.txt

If anything from the list above is missing in your folder then you might not have access to a fully functional Information System.

[Note: Do not change any file names otherwise you will not be able to use them in the program!]

Folders

programs QNA user_data user_menus

Developer

ActiveCourse.java AdditionalInfo.java Admin.java ContactInfo.java Course.java CourseRequirement.java CourseTracker.java

Graduate.java GraduateDatabase.java Guest.java InformationSystem.java Method.java PastData_Manager.java PastData.java

Program.java ProgramDatabase.java ProgramOverview.java QNA.java QNAAdmin.java QNAGuest.java QNAPage.java

QNAStudent.java Student.java User.java UserDatabase.java

Run the Program

1. Compile all files with the extension .java (after compilation, you should have a .class file for each .java file).
2. Run InformationSystemRunner.

Purpose of Each File

Programs (.java files)

- QNA: Defines the characteristics of each Q&A and allows access to them.

- QNAAdmin: Contains functions needed exclusively for admin users.

- QNAGuest: Contains functions needed for guest users.

- QNAStudent: Contains functions needed for student users.

- QNAPage: Contains functions needed for every general user (ie. any admin, student, or guest can use these functions).

- ActiveCourse: Stores all information about a course that is in progress.

- AdditonalInfo: The additional information of a program (e.g. scholarship options).

- Admin: Stores all information about Admin, displays all functions that can be performed by Admin.

- ContactInfo: The contact information of a program.

- Course: Stores all information about a completed course.

- CourseRequirement: The high school course requirement to be admitted in to a program in university.

- CourseTracker: Stores the information about a single student's courses.

- Graduate: Stores all information about a single AY Graduate.

- GraduateDatabase: Stores a list of Graduates. Is responsible for removing old graduates and saving graduates to a text file.

- Guest: Enables Guest users to access program list and Q&A.

- InformationSystem: Displays the main menu and allows users to log in or register.

- Method: Provides static methods that can be used by all classes.

- PastData: Keeps track of the past data of a program in a certain year.

- PastData_Manager: Combines many past data objects.

- Program: The information of one program.

- ProgramDatabase: Many programs combined.

- ProgramOverview: Part of the program field, which provides basic information about the program

- Student: Stores all information about a current student and is responsible for displaying and implementing functionality for student menus.

- User: Abstract class from which all users inherit fields and methods. Is responsible for storing username and password.

- UserDatabase: Stores and manages all user objects. Responsible for loading from file, saving from file, registering new users, verifying login data, and removing old students.

Text files (.txt files)

- Active QNAs: a list of all answered questions with their IDs, answers, and categories

- Inactive QNAs: a list of all unanswered questions with their IDs and categories only

- Category: a list of available question categories

- QNA Admin Menu: the menu containing Q&A options for admin users

- QNA Guest Menu: the menu containing Q&A options for guest users

- QNA Student Menu: the menu containing Q&A options for student users

- Admin_Menu: contains list of menu options for Admin main menu

- Admin_Menu_UpdateStudentInfo: contains list of menu options for Admin to modify a student's information

- Student_Menu: contains list of menu options for Student main menu

- Guest_Menu: contains list of menu options for Guest main menu

- Main_Menu: contains list of menu options for InformationSystem main menu

- admin_list: contains list of admins and their login information

- student_list: contains list of students, their names, their login information, and all of their courses

- graduate_list: stores names of graduates, their courses, their universities, and the years each one graduated

- program_database_menu: stores the menu items for program database

- program_menu: stores the menu items for a program

- program_overview: stores the information of

- sort: stores options for user to sort the program in ascending/descending order

Program Functions and Running Process

Main Menu

Upon program startup, you should see the following menu:

```
--- Information System ---
1. Log In (Student)
2. Log In (Admin)
3. Log In (Guest)
4. Register (Student)
5. End Program
Enter your choice:
```

Guest User Manual

Once you have logged in as a Guest user, your main menu should look like this:

```
--- Guest Menu ---
1. View Q&A
2. View Programs
3. Log Out
Enter an option:
```

Q&A System

This is what your menu should look like:

```
1. View all Q&As
2. Search by keyword
3. View all categories
4. Search by category
Enter option number ("-1" to return to previous menu):
```

Enter "-1" to exit the Q&A menu and return to previous guest menu. Enter a number (1 to 4) to access the above functions; function specs are described as follows:

- **Option 1: View all Q&As**
  View all the past questions, along with their answers, in a list.

  Sample:

```
ID: 1
Question: What is a conditional offer of admission?
Answer: Conditional offers require that you complete your OSSD, six Grade 12 courses, and
maintain a minimum final average.
Category: Admission

Enter "-1" to return to previous menu:
```

- **Option 2: Search by keyword**
  View all questions that contain the specified keyword (or phrase). This function is not case-sensitive.

Sample:

```
Enter keyword ("-1" to return to previous menu):
scholarship
ID: 4
Question: What type of applicants are eligible for the scholarships listed on AYJ Info board at school?
Answer: The scholarships listed on the system are available to Grade 12 students at school. Check with
Guidance to see the available options offered.
Category: Scholarships & Financial Support

Enter keyword ("-1" to return to previous menu):
```

When you enter a keyword, the program will output the Q&As that contain your keyword in its question, answer, or category. Keep entering keywords until you want to stop. Enter "-1" to stop searching.

- **Option 3: View all categories**
  View all the available question categories on this page.

  Sample:

```
Categories:
University Application
Admission
Program Information
Scholarships & Financial Support
Other
Enter "-1" to return to previous menu:
```

- **Option 4: Search by categories**
  Prompts you to select a category, then displays all Q&As that fall under that category.

  Sample:

```
1. University Application
2. Admission
3. Program Information
```

```
4. Scholarships & Financial Support
5. Other
Enter the number of a category ("-1" to return to previous menu):
```

Enter a category number (1 to 5) to select the category.

Sample:

```
Enter the number of a category ("-1" to return to previous menu): 4

ID: 4
Question: What type of applicants are eligible for the scholarships listed on AYJ Info board at school?
Answer: The scholarships listed on the system are available to Grade 12 students at school. Check with
Guidance to see the available options offered.
Category: Scholarships & Financial Support
```

In the above sample, user entered 4, which is the number for Scholarships & Financial Support. Note that there will be times when no Q&As can be found within a category. The program will generate the following standard output whenever Q&As in a particular category are not found:

```
Enter the number of a category ("-1" to return to previous menu): 5

Currently no Q&As available from this category.
```

Student User Manual

Once you have logged in as a student, your main menu should look like this:

```
--- Student Menu (Logged In As darryl301) ---
1. Q&A Menu
2. Program List
3. View My Courses
4. Add Course
5. Delete Course
```

```
6. Update Course
7. Check Top Six Average
8. Change Username
9. Change Password
10. Log Out
Enter an option:
```

Q&A System

This is what your menu should look like:

```
1. View all Q&As
2. Search by keyword
3. View all categories
4. Search by category
5. Ask a question
Enter option number ("-1" to return to previous menu):
```

Enter "-1" to exit the Q&A menu and return to previous guest menu. Enter a number (1 to 5) to access the above functions; function specs are described as follows:

- **Options 1 to 4: View all Q&As, Search by keyword, View all categories, Search by category**
  These functions are shared by all users. See Guest User Manual for instructions and examples.

- **Option 5: Ask a question**
  This feature allows students to submit any questions they may have.

  Prompt Screen:
  ```
  Enter your question ("-1" to return to previous menu):
  < insert question here >

  1. University Application
  2. Admission
  3. Program Information
  ```

```
4. Scholarships & Financial Support
5. Other
Enter the number of the category your question belongs to:
< insert category number here >
```

When prompted, type your question and then enter the number of the category to which your question belongs. When you are done, program will output the following message:

Prompt Screen:

```
Your question has been uploaded to be review by the administration.

Enter your question ("-1" to return to previous menu):
```

Seeing the confirmation message does not mean you will see your question in the Q&A list. You must wait for an admin to answer the question and publish it.

View My Courses

This option allows a student to view a list of all of their courses. Here is an example:

```
--- Darryl Wu's Courses ---
1 - ENG4U (73.0)
2 - MDM4U (87.0)
3 - MHF4U (97.0)
4 - MCV4U (90.0)
5 - ICS4U (72.0)
6 - PSK4M (81.0)
Enter anything to return to the previous menu:
```

Add Course

To add a course, you will need to enter the course code associated with the course, followed by a valid mark. Here is an example of adding a course:

```
--- Add Course ---
Course Code: SPH4U
Mark: 90
Course added successfully!
```

Delete Course

To delete a course, simply select a course from the list of courses. Here is an example:

```
--- Darryl Wu's Courses ---
1 - ENG4U (73.0)
2 - MDM4U (87.0)
3 - MHF4U (97.0)
4 - MCV4U (90.0)
5 - ICS4U (72.0)
6 - PSK4M (81.0)
7 - SPH4U (90.0)
Enter the number associated with the course you wish to delete (or enter -1 to cancel):
6
Course successfully dropped.
```

Update Course

To update a course, select one from the list and enter a new mark. Here is an example:

```
--- Darryl Wu's Courses ---
1 - ENG4U (73.0)
2 - MDM4U (87.0)
3 - MHF4U (97.0)
4 - MCV4U (90.0)
5 - ICS4U (72.0)
6 - SPH4U (90.0)
Enter the number associated with the course you wish to update (or enter -1 to cancel):
5
Enter a new mark for ICS4U (or enter -1 to cancel): 80
```

```
Mark updated successfully!
```

Check Top Six Average

To check your top six average, select the six courses you would like to use for your top six and the program will calculate your average for you.
Here is an example:

```
--- Alice Zeng's Courses ---
1 - ENG4U (73.0)
2 - MDM4U (87.0)
3 - MHF4U (97.0)
4 - MCV4U (90.0)
5 - ICS4U (80.0)
6 - SPH4U (90.0)
7 - SCH4U (62.0)

Enter the indicies of the courses that you are using for your top six:
Course #1: 6
Course #2: 7
Course #3: 3
Course #4: 2
Course #5: 5
Course #6: 1

--- Top Six Average ---
Average: 81.50%
Enter anything to return to the previous menu:
```

Change Username

To change your username, enter your old password to verify your identity and enter your new username. You will also be asked to confirm your new username.

```
--- Change Username ---
Please re-enter your current password to confirm your identity: password123
```

```
Enter new username: darryl123
Confirm new username: darryl123
Username changed successfully.
```

Change Password

To change your password, enter your old password to verify your identity and enter your new password. You will also be asked to confirm your new password.

```
--- Change Password ---
Please re-enter your current password to confirm your identity: password123
Enter new password: pass123
Confirm new password: pass123
Password changed successfully.
```

Admin User Manual

Once you have logged in as an admin, your main menu should look like this:

```
--- Admin Menu (Logged In As Ms. Lam) ---
1. View Q&A
2. Search Programs
3. Add Program
4. Delete Program
5. View Student Database
6. View Graduate Database
7. Log Out
Enter your choice:
```

Q&A System

This is what your menu should look like:

```
1. View all Q&As
2. Search by keyword
3. View all categories
4. Search by category
5. Browse unanswered questions
6. Browse unanswered questions by category
7. Add a category
Enter option number ("-1" to return to previous menu):
```

Enter "-1" to exit the Q&A menu and return to previous guest menu. Enter a number (1 to 7) to access the above functions; function specs are described as follows:

- **Options 1 to 4: View all Q&As, Search by keyword, View all categories, Search by category**
  These functions are shared by all users. See Guest User Manual for instructions and examples.

- **Option 5: Browse unanswered questions**
  Allows you to go through the list of all unanswered questions to see what students have been asking about. You will be able to answer or delete any of these questions. Prompt screen starts by displaying the questions and asking you to answer them:

  Prompt Screen:

```
Available questions to answer:

ID: 1
Question: When the universities calculate my scholarship average, which courses do they use?
Category: Scholarships & Financial Support

ID: 2
Question: Where can I find detailed course descriptions?
Category: Program Information

ID: 3
Question: What other post-secondary options should I be considering?
Category: Other

Enter ID to answer a question ("-1 to stop"):
```

Enter the ID of the question you'd like to answer.

Sample:

```
Enter ID to answer a question ("-1 to stop"):
2

Question: Where can I find detailed course descriptions?
Your answer (enter "-1" to not answer this question):
< insert answer >
```

You will be prompted to type your answer to the question, as shown above. If you no longer wish to answer the question, enter "-1" and you will be directed to the previous window. Once you finish answering, you will see a confirmation message. You will then be taken back to the list of unanswered questions and you will be able to select another question from the list.

```
The new Q&A has been uploaded.

Available questions to answer:

ID: 1
Question: When the universities calculate my scholarship average, which courses do they use?
Category: Scholarships & Financial Support

ID: 2
Question: What other post-secondary options should I be considering?
Category: Other

Enter ID to answer a question ("-1 to stop"):
```

Enter "-1" to stop answering questions and start deleting questions.

Prompt screen:

```
Available questions to delete:
```

```
ID: 1
Question: When the universities calculate my scholarship average, which courses do they use?
Category: Scholarships & Financial Support

ID: 2
Question: What other post-secondary options should I be considering?
Category: Other

Enter ID to answer a question ("-1 to stop"):
```

Enter an ID to delete questions that are irrelevant to or inappropriate for the Q&A System.

```
Enter ID to delete a question ("-1" to stop):
2

Question: What other post-secondary options should I be considering?
Do you want to delete this question?
1. Yes 2. No
Enter your choice: 1
```

Enter "1" to confirm that you want to delete the question. If you no longer wish to delete it, enter "2". After deleting the question, the program will continue prompting you to enter IDs to delete questions.

```
The question has been deleted.

Available questions to delete:

ID: 1
Question: When the universities calculate my scholarship average, which courses do they use?
Category: Scholarships & Financial Support

Enter ID to answer a question ("-1 to stop"):
```

If you enter "-1" to stop deleting questions, you will have the choice to save your progress.

```
Would you like to save changes? (Enter "1" to save, enter any other key to dismiss)
```

If you would like to save your progress, enter "1". If you do not wish to save, enter anything else. Nothing will be saved to the database if you do not save. However, if you have answered or deleted questions before, the program will assume that you might want to save your changes later so those Q&As will not be accessible until you re-launch the program.

Prompt screen after saving:

```
Would you like to save changes? (Enter "1" to save, enter any other key to dismiss)
1
Progress saved.

Enter "-1" to return to previous menu, enter any other key to continue viewing questions:
```

If you did not enter "1", you would not get a confirmation message. Instead, you will be asked to either keep viewing questions or return to the previous menu, as shown above. Enter anything other than "-1" to repeat the process of answering, deleting, and saving questions. Otherwise, enter "-1" to stop browsing unanswered questions.

If you run out of questions to answer or delete, you will see the following:

```
Available questions to answer:
None

Available questions to delete:
None

Would you like to save changes? (Enter "-1" to save, enter any other key to dismiss)
```

This means there is nothing in the list of unanswered questions and you may save any changes you've made. You will then see a prompt that asks you to enter "-1" and exit the page or enter any other key and keep viewing questions. You should enter "-1" to exit the page since there are no more available questions.

- **Option 6: Browse unanswered questions by category**

Most of the features of this function are exactly the same as those found in Option 5. The only difference is that you may browse questions in one category by entering a category number.

Prompt screen:

```
1. University Application
2. Admission
3. Program Information
4. Scholarships & Financial Support
5. Other
Enter the number of a category ("-1" to return to previous menu):
```

Enter a category number to view all unanswered questions in that category.

```
Enter the number of a category ("-1" to return to previous menu):
4

Available questions to answer:
ID: 1
Question: When the universities calculate my scholarship average, which courses do they use?
Category: Scholarships & Financial Support

Enter ID to answer a question ("-1" to stop):
```

As you can see, this window is very similar to the one in Option 5. You will go through a repeated process of answering, deleting, and saving questions as you would in Option 5, the only difference being that you can only view the questions in a selected category instead of all unanswered questions. To learn more about this process, refer to specs for Option 5.

When you are done answering, deleting, and saving questions, you will be directed to the original prompt window to reselect a category for viewing (refer to Prompt Screen).

- **Option 7: Add a category**

This function allows you to add a category name to make the Q&A System more user-friendly to everyone.

Prompt screen:

```
Enter new category name ("-1" to return to previous menu): < enter new category name here >
```

The program will continue to prompt you to enter a new category until you enter "-1" to exit.

Search Program

This is what the menu should look like:

```
Search by university
Search by program name
Search by OUAC code
Search by major
Search by admission average
Return to previous list
Enter option number ("-1" to return to previous menu):
```

- **Search by university**
  You will be asked to enter the name of a university. Enter a name (String) and press enter for all the programs in the university containing that String. You will enter integers given in the menu choices to choose which program you would like to see.

- **Search by program name**
  You will be asked to enter the name of a program. Enter a name (String) and press enter for all programs containing the String. You will enter integers given in the menu choices to choose which program you would like to see.

- **Search by OUAC code**
  You will be asked to enter the OUAC code of a program. Enter a code (String) and press enter for all programs with the entered code. You will enter integers given in the menu choices to choose which program you would like to see.

- **Search by major**
  You will be asked to enter a major. Enter a major (biology) and press enter for all programs in this major. You will enter integers given in the menu choices to choose which program you would like to see.

- **Search by admission average**
  You will be asked to enter an average. Enter an average (90), a real number, and press enter for all programs with lower admission average. You will enter integers given in the menu choices to choose which program you would like to see.

- **Return to previous list**
  Brings you back to the previous menu

Add Program

You will be asked to enter specifics for the program you will be adding. Carefully fill out the information since errors means restarting the process.

Delete Program

You will be asked to provide details of the program you want to delete.

View Student Database

This option displays the list of students that currently have an account in the database. Here is an example of a list of 10 active students:

```
--- Student Database ---
 1 - Becca Cai (865767408)
 2 - Joe Gamble (282980147)
 3 - Tina Chang (144654894)
 4 - Paul Simpson (417320519)
 5 - Thalia Wallace (788499938)
 6 - May Wallace (216919578)
 7 - Oscar Farmer (508915416)
 8 - Aurora Wang (327252780)
 9 - Paul Simmons (464284672)
10 - Olivia Harvey (360406250)
Enter a student's index to update their information. Enter -1 to return to the previous menu.
Enter your choice:
```

If you select one of the students by entering a number, you will be shown the following menu:

```
--- Update Olivia Harvey's Information ---
1. View Courses
2. Add Course
```

```
3. Delete Course
4. Update Course
5. Move to Graduate Database
6. Remove Student Account
Enter your choice (or enter -1 to cancel):
```

Options 1 to 4 work the same way for admins as they do for students, so please refer to the Student section if you are confused about any of those four options.

Option 5 allows you to move an existing student to the graduate database. To do so, you must select the six courses that the student in question used for their top six, as well as the program to which they got accepted. Here is an example of a student being moved to the graduate database:

```
--- Move Student to Graduate Database ---
Are you sure you want to move this student to the graduate database? You will no
longer be able to modify this student's information and their account will be closed.
Enter "CONFIRM" to confirm. Enter anything else to cancel.
confirm

--- Olivia Harvey's Courses ---
1 - ENG4U (80.0)
2 - ICS4U (71.0)
3 - MDM4U (89.0)
4 - SBI4U (88.0)
5 - SPH4U (85.0)
6 - PSK4M (71.0)
7 - SCH4U (78.0)

Enter the indices of the courses that the student used for their top six:
Course #1: 2
Course #2: 1
Course #3: 3
Course #4: 4
Course #5: 5
Course #6: 7

To which program did this student get accepted?
 1 - University of Waterloo (Software Engineering)
 2 - University of Toronto (Rotman Commerce)
```

```
 3 - University of Toronto (Engineering Science)
 4 - McMaster University (Life Science)
 5 - Trent University (Anthropology)
 6 - University of Guelph (Agriculture)
 7 - Western University (Science)
 8 - Queen's University (Commerce)
 9 - York University (Mathematics)
10 - Ryerson University (Arts and Contemporary Studies)
 Program: 7
 Student moved to graduate file.
```

Option 6 allows you to remove a student from the system completely. Here is an example of a student being removed:

```
--- Remove Student Account ---
Are you sure you want to remove this student from the database? This action
cannot be undone. Enter "CONFIRM DELETION" to delete the student. Enter
anything else to return to the previous menu.
confirm deletion
Student removed. Enter any key to go back to the main menu.
```

View Graduate Database

This option displays a list of all the students who have graduated from AYJ in the past 5 years. Here is an example of a list of 10 graduates.

```
--- Graduate Database ---
 1 - Mark Larson (569837672)
 2 - Emmanuel Blake (538291183)
 3 - May Wu (577134529)
 4 - Darryl Evans (135765277)
 5 - Alice Thomas (839870552)
 6 - John Rivera (132313764)
 7 - Alice Chang (857713929)
 8 - Tanya Rowe (223876385)
 9 - Brittany Collins (385193523)
10 - Joe Dixon (848229966)
```

```
Enter a graduate's index to view their information. Enter -1 to return to the previous menu.
Enter your choice:
```

You can select a graduate from this menu to view more information about them. For example, if you were to choose graduate #8, you would see the following output:

```
--- Tanya Rowe (223876385) ---
ENG4U (81.0)
SPH4U (75.0)
SCH4U (68.0)
MHF4U (67.0)
MCV4U (86.0)
SBI4U (83.0)
Average: 76%
Accepted to: University of Waterloo (Software Engineering)
Year Graduated: 2015
Enter any key to return to the previous menu:
```

Student Registration

To register as a student, you must fill out all your student information. To register, you must have a valid Ontario Education Number (or OEN) that is 9 digits long. Here is an example of a user who has successfully registered in the information system.

```
--- Student Registration ---
Username: darryl
Password: password123
Confirm Password: password123
First Name: Darryl
Last Name: Wu
OEN: 234789345
How many courses are you taking? 7
Course: ENG4U
Mark: 60
```

```
Course: ICS4U
Mark: 26
Course: SPH4U
Mark: 88
Course: SCH4U
Mark: 63
Course: MHF4U
Mark: 90
Course: MDM4U
Mark: 92
Course: MCV4U
Mark: 83
Registration successful.
```

End Program

This option logs you out of the system and ends the program. Please terminate the program using this option to ensure that all your data gets saved correctly.

Final Remarks

If any of this documentation is bad (or missing), it's because it was Manqiu or Darryl's responsibility.