Research two microcontrollers and provide information about them from their datasheets. There are several microcontroller manufacturers that you can investigate including Atmel, Microchip, Freescale, TI, etc. For each microcontroller, report the following information. (Be sure to include a link to an online reference where you found this information.)

- **Clock frequency**
- **Bitwidth of the datapath**
- **Size of Flash memory**
- **Number of pins**
- **Does the microcontroller contain an Analog-to-Digital Converter? If so, how many bits of precision does it have?**

1- 8-bit single-chip microcontroller

* clock frequency - upto 40MHz
* bitwidth of the datapath - 8MHz to 32.768KHz
* size of flash memory - 16KB
* Number of pins - 58
https://pdf1.alldatasheet.com/datasheet-pdf/view/128899/AMD/80515.html
yes it contains an analog to digital converter having 16 bits of precision

2- 8-bit control oriented microcontroller

* clock frequency - 12to 16 MHz
* bitwidth of the datapath - 12MHz to 38KHz
* size of flash memory - 32KB
* number of pins - 64
https://pdf1.alldatasheet.com/datasheet-pdf/view/66061/INTEL/8051AH.html
yes it also contains analog to digital converter having 32 bits of precision

Research the Arduino and Raspberry Pi platforms.

1. **Indicate if there are operating systems which can be used on each platform. If there are, list those operating systems**
2. **State whether the operating systems are open source or not.**

The operating system for Arduino

- Arduino is a microcontroller board that runs a dedicated program, there’s no OS, just your code. I believe any OS you may use on PCs or Macs; MS Windows, GNU/Linux, BSD flavors, Mac OS X, even likely DOS; basically anything that allows you to connect to the board via the serial cable.

The operating system for raspberry pi

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- Raspbian OS – The Best OS for Raspberry Pi 3.
- Windows 10 IoT Core.
- RISC OS Pi.
- Retro Pi.
- OSMC.
- New Linutop OS.
- Arch Linux ARM
- Pidora