

# **MODULE : 1**

## **Module 2 – Introduction to Programming**

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

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C programming is widely used in various domains due to its efficiency, portability, and low-level capabilities. Here are three real-world applications where C is extensively used:

### **1. Embedded Systems**

- C is the primary language for programming embedded systems, such as microcontrollers, IoT devices, and automotive systems.
- Example: The firmware in devices like washing machines, medical equipment, and industrial automation systems is often written in C.

### **2. Operating Systems**

- Many operating systems, including Linux, Windows, and macOS, have their core components written in C.
- Example: The Linux kernel, which powers servers, desktops, and mobile devices, is primarily written in C.

### **3. Game Development**

- C is used in game engines like Unity (with C++) and Unreal Engine (C/C++), providing high-performance graphics and physics processing.
- Example: The Doom game engine and other high-performance gaming applications rely on C for low-level system interactions.

