

Command Line Parameters

C++ programs can accept input from the command line using `main()` parameters: `argc` and `argv`.

1 Function Signature

```
int main(int argc, char* argv[]) {  
    // code  
}
```

Parameters:

- `argc` – Argument count. Number of command line arguments passed (including program name).
- `argv[]` – Argument vector. Array of C-strings (char pointers) representing arguments.

2 Example Usage

Command:

```
./program input.txt 42
```

Values at runtime:

- `argc = 3`
- `argv[0] = "./program"`
- `argv[1] = "input.txt"`
- `argv[2] = "42"`

3 Example Program

```
#include <iostream>  
using namespace std;  
  
int main(int argc, char* argv[]) {  
    cout << "Argument count: " << argc << endl;  
    for (int i = 0; i < argc; ++i) {  
        cout << "argv[" << i << "]: " << argv[i] << endl;  
    }  
    return 0;  
}
```

4 Notes

- All `argv[]` entries are of type `char*`; convert to integers with `std::stoi(argv[i])`.
- `argv[argc]` is guaranteed to be a null pointer.
- Useful for passing filenames, flags, or configuration options without user interaction.