C++: How To Use Command Line Arguments and Save To Files

Spring 2018

How to read command line arguments

```
#include <iostream>
#include <vector>
#include <string>
using namespace std;

int main(int argc, char * argv[])
{
  cout << "Number of command line arguments: " << argc << endl;

  /* Using the standard for loop */
  for(int count=0; count < argc; count++)
    cout << "Argument #" << count << ": " << argv[count] << endl;

  return 0;
}
```

How to generalize output

```
#include <iostream>
#include <fstream>
#include <vector>
#include <string>
using namespace std;

void sendToOutput(ostream &writer, string msg)
{
  writer << msg ;
}

int main(int argc, char * argv[])
{
  cout << "Number of command line arguments: " << argc << endl;

  if (argc == 2)
  {
     ofstream mywriter(argv[1]);
     sendToOutput(mywriter, "Output message to any destination");
  }
  else
  {
     sendToOutput(cout, "Output message to any destination");
  }

  return 0;
}
```

How to display the current date and time

```
#include <iostream>
#include <ctime>

using namespace std;

int main()
{
   // get current date and time in milliseconds
   time_t  currTime = time(NULL) ;

   cout << "Current date and time is: " << ctime(&currTime) <<
endl ;

   return 0;
}
```

Exercise

Write a program that displays the current entry as

mm/dd/yyyy hh:mm:ss Trace Entry

And will save to a given file if given in the command line as

SimpleTrace /file log.txt

Exercise

1. Define a class named “FoodItem” that inherits from the “Item” class but it also contains the food expiration date.

2. Define another class named “CarItem” that inherits from the “Item” class but it also contains the “car’s name” that this item is for.

3. Use the Vector Iterator interface approach to add many FoodItem and CarItem into the Vector, then retrieve and print them all out