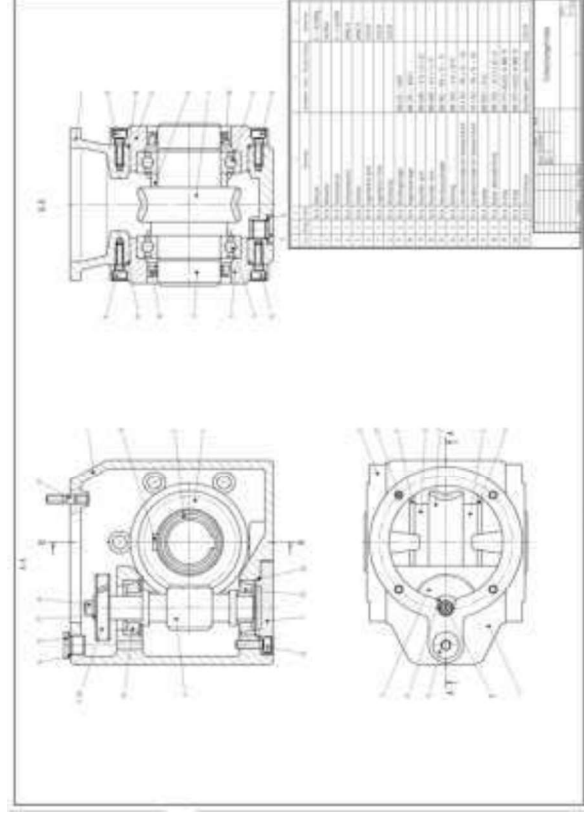
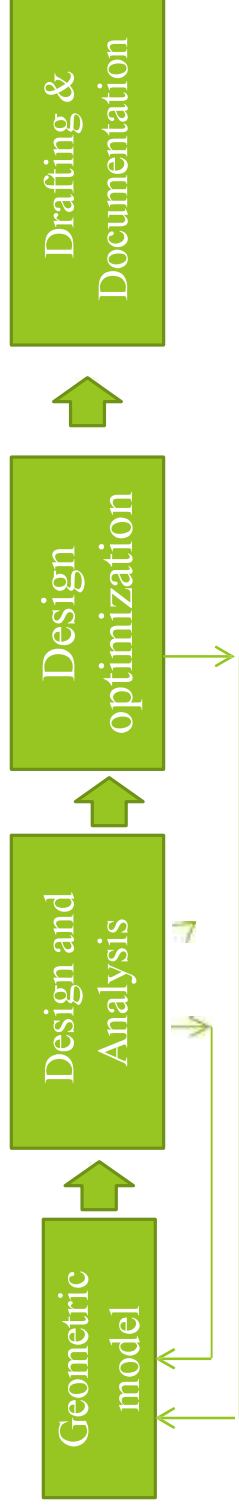
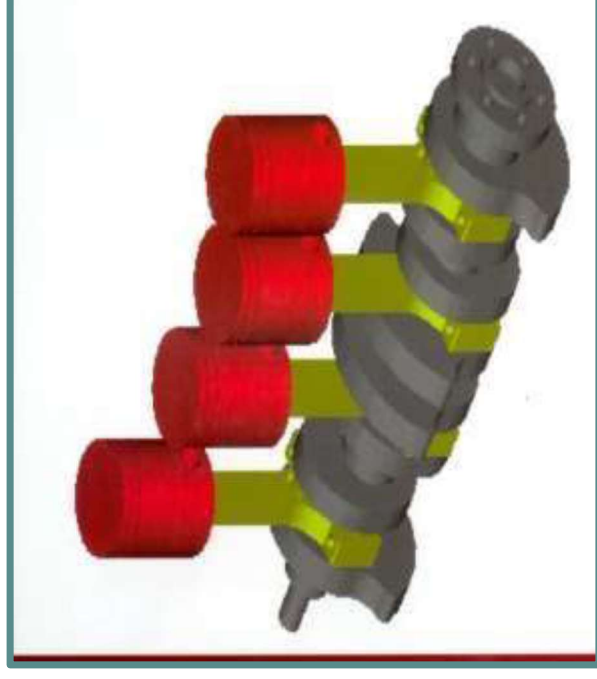


## What is CAD ?

- Computer-Aided Design (CAD) is the technology concerned with the use of computer systems to assist in the creation, modification, analysis, and optimization of a design. [Groover and Zimmers, 1984]



2D CAD drawing



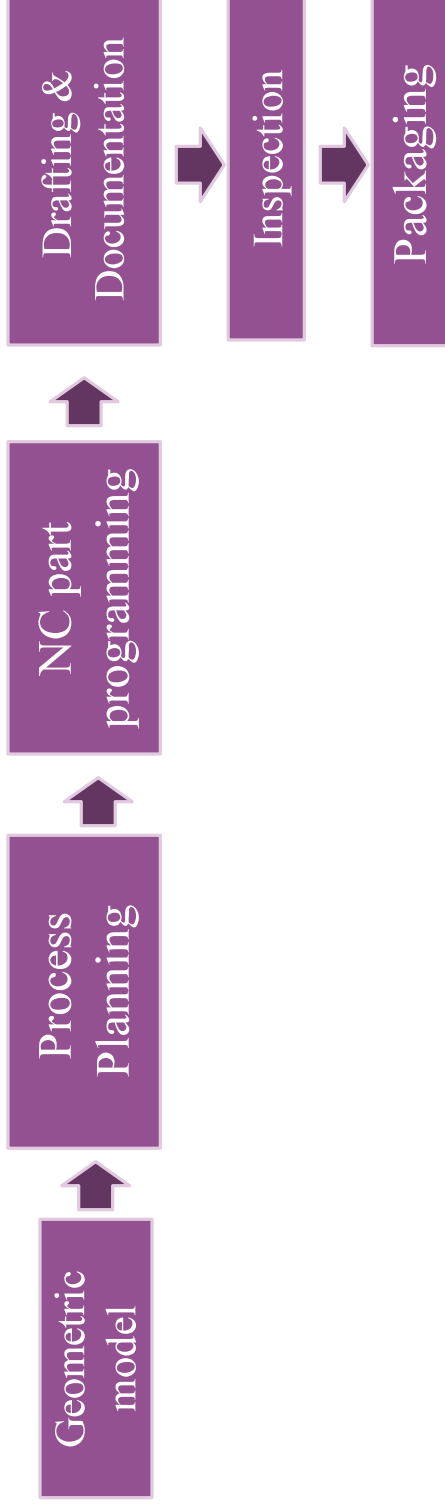
3D CAD model



## Different terminology related CAD



- **Computer-Aided Manufacturing (CAM)** is the technology concerned with the use of computer systems to plan, manage, inspect and control manufacturing operations directly or indirectly.



Phase of CAD

- **Computer-Aided Engineering (CAE)** is the technology concerned with the use of computer systems to analyze CAD geometry, allowing the designer to simulate and study how the product will behave.



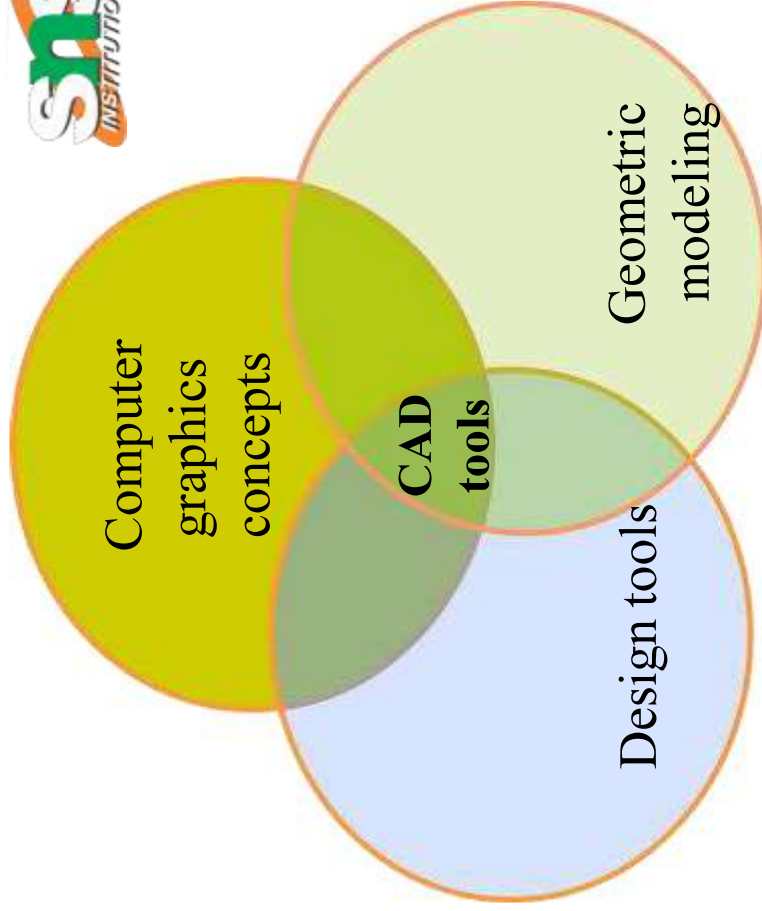
CAM



CAE



## CAD tools



## Difference b/w CADr and CAD

| Computer Aided Drafting  | Computer Aided Design/Modeling  |
|--|---|
| 1. This is done after analysis is performed on the geometric model                               | 1. This is done before analysis is performed on the geometric model       |
| 2. The dimension shown in computer aided drafting are safe, since these are drawn after analysis | 2. This provides the dimensions which may or may be safe                  |
| 3. This is generally a 2D Drawing  | 3 This is 2D drawing or 3D model  |
| 4. These are made basically for conveying the production design.                                 | 4. The model is used for design analysis                                  |
| 5. This is drawn with reference from the model already created with                              | 5. Model is actually developed from scratch with different approximations |

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