AutoCAD

AUTODESK

AutoCAD is a powerful computer-aided design (CAD) software used for creating precise 2D and 3D drawings. It finds applications in fields such as architecture, engineering, construction, and manufacturing.

FEATURES:

- **2D Drafting:** AutoCAD excels in creating accurate 2D drawings using tools like lines, circles, arcs, and text.
- **3D Modeling:** It supports 3D modeling, allowing users to create complex 3D objects.
- **Parametric Design:** AutoCAD enables parametric design, where changes to one element automatically update related components.
- **Customization:** Users can create custom commands, scripts, and macros.
- **Collaboration:** AutoCAD files can be shared across teams and integrated with other software.

COMMANDS & SHORTCUTS:

- **Line:** Draws straight lines.
- **Circle:** Creates circles.
- **Rectangle:** Makes rectangular shapes.
- **Extrude:** Converts 2D shapes into 3D objects.
- **Zoom:** Adjusts the view.
- **Pan:** Moves the view.
- **Layer Management:** Organizes elements into layers.

FILE FORMATS:

- AutoCAD files typically have extensions like .dwg (drawing) and .dxf (drawing exchange format)

AutoCAD LT is a streamlined version of AutoCAD, primarily focused on 2D drafting and documentation.

FEATURES:

- **2D Drafting:** AutoCAD LT provides a comprehensive set of tools for creating precise 2D geometry.
- **Editing and Annotation:** Users can edit, annotate, and document their designs effectively.
- **Automation:** AutoLISP allows users to customize their interface and automate workflows.

Licensing: Available as Annual & 3- Year Subscription.

Other Products from AutoDesk

1. Revit is a powerful tool for Building Information Modeling (BIM). It helps plan, design, construct, and manage buildings.

   FEATURES:

- **BIM Tools:** Create detailed models for architecture, structure, and MEP (mechanical, electrical, plumbing).
- **Collaboration:** Collaborate with designers, engineers, and contractors.
- **Powerful Documentation:** Generate construction documentation efficiently.

2. 3ds Max is used for 3D animation, modeling, simulation, and rendering in film, games, and TV.

3. Naviswork is used for project review, coordination, and clash detection in construction projects.

4. Fusion 360is a cloud-based 3D CAD/CAM/CAE software for product design.

   FEATURES:

- **Product Design:** Create 3D models and assemblies.
- **Simulation & Analysis:** Test designs virtually.
- **Manufacturing & Production:** Generate toolpaths for CNC machining.

5. Maya is widely used for 3D animation, visual effects, and game development.

Autodesk Architecture, Engineering, and Construction (AEC) Collection:

The Autodesk AEC Collection provides designers, engineers, and contractors with a comprehensive set of BIM (Building Information Modeling) and CAD (Computer-Aided Design) tools. <u>Supported by a cloud-based common data environment, this collection facilitates project delivery from early-stage design through to construction</u>.

Key features and components of the AEC Collection:

PURPOSE:

The AEC Collection equips professionals in the architecture, engineering, and construction fields to:

- Create with ease.
- Explore what's possible.
- Build with confidence.

INCLUDED SOFTWARE:

- **Revit:** A powerful BIM tool for creating detailed architectural and structural designs.
- **AutoCAD:** Widely used for 2D drafting and 3D modeling.
- **Civil 3D:** Specialized for civil engineering and infrastructure design.
- **Autodesk Forma:** A tool for simulation and analysis.
- **Navisworks Manage:** Facilitates design review, clash detection, and coordination, and more!

BENEFITS:

- **Streamlined Design Reviews:** Save time and stay organized with cloud-based review and approval workflows.
- **Common Data Environment (CDE):** Simplify collaboration and data management using Autodesk Docs' cloud-based CDE to ISO 19650 standards.
- **Centralized Issue Management:** Merge data and issues from AutoCAD, Revit, Navisworks Manage, and other tools into one centralized database.
- **Collaboration with Civil Engineers:** Connect workflows to Civil 3D for improved discussions between architects and civil engineers.