COP 3503 Summer 2014
Programmer's Guide and Report for Project_2
Ricardo Stefano Reyna
Tue June 16 EDT 2014
Purpose of Program
Project_2 reads input files and writes output files, it can do union, difference, subtract, intersect on files; insert, delete, and find items, it also reduces the count of items.
Options
It will take an integer argument and depending what you type it will take arguments accordingly.
Organization of Code
there is a set class which contains several different methods, the implementation is done on the source code.cpp and a main that takes functions from the set and implement them in each option.
Functions, Methods, Procedures
Inside the set 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
Crashes when attempting to add a file direlctly on the terminal. i.e. using the [-f].
Testing

```
$ make
g++ -c COP3503su14_Proj2_RicardoRmenu.cpp
g++ -o project_2 COP3503su14_Proj2_RicardoRmenu.o COP3503su14_Proj2_RicardoR.o

stefano92@Stefano ~/cop3503/project_2
$ make
make: 'all' is up to date.

stefano92@Stefano ~/cop3503/project_2
$ ./project_2 -h
============================================================
Usage: proj2 [-s][-v][-h][-f <filename>]
   -s: silent mode
   -v: verbose mode
   -h: print this help
   -f: <filename>: read <filename> into the current set
============================================================
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Subtract 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>: if <item name> is in the current set
10. Insert <item name>
11. Delete <item name>
12. Reduce <item name> <count>
13. Verbose output
14. Normal output
15. Silent output
16. Help
============================================================
>1
Input file name: a
Input file name is a
New set loaded
```

```
>8
Current multiset:
foo 5
bar 4
baz 2
boz 1

>2
Union file name: a
Union file name is a
Union completed
>8
Current multiset:
foo 10
bar 8
baz 4
boz 2

>3
Subtract file name: b
Subtract file name is b
Subtract completed
>8
Current multiset:
foo 6
bar 4
boz 2

>5
Intersect file name: b
Intersect file name is b
Intersect completed
>8
Current multiset:
foo 4
bar 4

>0


$ ./project_2 -s
1
a
2
b
3
d
File d cannot be opened
13
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Subtract 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. Reduce <item name> <count>
13. Verbose output
14. Normal output
15. Silent output
16. Help
>8
Current multiset:
foo 9
bar 8
baz 6
```

```
boz 1
buz 4

0. Exit
1. Input file <filename>
2. Union file <filename>
3. Subtract 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. Reduce <item name> <count>
13. Verbose output
14. Normal output
15. Silent output
16. Help
>2
Union file name: a
Union file name is a
Union completed
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Subtract 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. Reduce <item name> <count>
13. Verbose output
14. Normal output
15. Silent output
16. Help
>1
Input file name: a
Input file name is a
New set loaded
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Subtract 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. Reduce <item name> <count>
13. Verbose output
14. Normal output
15. Silent output
16. Help
>14
>8
Current multiset:
foo 5
bar 4
baz 2
boz 1

>3
Subtract file name: b
```

```
Subtract file name is b
Subtract completed
>8
Current multiset:
foo 1
boz 1

>4
Difference file name: b
Difference file name is b
Difference completed
>8
Current multiset:
foo 3
boz 1
bar 4
baz 4
buz 4

>1
Input file name: a
Input file name is a
New set loaded
>8
Current multiset:
foo 5
bar 4
baz 2
boz 1

>4
Difference file name: b
Difference file name is b
Difference completed
>8
Current multiset:
foo 1
baz 2
boz 1
buz 4

>1
Input file name: b
Input file name is b
New set loaded
>8
Current multiset:
foo 4
bar 4
baz 4
buz 4


$ ./project_2
>1
Input file name: b
Input file name is b
New set loaded
>9
Find: foo
Item foo was found with count 4
>10
Insert: foo
by: 3
foo was added by a count of 3
>10
Insert: bar
by: 2
bar was added by a count of 2
>8
Current multiset:
```

```
foo 7
bar 6
baz 4
buz 4


$ ./project_2
>16
0. Exit
1. Input file <filename>
2. Union file <filename>
3. Subtract 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>: if <item name> is in the current set
10. Insert <item name>
11. Delete <item name>
12. Reduce <item name> <count>
13. Verbose output
14. Normal output
15. Silent output
16. Help
>1
Input file name: a
Input file name is a
New set loaded
>8
Current multiset:
foo 5
bar 4
baz 2
boz 1

>12
Reduce: foo
by: 3
foo is not in the set
foo was reduced by a count of 3
>8
Current multiset:
foo 2
bar 4
baz 2
boz 1

>
```