**Architecture**

* Logical description of its components and its basic operations
* **Architecture** of a processor chip is a description of its basic components and of its basic operations

**Machine cycle**

* Execution of *one machine instruction****\***
* Includes Three cycles
  + **Fetch the Instruction**
  + **Increment the Program Counter**
  + **Execute the Instruction**

**Machine Instruction**

* Pattern of bits that corresponds to a fundamental operation of the processor
* When inspecting instructions it is unclear what it means

**Object Module**

* File that contains a machine language program that is not quite ready to run.
* Translated source program directly into machine language which is contained in a file
* FORTRAN often used to translate into assembly language

Assembly language *does* match the problem when the problem is the operation of the computer system. Assembly language is used for operating systems, compilers, communications, low-level graphics, and other programs where the architecture of the processor must be visible. Most common use of assembly language is in programming embedded systems

**Bit**

* Is a single on/off value

**Byte**

* Eight bits

**Main Memory**

* Byte which makes up the machine instructions of a program

**Emulator**

* A program that implements a processor’s architecture is the logical equivalent of implementation in silicon.

**Separate Assembly**

* Process which separating several sources files which could be individually assumed, later combined (linked) into the full executable.

**Load Module:**

* Separate object modules then combined by a linker to create an executable file.