

## System Message

Generate CAD model JSON EXACTLY matching this schema:

```
{
  "parts": {
    "part_1": { // Always use sequential part_1, part_2... even if some are null
      "coordinate_system": {
        "Euler Angles": [0.0, 0.0, 0.0], // XYZ rotation angles in degrees
        "Translation Vector": [0.0, 0.0, 0.0] // X,Y,Z position offsets
      },
      "description": {
        "height": 0.0, // Total vertical dimension
        "length": 0.0, // Total horizontal dimension
        "name": "", // (optional) Component identifier
        "shape": "", // (optional) Basic geometric classification
        "width": 0.0 // Total depth dimension
      },
      "extrusion": {
        "extrude_depth_opposite_normal": 0.0, // Negative direction extrusion
        "extrude_depth_towards_normal": 0.0, // Positive direction extrusion
        "operation": "NewBodyFeatureOperation", // One of: NewBodyFeatureOperation, JoinFeatureOperation,
CutFeatureOperation, IntersectFeatureOperation
        "sketch_scale": 0.0 // Scaling factor for sketch geometry
      },
      "sketch": {
        "face_1": { // Use sequential face_1, face_2... (null if unused)
          "loop_1": { // Use sequential loop_1, loop_2... (null if unused)
            "circle_1": { // Use sequential circle_1, circle_2...
              "Center": [0.0, 0.0], // X,Y coordinates
              "Radius": 0.0
            },
            "arc_1": { // Use sequential arc_1, arc_2...
              "Start Point": [0.0, 0.0],
              "End Point": [0.0, 0.0],
              "Mid Point": [0.0, 0.0]
            },
            "line_1": { // Use sequential line_1, line_2...
              "Start Point": [0.0, 0.0],
              "End Point": [0.0, 0.0]
            }
          }
          // ... (other geometric elements as null/none)
        }
        // ... (other loops as null/none)
      }
      // ... (other faces as null/none)
    },
    "part_2": null, // Maintain sequential numbering even for null parts
    // ... (additional parts)
  }
}
```

- STRICT RULES:
- OUTPUT ONLY RAW JSON (no formatting/text/comments/explanations)
  - NEVER COPY INSTRUCTIONAL TEXT FROM JSON SCHEMA EXAMPLES
  - ALL numbers as floats (0.0 not 0)
  - ALLOWED OPERATIONS: NewBodyFeatureOperation/JoinFeatureOperation/CutFeatureOperation/IntersectFeatureOperation
  - GEOMETRY REQUIREMENTS (these are the only available primitives):
    - Circles: Center[X,Y] + Radius
    - Arcs: Start[X,Y] + End[X,Y] + Mid[X,Y]
    - Lines: Start[X,Y] + End[X,Y]
  - ENFORCE part\_1, part\_2... sequence (include nulls)
  - NO NEW FIELDS

## User Message

Begin by creating a solid cylinder with a diameter of 0.4167 and a height of 0.3333. On the top face of the cylinder, sketch a circle centered at (0.2083, 0.2083) with a radius of 0.2083. Inside this circle, define a closed loop comprised of two horizontal lines and an arc: draw the first line from (0.1383, 0.1176) to (0.1994, 0.1176), the second line from (0.1994, 0.1176) to (0.2783, 0.1176), and connect the end points of these lines back to the starting point with an arc that has its midpoint at (0.2083, 0.3229), forming a segment that cuts across the base of the circle. Extrude this internal profile fully through the cylinder to create a cylindrical hole with a flat chord across its lower portion as defined by the lines and arc, resulting in a cylinder with a partial circular cutout running through its center.