Module-2: Introduction to programming

Que1. Research and provide three real-world applications where C programming is extensively used, such as in embedded systems, operating systems, or game development.

**Ans**.

🡪1. Embedded Systems:-

* Description: Embedded systems are specialized computing systems that perform dedicated functions within larger mechanical or electrical systems.
* Use of C: C is widely used because it allows direct manipulation of hardware resources and has minimal runtime overhead.
* Example:
  + Microcontrollers in household appliances (like washing machines or microwave ovens).

🡪2. Operating Systems:-

* Description: Operating systems manage computer hardware and software resources and provide common services for application programs.
* Use of C: Most modern operating systems are either written in C or have C at their core because it provides low-level access while maintaining some abstraction.
* Examples:
  + Linux kernel
  + Windows
  + macOS and Unix variants

🡪3. Game Development (Game Engines and Tools):-

* Description: Game development involves creating software for video games, including rendering engines, physics simulations, and hardware interfacing.
* Use of C: C and C++ are used for performance-critical parts of game engines due to their speed and memory control.
* Examples:
  + Doom and Quake
  + Unreal Engine

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Que2.