C/C++ Command Line Arguments

• When executing a program in either C or C++ there is a way to pass command line arguments.

• C:/myprogram file1.txt file2.txt
  myprogram -> name of program
  file1.txt -> command line argument 1
  file2.txt -> command line argument 2

• Passed as character arrays.
• Each parameter separated by a space
• Comes into the program as two arguments
  argc – Number of parameters (3 for example above)
  argv – Parameter list nameofprogram commandarg
#include <iostream>
using namespace std;

int main(int argc, char *argv[]) {
    for (int i=0; i<argc; i++)
        cout << "This is Argument number #" << i << "-" << argv[i] << endl;
    return 0;
}
Sample Output

Command Prompt

C:\Users\Lila\Documents\cs102\lila\commandline>cd debug
C:\Users\Lila\Documents\cs102\lila\commandline\Debug>dir
Volume in drive C is Acer
Volume Serial Number is D893-B589

Directory of C:\Users\Lila\Documents\cs102\lila\commandline\Debug
10/19/2014  04:15 PM  <DIR>  .
10/19/2014  04:15 PM  <DIR> ..
10/19/2014  04:15 PM  5   d
10/19/2014  04:15 PM  1,010,771  commandline.exe
10/19/2014  04:15 PM  11,809  main.cpp.o
10/19/2014  04:15 PM  28   main.cpp.o.d
  4 File(s)  1,022,613 bytes
  2 Dir(s)   399,759,474,688 bytes free
C:\Users\Lila\Documents\cs102\lila\commandline\Debug>commandline myfile1.txt myfile2.txt
This is how many arguments 3
This is Argument number #0->commandline
This is Argument number #1->myfile1.txt
This is Argument number #2->myfile2.txt

C:\Users\Lila\Documents\cs102\lila\commandline\Debug>commandline myfile1.txt
This is how many arguments 2
This is Argument number #0->commandline
This is Argument number #1->myfile1.txt

C:\Users\Lila\Documents\cs102\lila\commandline\Debug>
Command Line Arguments

Conventional rules:

• Arguments are always passed to main( ).
• There must be two
  – first is an integer
  – second char pointer to an array
• First argument (argv[0]) will always be the name of the calling program.
• argc will always be at least 1
• The first argument is always argv[0]
• The last argument is always argv[argc-1]
Pointers

- Example a points to b
- a contains the address of b
Pointer

- `int main(int argc, char *argv[])`

- `char *argv[] // the address of the character arrays`
  - `// the * tells the computer it is a pointer`
Command Line Arguments

Conventional rules:

• Arguments are always passed to main( ).
• There must be two
  – first is an integer
  – second char pointer to an array <<< the pointer
• First argument (argv[0]) will always be the name of the calling program.
• argc will always be at least 1
• The first argument is always argv[0] <<< the name of the program
• The last argument is always argv[argc-1]
CodeLite—Setting Command Line Args

- Workspace -> Open Active Project Settings

![HelloWorld Project Settings](image)

- Command Line Args: `shoppingCart.txt summary.txt`