1. Diff btw microprocessor and microcontroller?

* Applications

Major examples of a microprocessor are pc and computers

Uses: gaming, photo editing, web services etc. The microprocessor is used when the task is not predefined.

Microcontroller on the other hand is used for specific tasks. Majorly used microcontrollers include washing machine , camera etc.

* Memory usage

The microprocessor is used to perform different tasks depending on our usage.

Where as the mc is used to do specific job.hence the mp has external memory portds and io ports and mc has all thes embedded in a chip.

* Processing power

Mp runs at a clock speed of giga hertz whereas mc runs at clock speed of mega hz.

Also the ram usage of mp is in gb and mc uses am only in kb or mbs.

Peripheral interfaces used in mc is i2c,spi etc

* Power consumption

Due to external connections of memory ports and other things mp has high power consumption compared to mc therby resulting in higher cost as well.

* Data handling

Mp can handle about 32 to 64 bits input binary data. The address and data bus will have their sizes in 32 to 64 bit range to operate on input data.

Mc will handle around 8,16,or 32 bits of data. Hence an mp can handle a larger amount of ip data In a cycle.

* Arduino and AT Megachip 328 are single board microcontrollers.

In short an ATmega328 is a microcontroller chip found on Arduino Uno boards. ATmega328 microcontrollers are from the 8-bit AVR microcontroller family. The image below shows an AVR ATmega328 microcontroller chip.

* When an Arduino sketch is loaded to the Arduino it is actually loaded to memory inside the microcontroller chip. The microcontroller then runs or executes the sketch when the Arduino is powered up or reset after programming.
* Arduino is a prototyping board, and also the term "Arduino" is used to refer to the IDE and library on the PC side, and all its ecosystem. AVR is the architecture (developed by atmel) of the microcontroller chip used in all official 8bit board, and almost all clone. Arduino UNO and 2009, the most used, use the AtMega328P chip.