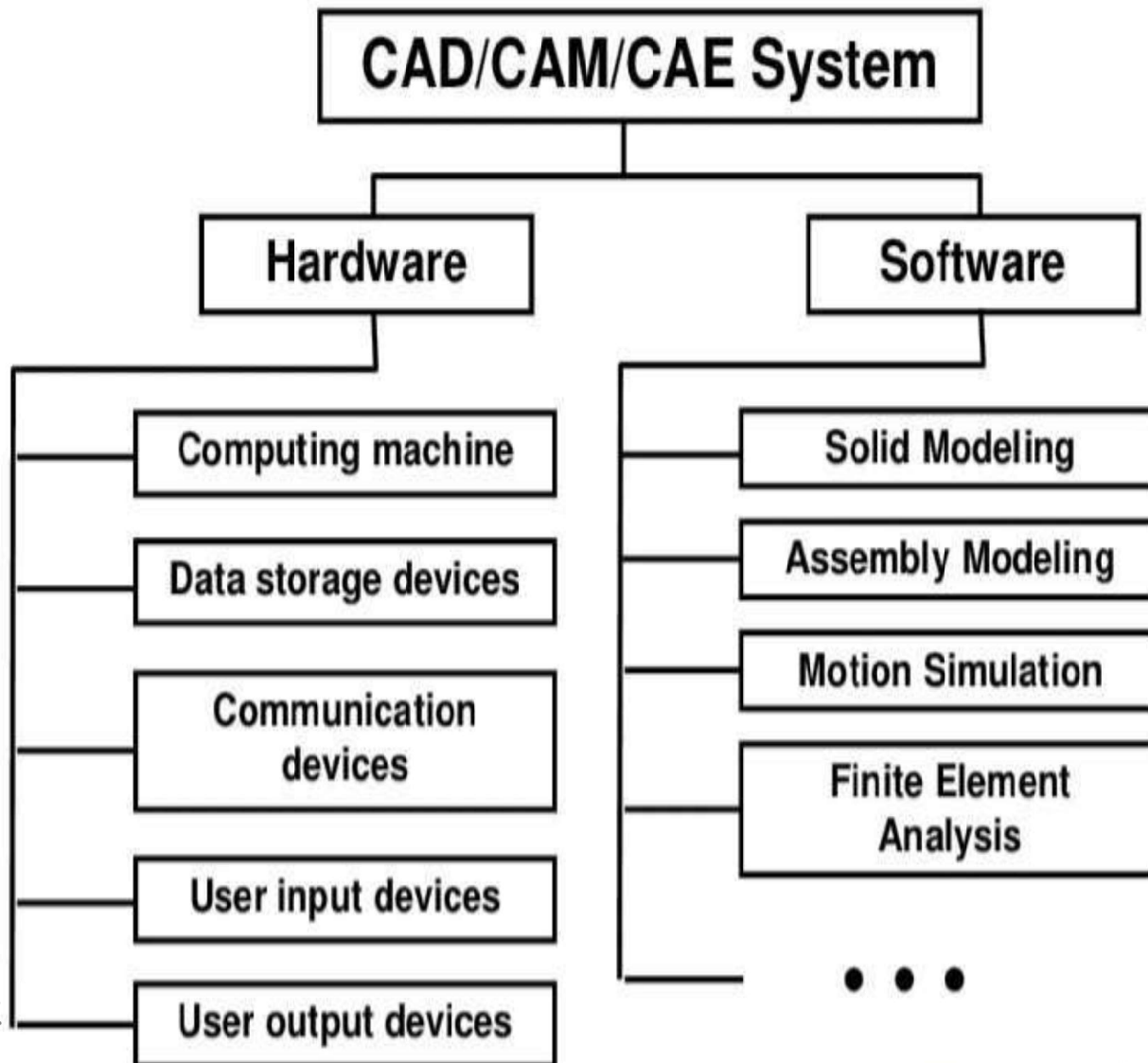




Components of CAD Systems





HARDWARE COMPONENTS



- Graphic device is composed of a display processing unit, a display device, and one or more input devices
- Input devices:
 - Mouse
 - Space ball
 - Data tablet with a puck
 - Keyboard
- Output Devices:
 - Plotters
 - Color laser printers
 - Laser Display



Input devices



8/5/2022

Output devices



SOFTWARE COMPONENTS



- CAD software allows the designer to create and manipulate a shape interactively and store it
- CAM software plans, manages and controls the operations of a manufacturing site
- CAE software analyzes design geometry, allowing designer to study product behavior
- Ex: C++, basic, java, cobol etc.

CAD Software

CAD software can be divided based upon the technology used:

1. 2-D drawing. Its applications include,
 - a. Mechanical part drawing
 - b. Printed-circuit board design and layout
 - c. Facilities layout
 - d. Cartography
2. Basic 3-D drawing (such as wire-frame modeling)
3. Sculptured surfaces (such as surface modeling)
4. 3-D solid modeling
5. Engineering analysis



DESIGN PROCESS



- The design is the act of devising an original solution to a problem by a combination of principles, resources, and products in design.
- It is an iterative process which checks the suitability of the design again and again.
- The design progresses in a step-by-step manner from some statement of need through identification of the problem, a search for solutions and development of the chosen solution to manufacture, test and use.
- The design process explained here is described by shigley.

