

# Representação Digital

# 2023-2024



UNIVERSIDADE  
DE LISBOA



FACULDADE DE ARQUITETURA  
UNIVERSIDADE DE LISBOA

Mestrado Integrado em Arquitectura  
Ano Lectivo 2023-2024 1º Semestre  
Docente - Nuno Alão 2º Ano

20221004

SHIRLEY DOS SANTOS



## ÍNDICE

Semana 1– (18/09/23 – 19/09/23)

Semana 2 - (25/09/23 – 26/09/23)

Semana 3 - (02/10/23 – 03/10/23)

Semana 4 - (09/10/23 – 10/10/23)

Semana 5 - (16/10/23 – 17/10/23)

Semana 6 - (23/10/23 – 24/10/23)

Semana 7 - (30/10/23 – 31/10/23)

Semana 8 - (06/11/23 – 07/11/23)

Semana 9 - (13/09/23 – 14/09/23)

Semana 10 - (20/09/23 – 21/09/23)

Semana 11 - (27/10/23 – 28/10/23)

Semana 12 - (04/12/23 – 05/12/23)

Semana 13 - (11/12/23 – 12/12/23)

Semana 14 - (18/12/23 – 19/12/23)

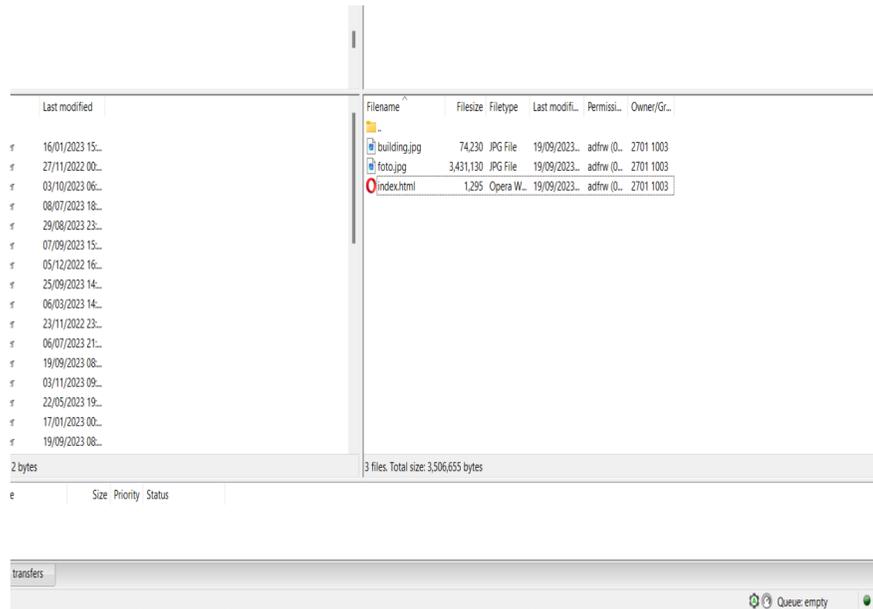
# Semana 1

Introdução a cadeira de representação digital

-Colocação do ficheiro no filezilla

-Como editar no Notepad++

-criação do Site



```
C:\Users\shir\Documents\index.html - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
ficha.html index.html
49 <br>
50 <br>
51 <br>
52 <h3>
53 <font color="Black"> <i>20221004
54 <br>
55 MIA 2ºAno; Ano <br>
56 Turma I
57 <a href="https://blog do aluno.blogspot.com/"> <br><br> MVTA </a>
58 <br><br>
59 <h3>
60 <a href="trabalho1.pdf"> Semana 1 </a>
61 <br>
62 <a href="trabalho1.pdf"> Semana 2 </a>
63 <br>
64 <a href="trabalho1.pdf"> Semana 3 </a>
65 <br>
66 <a href="trabalho1.pdf"> Semana 4 </a>
67 <br>
68 <a href="trabalho1.pdf"> Semana 5 </a>
69 <br>
70 <a href="trabalho1.pdf"> Semana 6 </a>
71 <br>
72 <a href="trabalho1.pdf"> Semana 7 </a>
73 <br>
74 <a href="trabalho1.pdf"> Semana 8 </a>
75 <br>
76 <br>
77 <br>
78 <br>
79 <br>
80 <br>
81 <br>
82 <br>
83 <br>
84 <br>
85 <br>
86 <br>
87 <br>
88 <br>
89 <br>
90 <br>
91 <br>
92 <footer>
93 <a href="mailto: shirleyrossana.ds@gmail.com"> Contacto </a>
94 </footer>
95 </body>
96 </html>
97
98
```

[Faculdade de Arquitetura - ULisboa](#)

2023/2024  
Nuno Alão

**20221004**  
**MIA 2º Ano**  
**Turma I**

[MVTA](#)

[Semana 1](#)  
[Semana 2](#)  
[Semana 3](#) [Semana 4](#) [Semana 5](#) [Semana 6](#) [Semana 7](#) [Semana 8](#)



[Contacto](#)

ReDig

Exerc. 1.1 – ACAD 2D

# Semana 2

## Comandos abordados:

Line - L  
Layesr - La  
Circle - C  
Copy - Co  
Offset - O  
Units - UN  
Rectangle – Rec  
Dtext - escrever texto

## Iniciação ao software

Model space - the space we are modeling in. Ex: 1/1000

Paper space - its the size we want on paper. Ex: 1/100

Unidade de medida  
Informação localizada em Layers

Change proprieties

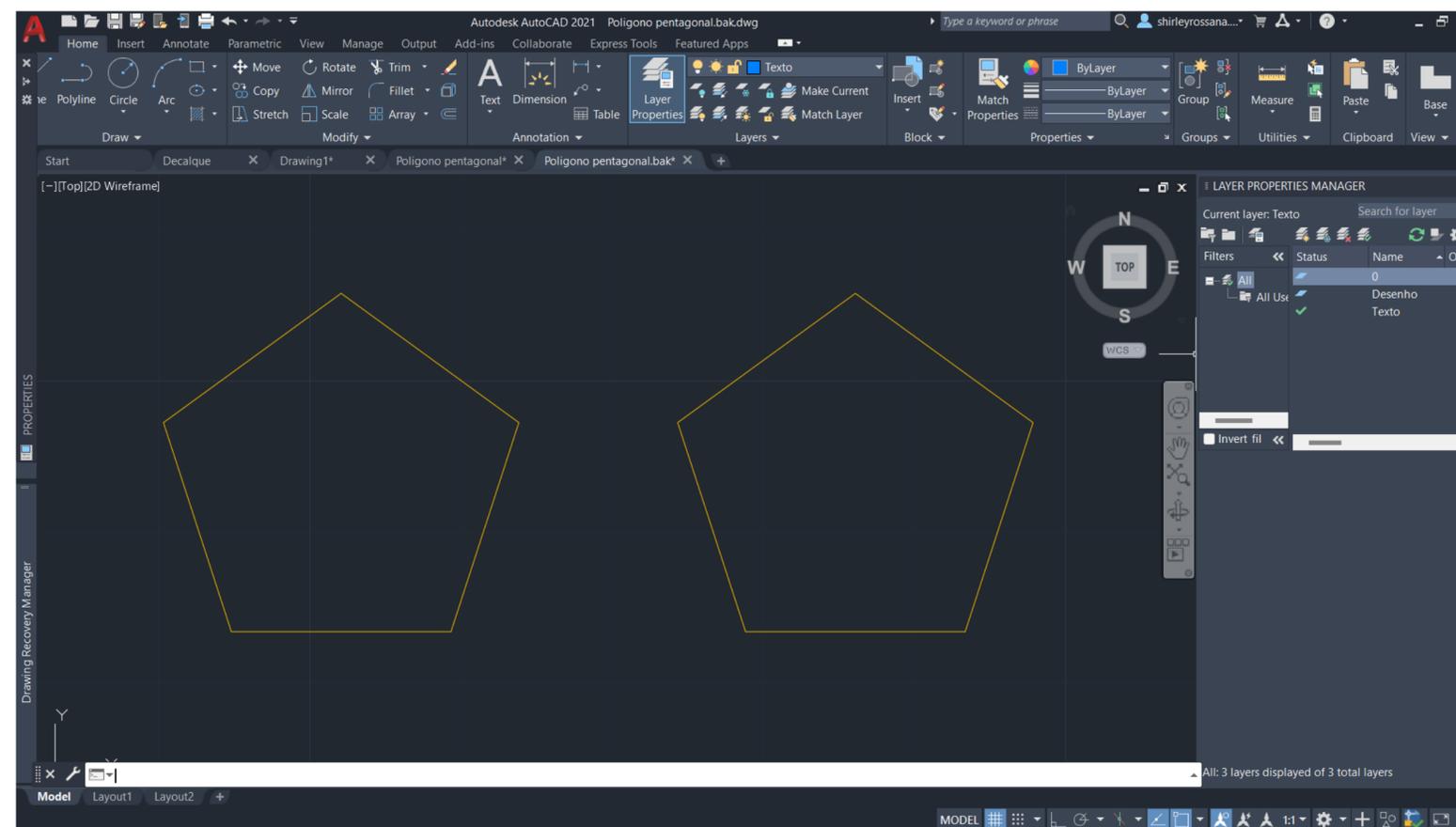
Coordenas Absolutas #  
Coordenadas Relativas @  
Coordenadas cartesianas x,y,z  
Coordenadas polares - contam com uma distancia e um angulo

Escala do autocad é 1/1000, pensa sempre em milímetros

## Exemplos de edificios:

- Torre meteorológica de Barcelona
  - Bonjour tristesse
  - John pew house - Frank lloyd wright
  - Villa rotonda palladio

## Criação do pentágono usando ângulos



# Semana 3

## Decalque da planta Casa António Carlos Siza

- Dimensionando a imagem fornecida de um dos esboços de Siza

(\* )  
+ soma  
- Sub

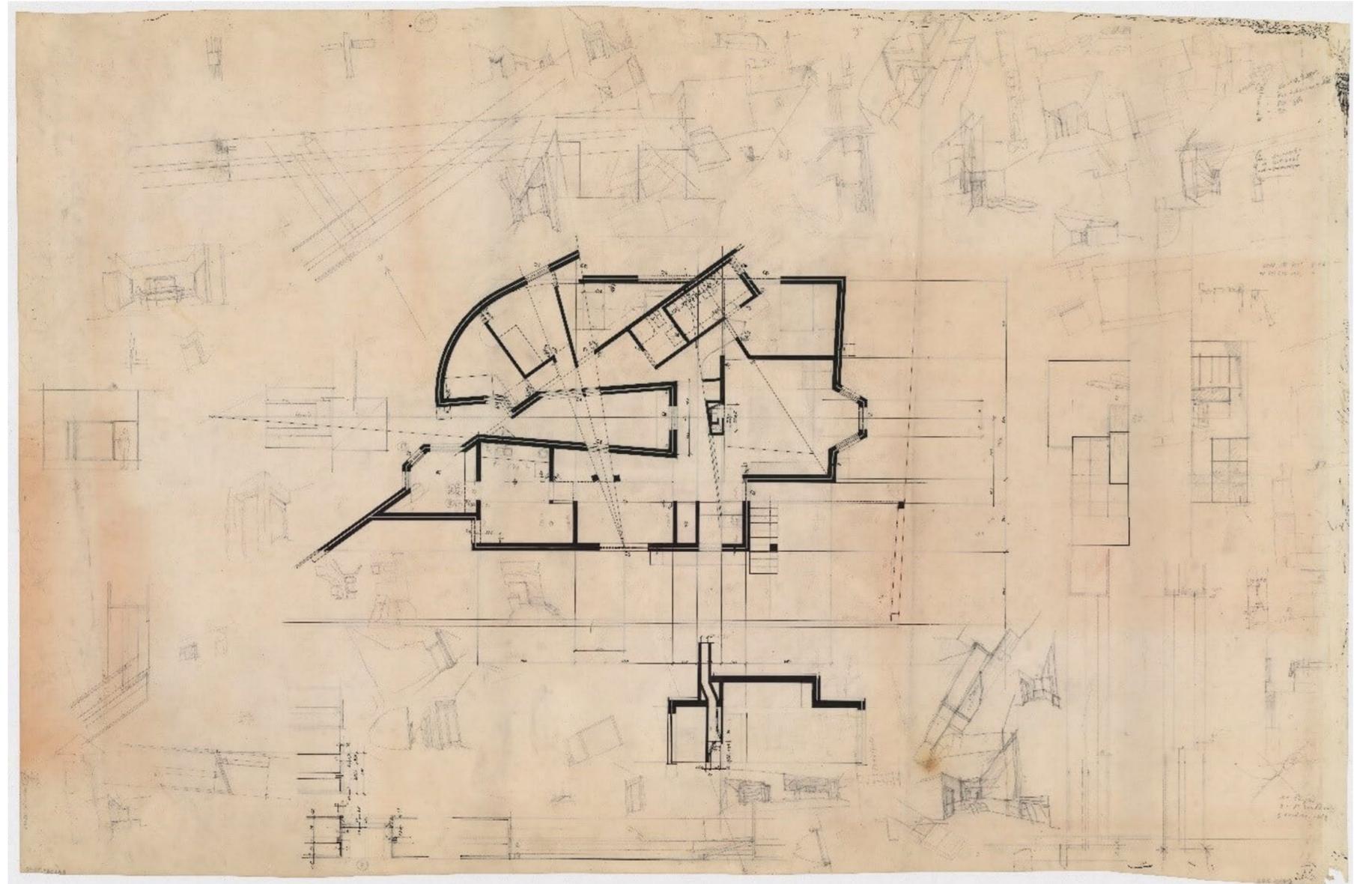
Scale - select obj - base point - scale factor

(/ 2 0.0616)

Result - 32.4675325

CHProp

Scale factor



# Semana 4

## Continuação da aula anterior e explicação sobre a entrega do trabalho

Vamos entregar em PDF e em folhas

Entrega 20 de outubro

A planta e os detalhes na escala 1/10

Vamos demonstra uma planta na escala 1/100 e no mínimo um detalhe

Nome do pdf ( TRAB. 1 - Decalque da casa do Siza)

Tem que se fazer hatch no reboco e parede

# Semana 5

Model space

Clicar layout 1 , than page setup manger

Paper size - A2, Vertical

Plot style -

Printer - DWG To PDF.pc3

Plot Area - Layout

Scale - 1:1

N XP

S - scale

Comandos:

Dtext -

Mview - make a view, janela

Vplayer - viewport layer

DimLin \_ Linear, Angular, aligned

Modify dimension styles

Utilização das canetas as canetas

A entrega é em pdf

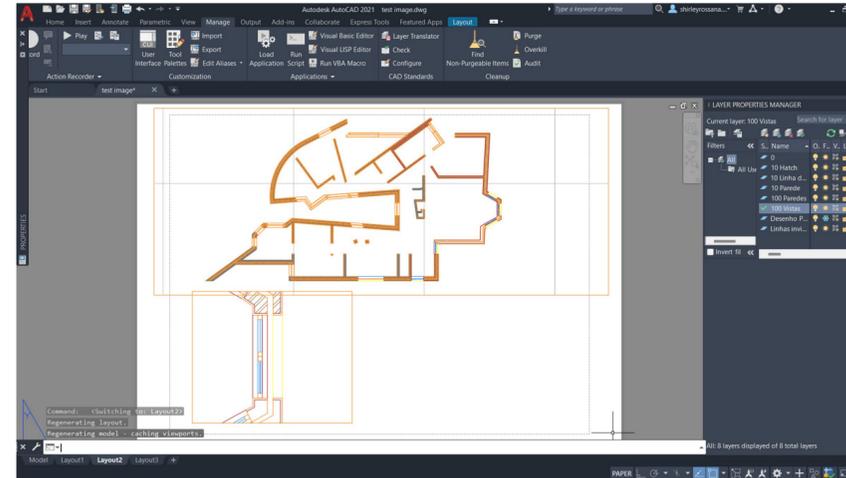
Dentro da janela, fazemos Vplayer

Colocar mobília no WC - optional

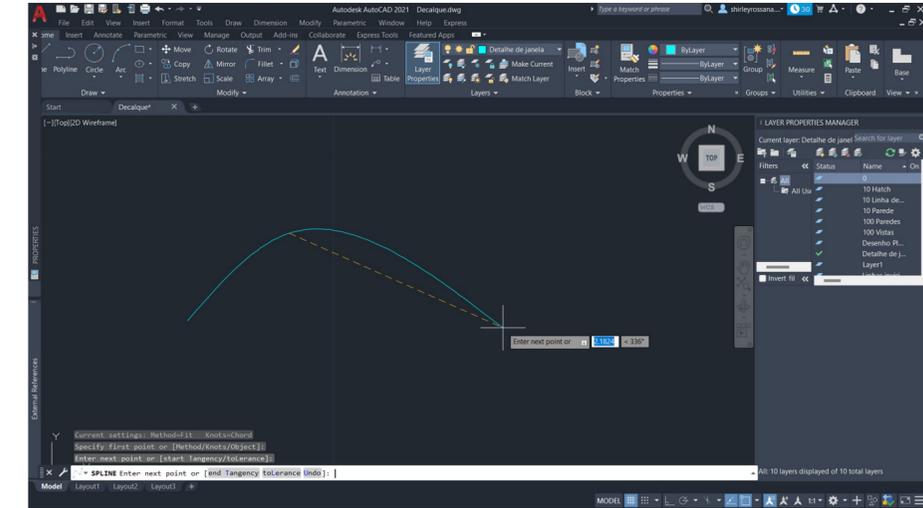
Linha invisível colocar em cinzento

Ar - conc

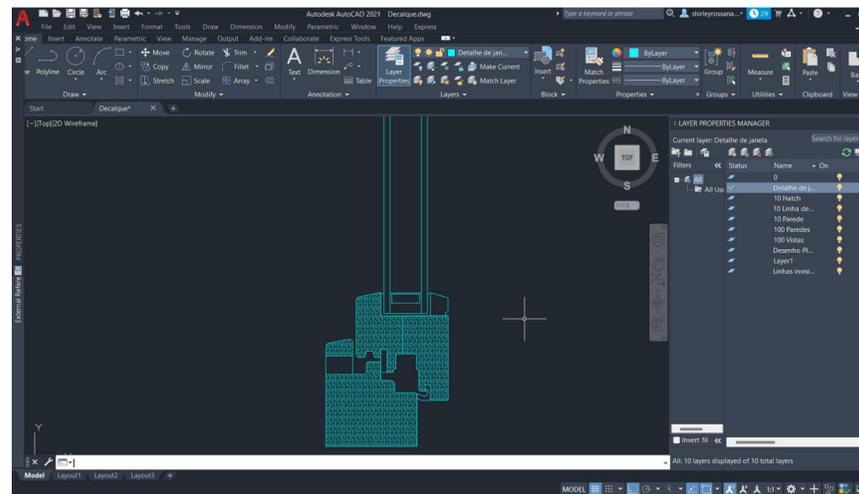
Ar- sand - reboco



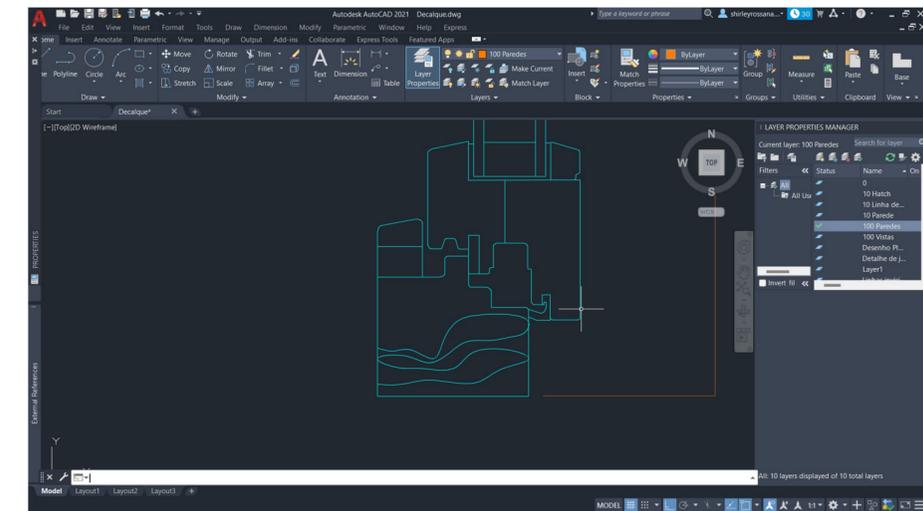
Commandos: Spline



Detalhe da caixilharia de madeira



Textura de madeira usando o comando spline:

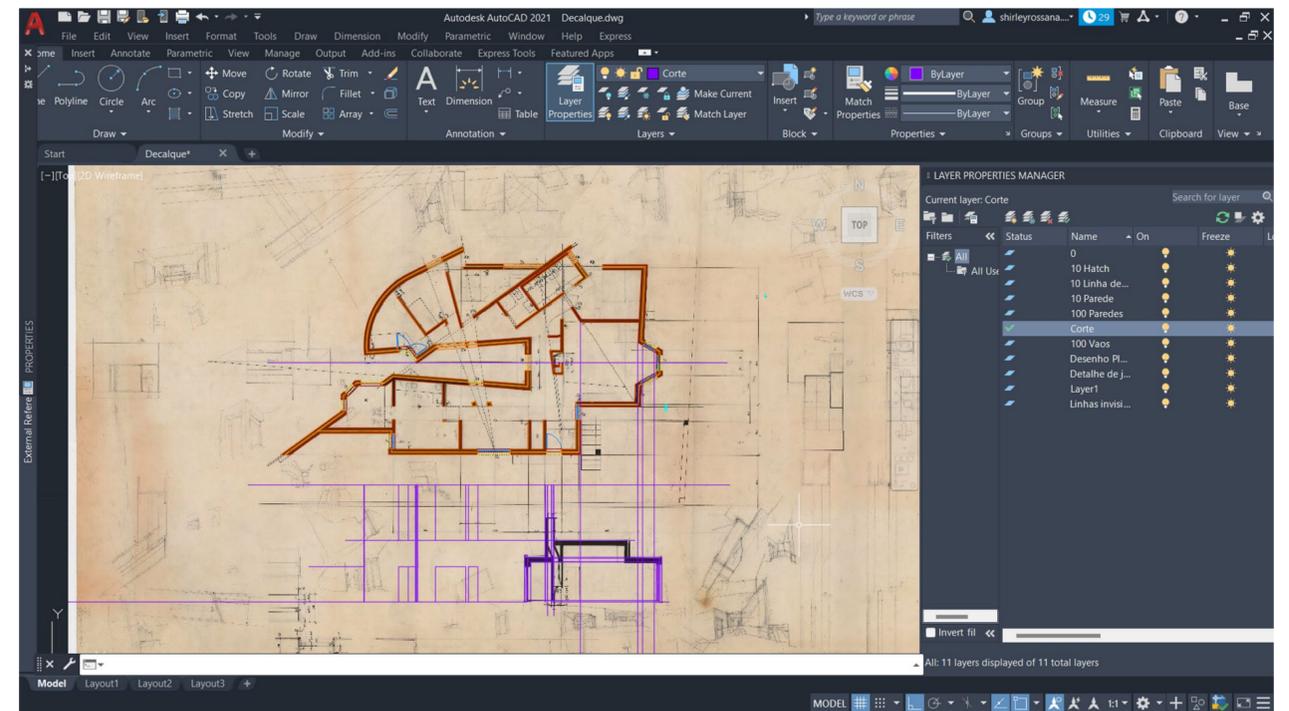
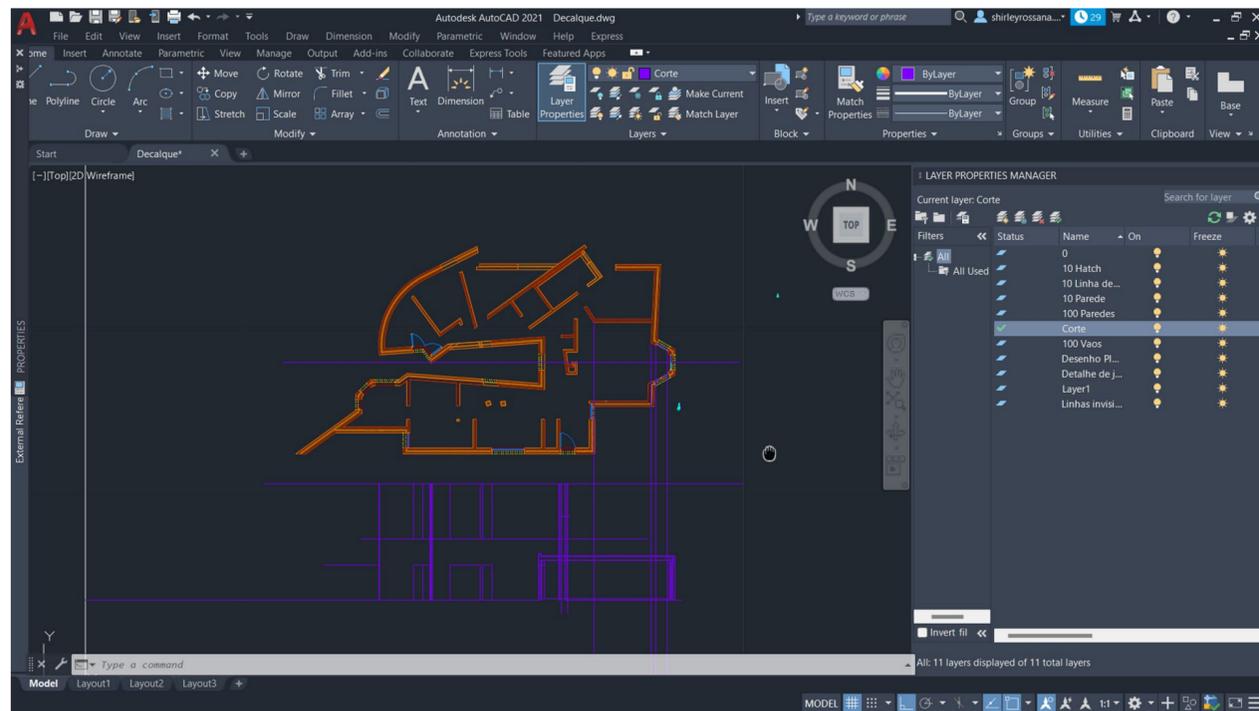


ReDig

Exerc. 1.1 – ACAD 2D

# Semana 6

Como fazer seções no AUTOCAD



ReDig

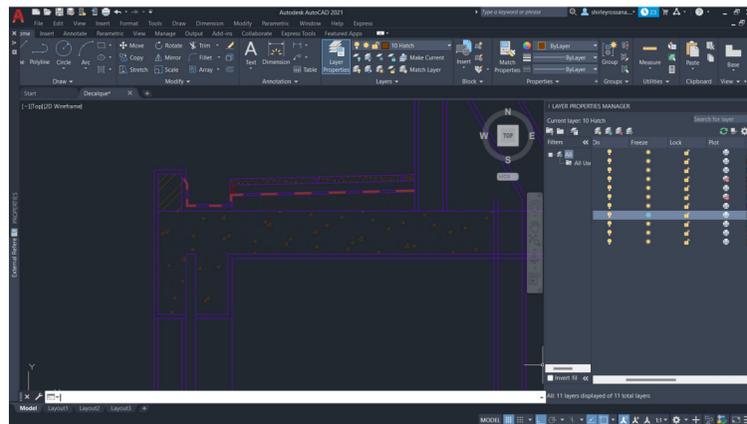
Exerc. 1.1 – ACAD 2D

# Semana 7

Aprendendo a fazer detalhe do telhado e componentes do telhado

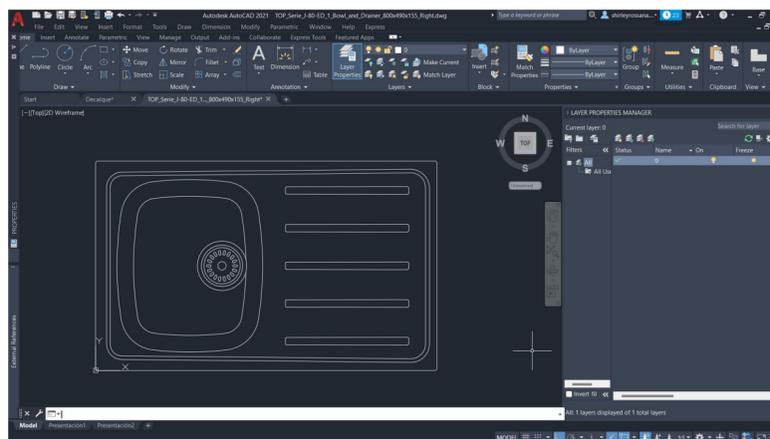
Inclinação entre 1,5-2%, Cada 1 metro sobe 1,5-2 cm

As linhas verticais, as do telhado estão a 0,04 de distancia



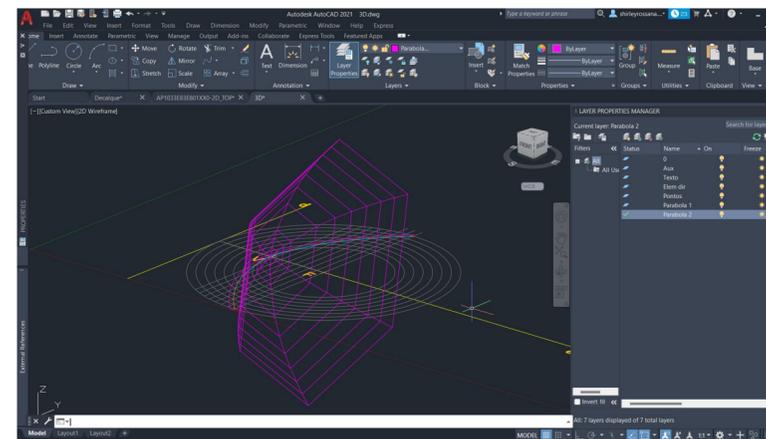
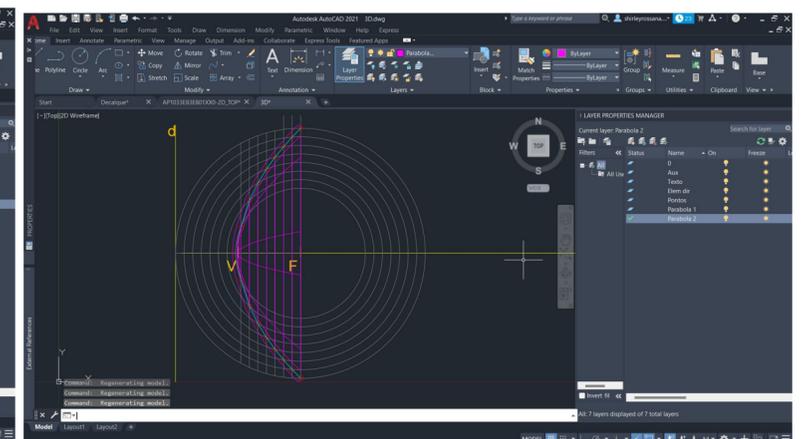
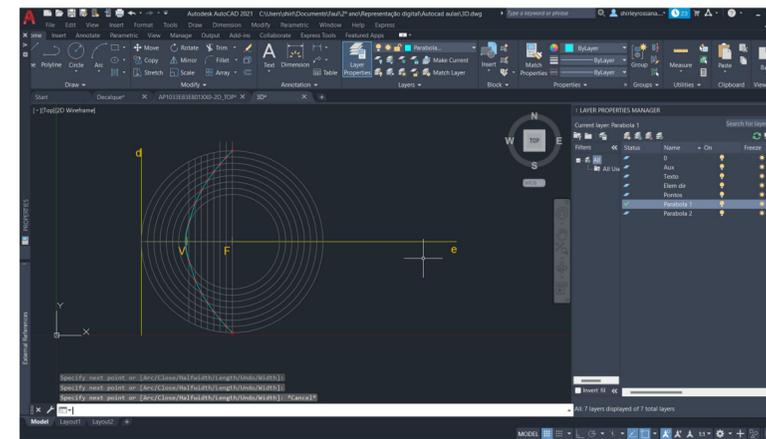
Colocação de mobiliários

Site dos mobiliarios :<https://www.roca.pt/produtos/lava-louca-aco-inoxidavel-1cuba-escorredor-direita-870L30800?sku=A870L30>



introdução a modelação 3D

Parábola



Comandos:

Hatch Arcom  
SurfTab  
Ravserve

ReDig

Exerc. 1.1 – ACAD 2D

# Semana 8

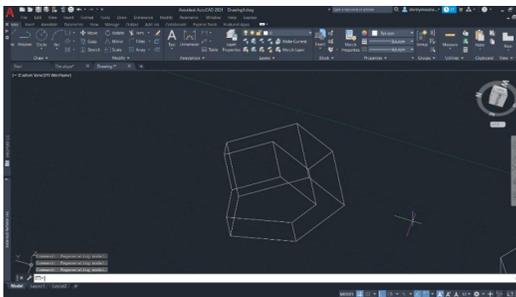
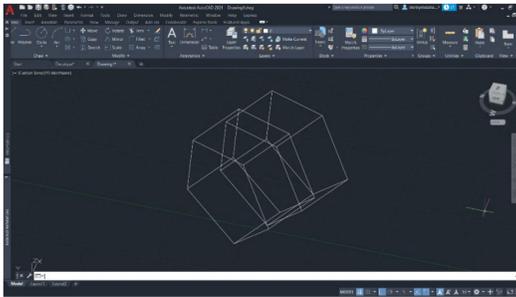
Comando :  
Extrude - define  
Rotate 3d - define  
3DRotate - define  
PEDIT

(há uma diferença entre girar 3D e girar 3D)

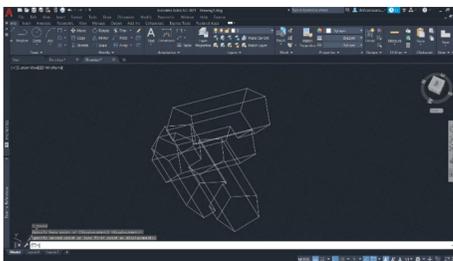
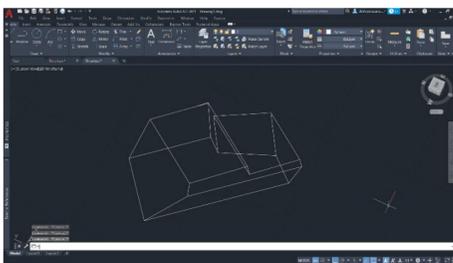
1. Operações booleanas

Union - add 2 or more shapes

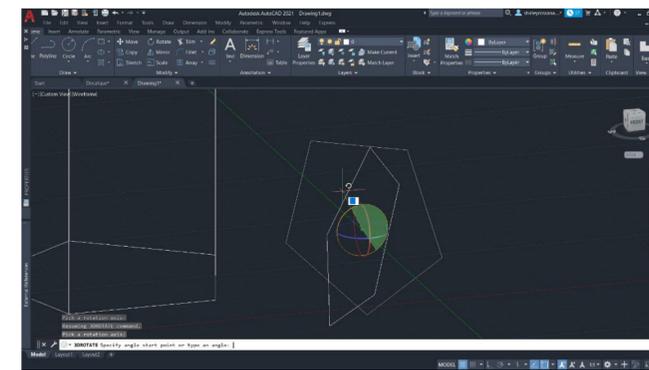
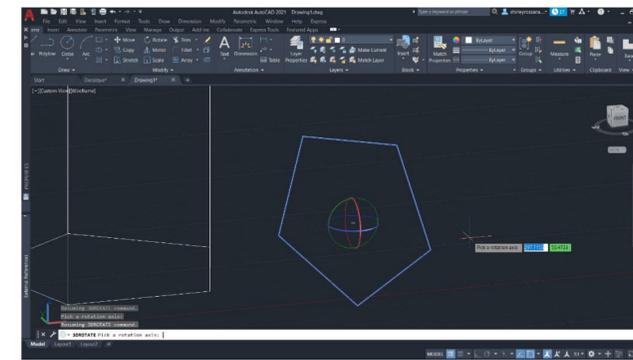
Subtract - Subtracts 1 shape from another



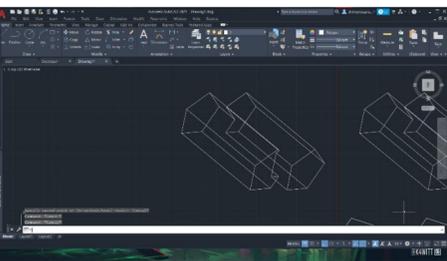
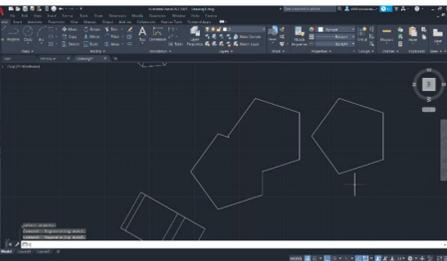
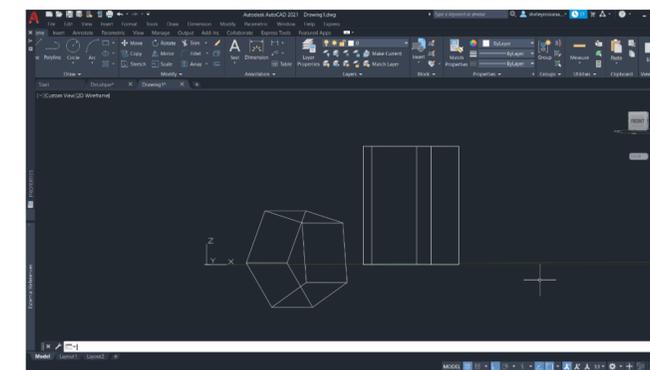
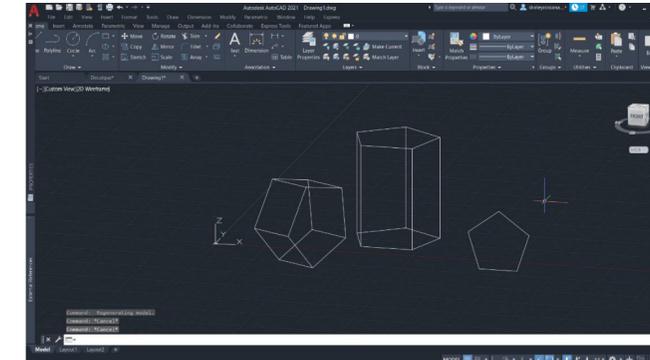
Intersect- which intersects 2 or more shapes



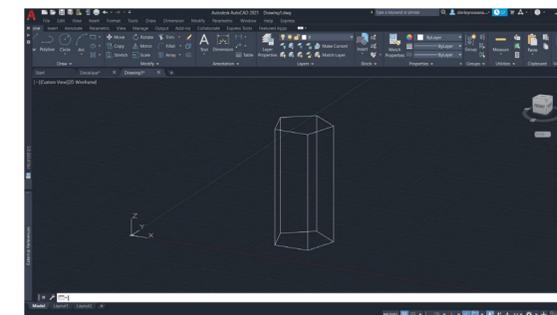
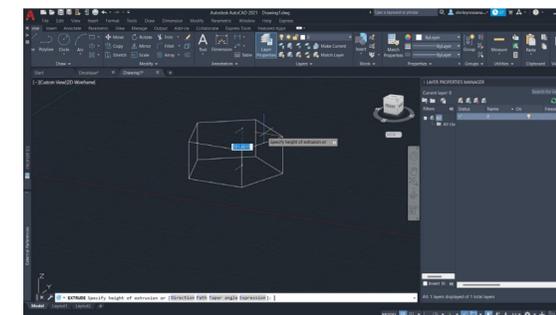
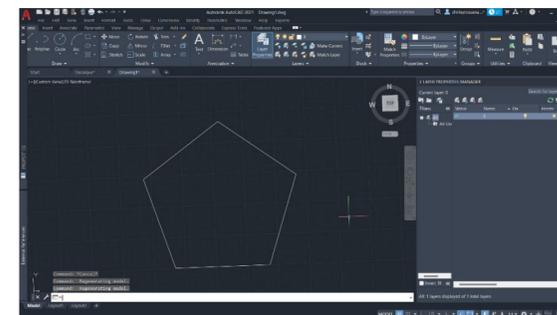
3DRotate



Rotate 3d



Extrusion



# Semana 9

Comando :  
Extrude - define  
Rotate 3d - define  
3DRotate - define  
PEDIT

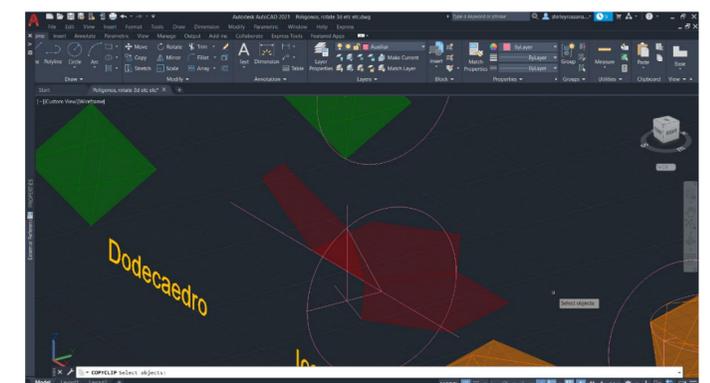
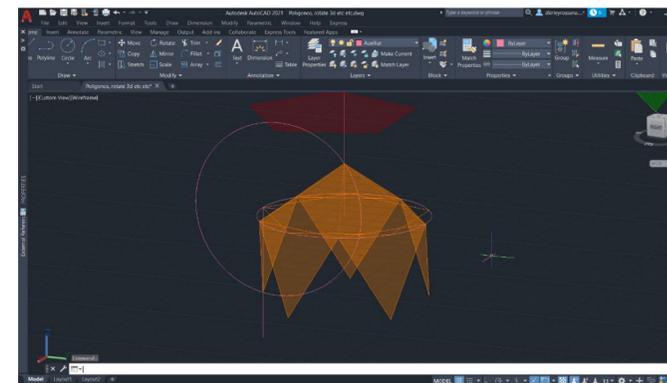
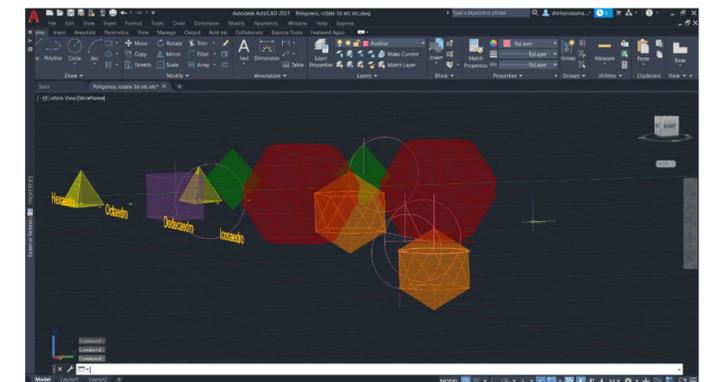
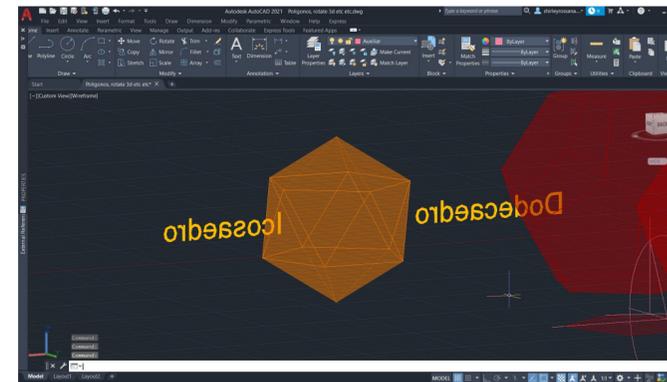
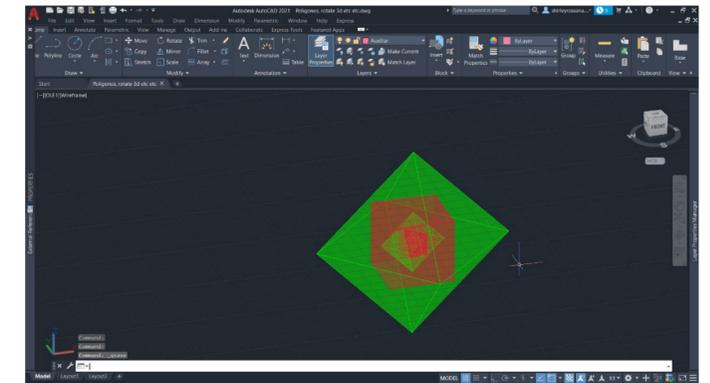
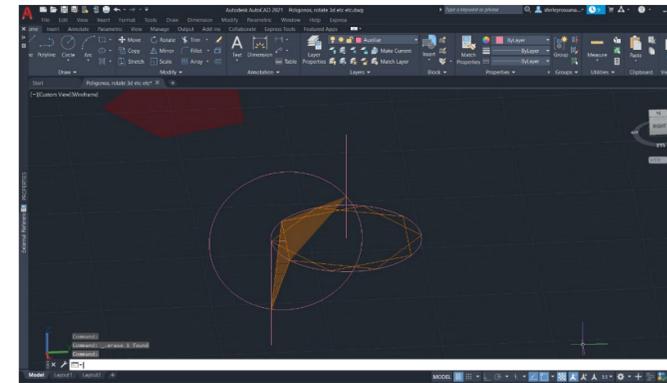
(há uma diferença entre girar 3D e girar 3D)

1. Operações booleanas

Union - add 2 or more shapes

Intersect- which intersects 2 or more shapes

Subtract - Subtracts 1 shape from another



ReDig

Exerc. 1.1 – ACAD 2D

# Semana 9 – Exercício Dualidade

Poliedros regulares utilizados para fazer as dualidades:

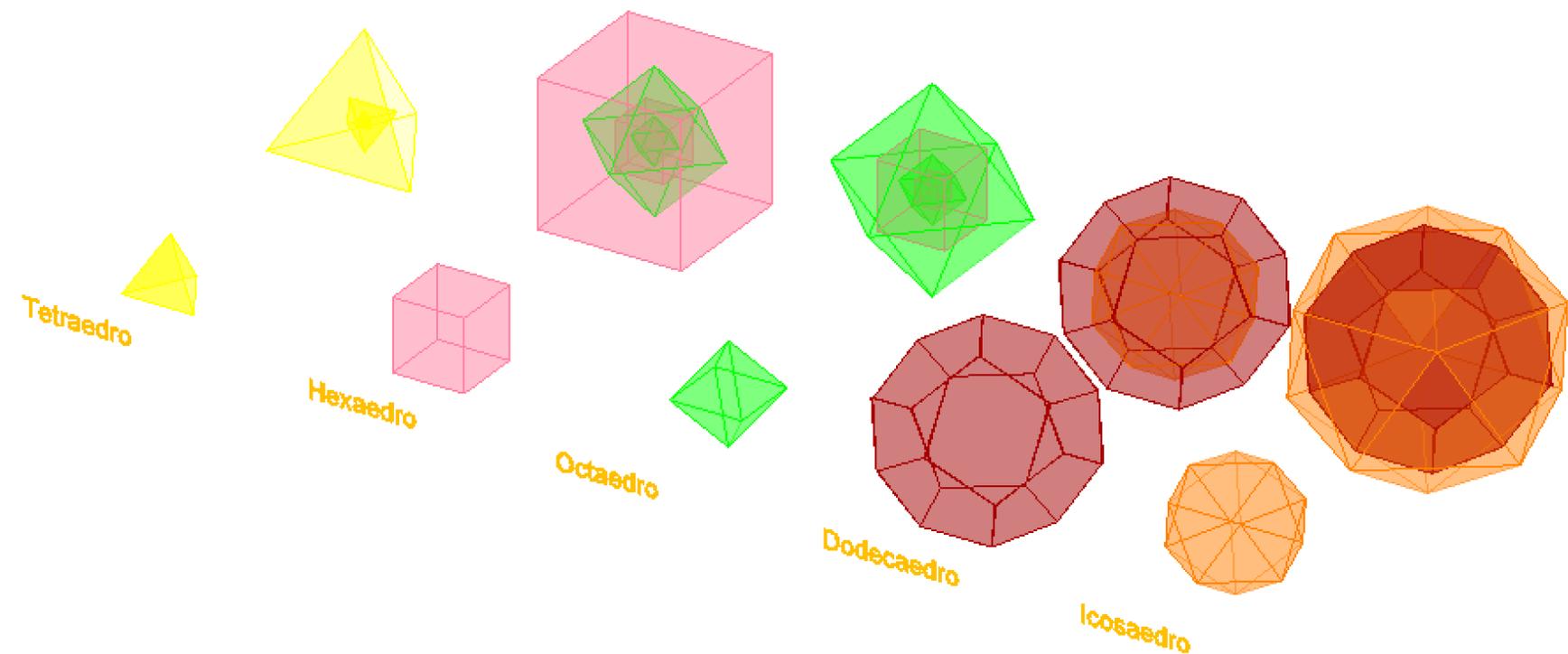
Tetraedro, hexaedro octaedro, dodecaedro e icosaedro

Em geometria, todo poliedro esta associado a uma segunda estrutura dual, onde os vértices de um correspondem as faces do outro, e as arestas entre pares de vértices de um correspondem às arestas entre pares de faces do outro.

As dualidades foram formadas por clicar um dos vértice de um poliedro e selecionar o centro do outro utilizando o comando “align” e escala dentro do poliedro,

Ex:

O Octaedro foi rotacionado 45 graus utilizando o comando “rotate” e depois clicando nos vértices do octaedro, usei o comando “align” para o centro de uma das faces do hexaedro e escalando dentro do hexaedro



# Semana 10

Comandos :

Extrude

Arc

Helix - Linha em 3D

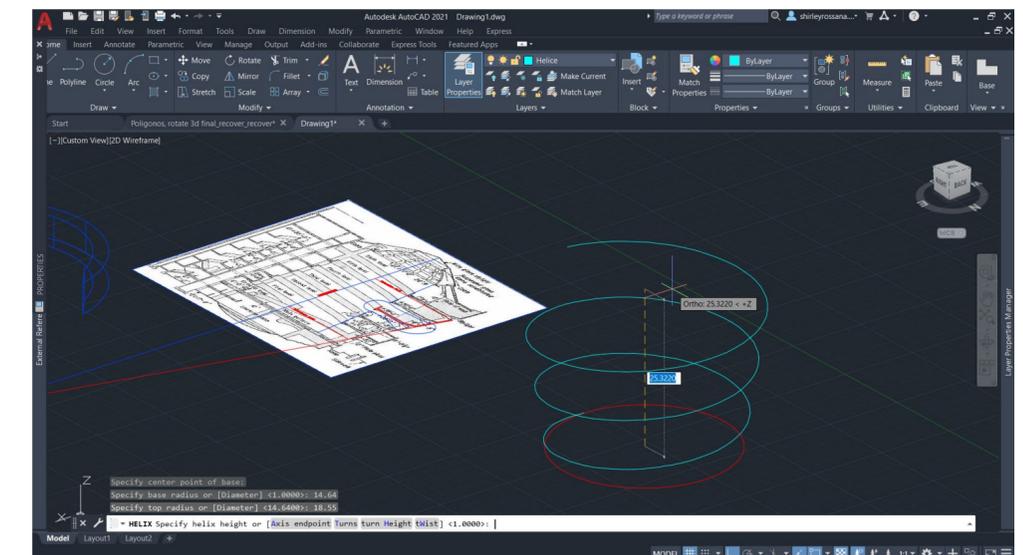
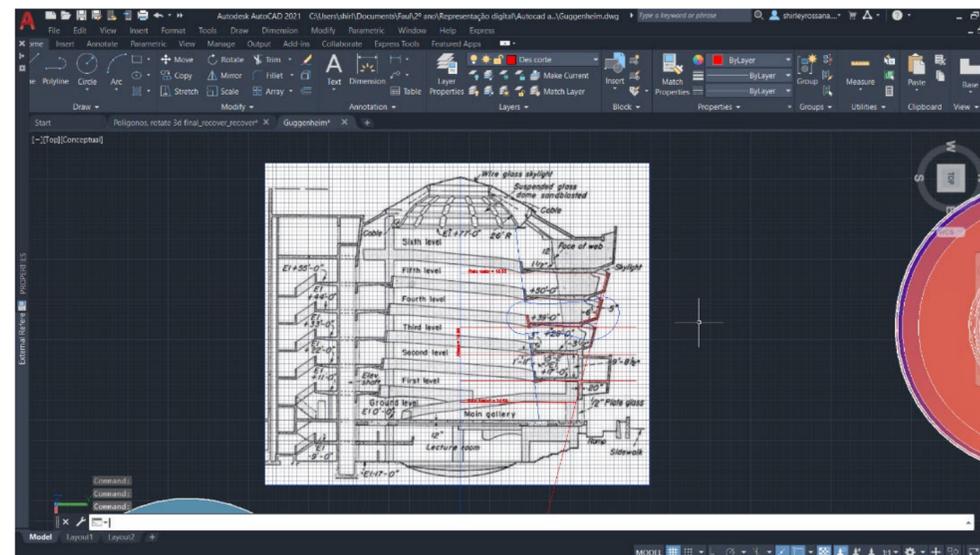
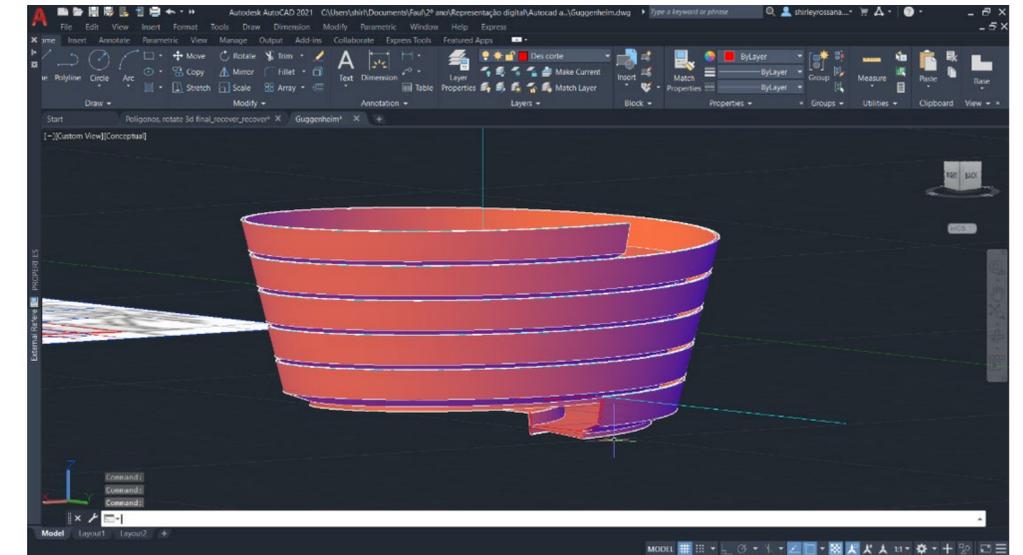
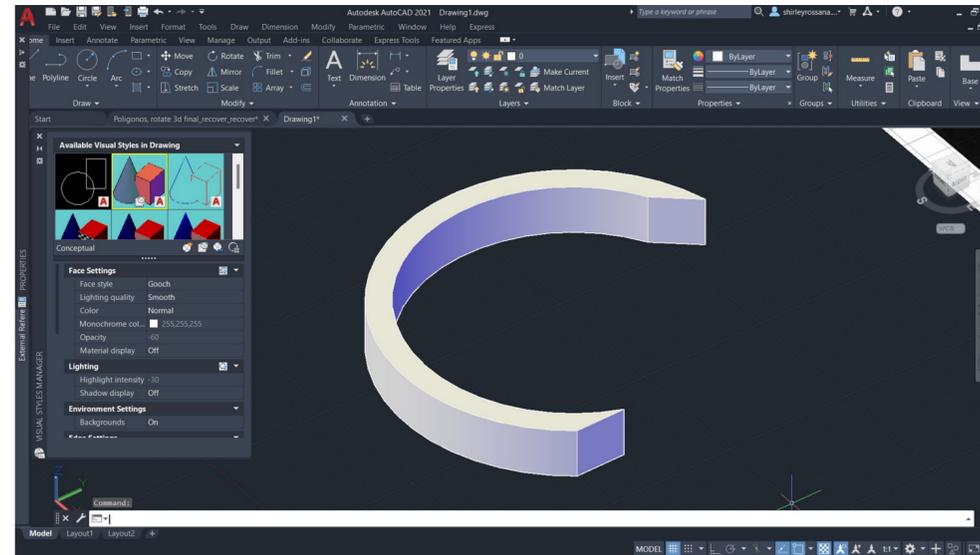
Criar uma circunferência

- Usando o comando “hélix” clicar no centro da circunferência depois colocar o raio

- A seguir decidir o outro raio e

- Clicar no Turns( quantidade de voltas)

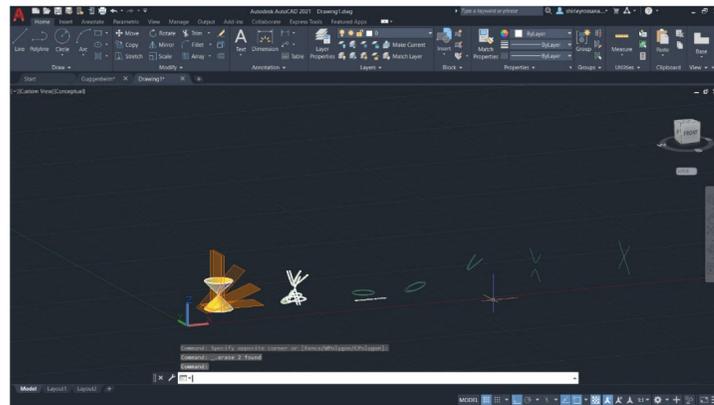
- E a Altura no final



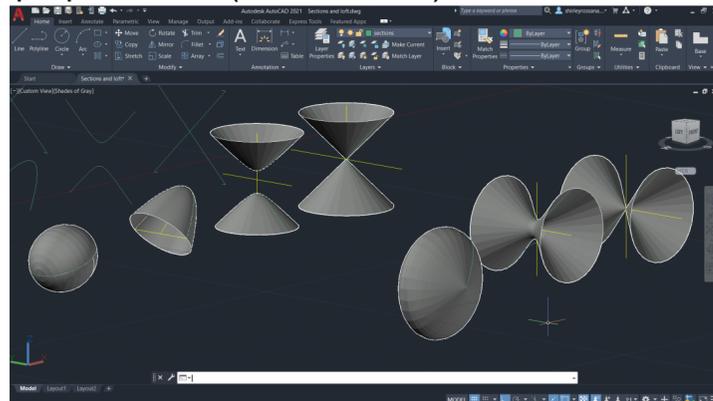
# Semana 10

Comandos :

Sections  
Loft  
Box  
Revsurf  
Revtab 1  
Revtab 2  
Cone



- Mudar revtab 1 e 2 para 30
- Usar Revsurf clicancando nas linhas e Axis depois os ângulos apropriados (0;180, 0;360)



- Primeiro crie 3 círculos e mova-os um em cima do outro depois disso use o comando "Loft" escolha cada Círculo e depois que o objeto para criado faça uma seção

- crie uma caixa usando o comando "Box"

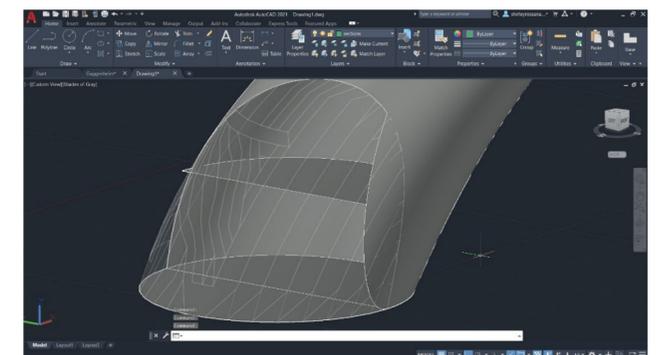
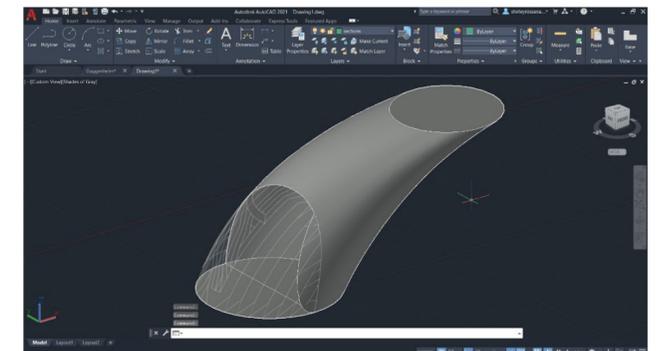
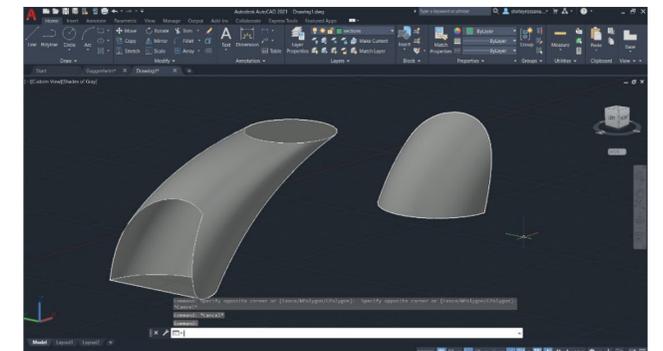
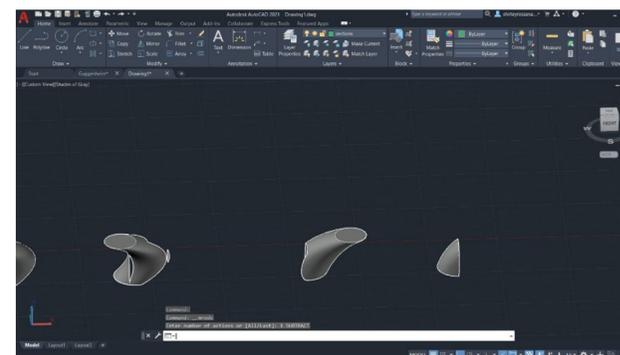
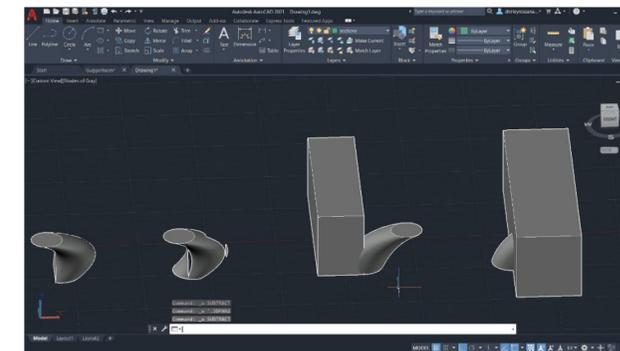
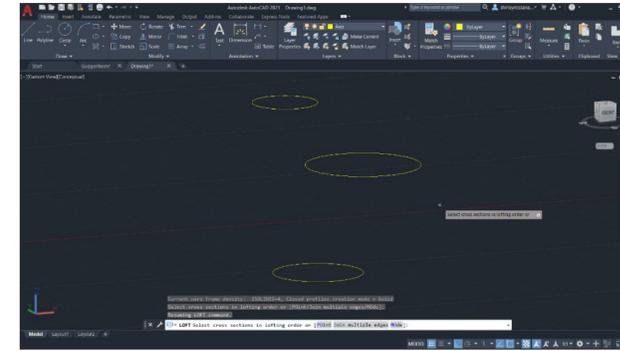
- Em seguida, use "subtract" nas formas e caixas

- Use "explode" nas formas e retire uma camada de uma das formas

- Altere a transparência de uma das formas usando "match prop" ou transparency e, em seguida, adicione a forma à outra

- Para alterar a espessura da forma basta usar o comando "thicken" para criar diferentes tipos de espessura

- Copie o semicírculo criando um "chão" dentro da forma



# Semana 11

## Introdução ao 3Ds Max

- Conceitos bases do programa
- Introdução do layout
- modelação de uma lamparina

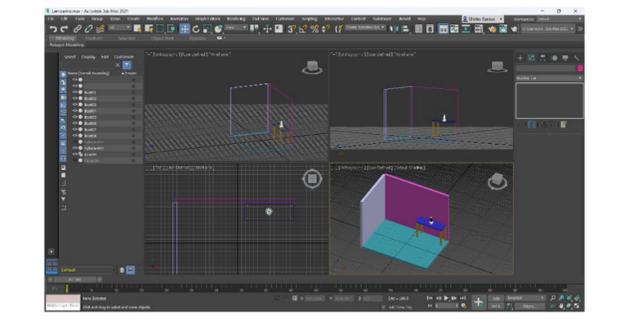
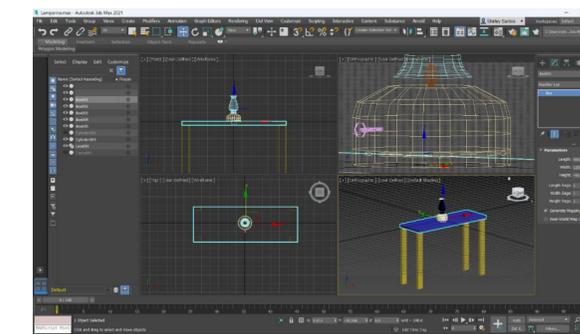
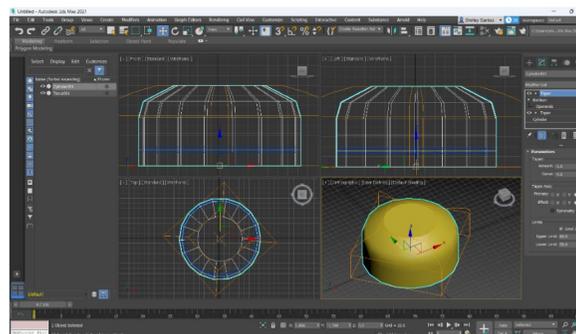
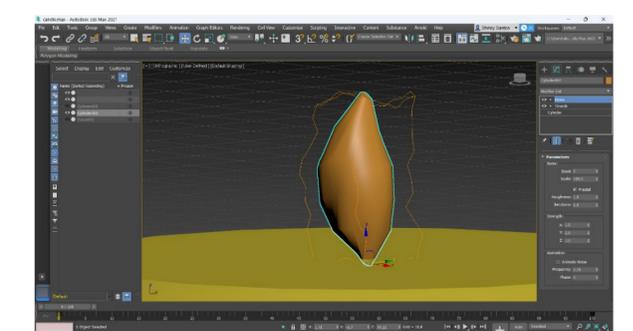
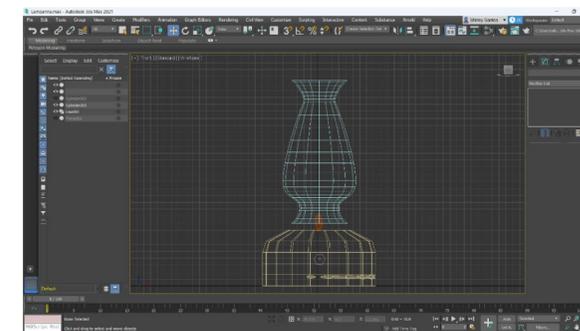
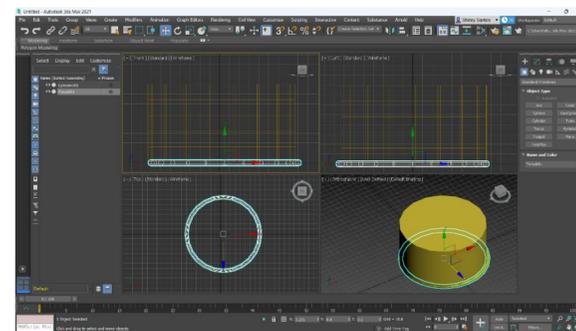
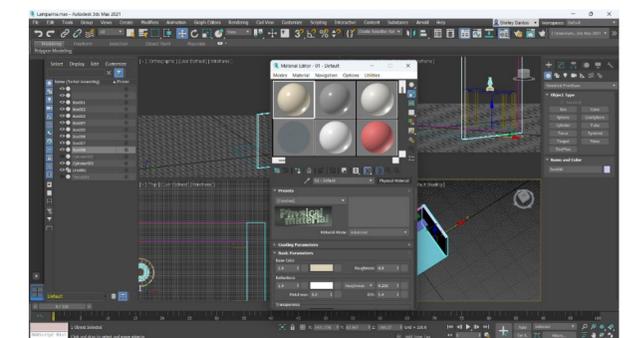
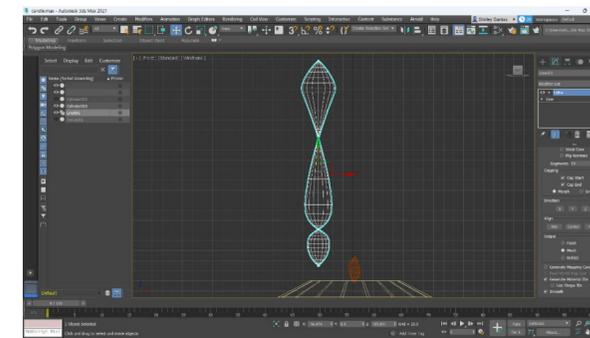
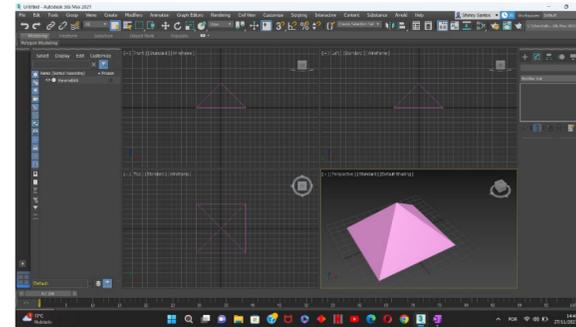
Create (+) – para criar os objetos,

Cylinder

Taurus

## Material editor - Mode – Compact material editor

- Para mudar o material
- Cor e transparência
- X (material) – U
- Y (material) – V
- Z (material) - W



ReDig

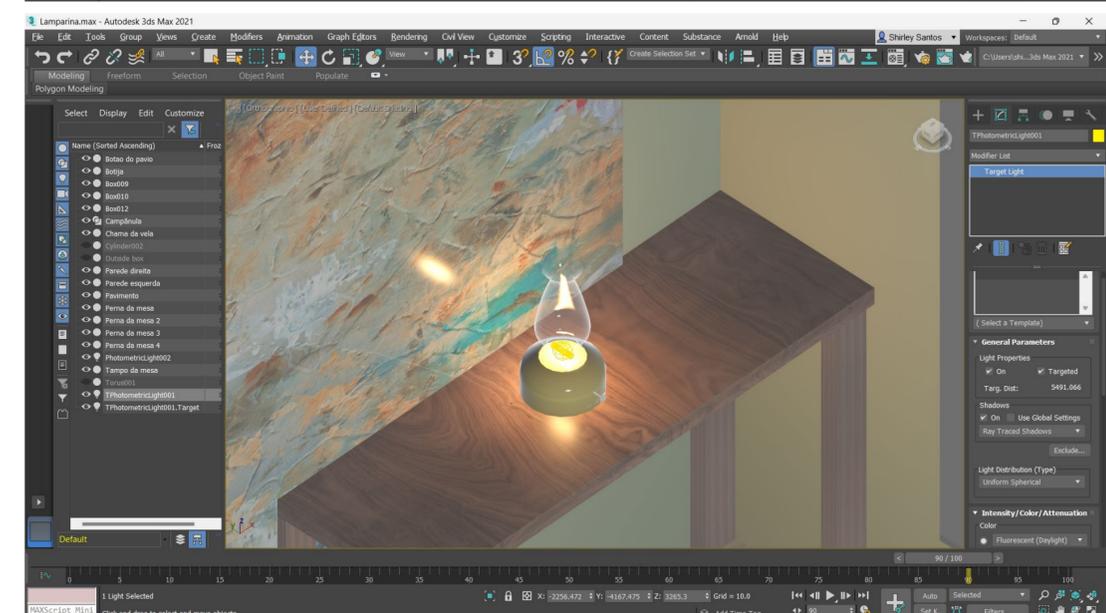
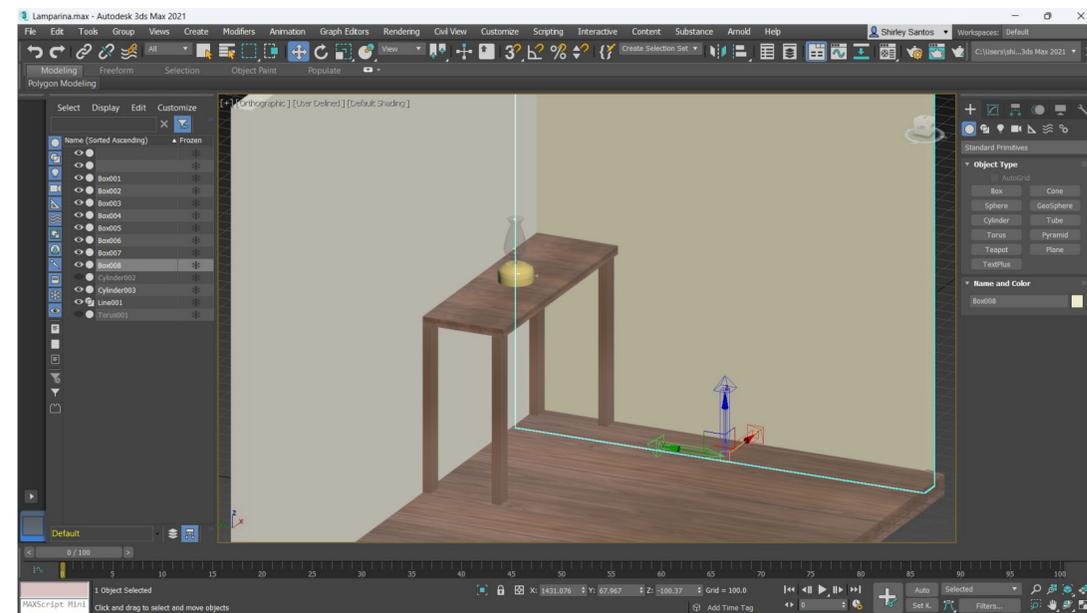
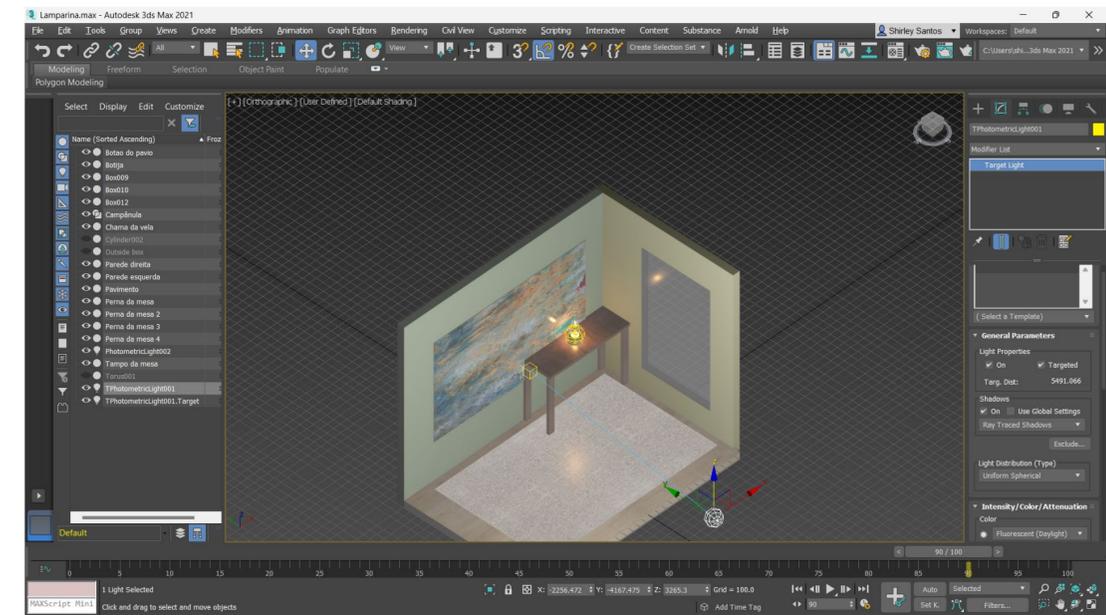
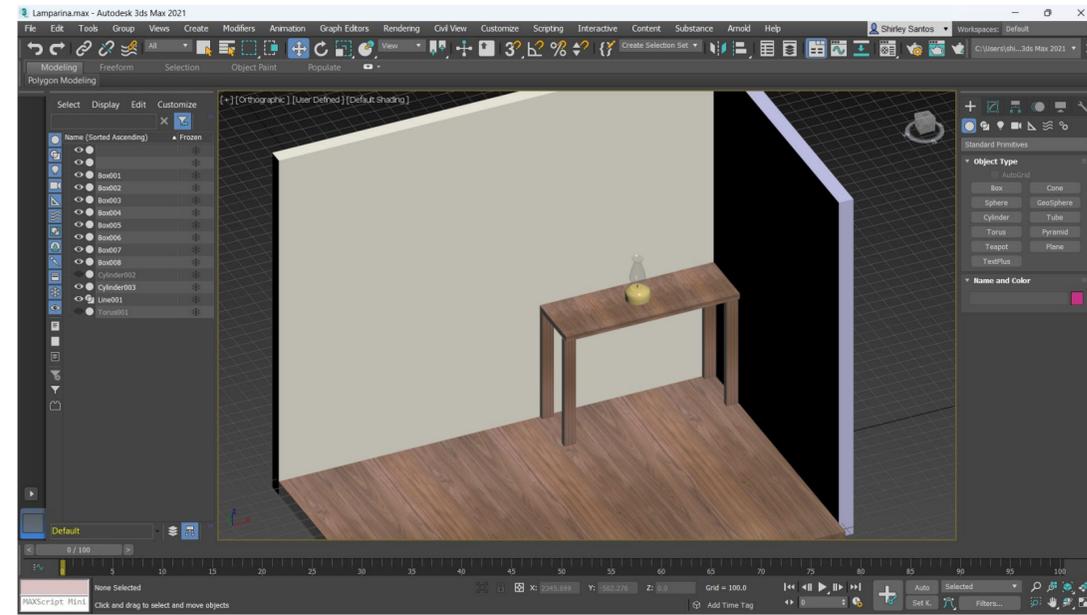
Exerc. 1.1 – ACAD 2D

# Semana 12 – Exercício Mesa , piso e parede

Continuação da aula anterior

- Trabalhar e modificar diferentes texturas – no material editor, Bitmap, etc

- Iluminação do cenário e lamparina – usando Light (target light)

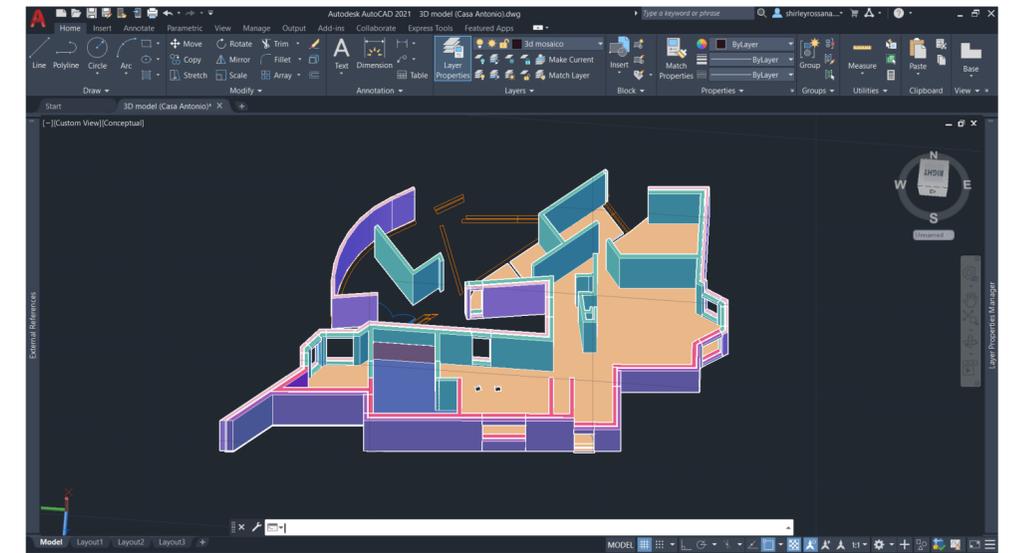
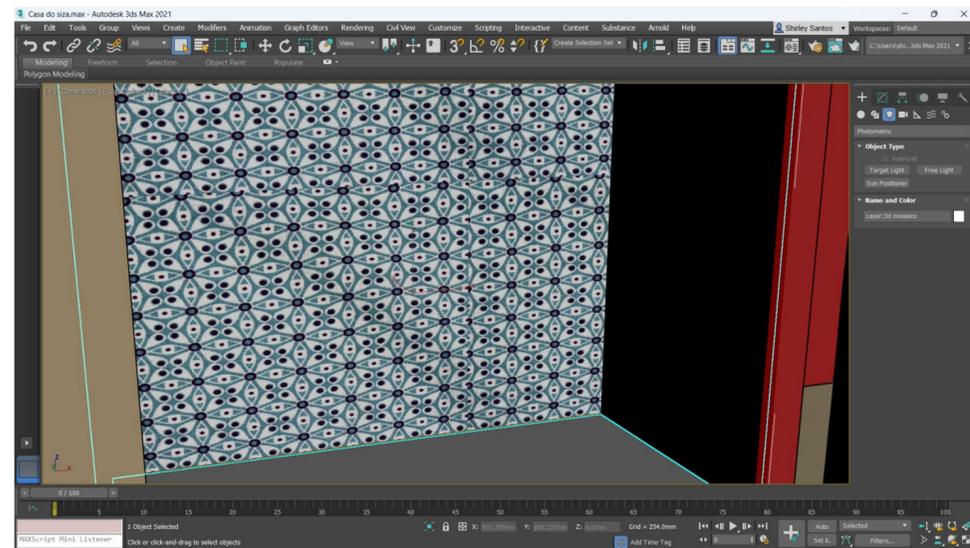
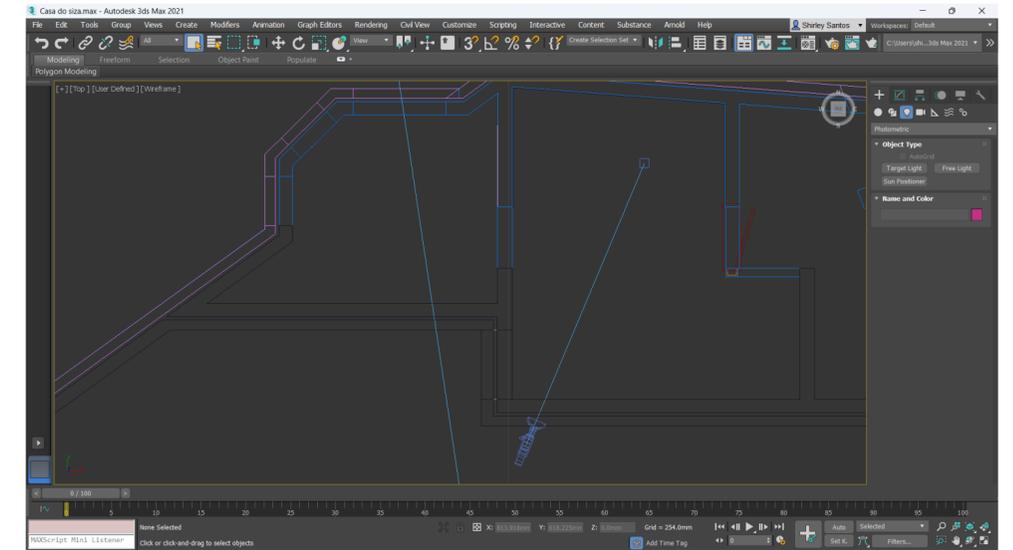
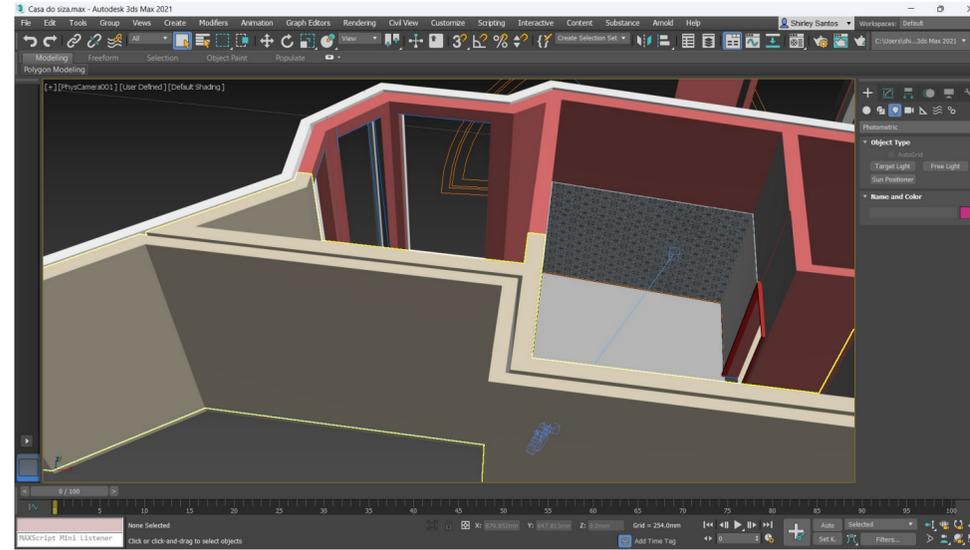


ReDig

Exerc. 1.1 – ACAD 2D

# Semana 13

- Desenvolvimento do trabalho do Siza
- Exportação do modelo 3D do autocad para 3Ds max
- Trabalhar com diferentes câmaras



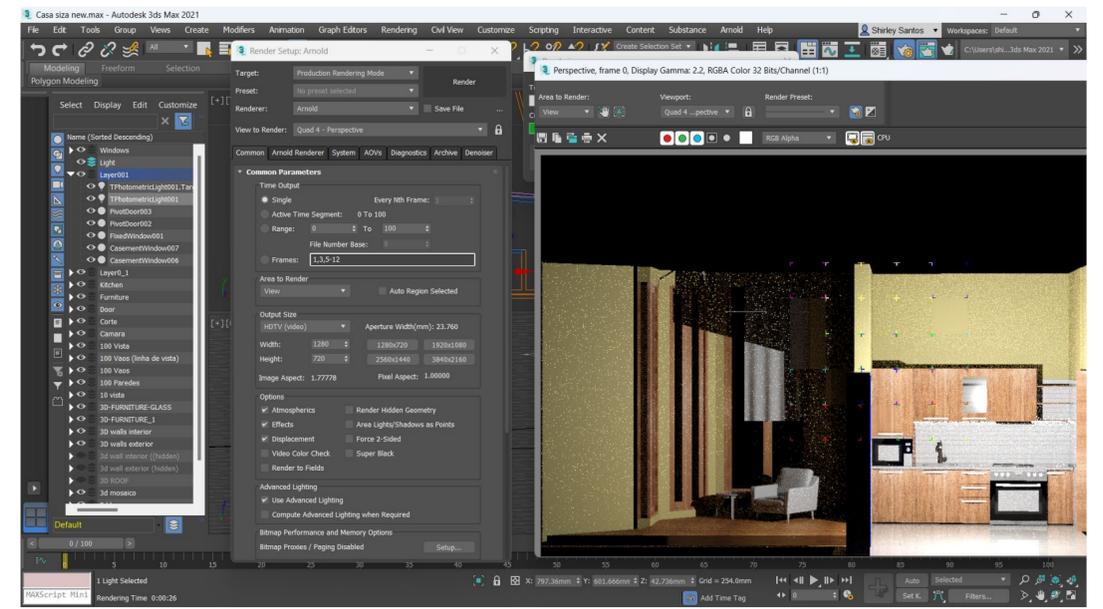
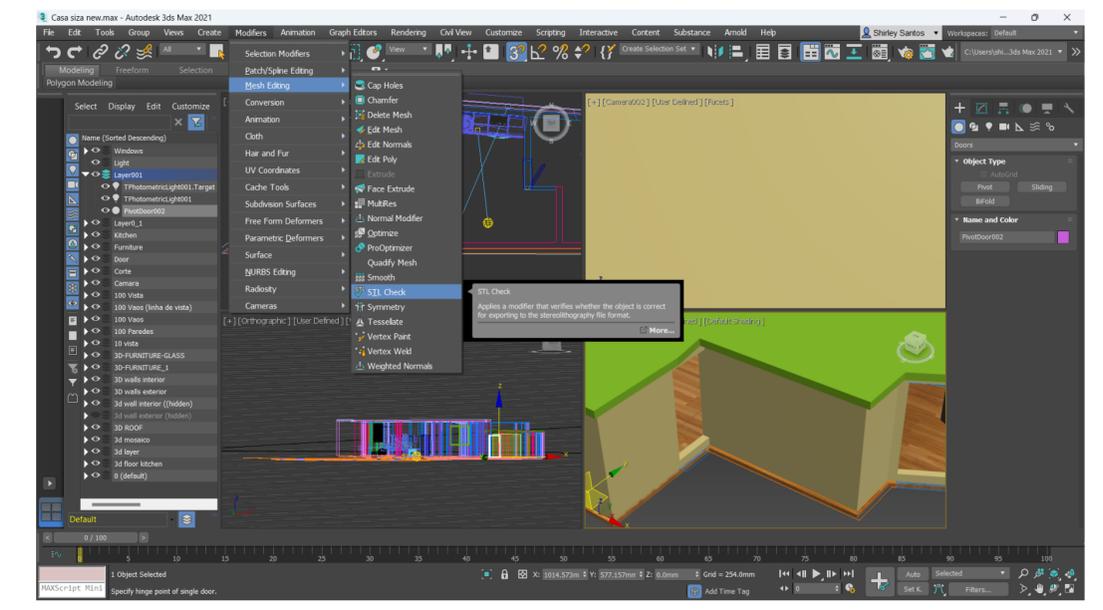
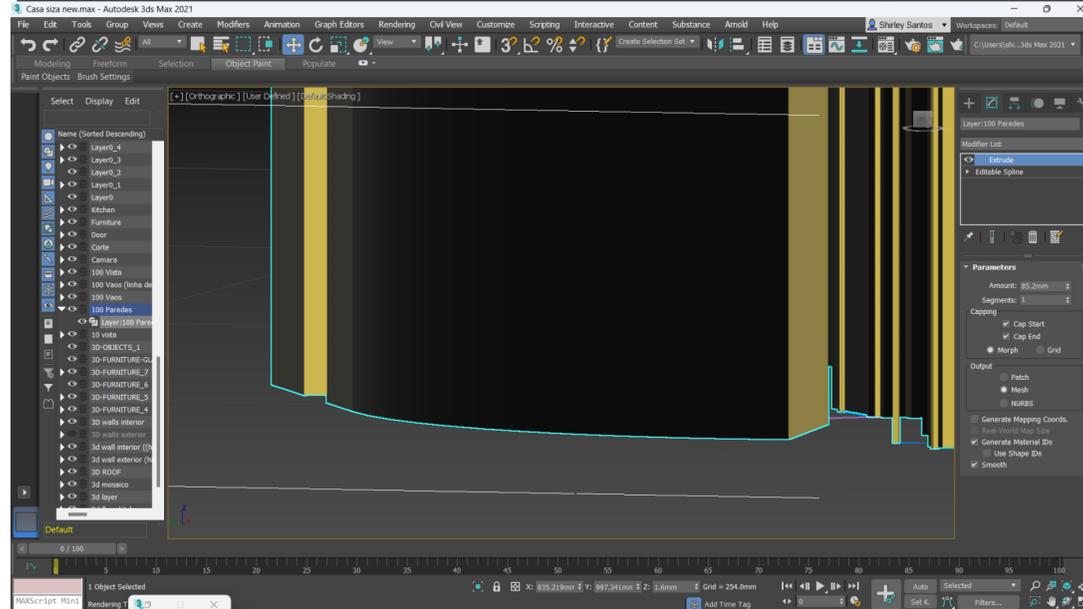
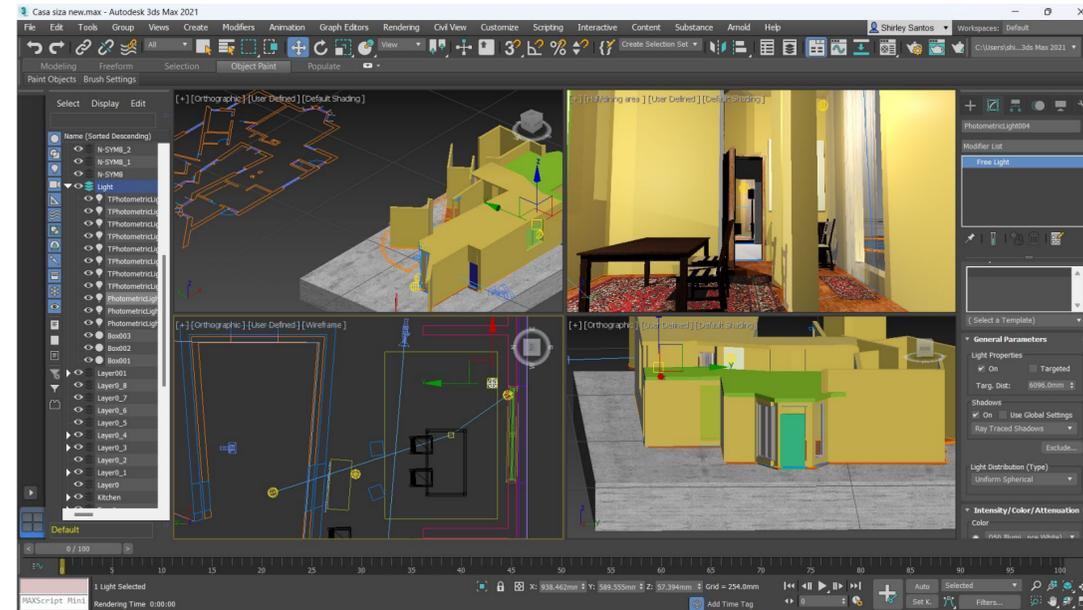
ReDig

Exerc. 1.1 – ACAD 2D

# Semana 14

Continuação da aula anterior:

- Desenvolvimento do trabalho do Siza
- SDL check
- Renderização do trabalho usando Arnold



ReDig

Exerc. 1.1 – ACAD 2D