Raspberry-Pi

➢ What is a Raspberry-Pi?

- **Raspberry Pi** s a series of small single-board computers (SBCs) developed in the United Kingdom by the Raspberry Pi Foundation in association with Broadcom.
- The Raspberry Pi is a debit card-sized low-cost computer that connects to a computer Desktop or TV and uses a standard mouse and Keyboard.
- It has a dedicated processor, memory, and a graphics driver, just like a PC. It also comes with its operating system, Raspberry Pi OS, a modified version of Linux.
- The raspberry pi board comprises a program memory (RAM), processor and graphics chip, CPU, GPU, Ethernet port, GPIO pins, Xbee socket, UART, power source connector. And various interfaces for other external devices.
- It has been ready for public consumption since 2012 with the idea of making a low-cost educational microcomputer for students and children.

➢ Components of Raspberry-Pi

- Central Processing Unit (CPU)
- HDMI port (High Definition Multimedia Interface)
- Graphics Processing Unit (GPU)
- Memory (RAM)
- Ethernet port
- SD Card Slot

➢ Block Diagram of Raspberry-Pi

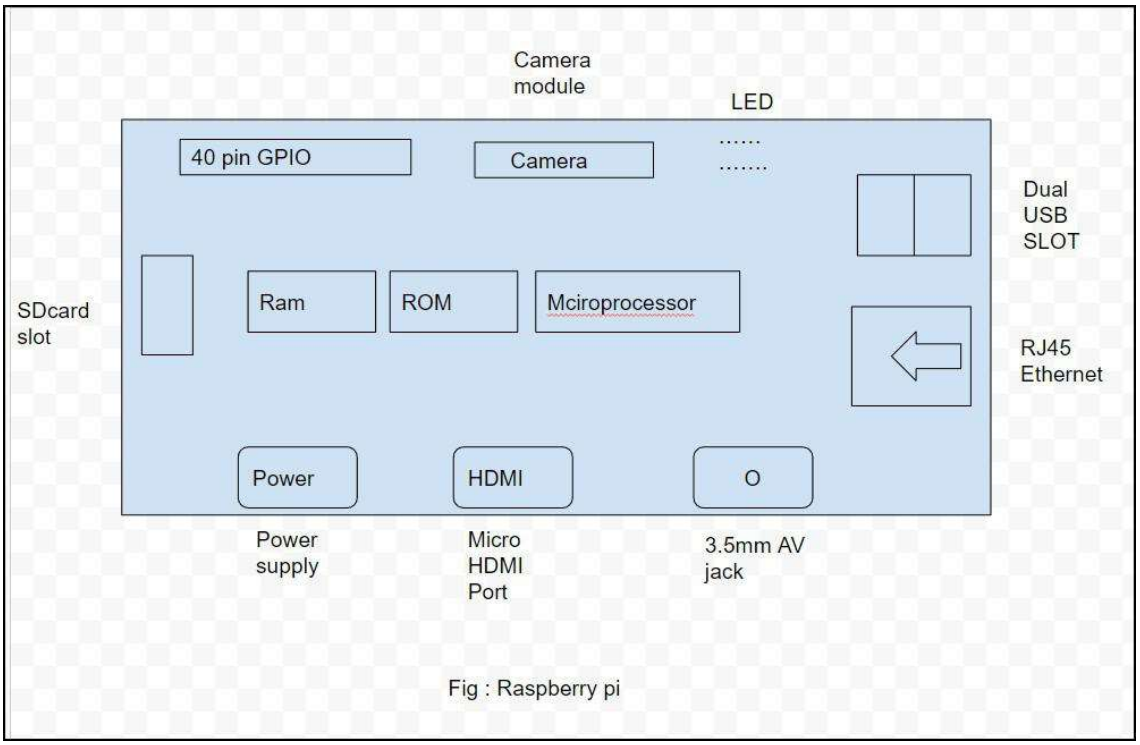
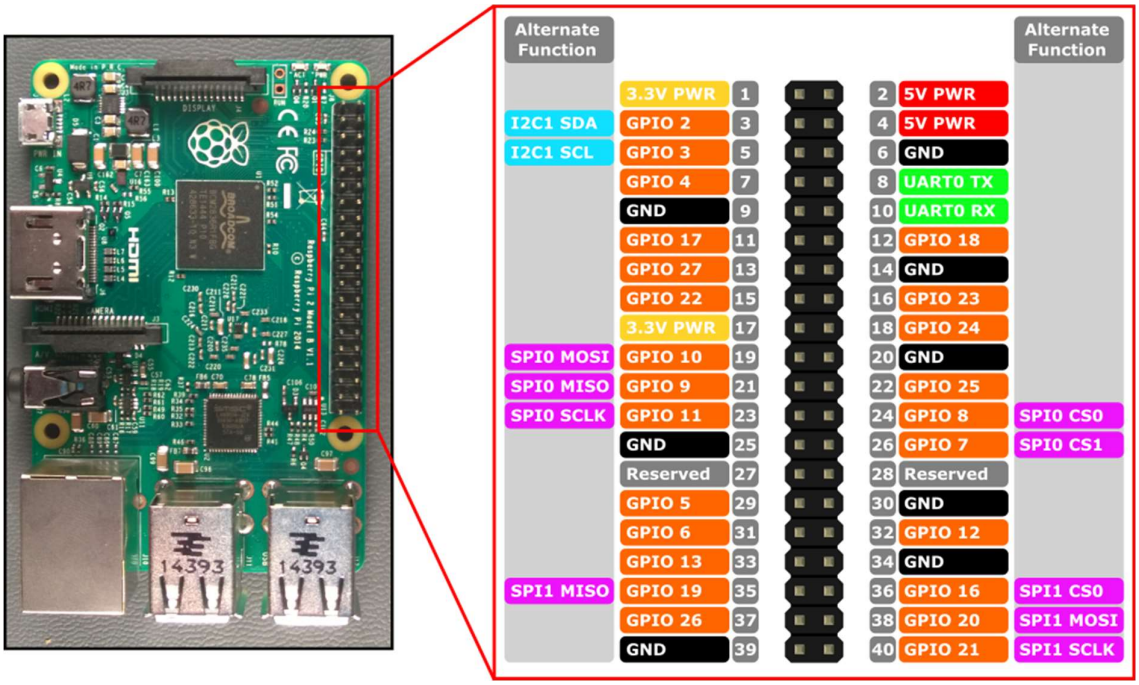


Fig : Raspberry pi

➢ Pin Diagram of Raspberry-Pi



➢ Advantages of Raspberry-Pi:

- Can be used as a Portable Computer.
- Faster Processor.
- Supports all types of codes.
- Multiple Sensors.
- Vast peripheral support.

➢ Disadvantages of Raspberry-Pi:

- Cannot run on Windows OS.
- Overheating.
- Impractical as Desktop Computer.
- Has limited functionality.
- Is slower.
- Not ideal for multitasking.

➢ Uses of Raspberry-Pi:

- Desktop PC
- Wireless Printer
- Media usage
- Game Servers
- Retro Game machines
- Robot controller
- Stop Motion camera
- FM Radio Station
- Web servers

➢ Common terms used:

- HDMI- High-Definition Multimedia Interface
- VGA- Video Graphics Array
- GPIO- General Purpose Input-Output