AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)

Department of CSE

Computer Aided Design and Drafting

Section: L

Experiment No: # 01

Name : Khan, Md. Sazzad

Id : 22–49172-3

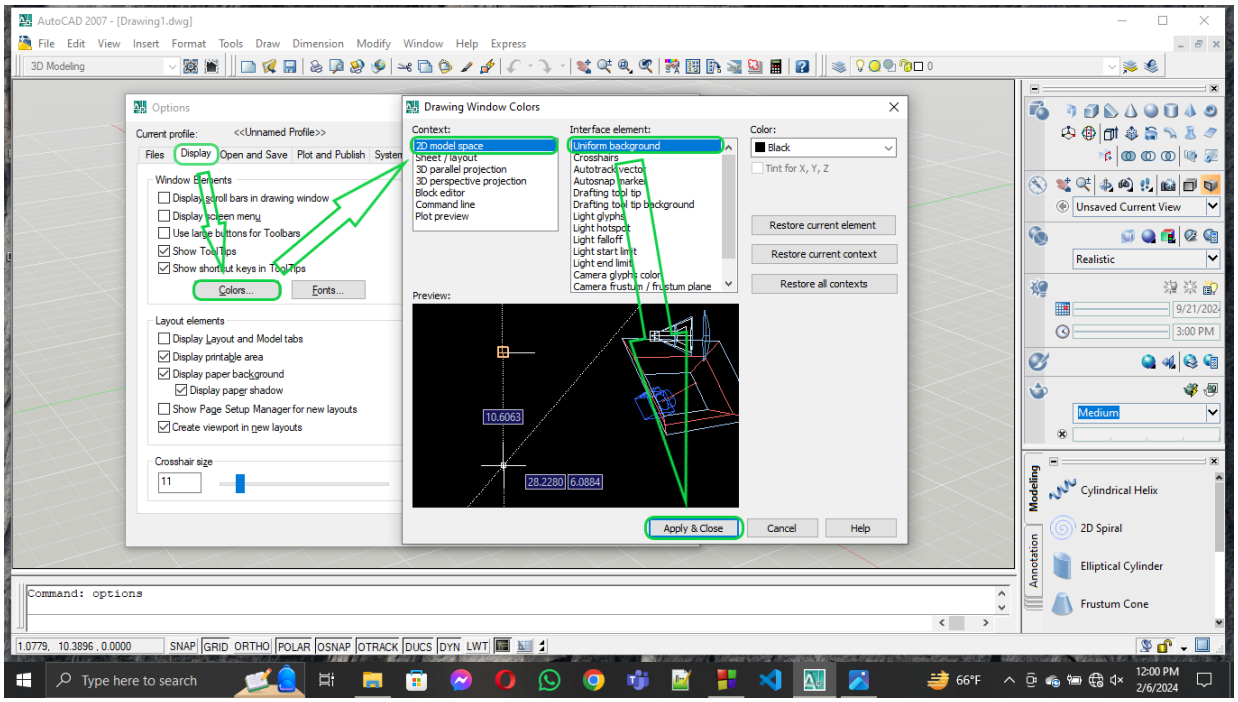
Supervised by : **MD. RAKIBUL ISLAM CHOWDHURY**

Name of Experiment : Introduction to Engineering Drawing and Computer-Aided Design & Drafting and Familiarization with AutoCAD software and its different features.

AutoCad Comments:

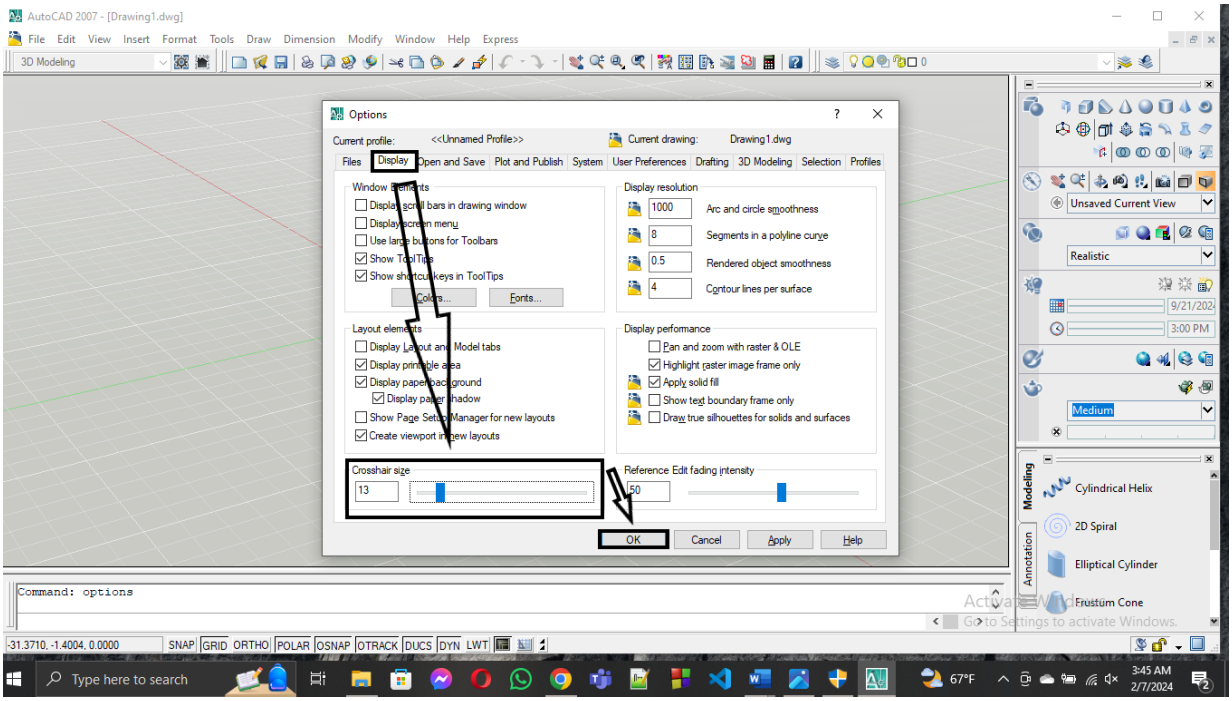
1. **How To Change Background Color In AutoCad :**

Type options >> Enter Key >> Display >> Colors >> Context : 2D model space >> Interface element : Uniform background >> Color : Choose Color >> Apply & Close



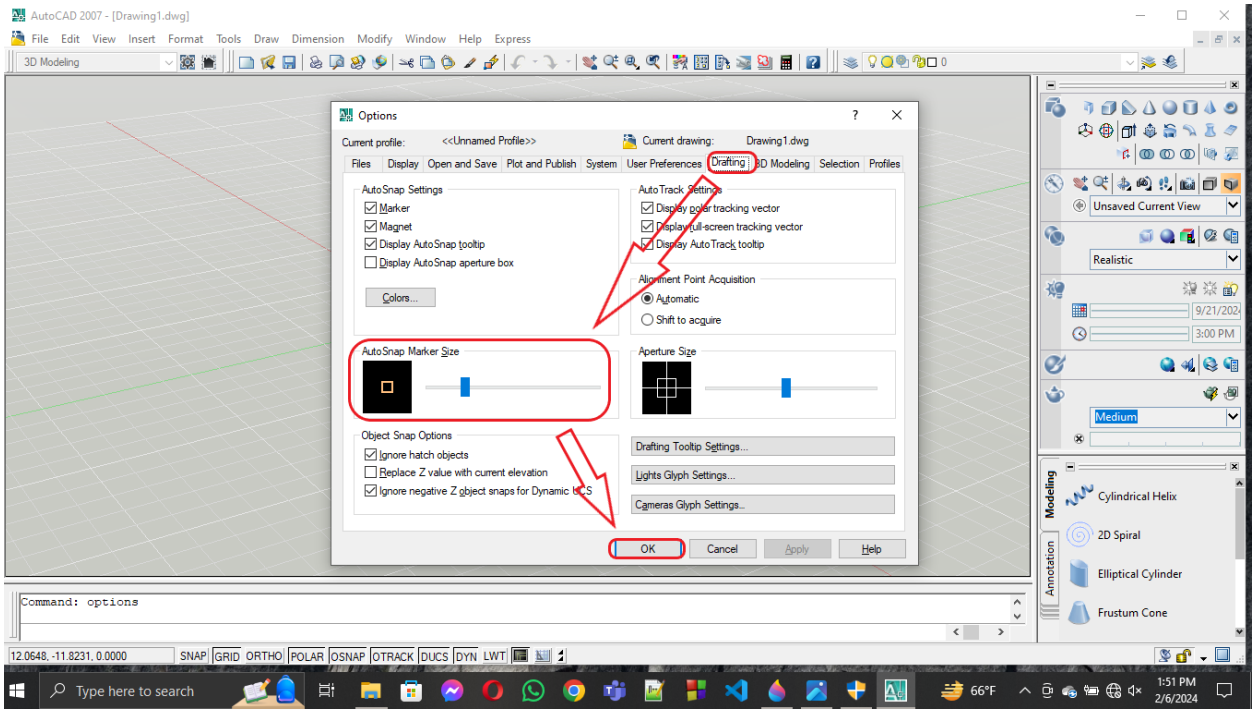
2. How To Increase or Decrease CrossHair Size In AutoCad :

Type options >> Enter Key >> Display >> Increase or Decrease Crosshair size(Bottom) >> OK



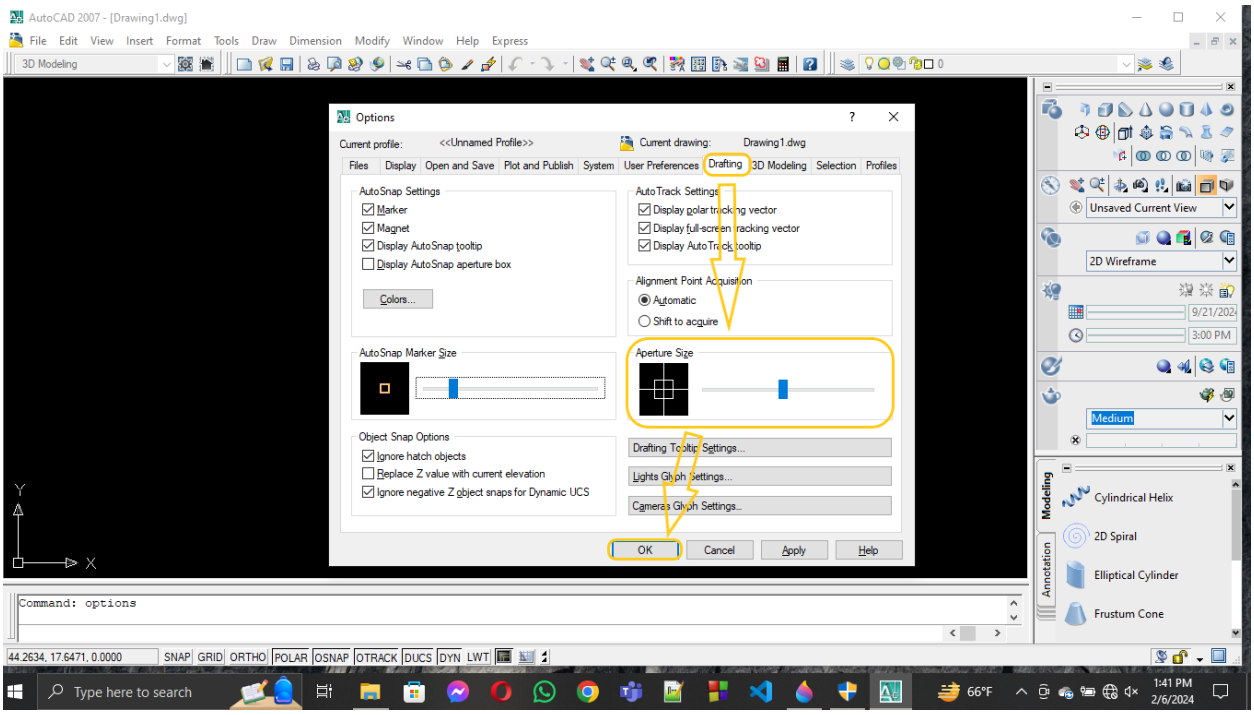
3. How To Increase or Decrease Auto Snap Marker Size In AutoCad :

Type options >> Enter Key >> Drafting >> Increase or Decrease Auto Snap Marker Size(Middle) >> OK

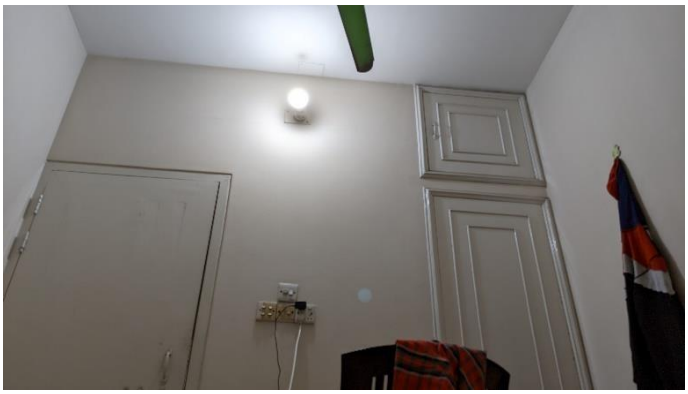


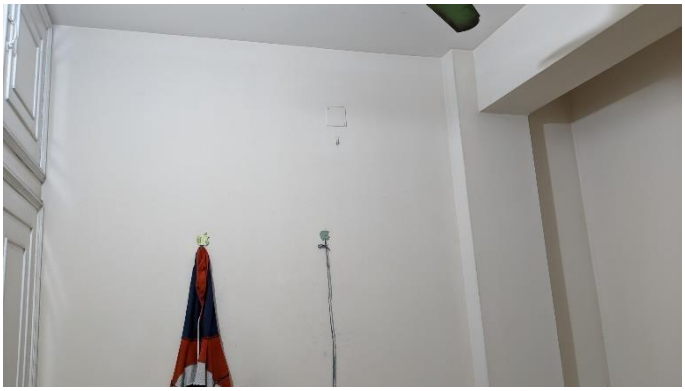
4. How To Increase or Decrease Aperture Size In AutoCad :

Type options >> Enter Key >> Drafting >> Increase or Decrease Aperture Size(Middle) >> OK

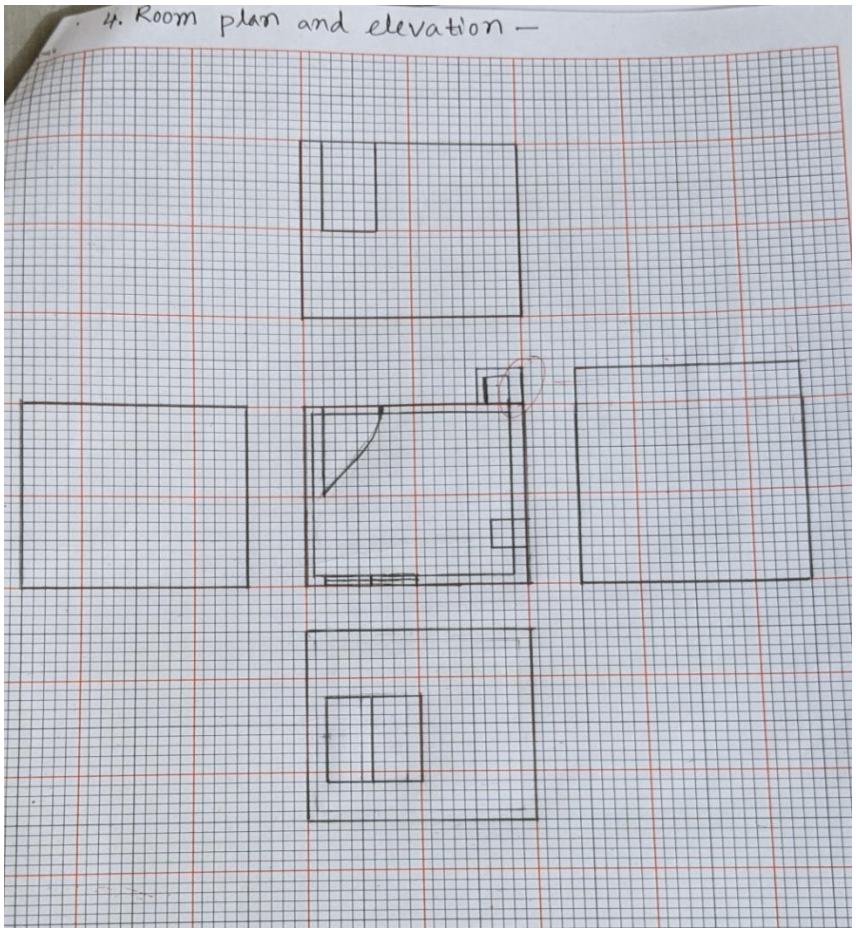


Room View:



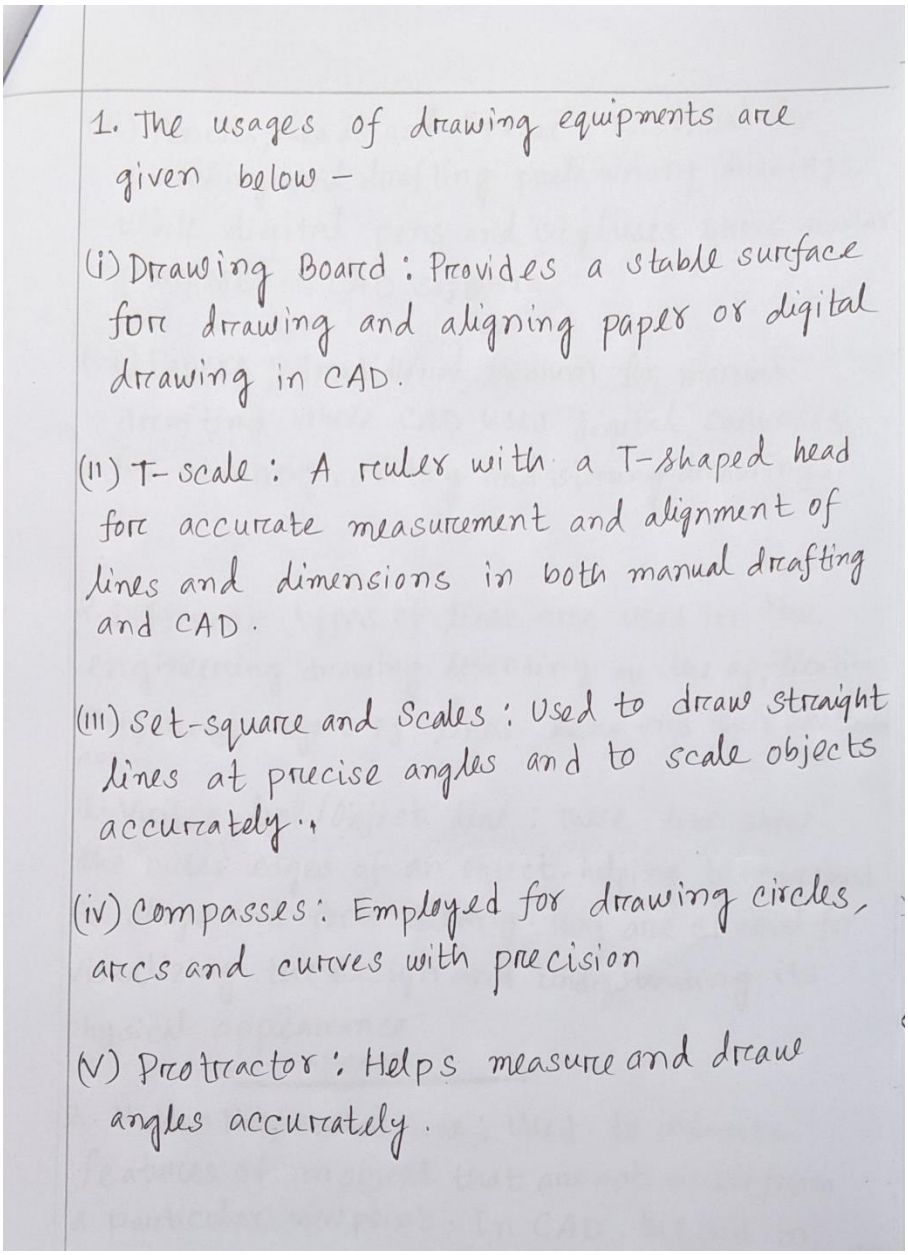


Room Structure:



Question Answer

1.



1. The usages of drawing equipments are given below –

(i) Drawing Board : Provides a stable surface for drawing and aligning paper or digital drawing in CAD.

(ii) T-scale : A ruler with a T-shaped head for accurate measurement and alignment of lines and dimensions in both manual drafting and CAD.

(iii) Set-square and Scales : Used to draw straight lines at precise angles and to scale objects accurately.

(iv) Compasses : Employed for drawing circles, arcs and curves with precision

(v) Protractor : Helps measure and draw angles accurately.

2.

(vi) Pencils, Leads and Eraser : Essential for sketching and drafting preliminary drawings, while digital pens and styluses serve similar purpose in CAD software.

(vii) Papers : Traditional medium for manual drafting, where CAD uses digital canvases for creating, editing and storing drawings.

2. Different types of lines are used in the engineering drawing depending on the application. Different types of lines ~~are~~ and their necessaries are –

1. Visible line/Object line : these line show the outer edges of an object, helping to understand its shape and form clearly. They are crucial for visualizing the design and understanding its physical appearance.

Heavy

2. Hidden line/Dashed line : Used to indicate features of an object that are not visible from a particular viewpoint. In CAD, the aid in

creating realistic representations of objects by showing internal structures without cluttering the view

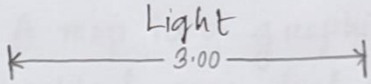
Medium

Center lines:

3. These lines represent the central axis or symmetry of an object, aiding in aligning and dimensioning features accurately, they are important for maintaining symmetry and balance in designs.

Light

4. Extension line, dimension line and leaders: Essential for providing precise measurements and dimensions of objects. The help convey important information about size, distance and scale.



5. Section lines: Used to indicate the cut portion of an object in sectional views. They help visualize internal details and understand how components fit together, essential for engineering analysis

Light

3.

6. Cutting plane line : shows the imaginary plane along which an object is cut to create a sectional view. It helps in visualizing internal features and understanding how parts are assembled or manufactured.

Heavy

3.

Plan : A plan is a 2D drawing that shows an overhead view of an object or area, like a floor plan of a building. It typically displays the layout of walls, doors, windows and other architectural elements without showing height or depth.

Map : A map is a graphical representation of a geographical area, such as a city, region or country. It includes features like roads, landmarks bodies of water and boun boundaries.