

Embedded Systems

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1] what are device drivers?
→ Device drivers are software programs that allow the operating system to communicate with and control hardware devices such as printers, scanners and graphic cards.

2] Difference between General purpose systems and embedded systems.

General purpose Systems	Embedded Systems
* They are designed to be versatile & adaptable	* They are designed for specific tasks
* They use more generic components	* They often have dedicated hardware components
* They use General purpose software	* They use specialized software

3] How can hardware understand the codes that are written in embedded systems?

→ Hardware cannot understand the codes that we write in the embedded system. The codes are written in high-level programming languages such as C or C++, which are then compiled into machine code that the hardware can understand. The machine code is a low-level language that consists of binary instructions that the processor can execute. The machine code is loaded into the memory of the hardware device & executed.

by the processor can execute. Therefore the device driver acts as a translator between the high-level programming language & the low-level machine code, allowing the operating system to communicate with and control the hardware device.

4) Difference between RTOS & General purpose OS.

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Real time operating System (RTOS)	General purpose operating system
<ul style="list-style-type: none"> ⊛ RTOS is specific designed to handle real time requirements, ⊛ RTOS is designed to use system resources ⊛ RTOS provides deterministic behaviour ⊛ RTOS provides multitasking 	<ul style="list-style-type: none"> ⊛ GPOS is designed for General purpose Computing ⊛ GPOS is designed to provide a rich set of features & services ⊛ GPOS does not guarantee deterministic behaviour ⊛ GPOS also provides multitasking, but it may not provide the same level as RTOS