

# **Module 2 – Introduction to Programming (C Language)**

## **Practical (LAB) Exercises**

**1. Research and provide three real-world applications where C programming is extensively used, such as in embedded systems, operating systems, or game development.**

➤ **Operating Systems:-**

C is used to write the core (kernel) of an OS because it provides fast, low-level access to memory and hardware.

Examples: Linux Kernel, Windows Kernel, macOS Kernel...

➤ **Embedded Systems:-**

C programs the firmware for devices with limited resources, like microcontrollers, due to its efficiency and small memory footprint.

Examples: Automotive systems, drones, smart appliances, medical devices...

➤ **Language Development:-**

C is used to build the interpreters and compilers for other high-level languages to ensure they run as fast as possible.

Examples: Python (CPython), Ruby (MRI), and PHP interpreters..