



# CLP: Advanced Programming in C

During the Cisco Networking Academy® course, administered by the undersigned instructor, the student has studied the following skills:

- Evolution of the elements of C language syntax and semantics;
- handling a variable number of parameters using the facilities offered by ;
- low-level I/O in POSIX and MS Windows environments;
- memory and string manipulation including 118N issues;
- creating multi-processed and multi-threaded environments (POSIX, MS Windows, C11)
- the IEEE-754 floating-point point standard and multi-precision libraries;
- using network sockets (POSIX and MS Windows)
- const vs. volatile variables, local vs. non-local jumps, as well as sequence points, portability issues and undefined behaviors.

This Statement of Achievement is to acknowledge that during the course CLP: Advanced Programming in C, the student has been able to accomplish coding and design tasks related to the advanced techniques of programming in the C programming language, as well as fundamental issues connected to running programs in multi-processed/multi-threaded environments, and using network sockets, low level I/O, and new C11 capabilities in Linux/Unix/POSIX and Windows environments.

By completing the course, the student is now ready to attempt the qualification CLP – C Certified Professional Programmer Certification, from the C++ Institute.

**EL-HAMDAOUI MAROUANE**

Student

**ENSAM Casablanca**

Academy Name

**Morocco**

Location

**20 Aug 2024**

Date

**Said Bahassine**

Instructor

Instructor Signature