



SNS COLLEGE OF ENGINEERING



Kurumbapalayam(Po), Coimbatore - 641 107

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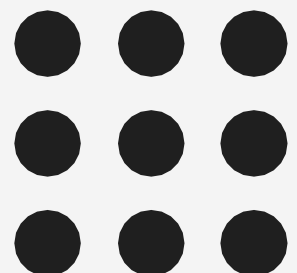
Department of Information Technology

**Course Name - 19IT301 Computer Organization and
Aechitecture**

II Year / III Semester

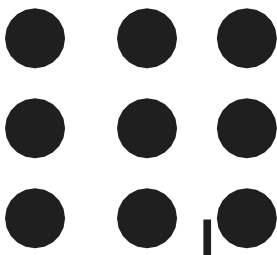
Unit 1 - Basic Structures of Computers

Topic :Bus Structure



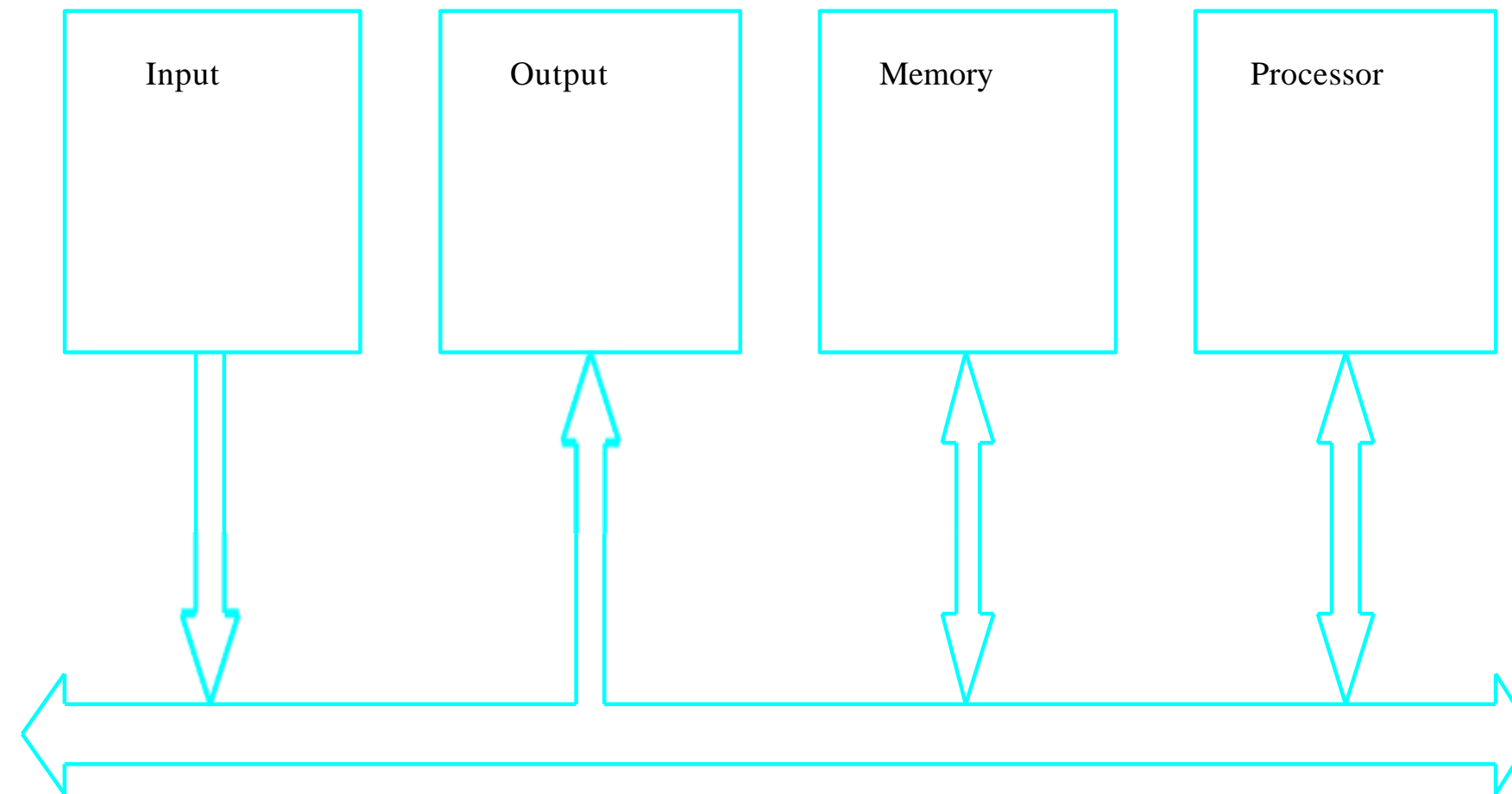


Bus Structure



- There are many ways to connect different parts inside a computer together.
- A group of lines that serves as a connecting path for several devices is called a *bus*.
- Address/data/control

Single Bus Structure





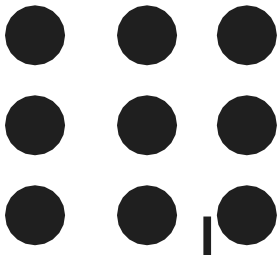
Speed Issue



- Different devices have different transfer/operate speed.
- If the speed of bus is bounded by the slowest device connected to it, the efficiency will be very low.
- How to solve this?
- A common approach – use buffers.



Performance



- The most important measure of a computer is how quickly it can execute programs.
- Three factors affect performance:
 - Hardware design
 - Instruction set
 - Compiler

Bus Structure

Processor time to execute a program depends on the hardware involved in the execution of individual machine instructions.

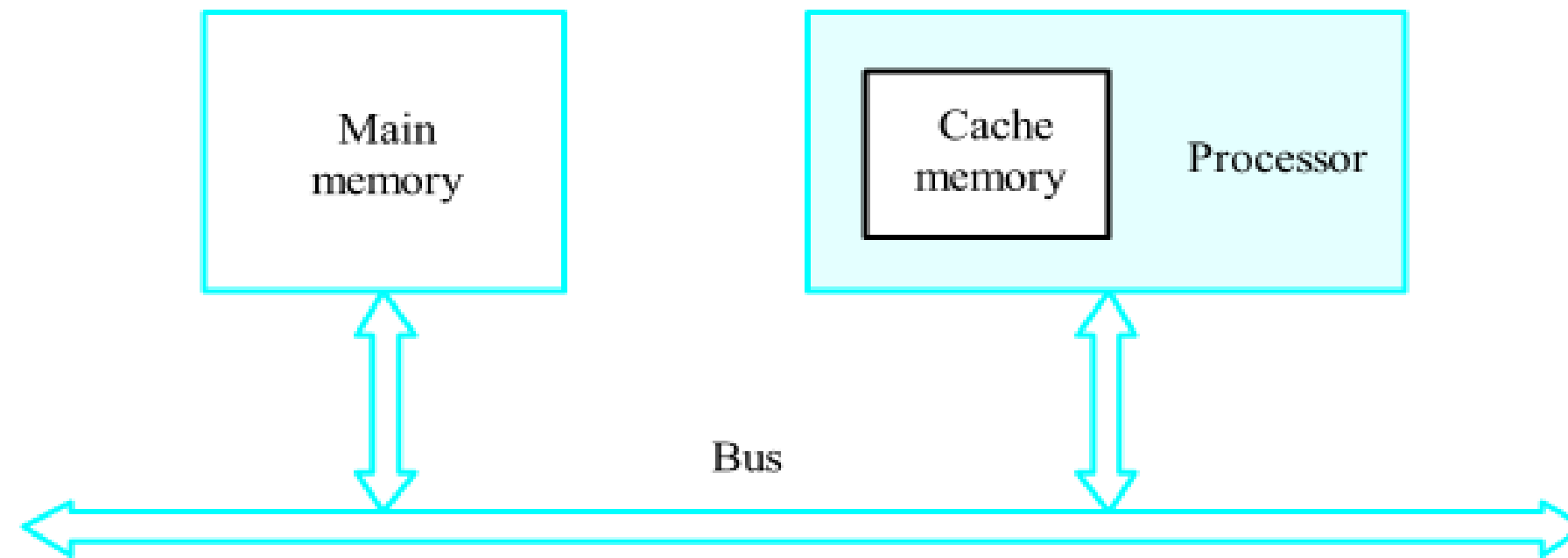


Figure 1.5. The processor cache.



THANK YOU