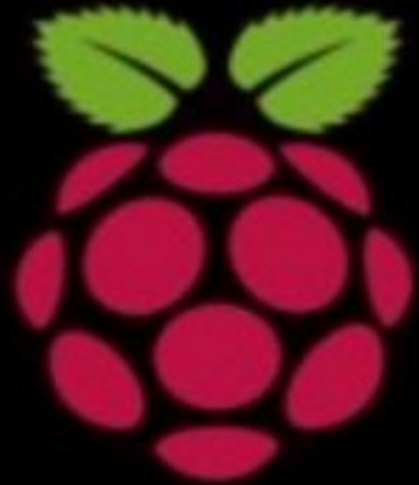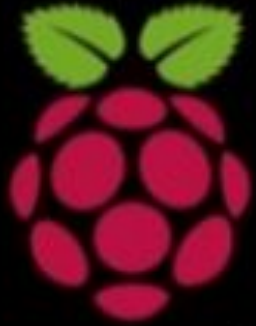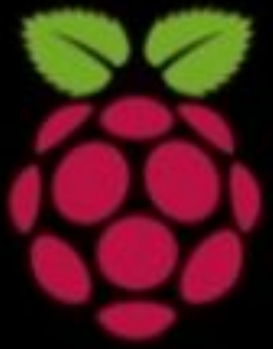Ms.T.Kavitha,

Assistant Professor (CSE)

Introduction

- The Raspberry Pi is a *credit-card* sized computer

- It can be plugged into your TV and a keyboard, and can be used for many of the things that your average desktop does - spreadsheets, word-processing, games and it also plays high-definition video.
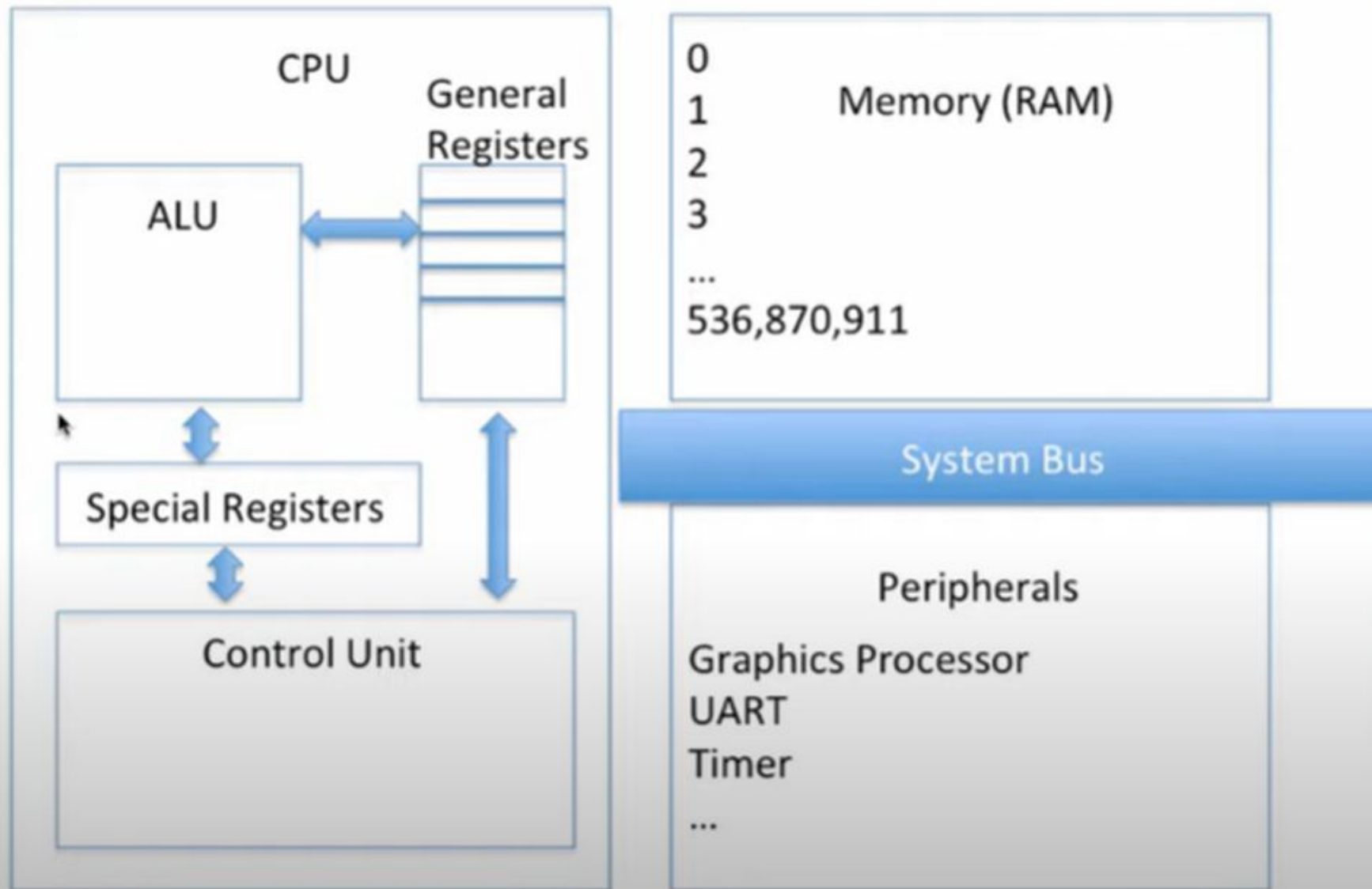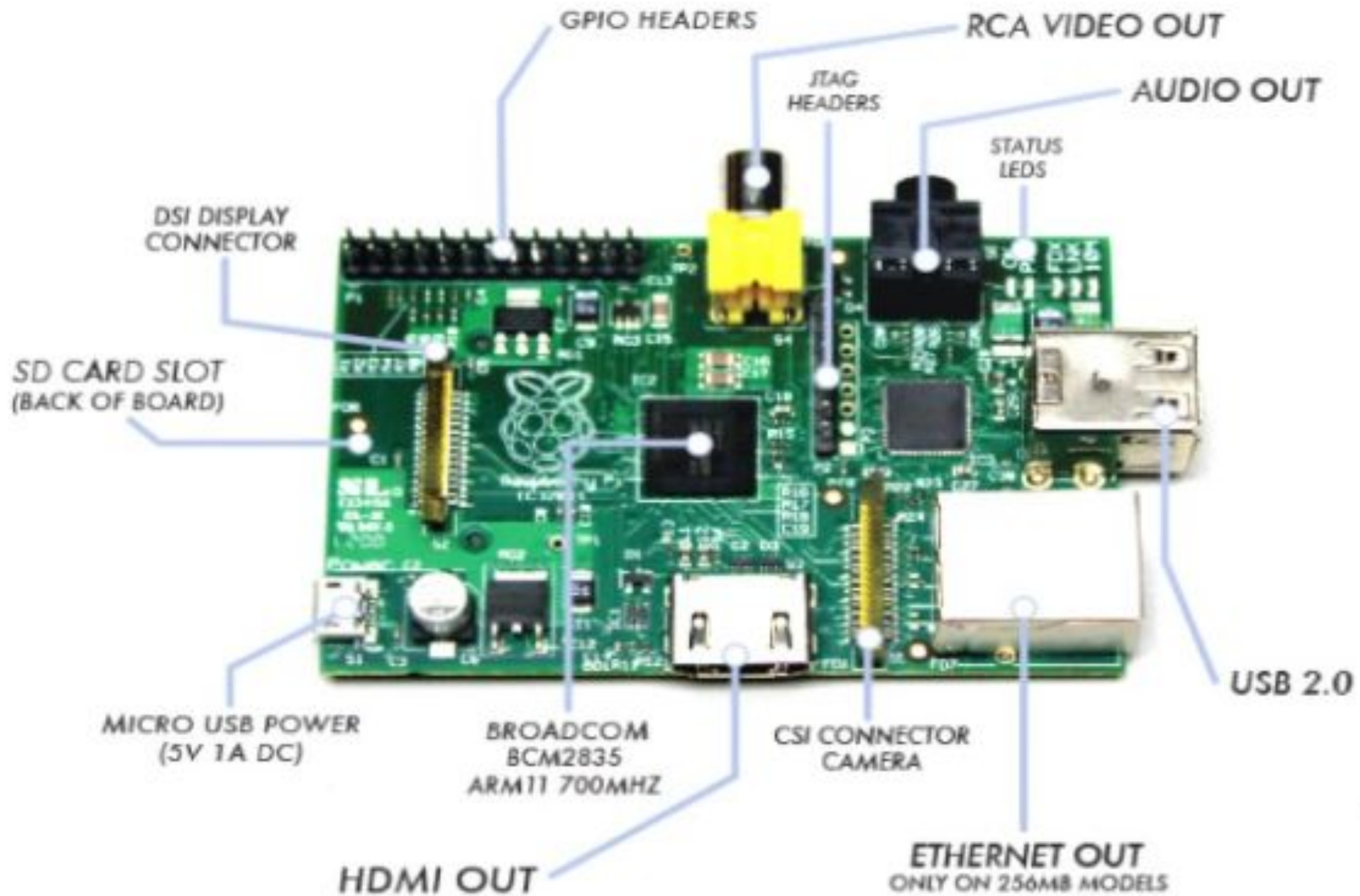
Introduction

- measuring approximately 9cm x 5.5cm

Raspberry Pi 2 Model B Stats

- 900MHz quad-core ARM Cortex-A7 CPU
- VideoCore IV 3D graphics core
- 1GB RAM
- 4 USB ports
- Full HDMI port
- Ethernet port
- Micro SD card slot
- Combined 3.5mm audio jack and composite video
- Camera and display interface
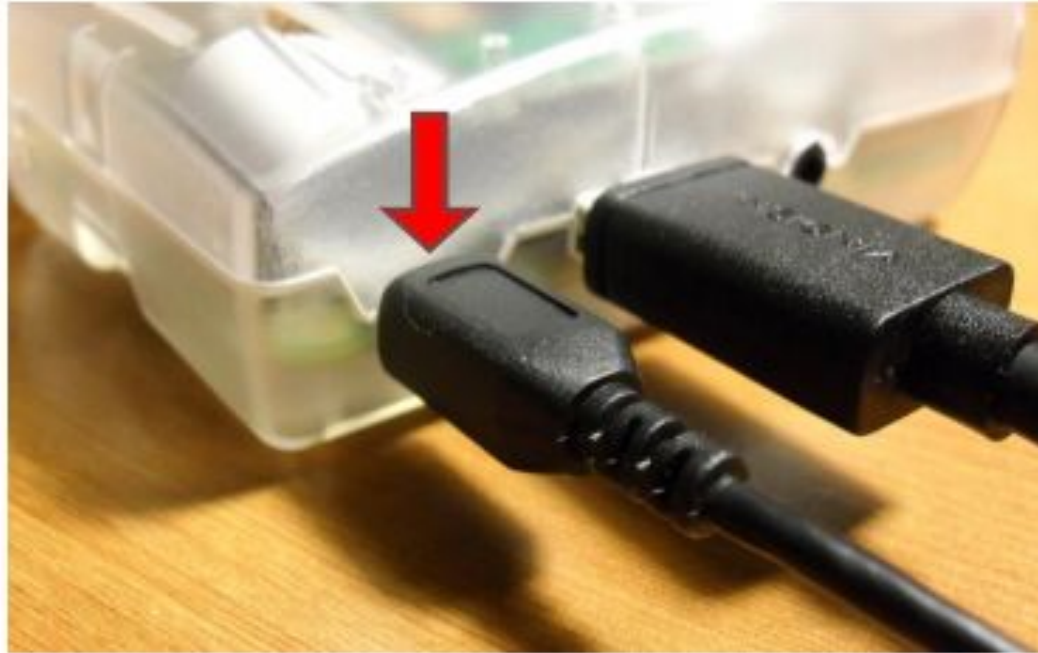- 40 General Purpose Input / Output pins (GPIOs)

Raspberry Pi	Modelo A	Modelo A+	Modelo B	Modelo B+	RPi V2 modelo B	RPi 3 modelo B
SoC	Broadcom BCM2835	Broadcom BCM2835	Broadcom BCM2835	Broadcom BCM2835	Broadcom BCM2836	Broadcom BCM2837
CPU	700MHz ARM1176JFZ-S	700MHz ARM1176JFZ-S	700MHz ARM1176JFZ-S	700MHz ARM1176JFZ-S	900MHz Quad-core ARM Cortex-A7	1.2Ghz Quad Cortex A53
GPU	VideoCore IV	VideoCore IV	VideoCore IV	VideoCore IV	250Mhz VideoCore IV	400Mhz VideoCore IV
RAM	256Mb	512Mb	512Mb	512Mb	1Gb	1Gb
USB	1	1	2	4	4	4
Video	RCA, HDMI	Jack, HDMI	RCA, HDMI	Jack, HDMI	Jack, HDMI	Jack, HDMI
Audio	Jack, HDMI	Jack, HDMI	Jack, HDMI	Jack, HDMI	Jack, HDMI	Jack, HDMI
Boot	Memoria SD	Memoria microSD	Memoria SD	Memoria microSD	Memoria microSD	Memoria microSD
Wireless	No tiene	No tiene	No tiene	No tiene	No tiene	802.11n / Bluetooth 4.1
Red Ethernet	No tiene	No tiene	Ethernet 10/100	Ethernet 10/100	Ethernet 10/100	Ethernet 10/100
Alimentación	5V / 2Amp	5V / 2Amp	5V / 2Amp	5V / 2Amp	5V / 2Amp	5V / 2,5Amp
GPIO	26 pines GPIO	40 pines GPIO	26 pines GPIO	40 pines GPIO	40 pines GPIO	40 pines GPIO
Tamaño	85,6 x 53,98 mm	65 x 56 mm	85,6 x 53,98 mm	85 x 56 x 17 mm	85 x 56 x 17 mm	85 x 56 x 17 mm

Where is the power button?

- The Raspberry Pi doesn't have a power button. It boots up as soon as you plug in the power supply.
- If you've completed all the previous steps, plug in the power supply to boot the Raspberry Pi.

Raspberry Pi Components

► **Power Supply** – Micro USB, 400 mA, 5V

► **Screen** – The screen is a monitor with HDMI or DVI input. It can be connected with VGA with HDMI to VGA adapter.

► **Keyboard or Mouse** - Lower-power USB peripherals with less than 0.1 A power are suitable to connect with Raspberry Pi

► **SD Card** - Class 4, with minimum 8 GB of storage capability. Operating systems like NOOBS and Raspbian are most commonly used operating systems to install on an SD card.

3V3 power	① ②	5V power
GPIO 2 (SDA)	③ ④	5V power
GPIO 3 (SCL)	⑤ ⑥	Ground
GPIO 4 (GPCLK0)	⑦ ⑧	GPIO 14 (TXD)
Ground	⑨ ⑩	GPIO 15 (RXD)
GPIO 17	⑪ ⑫	GPIO 18 (PCM_CLK)
GPIO 27	⑬ ⑭	Ground
GPIO 22	⑮ ⑯	GPIO 23
3V3 power	⑰ ⑱	GPIO 24
GPIO 10 (MOSI)	⑲ ⑳	Ground
GPIO 9 (MISO)	㉑ ㉒	GPIO 25
GPIO 11 (SCLK)	㉓ ㉔	GPIO 8 (CE0)
Ground	㉕ ㉖	GPIO 7 (CE1)
GPIO 0 (ID_SD)	㉗ ㉘	GPIO 1 (ID_SC)
GPIO 5	㉙ ㉚	Ground
GPIO 6	㉛ ㉜	GPIO 12 (PWM0)
GPIO 13 (PWM1)	㉝ ㉞	Ground
GPIO 19 (PCM_FS)	㉟ ㊱	GPIO 16
GPIO 26	㊲ ㊳	GPIO 20 (PCM_DIN)
Ground	㊴ ㊵	GPIO 21 (PCM_DOUT)