

## Exercise 00 - Theory Answers

### **1. What is the purpose of a Makefile?**

A Makefile is used to automate the compilation and build process of a project; it saves time and reduces manual errors.

### **2. What is a pointer in C?**

A pointer is a data type whose value refers directly to (or "points to") another value stored elsewhere in the computer memory using its address.

### **3. What does the -O3 flag do when compiling C code?**

The -O3 flag in C code compilation with the GNU Compiler Collection (GCC) enables maximum optimization. This flag instructs the compiler to apply various aggressive optimization techniques to minimize code size and execution time.

### **4. How can you pass a value by reference to a function in C?**

To pass a value by reference we use the address operator (&) and indirection operator (\*). When any argument is passed by reference in the function call as a parameter, it is passed using the address of(&) operator from the main function. In the function definition, the function takes the value of the parameter by using (\*) operator.