

Computer Organization

UNIT - I

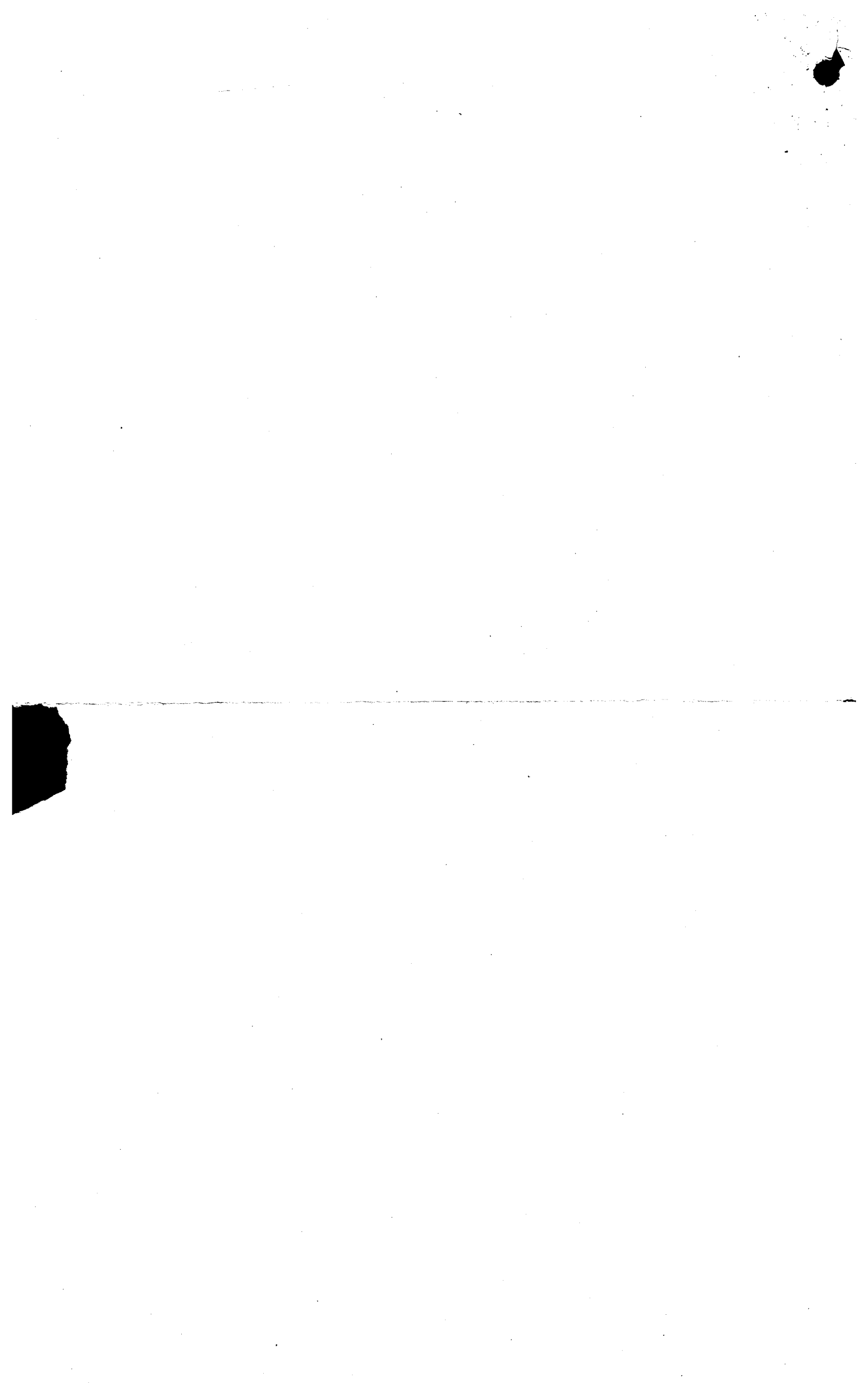
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Computer Organization

Computer Organization refers to the Operational units and their interconnections that realizes the architectural specification.

Examples:

- Control signals
- Interfaces between computer and peripherals
- Memory technology being used.

Basic structure of Computers:

Computer types:

- ① Digital computers
- ② Personal Computers
- ③ Notebook Computers
- ④ Workstations
- ⑤ Enterprise system
- ⑥ Server
- ⑦ Super computer.

Digital Computer:

→ It is a fast electronic calculating machine which accepts digitized input information, process it to list of internally stored instruction and produces the resulting output information.

→ The list of instruction is called as computer program and internal storage is called computer memory.

→ The Computer may widely vary in size, cost and power.

Personal Computer:

→ The most common computer is personal computer which can be used in homes, ~~shops~~, schools, business, office etc.

→ It is the most common form of desktop computer that have processing and storage unit, visual display, audio output unit and a keyboard.

→ In this storage media includes harddisc, CDROM and diskettes

Notebook Computers:

→ It is another version of personal computer where all the components are packed into a single unit.

→ It is portable and size is of thin brief case.

Ex: Laptops, Tablet PC

Workstations:

- Workstations are of with high resolution graphics and I/O capability that performs more computational power than Personal Computers
- It can be used in engineering application and interactive design work.

Enterprise System: (or) mainframes System:

- It is a large and powerful system that are used for business data processing.
- It computes at high power and has very large storage.

Servers:

- It contains very large size database, storage unit and capable of handling large volumes of request to access the data
- Servers are widely used in education, business and personal user communities.

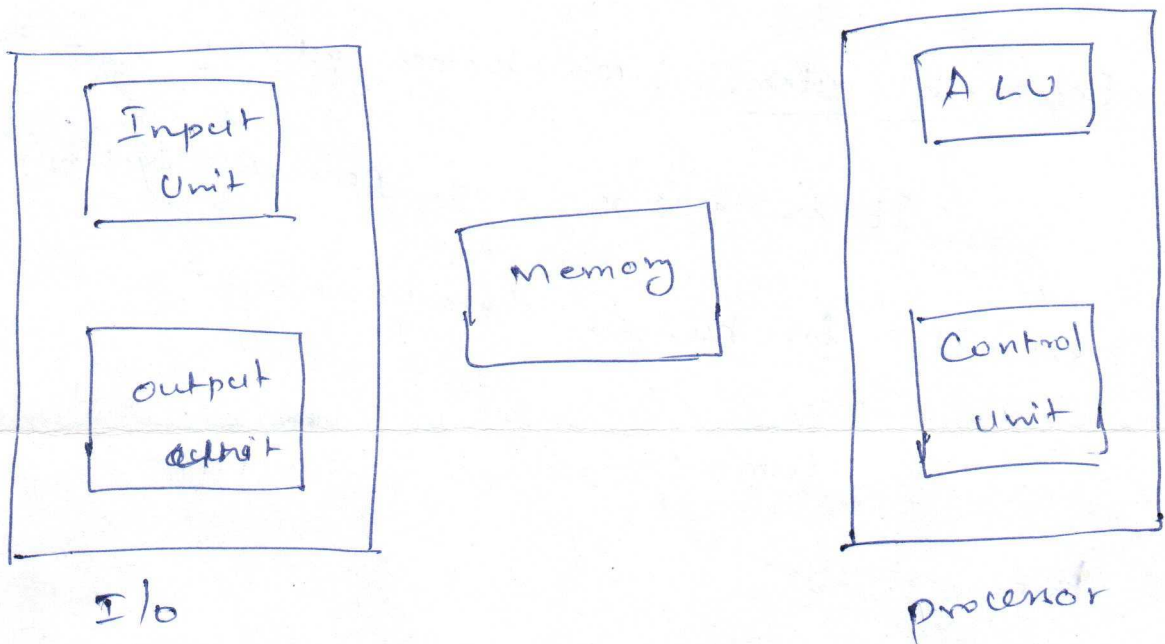
Super Computers:

- It is used for large scale numerical calculation required in applications such as weather forecasting, aircraft design and simulation.

Functional units:

A computer consist of five functional units

- They are ① Input unit
- ② Memory unit
- ③ ALU
- ④ output unit
- ⑤ Control unit.



Basic functional units of Computer

- The input unit accepts the coded information from the user through the electromechanical device such as keyboard, or from other computers.
- The information received is either stored in memory or immediately used by ALU to perform desired operation.
- The processing steps are determined by a program stored in the memory.
- finally the results are sent back to the user through the output unit.