Command Line Arguments

- arguments to main are passed by the command interpreter
  
  ```c
  int main( int argc, char * argv[] )
  ```

- argc is the count of command line arguments

- argv is an array of pointers to character strings

- each argument is formatted as a separate character string by placing a '\0' after each token

- argv[0] is the command name (the name under which the program was run)
Command Line Arguments

• by convention, a leading "-" indicates a program option (usually with one letter following)
• on Unix systems, the environment variables follow the command line arguments.  consider

    /* print out command line arguments */
    int main( int argc, char * argv[] )
    {
        int i;
        printf("%d arguments\n", argc);
        for( i = 0; i < argc; i++ )
        {
            printf( "%d:  %s\n", i, argv[i] );
        }
        return 0;
    }
Command Line Arguments

output for ./a.out,
  1 argument(s)
  0:  ./a.out

output for ./a.out  in.dat  temp.dat  25  12.5  hello
  6 argument(s)
  0:  ./a.out
  1:  in.dat
  2:  temp.txt
  3:  25
  4:  12.5
  5:  hello
output for ./a.out x y z

4 argument(s)

0: ./a.out
1: x
2: y
3: z