"GHEORGHE ASACHI"
TECHNICAL UNIVERSITY OF IAȘI

AUTOCAD Design

Trainer: Lecturer Toma Ana – Maria Ph.D.

BEST Course in Summer, 10-21 July 2023, Iasi

Project CNFIS-FDI-2023-F-0457: iAGILE
(Noi convergențe de internaționalizare la TUIASI - iAGILE)
http://www.international.tuiasi.ro/

Autocad 3D commands:

Right click – options – display – colors –

*** 3D perspective projection:**

- top of sky -> background earth horizon (white)

- Crosshairs & Viewport control (black)

*** 3D parallel projection:**

- uniform background (white)

- Crosshairs & Viewport control (black)

View controls – SW isometric

Visual style – Conceptual

Comm: UCS – X0Y – rotate X, Y or Z

3dorbit

Comm: EXTRUDE

Comm: PRESSPULL

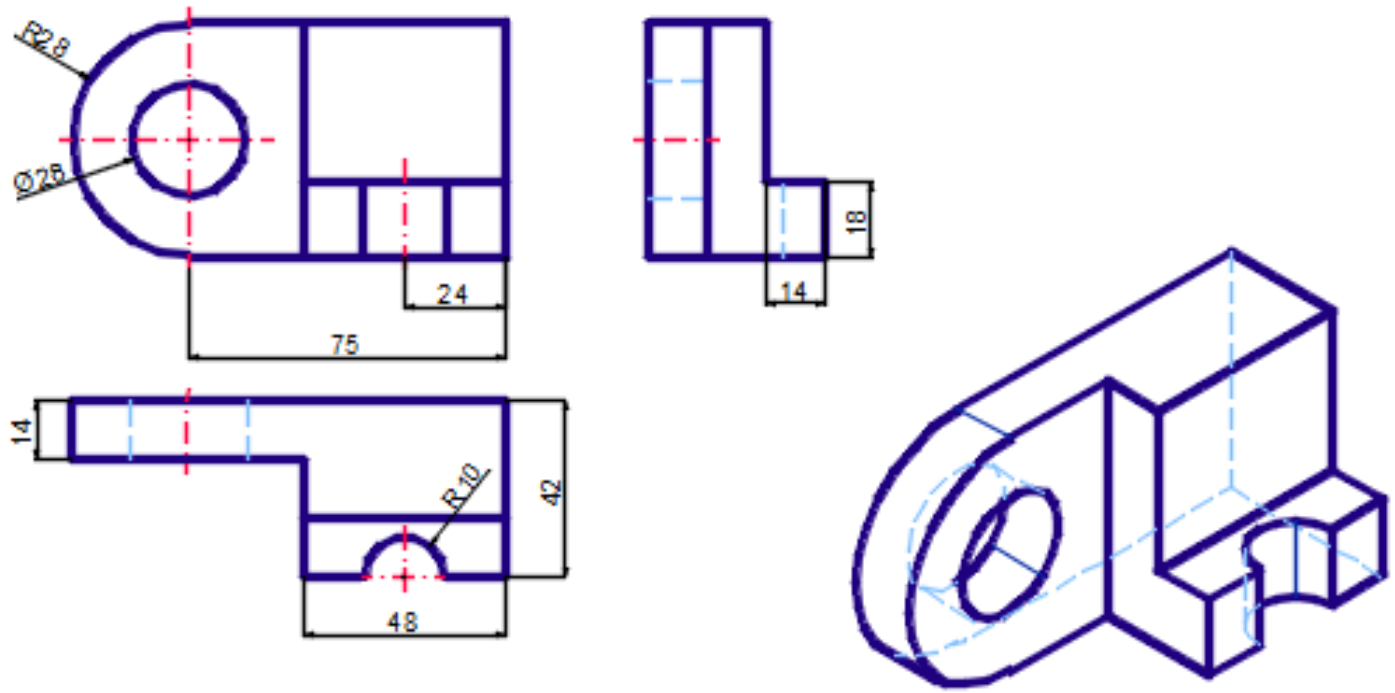
Comm: REVOLVE

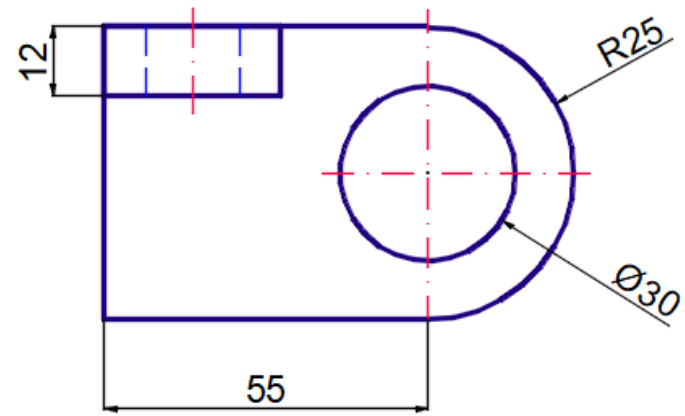
Comm: SWEEP

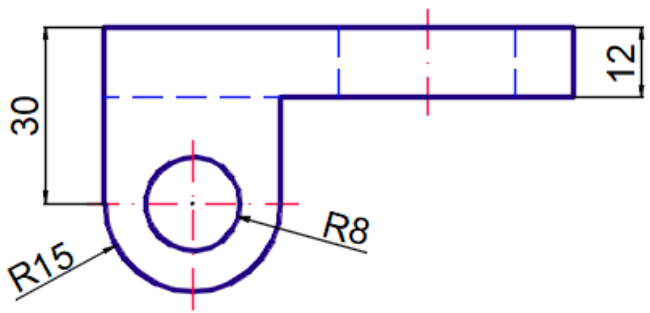
Comm: OFFSET (set distance to copy)

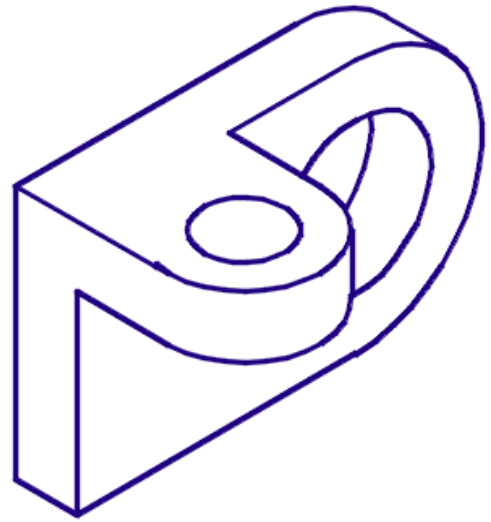
Comm: MIRROR

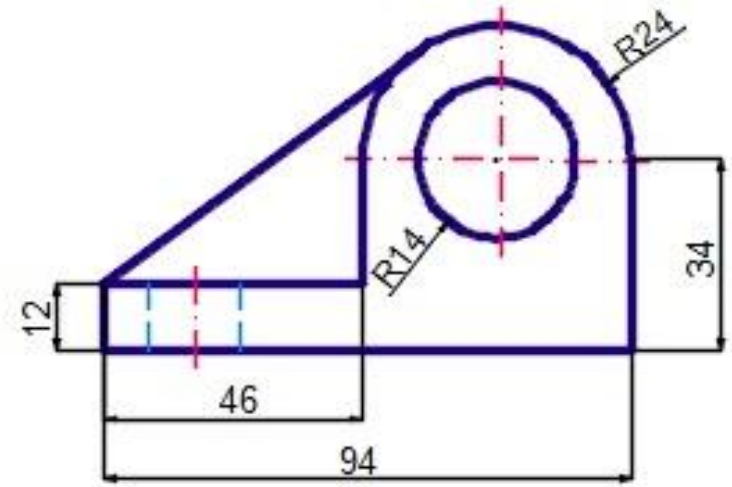
Comm: UNION

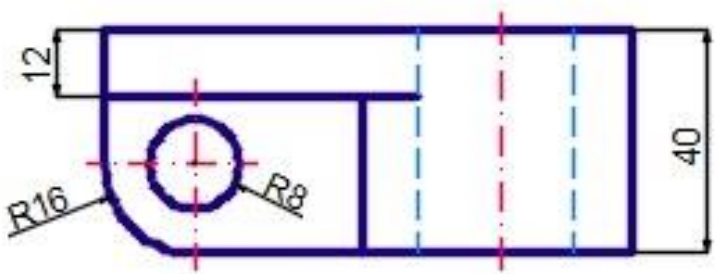

R28
Ø25
24
75
18
14
14
R10
42
48

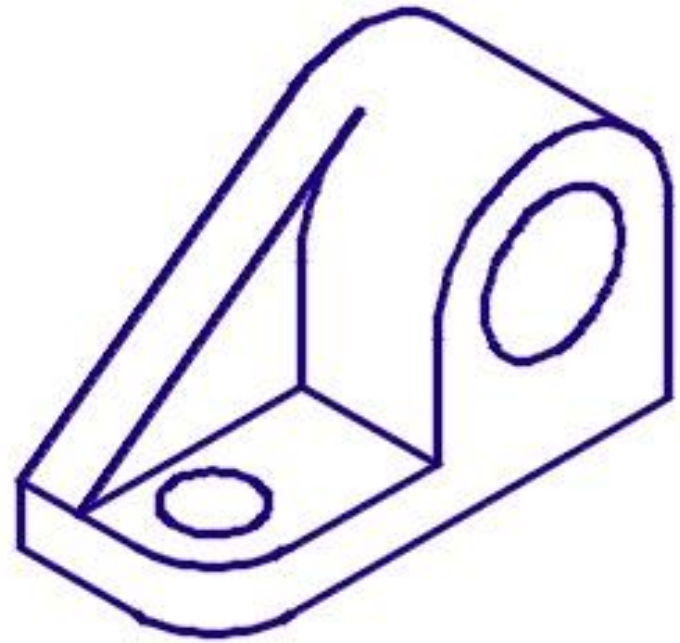

12
R25
Ø30
55

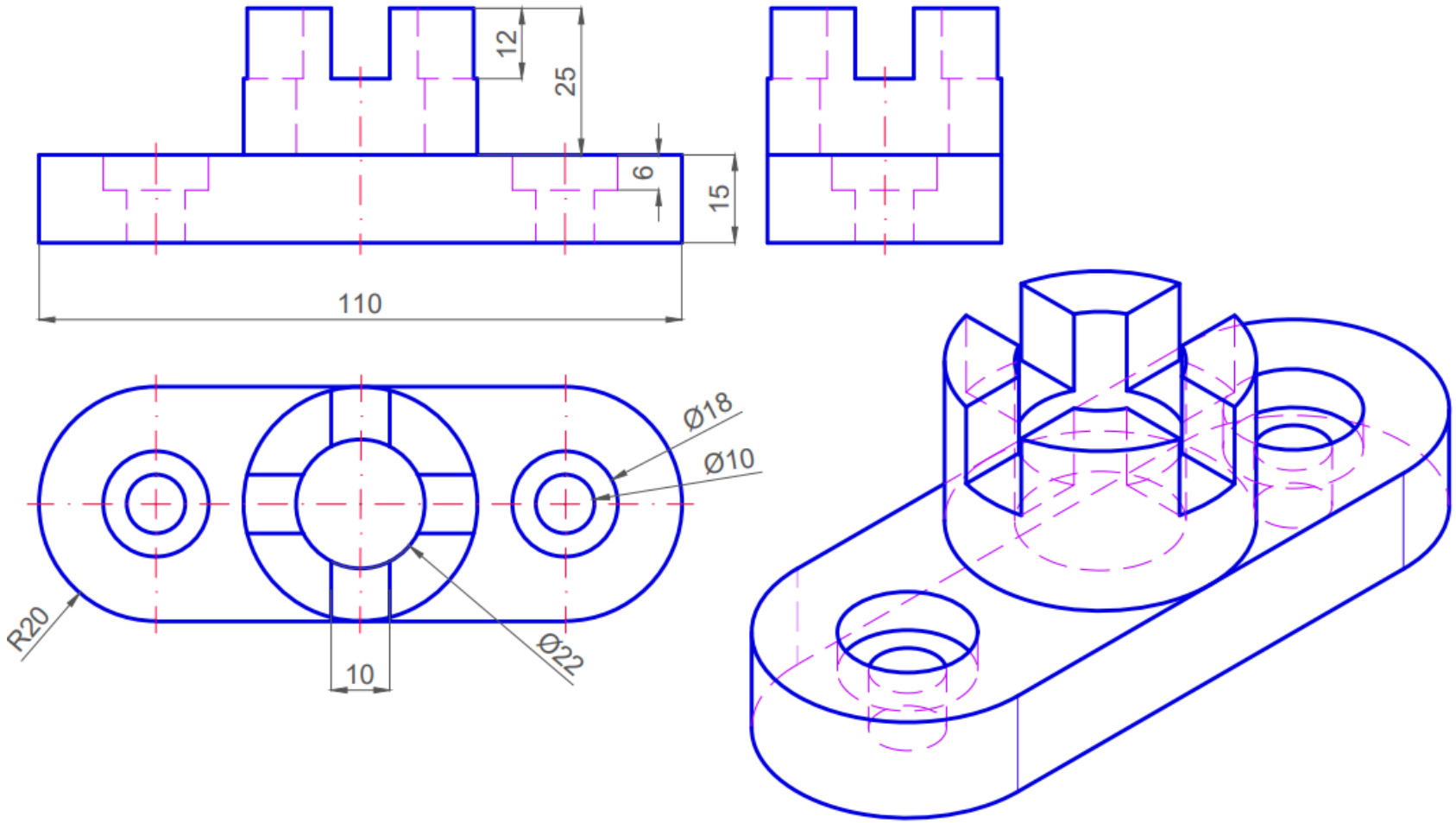

30
12
R8
R15




R24
R14
34
12
46
94


12
40
R16
R8




12
25
6
15
110
Ø18
Ø10
R20
10
Ø22

Comm: PL (polyline)

Comm: PE (polyline edit) / join/

Comm: FILLETEDGE

Comm: SUBTRACT

Comm: TORUS

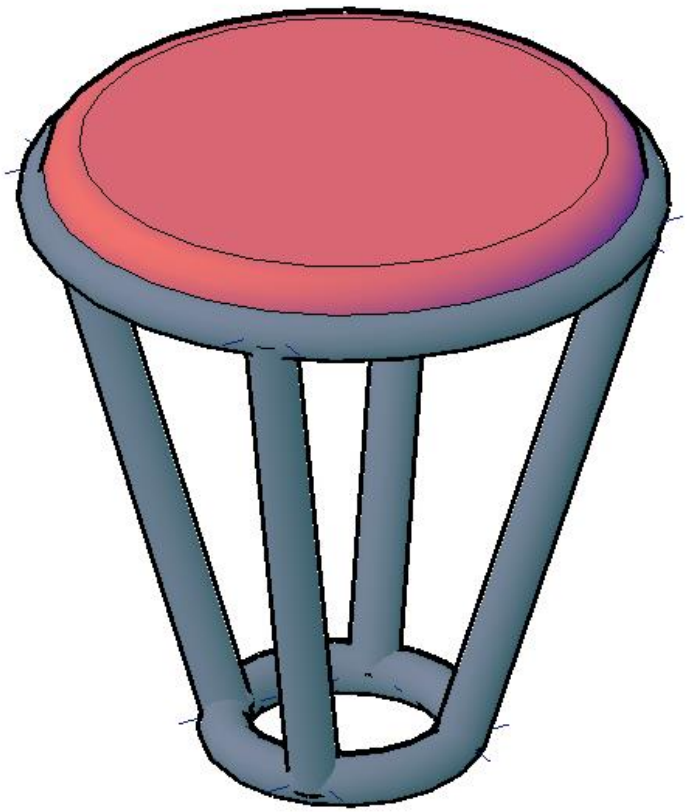
3DPOLY (chair legs)

SWEEP (chair)

FILLETEDGE (pillow) **SMOOTH**

DIVIDE (4 points)

DDPTYPE (marks the X points)



POLYLINE (PL) – The POLYLINE command will allow you to create a 2D polyline. When working with the Solid Model Tools, it is crucial to close a polyline when trying to make a shape. Not closing a polyline will result in a mesh object being created. Mesh objects are not recognized by the Solid Model Tools.

EXTRUDE (EXT) – The EXTRUDE command will extrude a 2D object into a 3D object. When using the EXTRUDE command, the original 2D object will be removed from the drawing.

PRESSPULL (PRESS) – The PRESSPULL command will extrude a 2D object into a 3D object, or extend a 3D surface. When using the PRESSPULL command with a 2D object, the 2D object will remain in the drawing.

BOX – The BOX command will allow you to create a 3D box by selecting 3 points in the X, Y, and Z axes.

3DMOVE (3M) – The 3DMOVE command will allow you to move an object in either the X, Y, or Z-axis.

3DROTATE (3R) – The 3DROTATE command will allow you to rotate an object about the X, Y, or Z axes.

3DPOLYLINE (3DPOLY) – The 3DPOLYLINE command will allow you to create a polyline with points that can exist in the X, Y, and Z axes.

UNION (UNI) – The UNION command will allow you to join separate 3D objects into one.

SUBTRACT (SU) – The SUBTRACT command will allow you to subtract 3D objects from another 3D object.

SLICE (SL) – The SLICE command will allow you to create a joint through a 3D

Command	Description	Menu
Box	Creates a three-dimensional solid box	**Solids > Draw**
ChamferEdges	Bevels the edges of 3D solid objects	**Solids > Solid Editing**
Cone	Creates a three-dimensional solid cone	**Solids > Draw**
ConvertEdges	Creates wireframe geometry from the edges of a specified 3D Solid, Surface, Mesh, or Region	**Solids > Solid Editing**
Cylinder	Creates a three-dimensional solid cylinder	**Solids > Draw**

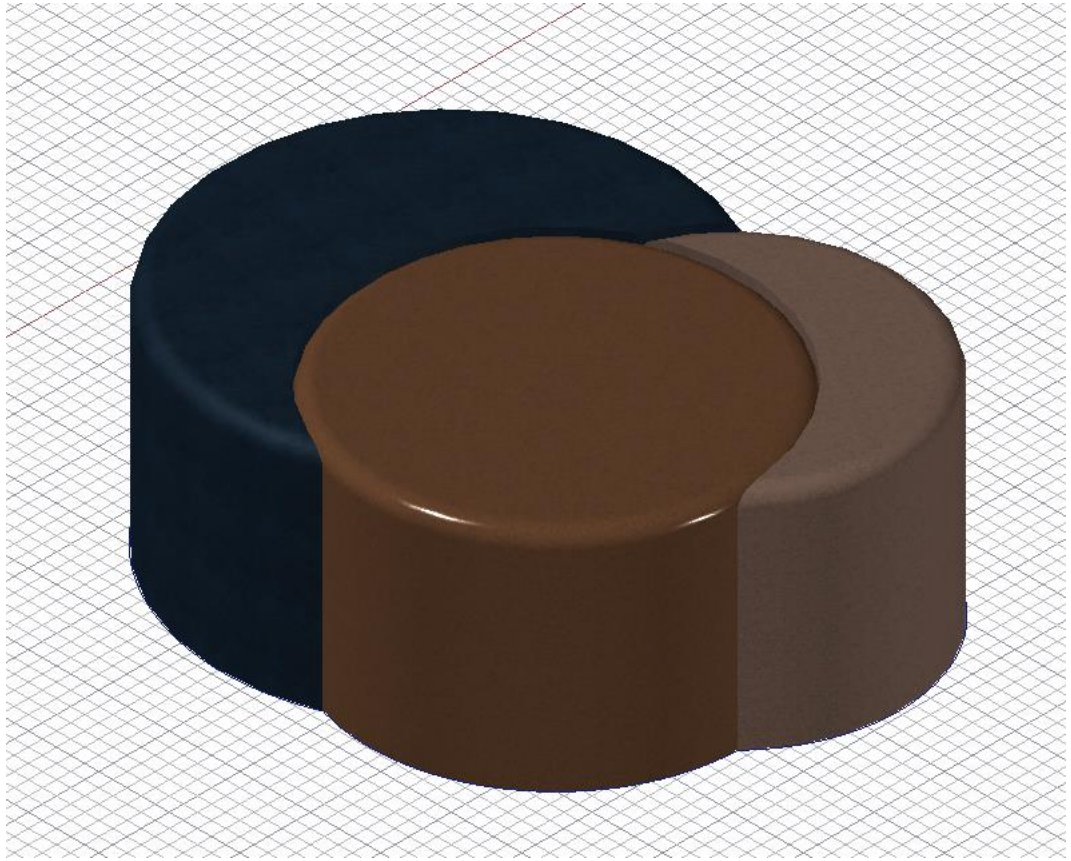
EditSolid	Edits bodies, faces and edges of three-dimensional solid objects	**Solids > Solid Editing**
Extrude	Creates a 3D solid or surface	**Solids > Draw**
FilletEdges	Rounds the edges of 3D solid objects	**Solids > Solid Editing**
GetMassproperties	Calculates and displays the mass properties of 3D solids and regions	**Tools > Inquiry**
Interfere	Checks interferences within a solid model	**Solids > Solid Editing**
Intersect	Creates regions or 3D solids from the intersection regions or of 3D solids	**Solids > Solid Editing**

Loft	Creates a three-dimensional solid by lofting between existing cross sections	**Solids > Draw**
MakeFlatSnapshot	Creates a flat representation of 3D solid objects, projected to the X-Y plane of the drawing (dialog box variant)	**Solids > Solid Editing**
-MakeFlatSnapshot	Creates a flat representation of 3D solid objects, projected to the X-Y plane of the drawing (command window variant)	—
OffsetEdges	Creates 2D entities from the boundary of a 3D solid or surface	**Solids > Solid Editing**
PlaneSurf	Creates rectangular planar surfaces	**Solids > Draw**
PolySolid	Draws 3D solid objects in the shape of a polygonal walls	**Solids > Draw**

PushPull	Modifies 3D solid objects or bounded areas by extrusion	**Solids > Draw**
Pyramid	Creates a 3D solid pyramid	**Solids > Draw**
Revolve	Creates a 3D solid or surface by revolving a 2D object about an axis	**Solids > Draw**
Slice	Slices 3D solids with a plane or surface	**Solids > Solid Editing**
Sphere	Creates a three-dimensional solid sphere	**Solids > Draw**
Subtract	Creates a composite region or a 3D solid by subtraction	**Solids > Solid Editing**

Sweep	Creates unique solid primitives or surfaces by sweeping existing two-dimensional entities along a path	**Solids > Draw**
Thicken	Create a 3D solid from a surface by thickening it	**Solids > Solid Editing**
Torus	Creates a three-dimensional toroid solid	**Solids > Draw**
Union	Creates a composite region or solid by addition	**Solids > Solid Editing**
Wedge	Creates a three-dimensional solid with a sloped face tapering along the X axis	**Solids > Draw**

RMAT – library of materials - fabric



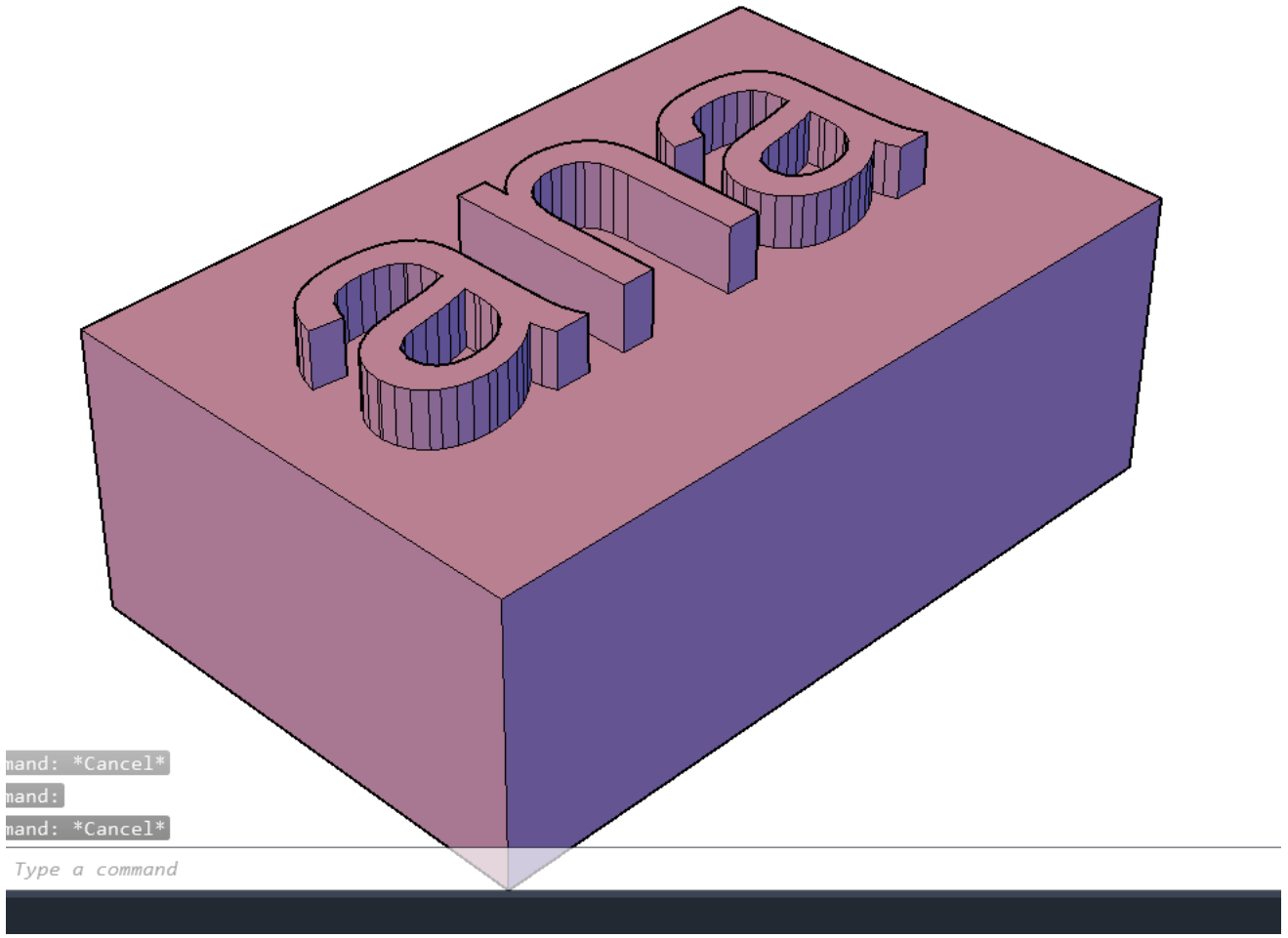
MTEXT

TXTEXP

REGION

SOLIDUNION

Presspull



Autodesk AutoCAD 2023 antena.dwg

Type a keyword or phrase

ana-maria.toma

Share

Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps

Line Polyline Circle Arc — Draw

Move Copy Stretch Rotate Mirror Scale Trim Fillet Array — Modify

Text Dimension — Annotation

Layer Properties — Layers

Insert — Block

Match Properties — Properties

ByLayer ByLayer ByLayer

Group — Groups

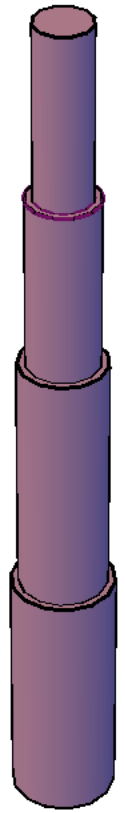
Measure — Utilities

Paste — Clipboard

Base — View

Start chair* sofa* scris 3d* antena*

[−][SW Isometric][Conceptual]



Unnamed

Type a command

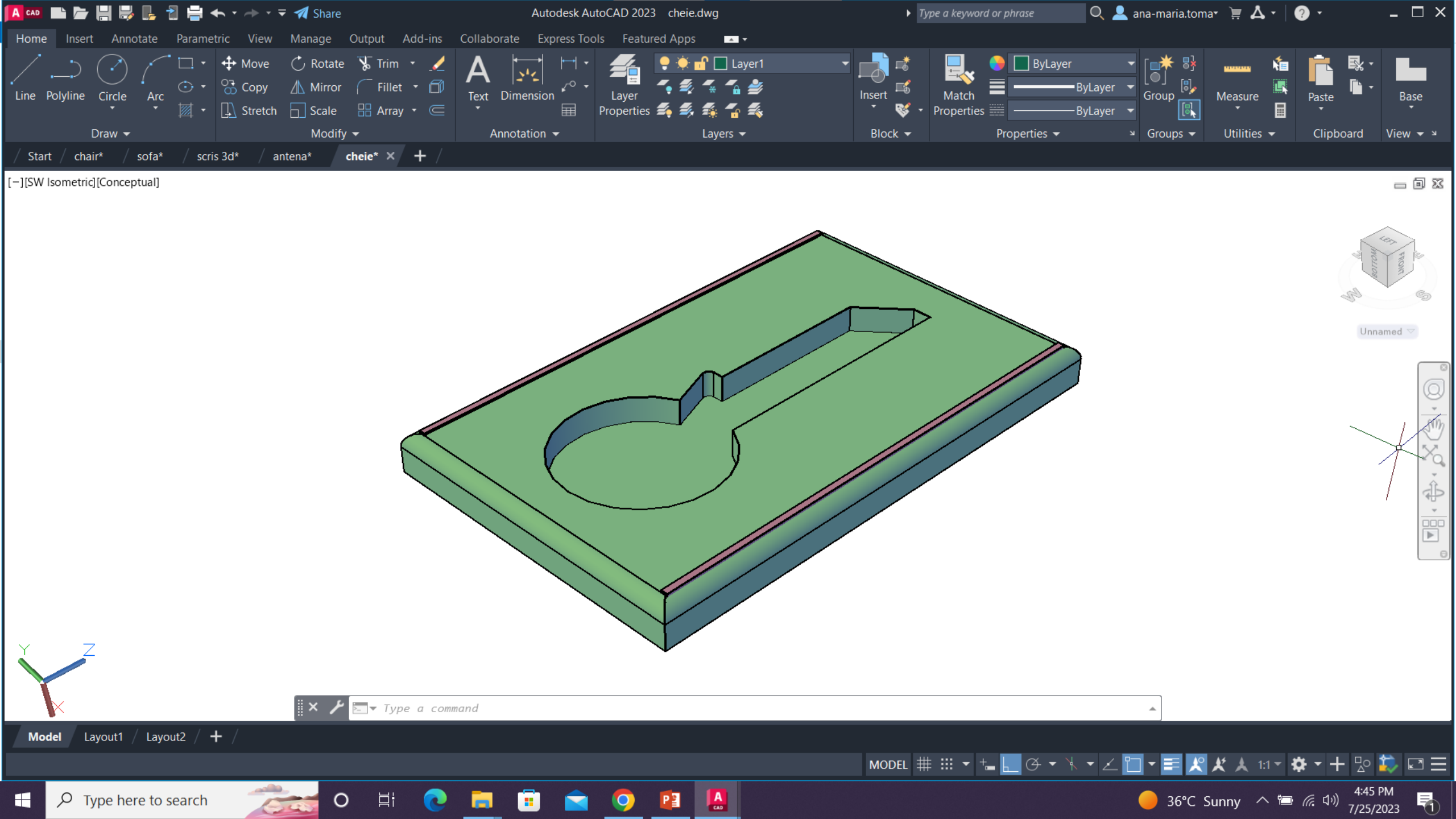
Model Layout1 Layout2

MODEL 1:1

Type here to search

36°C Sunny

4:43 PM
7/25/2023


Autodesk AutoCAD 2023 cheie.dwg
Share
Type a keyword or phrase
ana-maria.toma
Home Insert Annotate Parametric View Manage Output Add-ins Collaborate Express Tools Featured Apps
Line Polyline Circle Arc
Move Rotate Trim
Copy Mirror Fillet
Stretch Scale Array
Text Dimension
Layer Properties
Layer1
Insert
Match Properties
ByLayer
ByLayer
ByLayer
Group
Measure
Paste
Base
Draw
Modify
Annotation
Layers
Block
Properties
Groups
Utilities
Clipboard
View
Start chair* sofa* scris 3d* antena* cheie*
[−][SW Isometric][Conceptual]
Unnamed
Type a command
Model Layout1 Layout2
MODEL
Type here to search
36°C Sunny
4:45 PM
7/25/2023