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Professor Carpenter

ELEC-3150-03

11/30/19

Lab 8

The purpose of this program is to utilize the C++ Standard Template Library to recreate the Grammy Winner List from Labs 5 and 6. The general structure of the program is the same. The main function is basically the same, and the same functions created for lab 5 were used. The way each of the created functions operate is the only difference between the two labs. Instead of creating and manipulating pointers to create a doubly linked list, the “list” STL was utilized. This list is doubly linked and is already set up with functions to add, remove, etc.

Working off the code from lab 5, the functions for adding, removing, searching, printing, and deleting for the Grammy List were changed to work with the list STL. This made it significantly easier to create and maintain the list. This program still allows the user to add winners, remove winners, print winners, search by name, and delete the list and exit. The only difference for the user between lab 5 and lab 8 is that lab 8 allows the list to have duplicate entries. This removes the need to have a “numWins” counter and a “year” array. So, instead of an artist like Adele appearing only once, she appears twice with each of her wins respectively. Other than that, the user experience between each lab is identical.

```
kearnsm2@turing:~/00P_Fall$ g++ -g lab08.cpp
kearnsm2@turing:~/00P_Fall$ ./a.out
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
4
Enter artist name: Bruno Mars
Name: Bruno Mars
Year: 2018
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
1
Enter artist name: Michael Kearns
Enter year: 2020
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
3
Santana
2000
Steely Dan
2001
Various Artists (0 Brother, Where Art Thou?)
2002
Norah Jones
2003
OutKast
2004
Ray Charles
2005
U2
2006
Dixie Chicks
```

not Michael Kearns by entering in the nonfictional author name: <https://muhavits>

```
Norah Jones
2003
OutKast
2004
Ray Charles
2005
U2
2006
Dixie Chicks
2007
Herbie Hancock
2008
Robert Plant and Alison Kraus
2009
Taylor Swift
2010
Arcade Fire
2011
Adele
2012
Mumford and Sons
2013
Daft Punk
2014
Beck
2015
Taylor Swift
2016
Adele
2017
Bruno Mars
2018
Kacey Musgraves
2019
Michael Kearns
2020
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
```

```
kearnsm2@turing:~/00P_Fall$ ./a.out
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
2
Enter artist name: Bruno Mars
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
3
Santana
2000
Steely Dan
2001
Various Artists (0 Brother, Where Art Thou?)
2002
Norah Jones
2003
OutKast
2004
Ray Charles
2005
U2
2006
Dixie Chicks
2007
Herbie Hancock
2008
Robert Plant and Alison Kraus
2009
Taylor Swift
2010
Arcade Fire
2011
Adele
2012
Mumford and Sons
```

```
Adele
2012
Mumford and Sons
2013
Daft Punk
2014
Beck
2015
Taylor Swift
2016
Adele
2017
Kacey Musgraves
2019
What function would you like?
1 to add new artist
2 to remove artist
3 to print list
4 to search
5 to delete and exit
```