Parallel Processing

↳ Organization:-

↳ • Single Instruction, Single Data (SISD)

single processor execute single ins.
to operate an data in single memory

• Single Instruction, Multiple Data (SIMD)

single instruction control multiple
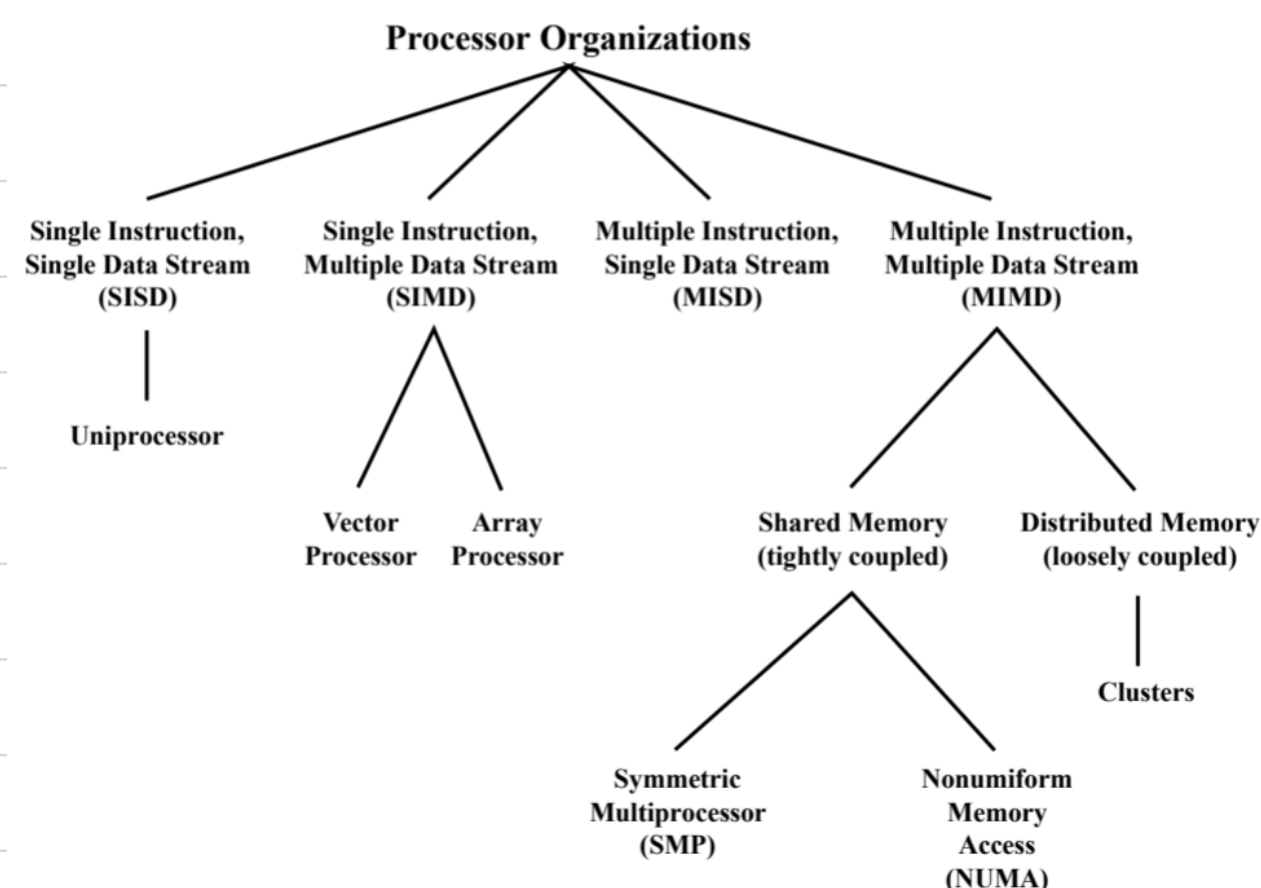execution of processing element

• Multiple Instruction, single Data (MISD)

sequence of data transmitted to a set of
processors which execute different
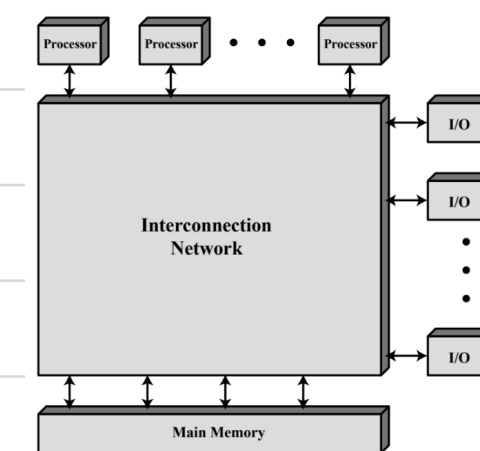data stream

• Multiple Instruction, Multiple Data (MIMD)

set of processors executes diffent ins.
sequence on different data sets.

MIMD

↳ Shared Memory

↳ Single Multiprocessor
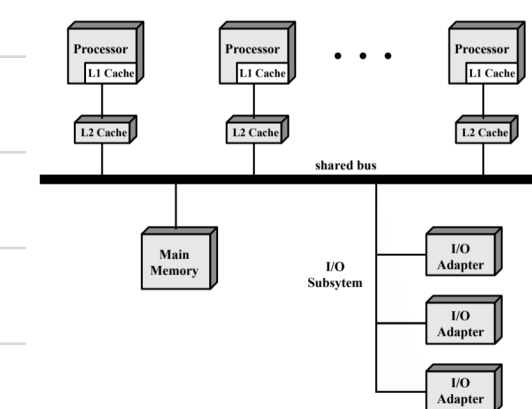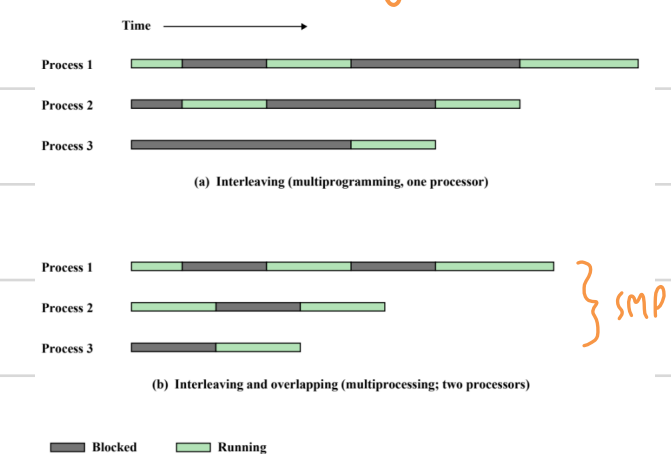
↳ • 2+ processor of similias capacity

• processors shore same memory & I/O
facilities

• all processors have acces to I/O devices

• all processors can perform same function "symmetric"

• controlled by integrated Os

↳ Bus organization has:-

• Simplicity
   simplest approach

• Flexibility
   can add more processor

• Reliability
   doesn't cause absolute failure

• Performance
   limited by bus

• cache memory
   reduced num of bus access

• cache coherence
   cause problems