Part 1:
Your Goal: To write a script that can "see" a raw 3D object and measure it.

Context:
Imagine you have a 3D scanner. It gives you a raw mesh file (like a .obj or .ply). Your code needs to act as the software that calculates the tightest possible box around that object so we know its size.
Your Task:

1. **Input:** We have provided 3 files: CUBE.obj, CYLINER.obj, and TEAPOT.obj (check shared Google Drive Folder).
2. **Action:** Write a Python script (using libraries like OpenCV, Open3D, or Trimesh) that:
    - Reads each file.
    - Calculates the **Oriented Bounding Box (OBB)**. *Hint: This box should rotate to fit the object tightly. Do not just draw a big square aligned to the screen (AABB).*
    - Outputs the Volume and Dimensions (L x W x H) of that box.
3. **Deliverable:** A screen recording showing your script reading the file and visualizing the tight box around the Cube, Cylinder, and Teapot. Please send us all your video(s) as a Google Drive link (with "Anyone with link can View" permission).

Part 2:

Your Goal: To write a script that solves a "3D Tetris" puzzle.

Context:
Now that we know the sizes of objects, we need to pack them into a container without wasting space.

Your Task:

1. **Input:** We have provided a file named **`Item List.json`**. (check shared Google Drive Folder).
    - This file contains a list of 20 theoretical items with defined dimensions (e.g., `[20, 20, 20]`).
    - You must write your script to ingest this specific file.
2. **Constraint:** You have a "Master Box" of size **100 x 100 x 100**.
3. **Action:** Write a function that calculates coordinates `(x, y, z)` to place these 20 items inside the Master Box.
    - **Rule 1:** Items cannot overlap.
    - **Rule 2:** Gravity matters (items must be supported by the floor or another item).
    - **Rule 3:** Try to pack them as tightly as possible.
4. **Deliverable:** A simple 3D visualization showing the blocks getting stacked one-by-one into the Master Box. Please send us your video(s) as a Google Drive link (with "Anyone

with link can View” permission).