

① ⇒ General purpose computer V/s Embedded system.

General purpose computer:-

Purpose:- Multipurpose

constrained:- Low or no resource constrained

performance:- Faster and better

user interface:- Keyboard, Display, Mouse touch screen

Embedded system:-

Single Functioned

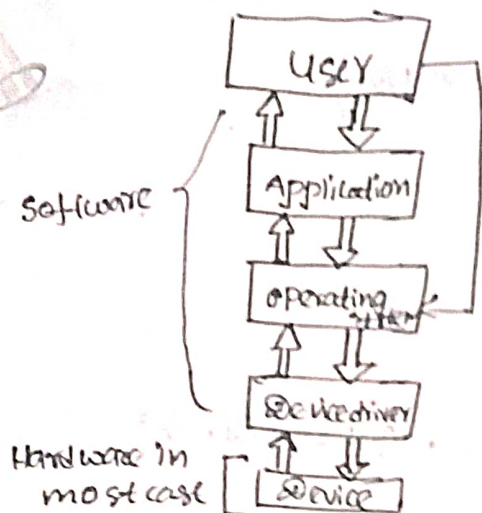
→ size, power, cost, memory, Real-time.

→ Fixed runtime requirements!

→ Integrated into the real world.
Button, sensors

2) What are Device Drivers?

⇒ A device driver is a special kind of software program that controls a specific hardware device attached to a computer.



3) How can hardware understand the codes that we write in embedded systems?

⇒ First, "all the codes the user writes is translated into a set of 1's and 0's by a compiler.

⇒ All the computer understand is "high" and "low" voltages or 1's and 0's.

⇒ Each instruction generated by the compiler is executed in a cycle. First, the hardware accesses the memory to retrieve an instruction.

4) Difference between RTOS and General purpose OS?

⇒ RTOS is designed for a single-user environment.

⇒ General purpose operating system (GPOS) is designed for a multi-user environment.

→ The time response of the RTOS is deterministic

→ Real-time task is the task that is associated with time bound. Non-real-time task is not associated with the time bound.

⇒ It can be expressed as quantitative expression of time.

5) Difference between compiler and Interpreter?

⇒ Compiler:-

A compiler translates code from a high-level programming language (like python, javascript or C++) into machine code before the program runs.

⇒ Interpreter:-

→ An Interpreter translates code written in a high-level programming language into machine code line-by-line as the code runs.