Command Line Arguments

CPE 212 -- Lecture 07

UAHuntsville

Command Line Arguments

- It is possible to give your program argument values when invoking the program from the terminal window
  - ***Command Line Arguments***
- Many Unix/Linux utility programs make use of this mechanism for the input of options, file names, or directory names
  - Examples:

```
$ mkdir  project01
$ cp  source.txt  destination.txt
$ ls  -l
```

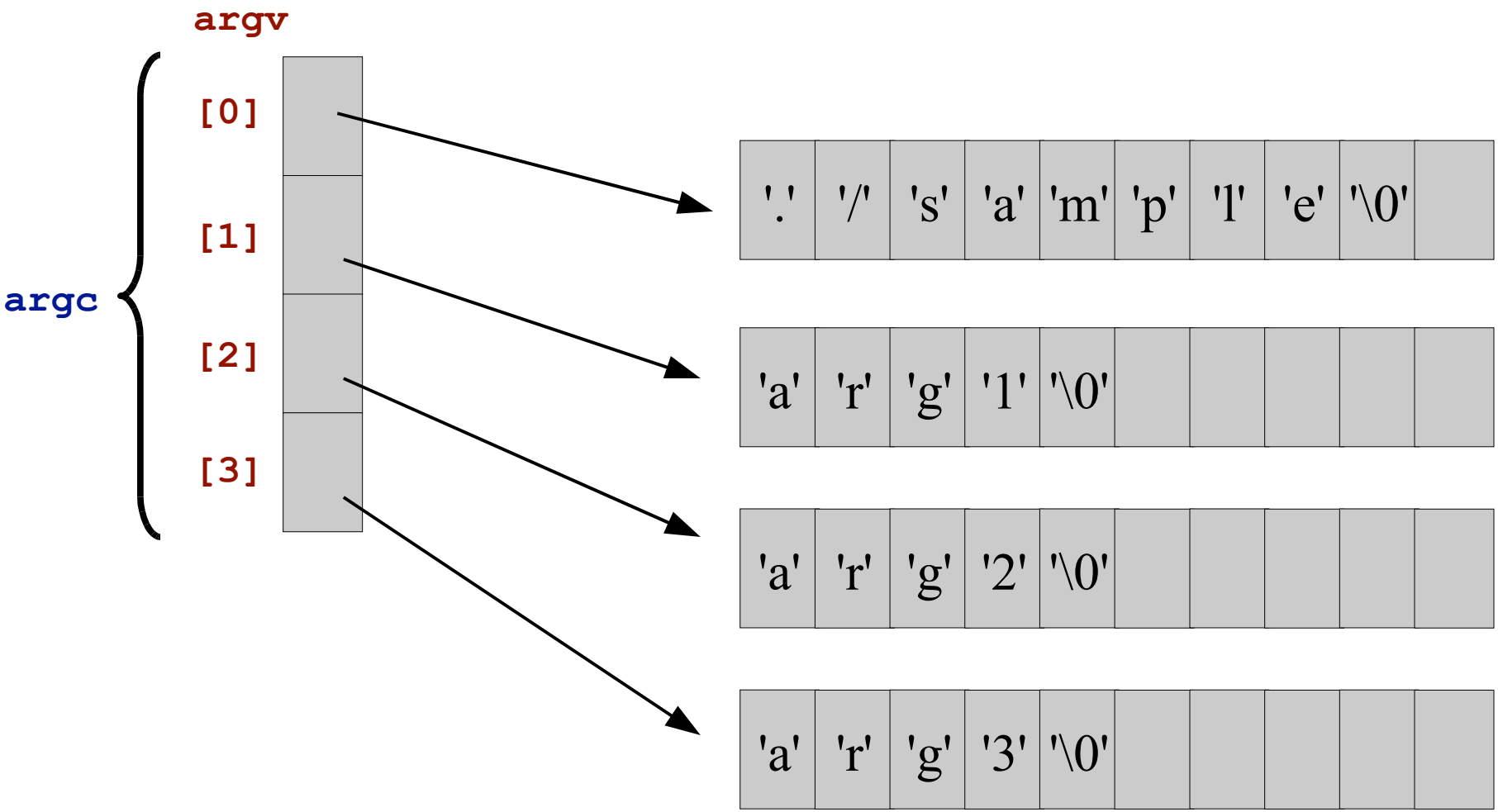
Array of Pointers Example - 1

```
//
// Command Line Arguments Example
//
#include <iostream>

using namespace std;

int main(int argc, char* argv[])
{
  for(int k = 0; k < argc; k++)
    cout << "argv[" << k << "] = " << argv[k] << endl;

  return 0;
} // End main()
```

Total Number of C-Strings on Command Line

Array of Pointers to Arguments Stored as C-Strings

Array of Pointers Example - 2



Array of Pointers Example - 3

```
$ g++ main.cpp -o  sample
$ ./sample arg1 arg2 arg3
argv[0] = ./sample
argv[1] = arg1
argv[2] = arg2
argv[3] = arg3
$
```

Pointer to Pointer Example - 1

```
//
// Command Line Arguments Example - Revisited
//
#include <iostream>

using namespace std;

int main(int argc, char** argv)
{
  for(int k = 0; k < argc; k++)
    cout << "argv[" << k << "] = " << argv[k] << endl;

  return 0;
} // End main()
```

Pointer to Pointer Example - 2

```
$ ./sample2 arg1 arg2 arg3
argv[0] = ./sample2
argv[1] = arg1
argv[2] = arg2
argv[3] = arg3
$
```

C-Style String to C++ String

```
// C-Style String to C++ String
#include <iostream>
#include <string>

using namespace std;

int main(int argc, char** argv)
{
  string  value0 = argv[0];
  string  value1 = argv[1];

  string  value2(argv[2]);
  string  value3(argv[3]);

  cout << "value0 = " << value0 << endl;
  cout << "value1 = " << value1 << endl;
  cout << "value2 = " << value2 << endl;
  cout << "value3 = " << value3 << endl;

  return 0;
} // End main()
```