COP 3503 Summer 2014
Programmer's Guide and Report for Project_1

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Purpose of Program

Project_1 reads input files and writes output files, it can do union, difference, subtract, intersect on files; insert, delete, and find items.

Options

It will take an integer argument and depending what you type it will take arguments accordingly.

Organization of Code
there is a struct set which contains several different methods and a main that takes functions from the set and implement them in each option.

Functions, Methods, Procedures
Inside the set struct it contain different methods that will later be implemented inside each option.

Efficiency
If it was possible to use the C++ Set class it would probably be more efficient.

Known Bugs
The interesct may take a while to run.
If it doesn't read a file it will crash.

Testing

```
stefano92@Stefano ~
$ cd cop3503

stefano92@Stefano ~/cop3503
$ g++ COP3503su14_Proj1_RicardoR.cpp -o project

stefano92@Stefano ~/cop3503
$ cd cop3503
-bash: cd: cop3503: No such file or directory

stefano92@Stefano ~/cop3503
$ ./project
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
```

```
13. Normal output
14. Silent output
15. Help
1
Input file name: f1
Input file name is f1
New set loaded
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
8
banana
apple
pineapple
grapefruit
orange
pear
grape
lime
lemon

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
9
Find: apple
Item apple was found
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
```

```
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
9
Find: kiwi
Item kiwi was not found
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
10
Insert: egg
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
8
banana
apple
pineapple
grapefruit
orange
pear
grape
lime
lemon
egg

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
```

```
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
13
>8
banana
apple
pineapple
grapefruit
orange
pear
grape
lime
lemon
egg

>15
0. Exit
1. Input file <filename>: open and read a list from a file to the current list
2. Union file <filename>: open and union a set from a file with the current set
3. Substract file <filename>: open and subtract set from a file from the current set
4. Difference file <filename>: open and find the difference between a set from a file
and the current set
5. Intersect file <filename>: open and find the intersection between a set from a file
and the current set
6. Reset current set to empty string
7. Output file <filename>: open and write the current set to a file
8. Print current set to console
9. Find <item name>: if <item name> is in the current set
10. Insert <item name>: add <item name> to the current set if it is not already in it
11. Delete <item name>: remove <item name> from the current set if it is in it
12. Verbose output: Displays messages and menu everytime
13. Normal output: Only displays messages and uses the '>' prompt in everyline
14. Silent output: Only displays error messages
15. Help
>11
Delete: apple
>8
banana
pineapple
grapefruit
orange
pear
grape
lime
lemon
egg

>13
>12
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
```

```
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
11
Delete: apple
apple is not in the set
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
6
Reset completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
8

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
```

```
1
Input file name: f1
Input file name is f1
New set loaded
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
2
Union file name: f2
Union file name is f2
Union completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
8
banana
apple
pineapple
grapefruit
orange
pear
grape
lime
lemon
mango
guanabana
lychee
avocado
nispero
guava
carambola

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
```

```
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
6
Reset completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
1
Input file name: f1
Input file name is f1
New set loaded
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
3
Substract file name: f2
Substract file name is f2
Substract completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
```

```
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
8
apple
pineapple
grapefruit
orange
pear
grape
lemon

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
6
Reset completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
1
Input file name: f1
Input file name is f1
New set loaded
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
```

```
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
4
Difference file name: f2
Difference file name is f2
Difference completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
8
apple
pineapple
grapefruit
orange
pear
grape
lemon
mango
guanabana
lychee
avocado
nispero
guava
carambola

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
0

stefano92@Stefano ~/cop3503
$ ./project
0. Exit
```

```
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
1
Input file name: f1
Input file name is f1
New set loaded
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
5
Intersect file name: f2
Intersect file name is f2
Intersect completed


stefano92@Stefano ~/cop3503
$ ./project
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Substract file <filename>
4. Difference file <filename>
5. Intersect file <filename>
6. Reset current set to empty string
7. Output file <filename>
8. Print current set to console
9. Find <item name>
10. Insert <item name>
11. Delete <item name>
12. Verbose output
13. Normal output
14. Silent output
15. Help
14
1
f1
8
```

```
banana
apple
pineapple
grapefruit
orange
pear
grape
lime
lemon

1
abc
File abc cannot be opened


stefano92@Stefano ~/cop3503
$ ^C

stefano92@Stefano ~/cop3503
$
```