Technical Drawings

Lesson Overview

Today you will be learning:

-How to set up and use a drawing board.

-Line weights.

-Drawing and measuring in scale.

-Floorplans, sections and elevations.

Lesson Overview

Introduction Slides
Drawing Board Set Up
Case Studies
Drawing Floorplans
BREAK
Drawing Elevation/Section
Feedback

Lesson Overview

10 minutes to research topics and concepts + get into groups
3 minutes to gather materials (ideally recycled)
15 minutes to create initial concepts
Present what you have so far + 5 minutes to look around the room
15 minutes to either expand on concept already, try new materials or try something enterally different
10 minutes to play around with scale

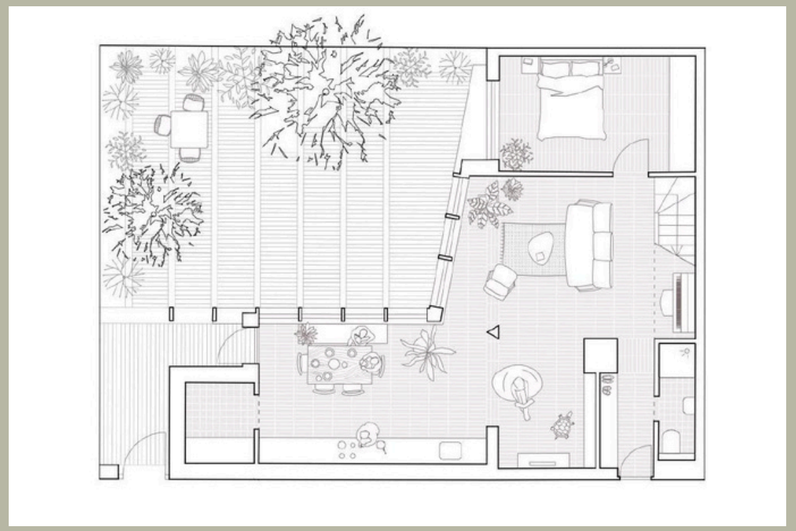
Lesson Overview

You Will Need
Paper
Pencil
Fine Liners
Scale Ruler
Set Square + Ruler
Optional: Colours For Rendering

Introduction

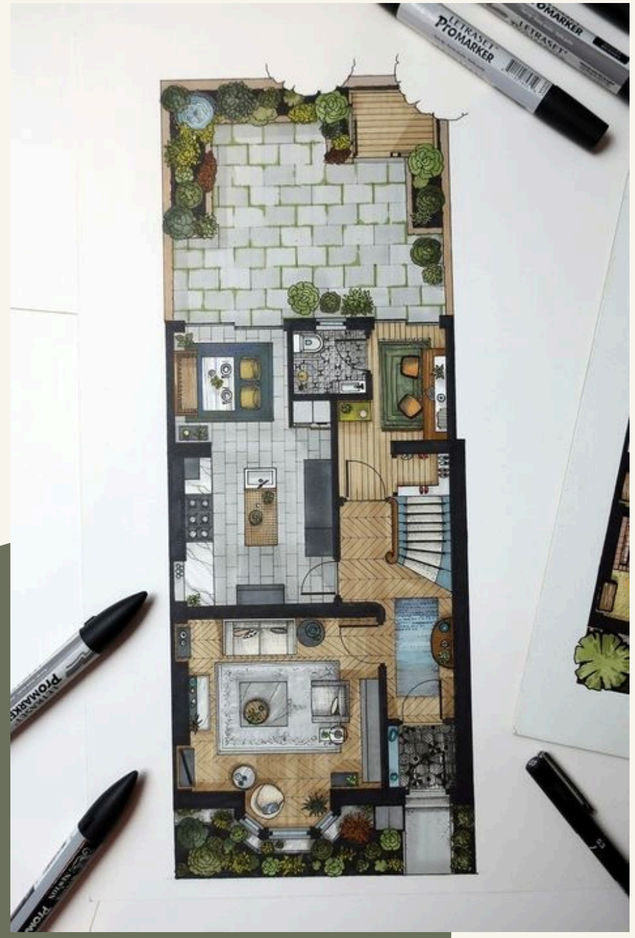
Floorplans

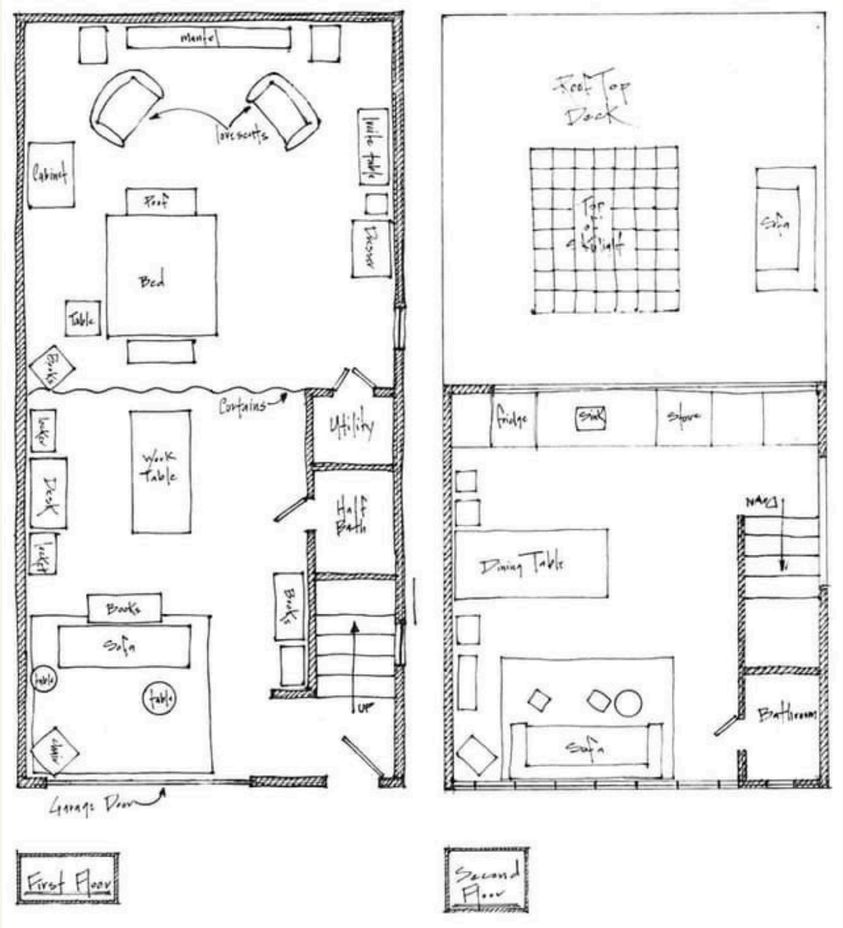
A floor plan is a scaled diagram of a room, building, or home as seen from above. It shows the layout of spaces, walls, doors, windows, and furniture placements.



Examples

Floorplans





They are usually cut at 1.2 meters above floor height.

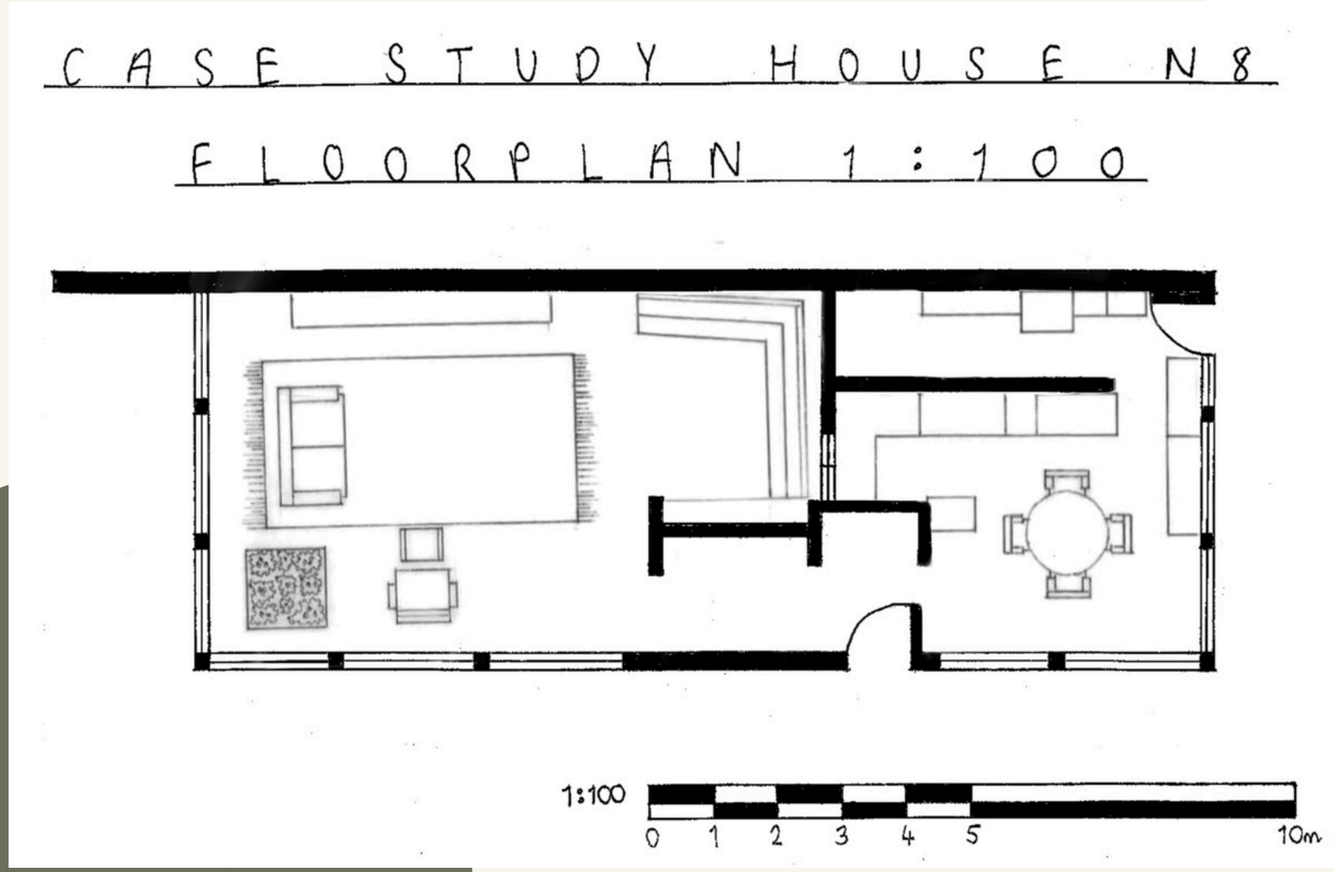
-If something is cut through this height, it would be show as either a solid line or a hatched line.

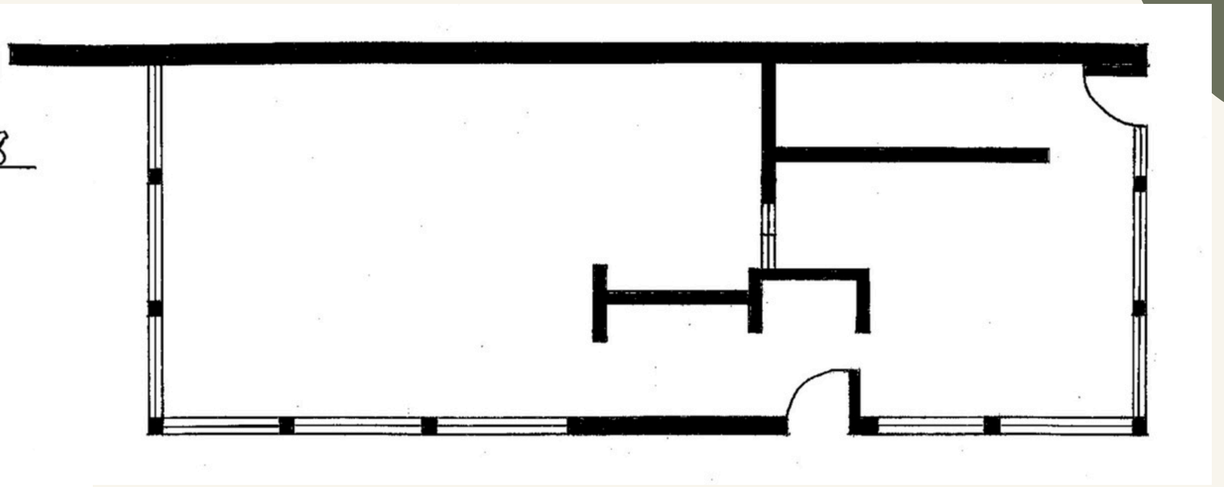
-Anything above this height would be shown as a dotted line.

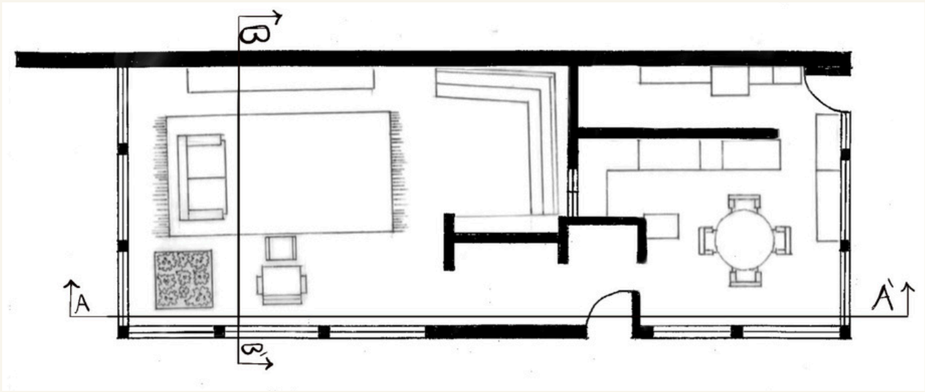
-Anything below the height is just show how it is as a line.

Examples

Floorplans

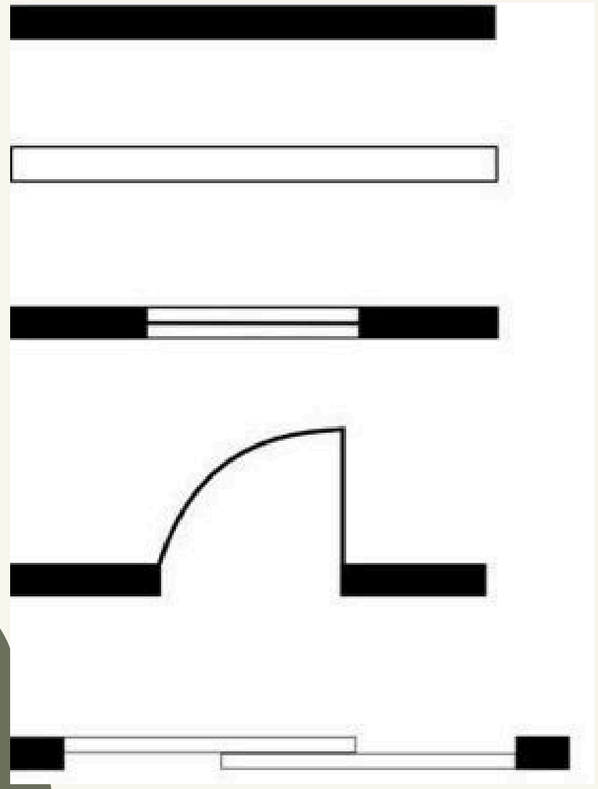






Conventions

Floorplans



Solid Walls

Wall that does not reach the ceiling

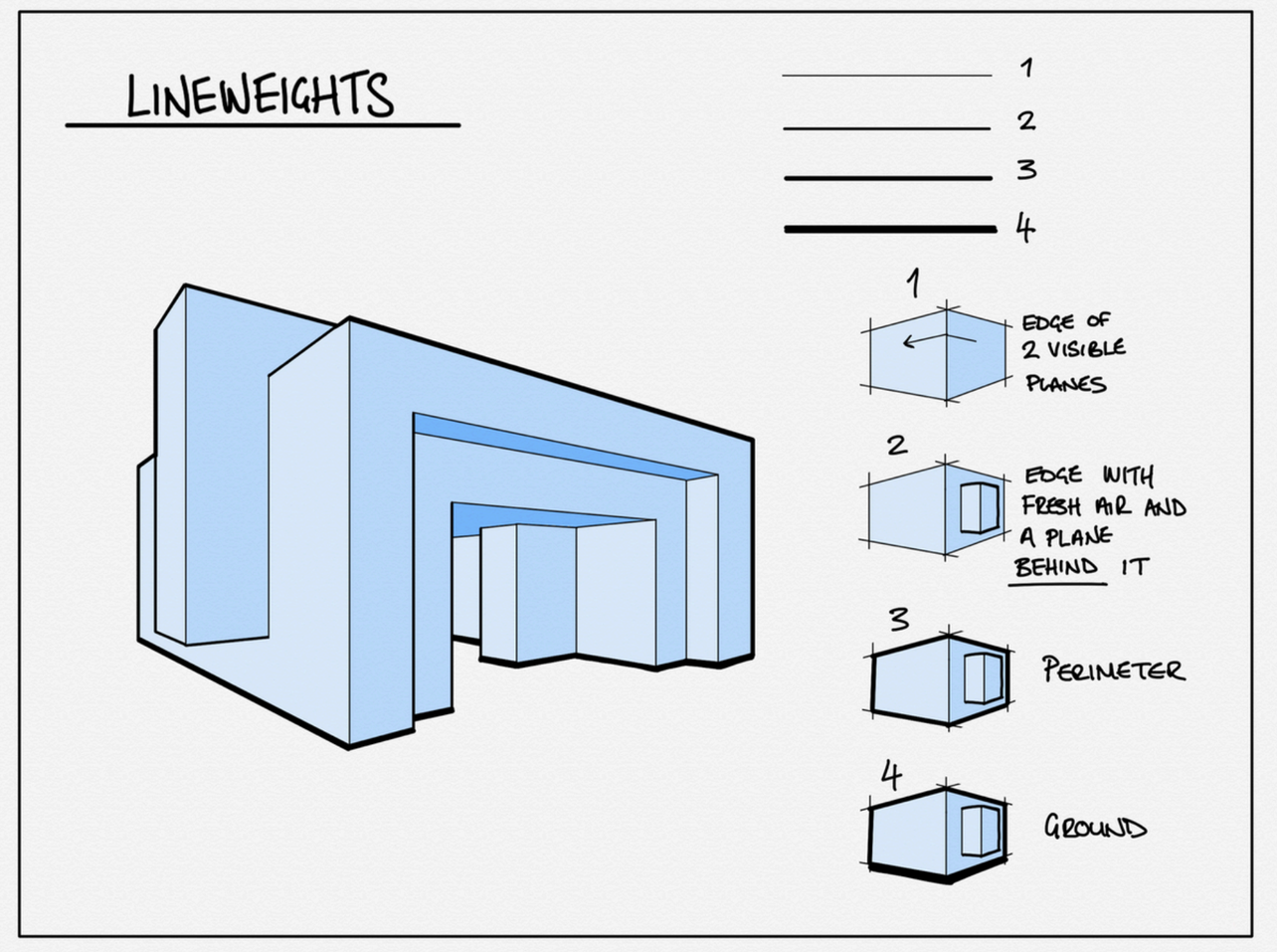
Window in a wall

Door, indicating which way it opens

Sliding door

Introduction

Line Weights



Choosing 3 different weight pens help to clearly show hierarchy within a drawing.

-The thickest should be for the walls and cut throughs.

-The next should be for things like windows and doors.

-The finest should be for furniture and things that are dynamic in a room.

Lets Set Up A Drawing Board!

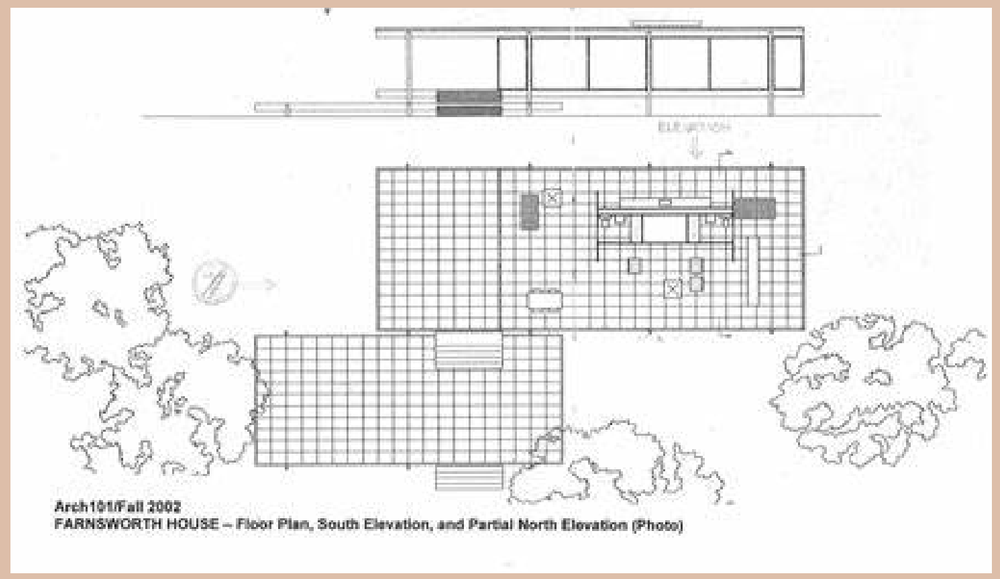
Case Studies

Mies Van Der Rohe - Farnsworth House

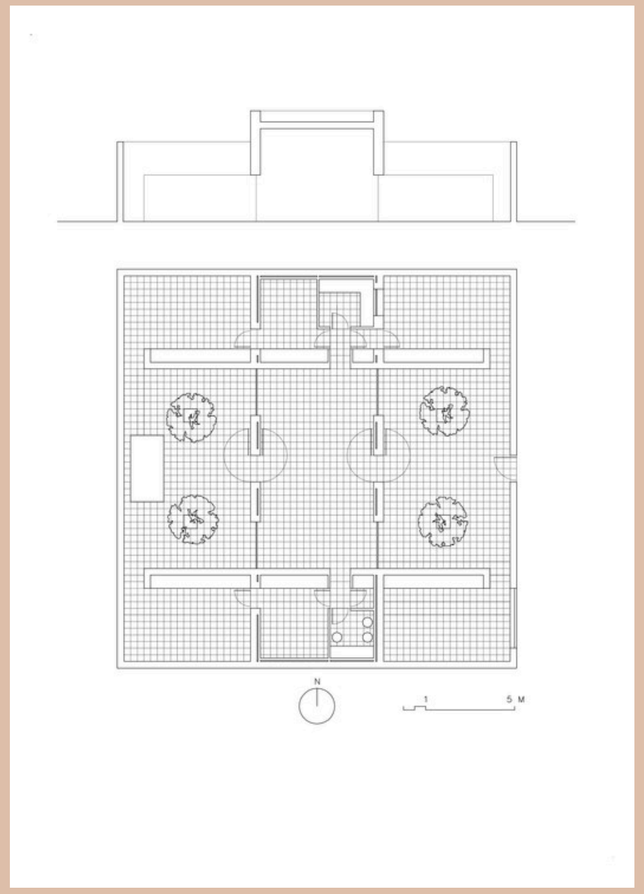
Alberto Campo Baeza - Gasper House

Case Studies

Mies Van Der Rohe - Farnsworth House

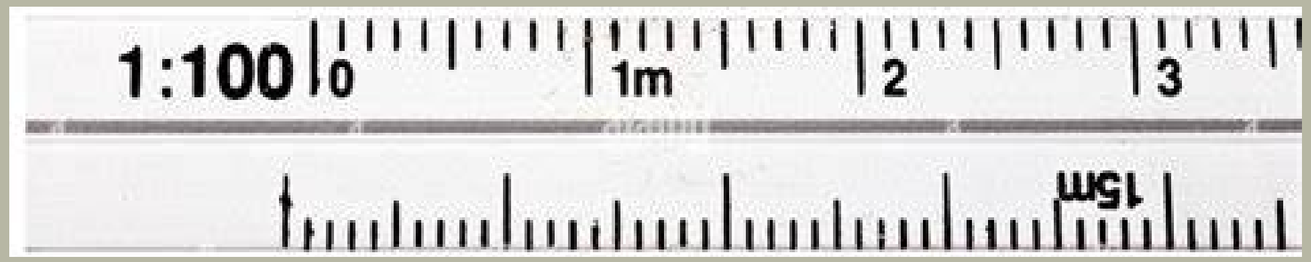


Alberto Campo Baeza - Gasper House



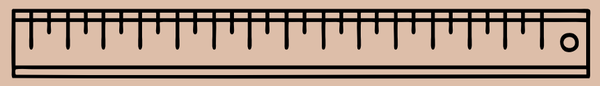
Reading A Scale Ruler

For your plans today, you will be working at a scale of 1:100.
This means every 1m=1cm/10mm.
For example 5.7m=5.7cm/57mm.



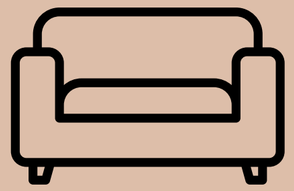
Task 1 – Floorplan

Measure the case study plan you've chosen. Mark these on your sheet.



Begin to draw the plan onto the page you've set up on your drawing board at 1:100 scale. Start with pencil and go over with pen.

If finished, add furniture into the space to give a sense of scale. MAKE SURE TO ADD SCALE BAR AND NORTH ARROW.



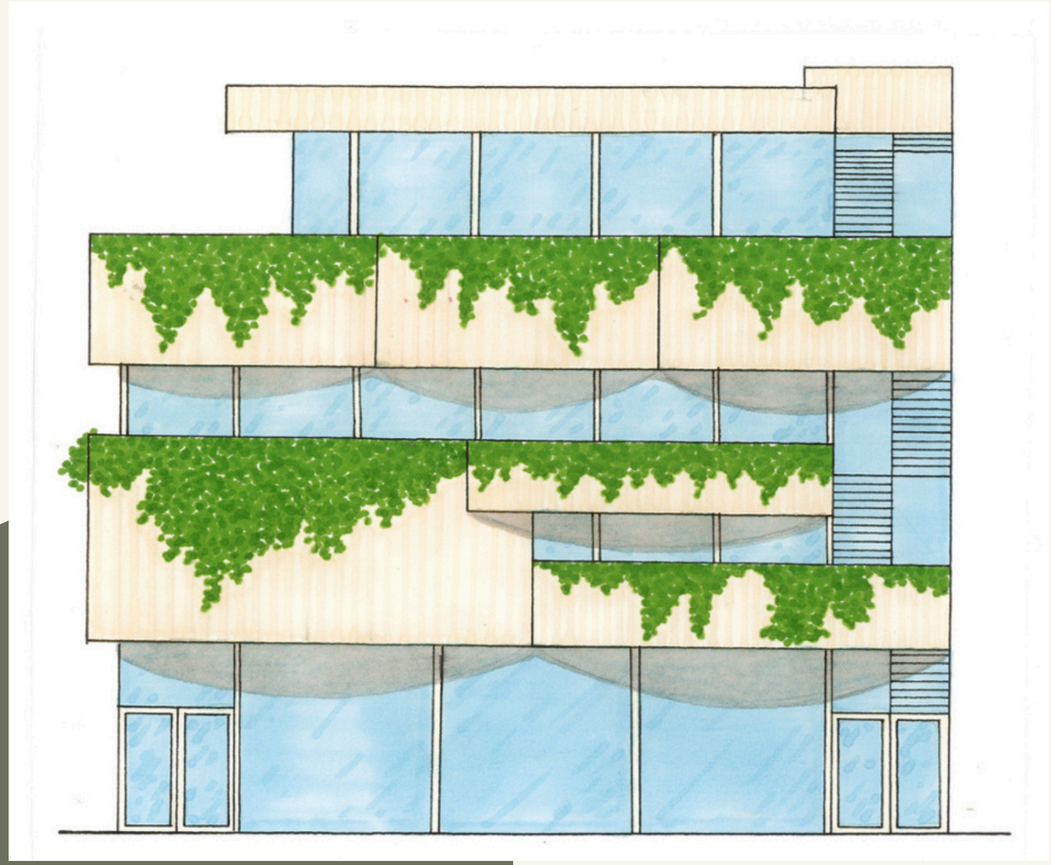
Introduction

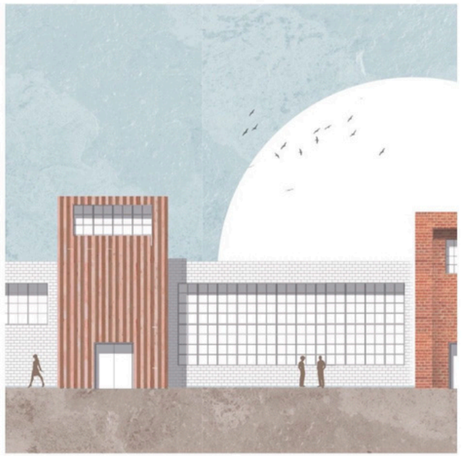
Elevations

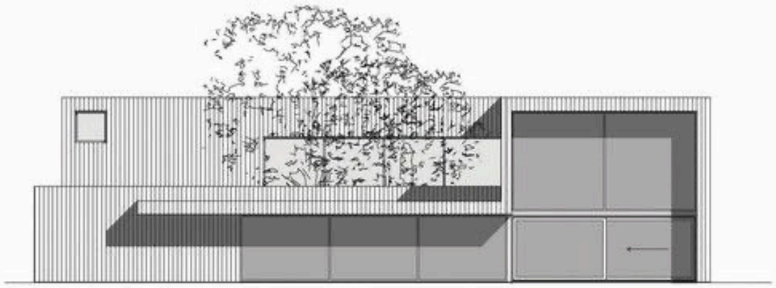
An elevation is a 2D drawing that represents one vertical side of a building. It shows the external or internal appearance, proportions, materials, and design details of a structure without perspective distortion.

Introduction

Elevations

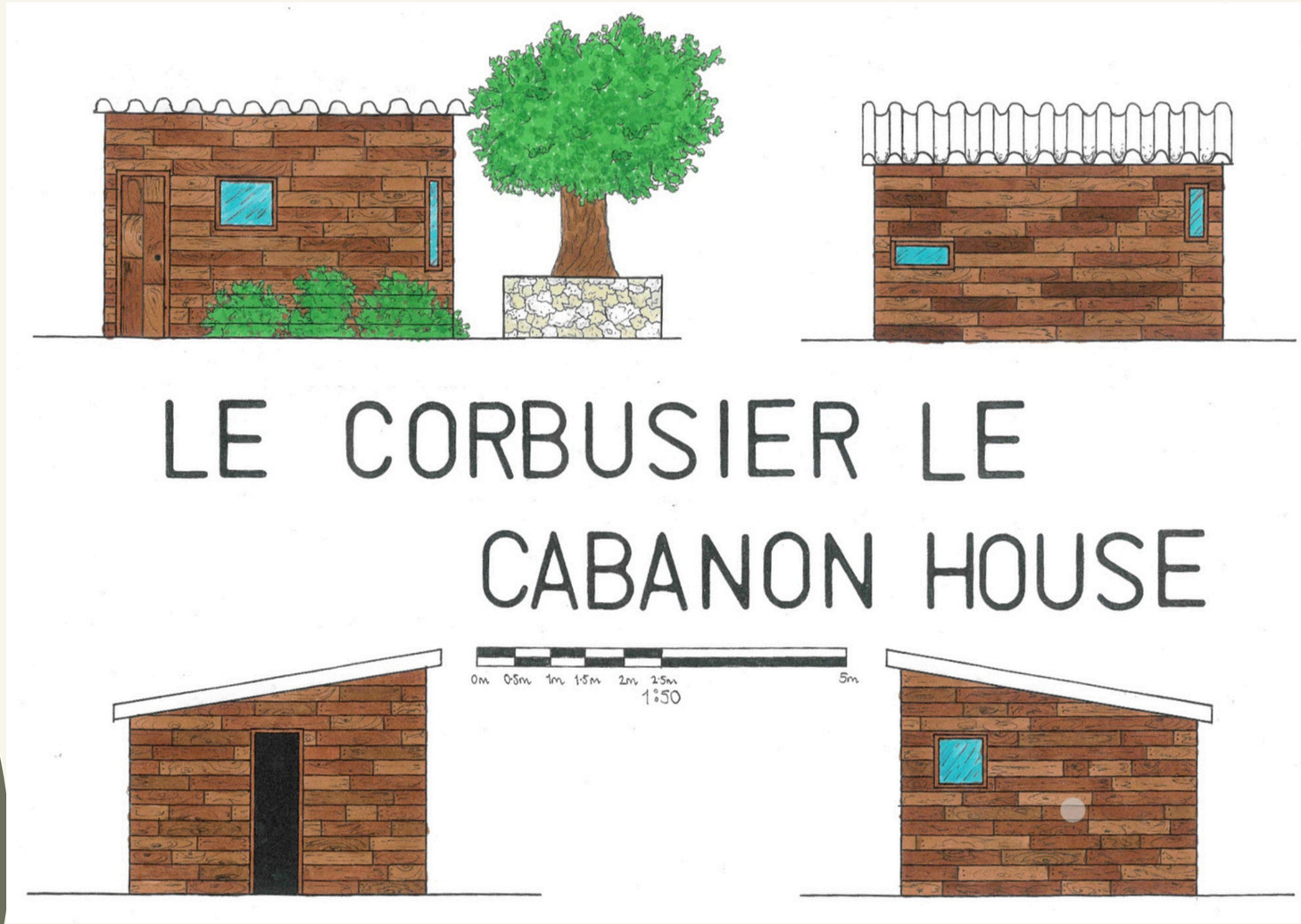






Examples

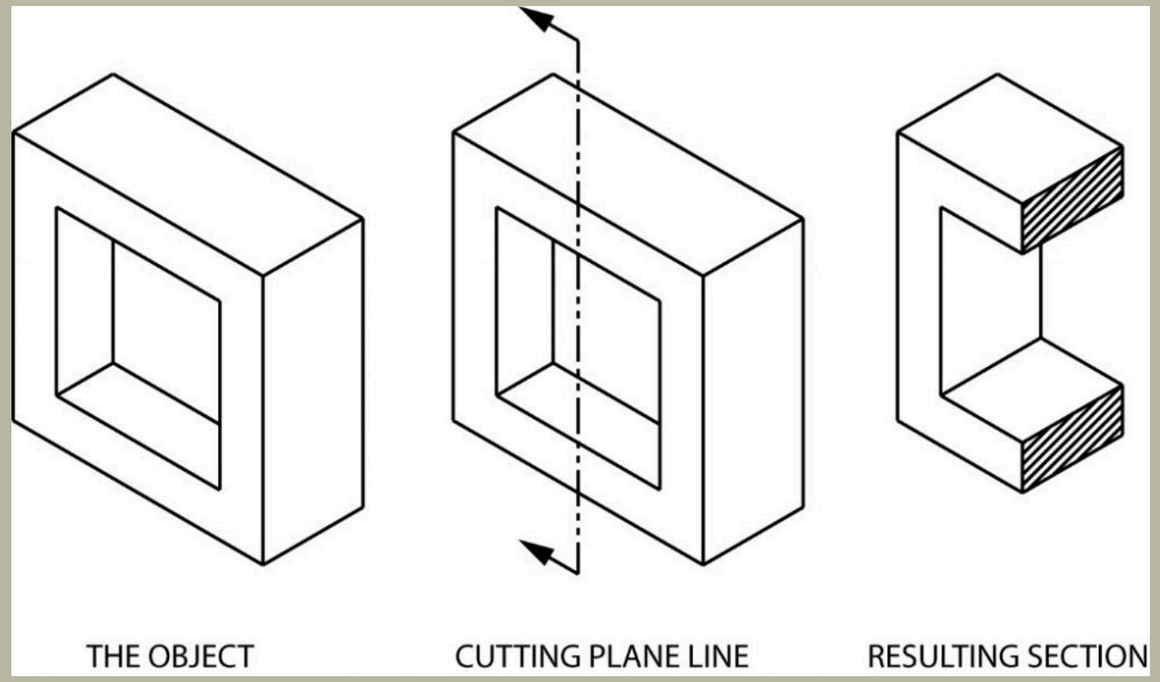
Elevation



Introduction

Sections

A section cut is a drawing that shows an interior view of a structure by "cutting" through it. Almost like slicing through a cake and drawing what's on the inside.



Example

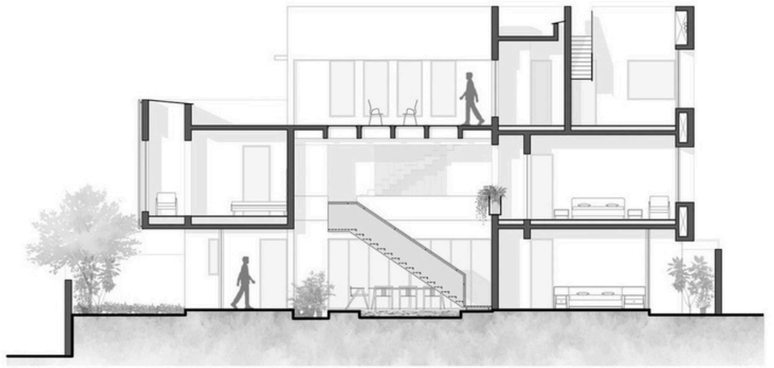
Sections

CORTE TRANSVERSAL

0 1 2 5

A-A KESİTİ ÖLÇEK:1/200

C-C KESİTİ ÖLÇEK:1/200



SECTION - BB'

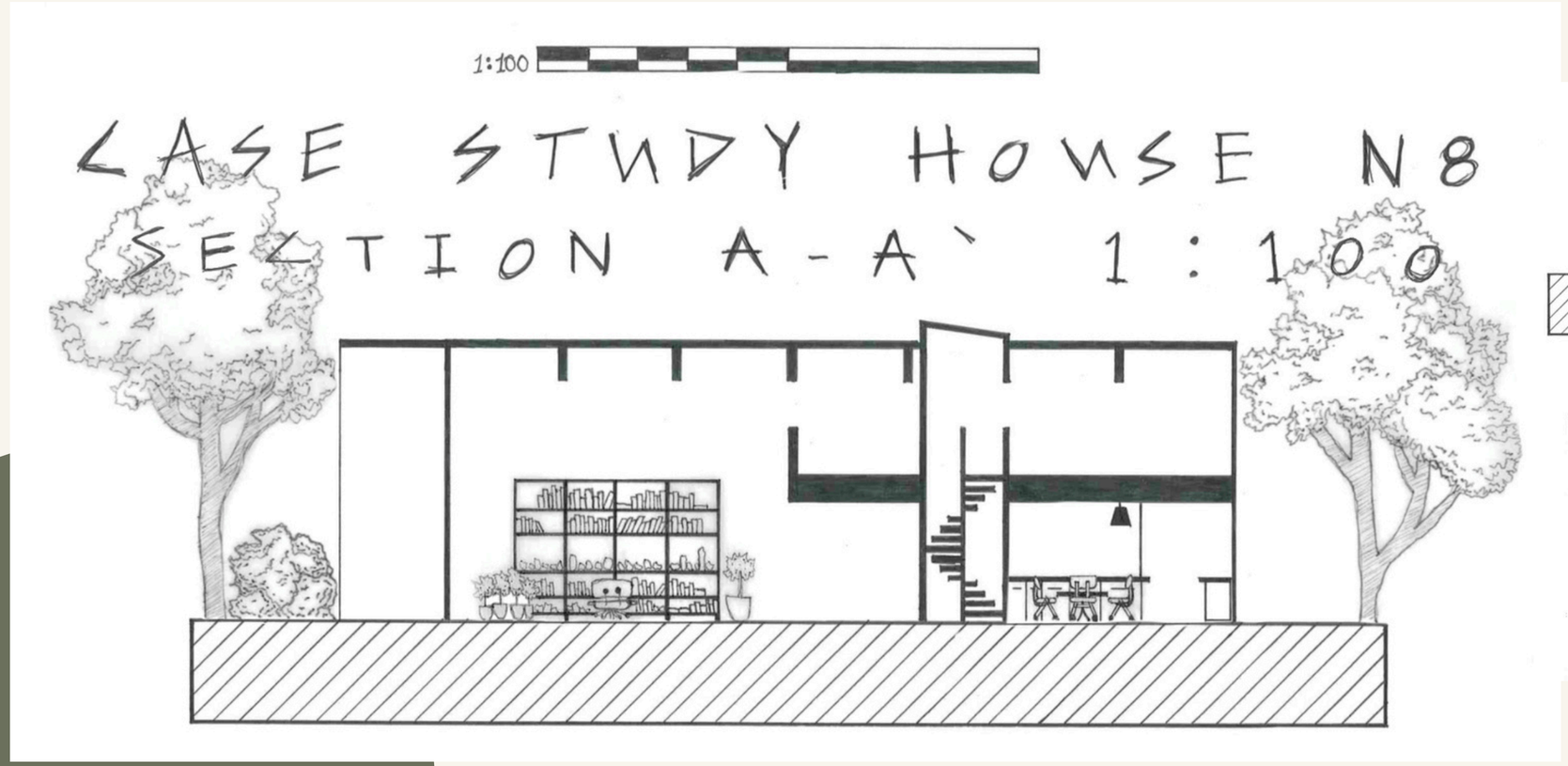
Introduction

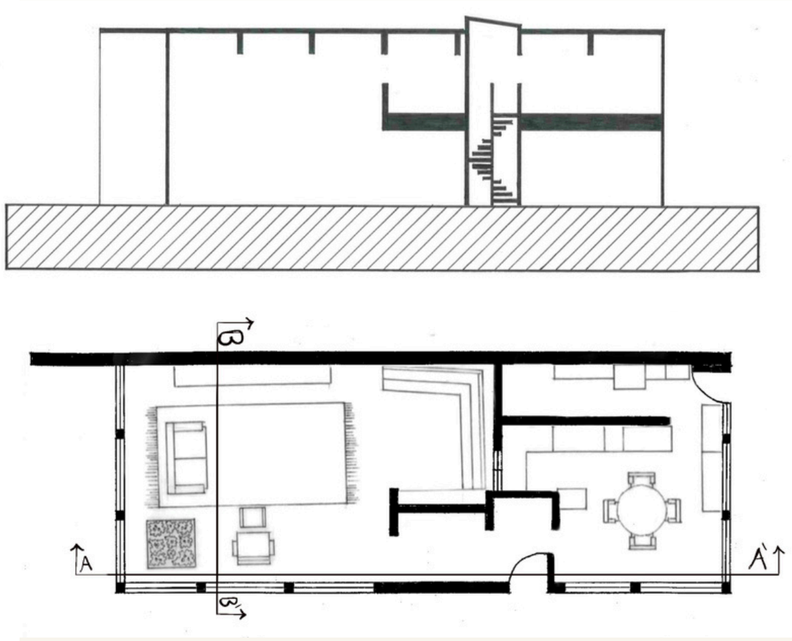
Sections

To show where you have cut, you need to represent this with a section line. This is a line with two arrows showing which way your drawing is facing. You then add A on the first arrow and A’ on the second to show which section you are drawing (if doing multiple, it then just goes in alphabetical order: B-B’, C-C’ etc.)

Example

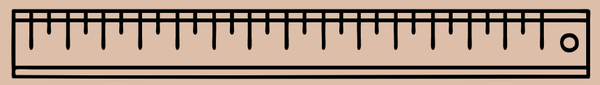
Sections





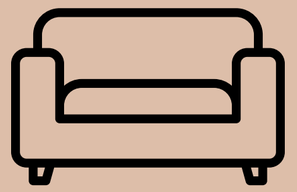
Task 2 – Elevation

Measure the walls from the case study plan you've chosen. Mark these on your sheet.



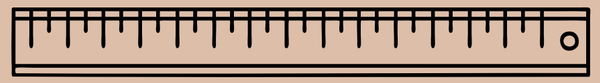
Using your floorplan, draw guide lines up from the wall you want to draw. This means you don't need to remeasure the walls. Then add the wall heights and details. Go over this with pen. Then add things like windows or other details to your wall.

If finished, have a go at adding a render or furniture to your drawings to show materiality.

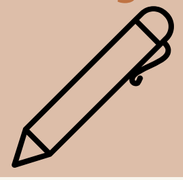


Task 2 – Section

Choose the point on your floorplan that you want to cut through. Draw a section cut line of this on your sheet and label it A-A'.



Start with your floor line from measuring your cut through. Add wall heights going up from the floor. Give these lines a thickness, the average external wall is 250-300mm. Either fill this with a dark line or hatch it. Add any other walls or cut throughs.



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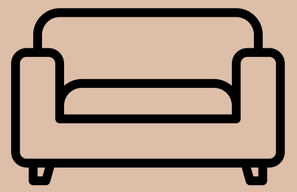

Today We Covered:

-How to set up and use a drawing board.
-Line weights.
-Drawing and measuring in scale.
-Floorplans, sections and elevations.

Hope it was a productive and helpful session!