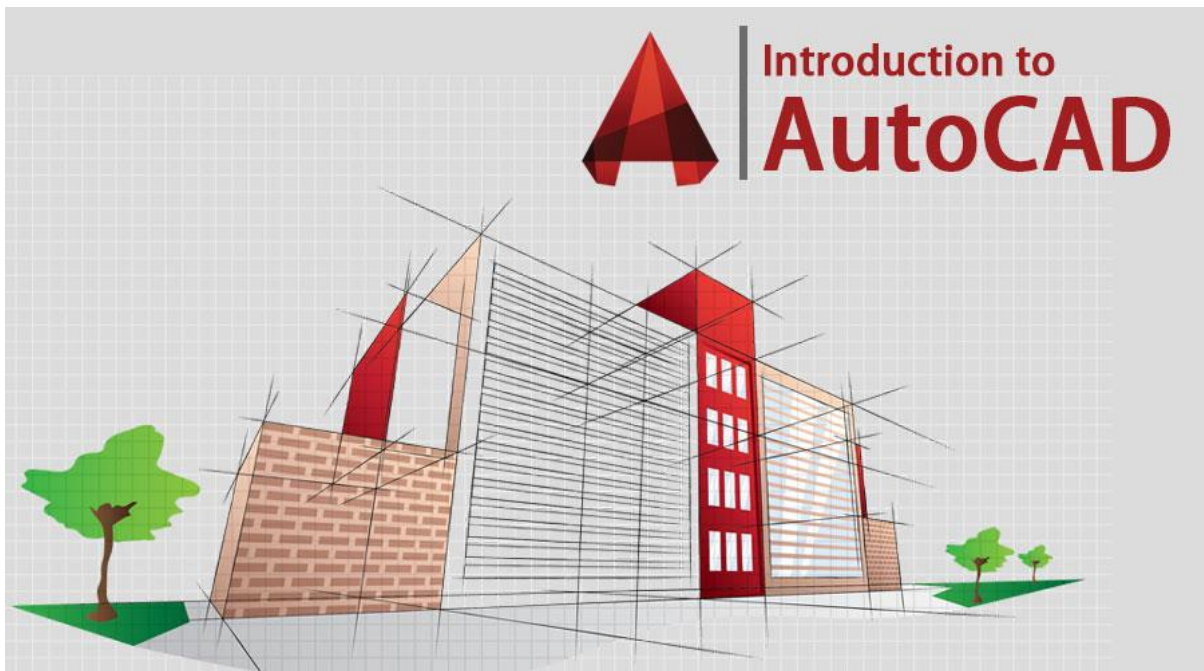


# Computer Aided Design of Buildings Laboratory

## AutoCAD

AutoCAD is a computer-aided design (CAD) program used for 2-D and 3-D design and drafting. AutoCAD is developed and marketed by Autodesk Inc. and was one of the first CAD programs that could be executed on personal computers. AutoCAD allows the designer to use and manage it on multiple machines using network licensing. Being an easily available program, AutoCAD is used globally by students, teachers, architects, freelancers, engineers, fashion designers. Like other CAD programs, AutoCAD also works on a database of geometric systems, including points, lines, arcs, etc. The user works on the application through the commands; editing or drawing is done from the inbuilt command line. AutoCAD is issued free of cost to students, educators, and institutions.



AutoCAD is globally used by surveyors, designers, engineers, drafters. Globally, AutoCAD has proven as an efficient and user-friendly program. Commercial drafting and computer-aided design(CAD) software applications are AutoCAD. AutoCAD software is recognized internationally for its remarkable editing capabilities, which make it likely to digitally draw building plans or recreate 3D images. This software was developed in the year 1982 by Autodesk.

1. The designers and architects can create accurate models, sketches, and drawings with AutoCAD. This is next to impossible when done manually.
2. With the introduction to AutoCAD, the user can even model 3D objects with colors & materials that can be applied to various surfaces, making it simpler

for the user to anticipate the outcome, which cannot be fulfilled in manual 3D sketches.

3. Creating drawings manually is a time-consuming task. When designers create drawings on a digital platform with computer software, they get the benefit of the application interface. Editing is also easy with AutoCAD as it has many editing commands.
4. AutoCAD is an advanced program that has default commands incorporated in the application. With these commands, the users can edit and change their files without any limitations.
5. With AutoCAD, the users get to link their files to multiple platforms; they have the benefit of importing and exporting all kinds of files.
6. The users can even expand the base program through programming; thus, AutoCAD is a versatile application that has standardized in computer designs.
7. AutoCAD also has project managing tools that allow users to share information simultaneously & effectively.
8. The cost of the program is quite high due to its license.
9. The software is a time-consuming application. It has many functions and features which specific and to the point.
10. A powerful computer with good RAM and Hard disk is required for the application to work with processing speed.

# QCAD

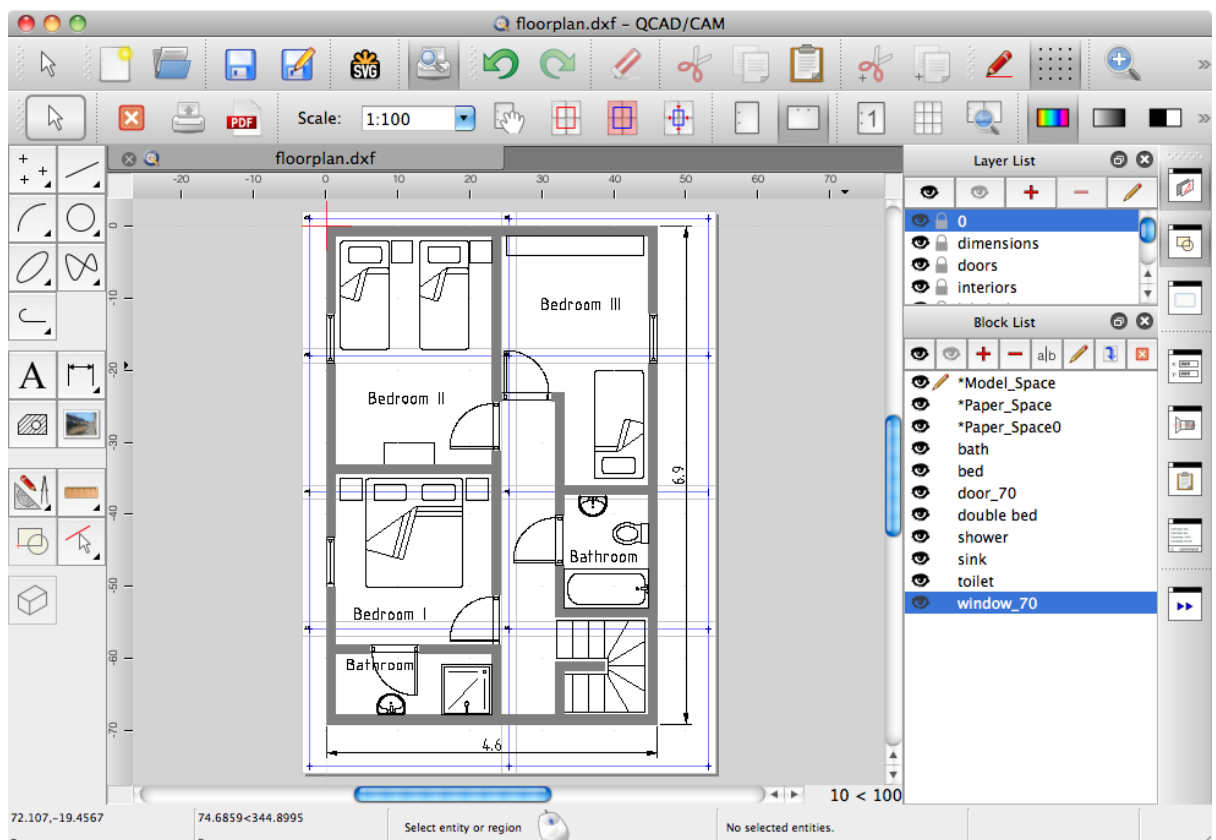
QCAD is a computer-aided design (CAD) software application for 2D design and drafting. It is available for Linux, Apple macOS, Unix and Microsoft Windows. The QCAD GUI is based on the Qt framework.

QCAD is partly released under the GNU General Public License. Precompiled packages are available for 32-bit and 64-bit Linux platforms, Microsoft Windows OS and macOS.

QCAD is developed by RibbonSoft. Development on QCAD began in October 1999, starting with code from CAM Expert. QCAD 2, designed to "make QCAD more productive, more user friendly, more flexible and increase its compatibility with other products" began development in May 2002. QCAD 3 was first released in August 2011 with an ECMAScript (JavaScript) interface as major addition.

Some of the interface and concepts behind QCAD are similar to those of AutoCAD.

QCAD uses the DXF file format internally and to save and import files. Support for the popular DWG file format is available as a commercial plugin based on the Open Design Alliance DWG libraries.



Starting from version 3.7 QCAD is distributed as Professional Trial that works for a limited time, or as Community Edition as source code only, so users need to self-compile or remove the QCAD Professional add-on running in trial mode.

Although much of the software source is under the GPL-3.0-or-later license there is also significant functionality not available under a free software license. QCAD 3.1 adds various improvements and new features to QCAD but probably the most important news today is that starting with QCAD version 3.1, QCAD is now available under the GPLv3 (open-source software) as a free download to anyone. QCAD 3.1 is an easy to use, complete 2D CAD system for Windows, Mac OS X and Linux.