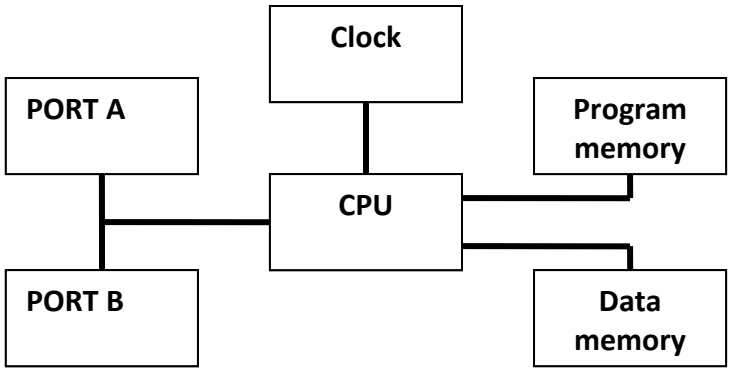
Basic Architecture

The PIC microcontroller can be considered as a simple block design:



The **CPU :** Central Processing Unit performs the programme operations and controls data flow.

PORT A and **B** are bi-directional communication ports, each bit (single interface) can be configured as an input or output. The inputs can be digital or analogue depending upon the device and configuration.

Data memory contains a number of file registers which the PIC uses to function correctly.

The size of the **program memory** is dependent on the PIC chip used, but does not need to be large as the program is in machine code.

The **clock speed** is dependent on the application and may only be a maximum of 4MHz, but this does not affect the operation as the instructions are in machine code and can run at the clock speed.

Note:

PIC microcontrollers come with a range of specifications, in terms of the size and types of memory included, internal file structure and functions included, number and size of PORTS.

Programmable Components – *Picxe 18 chip and Picaxe 8 chip*