

### JOINING PROCESSES

- Joining two or more elements to make a single part.
- A fairly large number of industrial components are made by joining processes. Common examples are aircraft and ship bodies, bridges, building trusses, welded machine frames, sheet metal parts, etc.
- The joining process is often, the most economical method and relies on raw material obtained from one of the primary manufacturing processes.
- The various joining processes can be classified as follows:
  - **Mechanical joining by means of bolts, screws and rivets.**
  - **Adhesive bonding by employing synthetic glues such as epoxy resins.**
  - **Welding, brazing and soldering.**

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#### Temporary, Semi – Permanent and Permanent joining processes

- Joining obtained by bolts and screws is **temporary** in nature and can be disassembled whenever necessary.
- Rivets are **semi permanent** fastening devices and the joint can be separated only by destroying the rivet without harming the parent elements.
- Welding produces a **permanent** joint as a welded part needs to be broken to dismantle it.