Final Project Report

A Real Life Object: Dining Table & Chairs.

Course title: Computer Aided Engineering Drawing
Course code: CSE200

Submitted to
Md. Tanvir Alam
Lecturer, Department of Computer Science and Engineering

Submitted by
Tahmina Rahman Jidny [ID: 2021-2-60-167]
SK.Md.Shakib Imran [ID: 2020-1-60-047]
Umme Haney [ID: 2020-2-60-009]

Introduction of AUTOCAD

What is CAD?

Computer aided Design And Draughting (sometimes known as cad). Generally, it is the use of computers in the design and drawing process. Traditionally, technical drawings are made using manual drafting. It often requires a lot of effort and time, particularly for large complex drawings. CAD is being used widely in modern practice. The ability of computers that enable engineers to produce, revise, store and transmit original drawings has made it very important.

Why use AUTOCAD ?

Modern Computer Aided Design (CAD) tools have significantly changed the way we design mechanical products or machines. CAD techniques offer benefits such as rapid prototyping, less revisions in design, automatic update of drawings, rapid turnaround time and low operating cost.
One of the most popular tools used in the manufacturing industry is AutoCAD by Autodesk Inc. With AutoCAD you get the best 2D and 3D design modules in one package which renders a central 3D model to clearly visualize the final product. AutoCAD software facilitates faster digital prototyping by allowing direct read and write of native DWG files. This results in accurate format translations and greatly improves overall efficiency of mechanical designs.
.

How is autocad used?

Electronic paper with drawings and editing tools is valuable and more effective at changing drawings than manual drafting. The ability to move, copy, rotate, erase, and redraw an object is available. AutoCAD editing is quicker than hand drawing. Drawing Layers to Improve Visibility and Drawing. There is a type of drawing layer offered by AutoCAD that is comparable to the engineering layers on working drawings. database or storage for often used objects. Complex things that are used regularly can be placed in the library as symbols. This would boost the drafting work's productivity.

Advantages of autocad

With the click of a button, the sketching area on the screen can be adjusted to any size.
• The application provides every tool required.
• Complete accuracy is possible to maintain.
• Direct extraction of production information from the drawing is possible.
• Does not require full-size set outs.
• With the click of a button, the sketching area on the screen can be adjusted to any size.

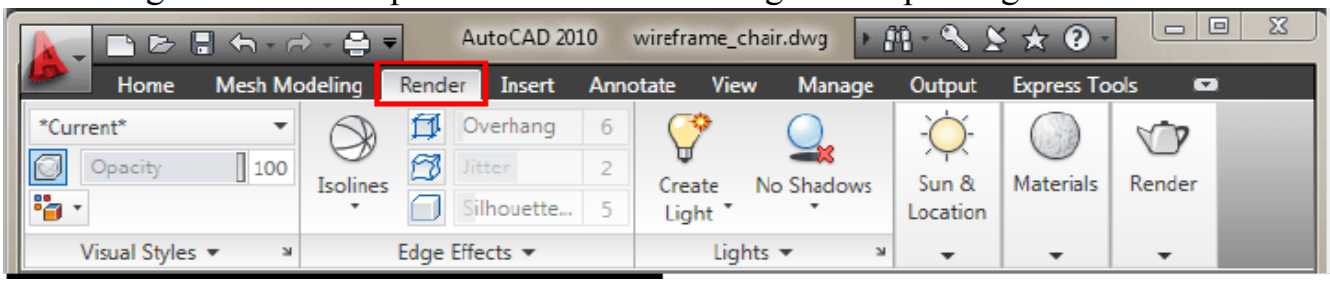
• The application provides every tool required.
• Complete accuracy is possible to maintain.
• Direct extraction of production information from the drawing is possible.
• Does not require a full-size set

Basic AutoCSD Functions

- Lines, circles, arcs, polylines, rectangles, polygons, splines, points, texts and area hatching are used in 2-D mechanical drafting.
- 3D modeling Surface modeling, solid modeling, and wireframe modeling

extruded and revolved solids from 2-D objects; Boolean operations to the 3-D objects, such as union, subtraction, and intersection). 3-D primitives, such as boxes, wedges, cones, cylinders, spheres, and toruses.

- Procedures for 2-D and 3-D objects copying, mirroring, and wiping, among other operations.
- Viewing zooming and panning, creation of multiple viewports, specification of the user coordinate system (UCS), and choice of viewing angle.
- Tolerancing and Dimensioning Dimensions in the following categories: linear, angular, radius, diameter, baseline, continuous, leaders, and size and geometric tolerances.
- 3-D pictures images with wireframes, hidden lines, shading, and rendering.
- The grouping of objects characteristics, references, groupings, line types, colors, and layers.
- Generating PostScript files through plotting ki



COMMANDS USED IN AUTOCAD:

•There are many commands which are used in AutoCAD drawing.•The commands are follows:--

LINE COMMANDS:- This command is used to draw lines by mouse. The Syntax is “L” and then press “Enter”.

3-D ORBIT
CONSTRUCTION LINE:- It is also called “ X-line ” . It is used to draw hidden lines.
MULTI LINE:- It is used to draw many lines. It is also called “ M-line”. The Syntax is “ Ml” and press “Enter”.

POLY LINE:- It is also called “P-line”. The syntax is “ PL” and press “Enter”.

POLYGON LINE:- It is used to draw hexagonal shapes.

RECTANGLE :- It is used to draw “Rectangles”. The syntax is “ REC”.

ARC:- It is used to draw “Arcs”. Syntax = “ARC”.

CIRCLE:- It is used to draw a circle for desired radius Syntax = “C”.

SP LINE :- It is used to draw smoother and more controllable curves Syntax =“ S ”.

ELLIPSE: - It is used to draw an ellipse in horizontal or vertical Syntax = “E ”.

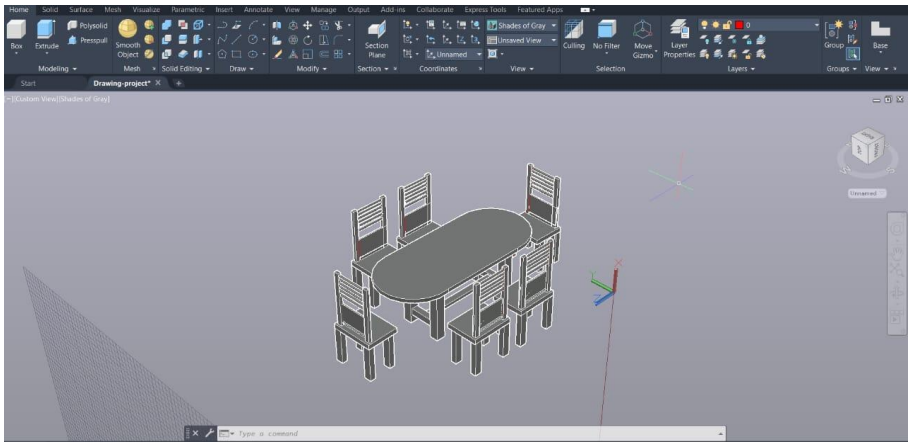
HATCH :- It is used for Hatching after drawing. The hatching can be done through many types.

The given commands are used for drawing only. Now the below commands are used for modifying the respected drawing:-

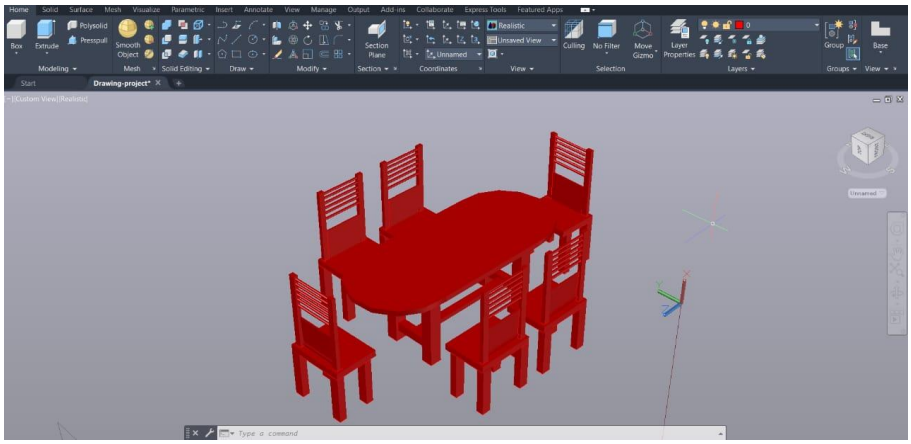
ERASE, COPY, MIRROR, OFF SET, ARRAY, MOVE, ROTATE, STRETCH, LENGTHEN, TRIM, EXTEND, FILET, EXPLODE.

Results of work:

Some screenshot from our project: [Dining table and chairs]



Screenshot-1



screenshot-2

These are some screenshots from our project. The dwg file is attached in the classroom as well.

Conclusion:

There are undoubtedly some benefits to using Auto CAD's import feature. It may aid in speeding up the process of creating the drawings required in the workplace. However, issues could develop down the road if the person who made the imported file is not given credit for it. Additionally, using the feature can cause individuals to gradually begin to appreciate other people's intellectual property less, which would definitely lead to conflict in the future. To improve industry efficiency, the usage of the import function may also be largely depended upon. This can cause the rate of innovation to slow down. It is clear that the import function belongs in the structure

Reference:

Indus Institute of Engg. & Technology
A Training Report On/In
“AUTOCAD”
Available
https://www.scribd.com/document/419697825/159491084-Autocad-Full-Report-pdf