CG 1ª Entrega

09/10/2018

Grupo 21

Baltasar Dinis A89416

Pedro Pires

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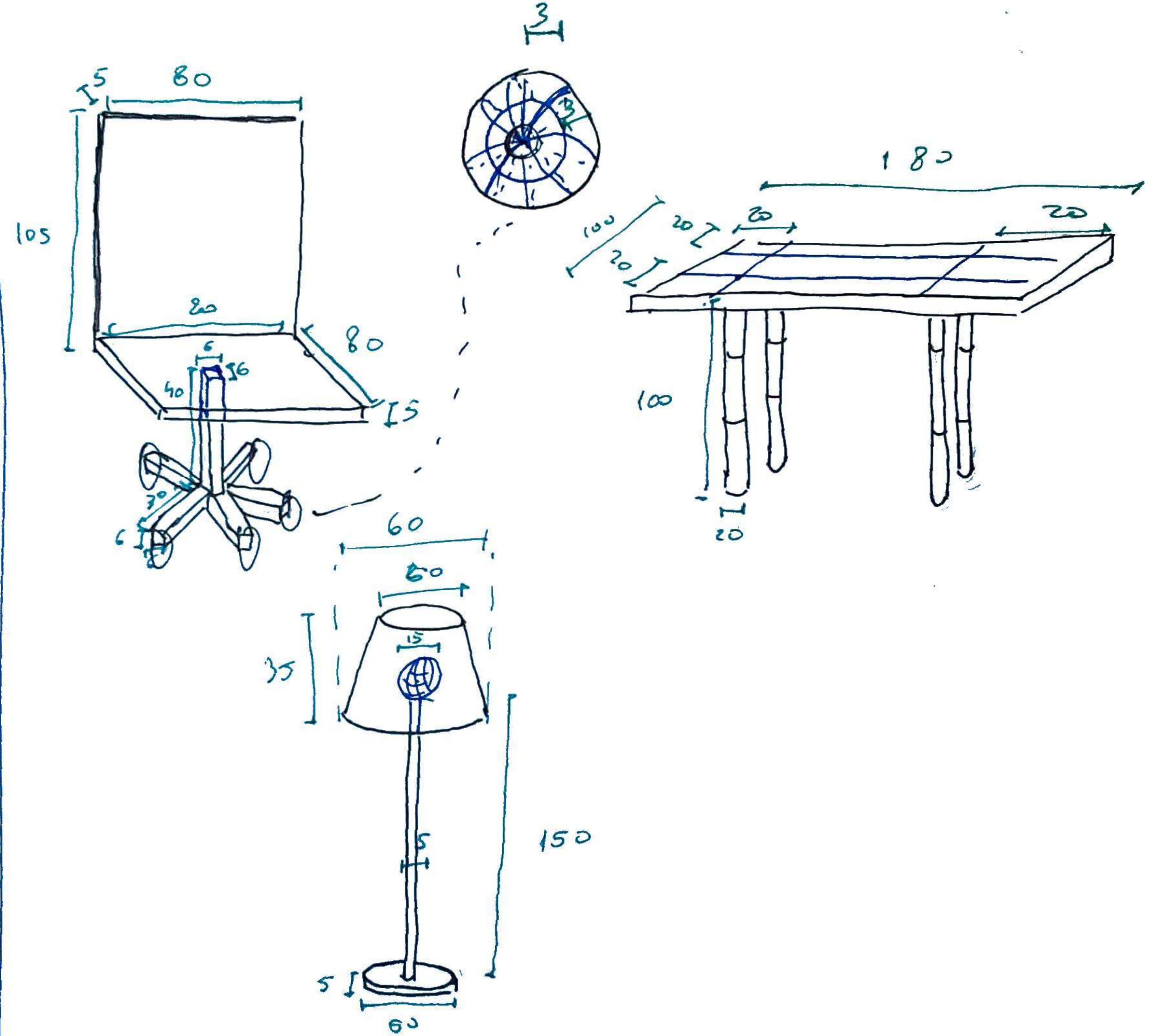
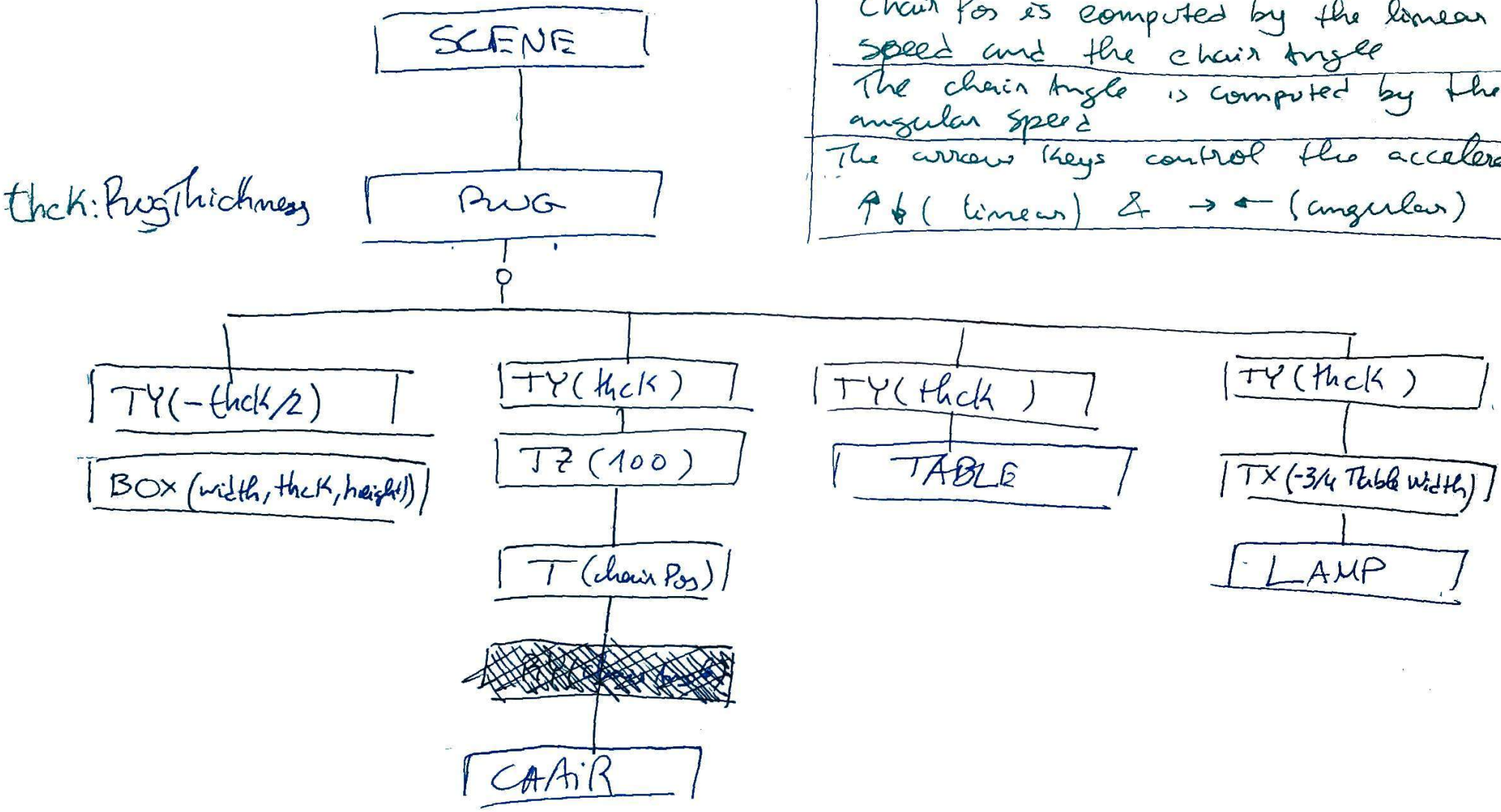
1. Esboços
2. Grafo de Cena: Cena Geral & Tapete
3. Grafo de Cena: Lâmpada
4. Grafo de Cena: Mesa
5. Grafo de Cena: Cadeira
6. Grafo de Cena: Perna da Cadeira



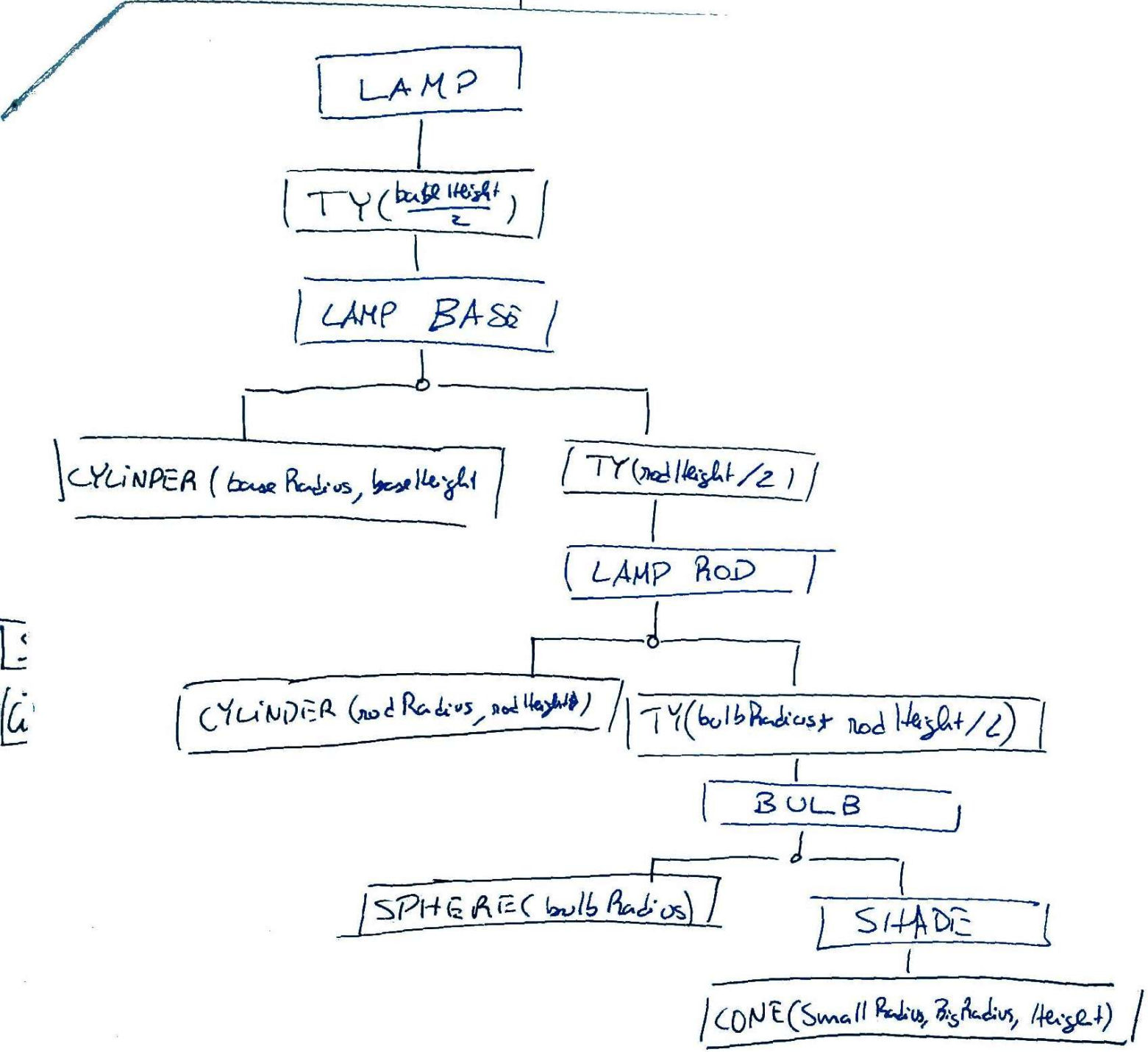


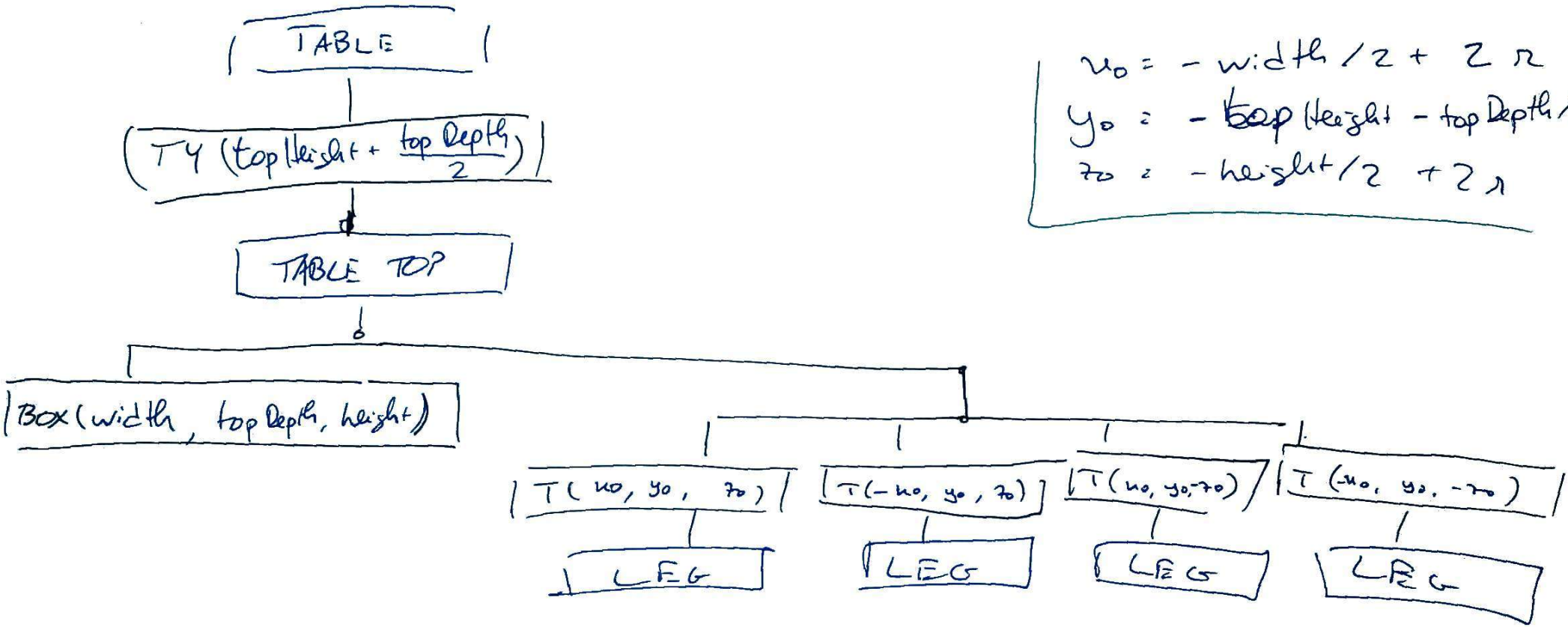
chairPos is computed by the linear speed and the chair angle

The chair angle is computed by the angular speed

The arrows keys control the accelerations:

↑ ↓ (linear) & → ← (angular)

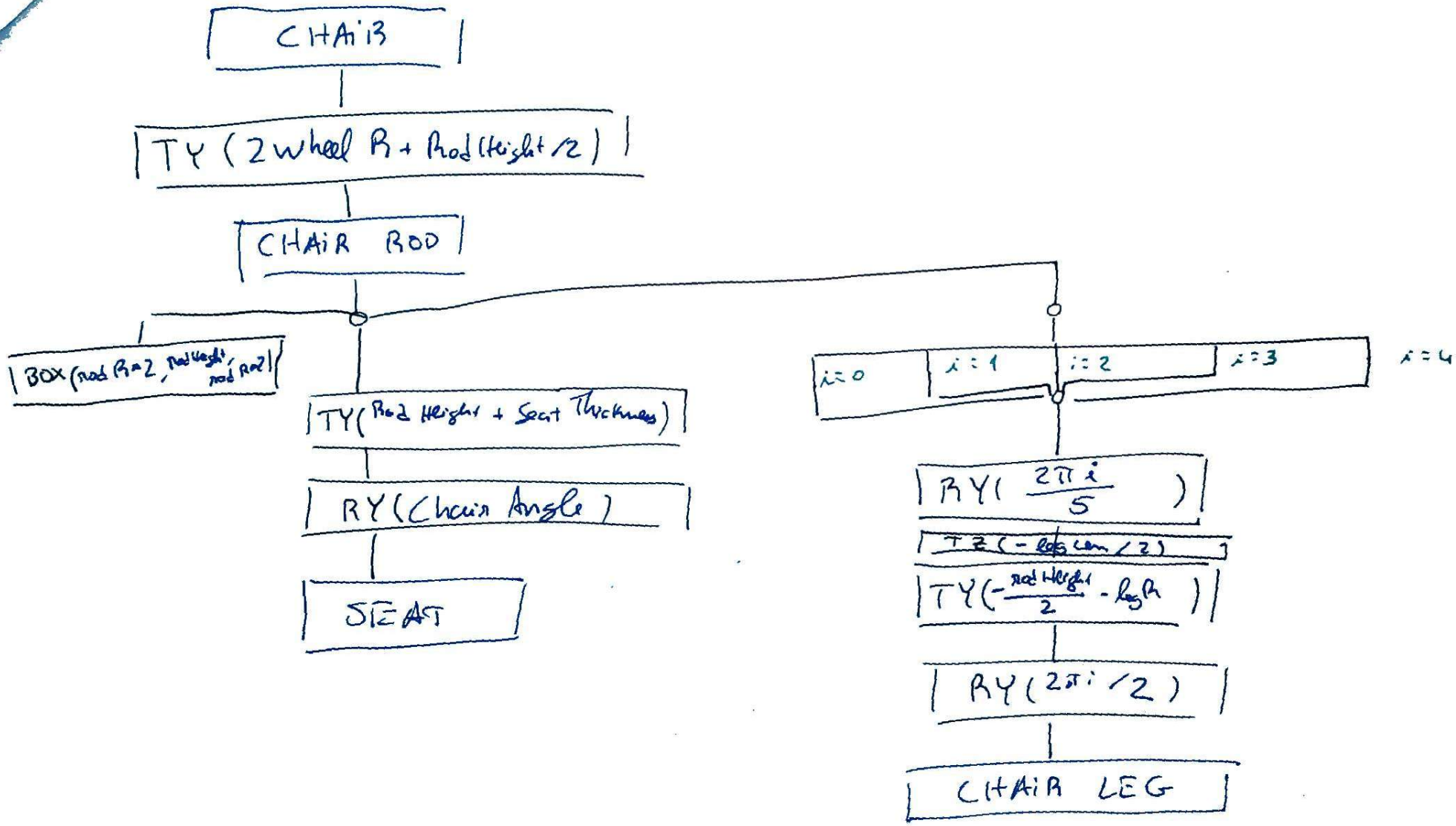

LAMP
TY(base Height/2)
LAMP BASE
CYLINPER (base Radius, base Height
TY(rod Height/2)
LAMP ROD
CYLINDER (rod Radius, rod Height)
TY(bulb Radius+ rod Height/2)
BULB
SPHERE(bulb Radius)
SHADE
CONE(Small Radius, Big Radius, Height)

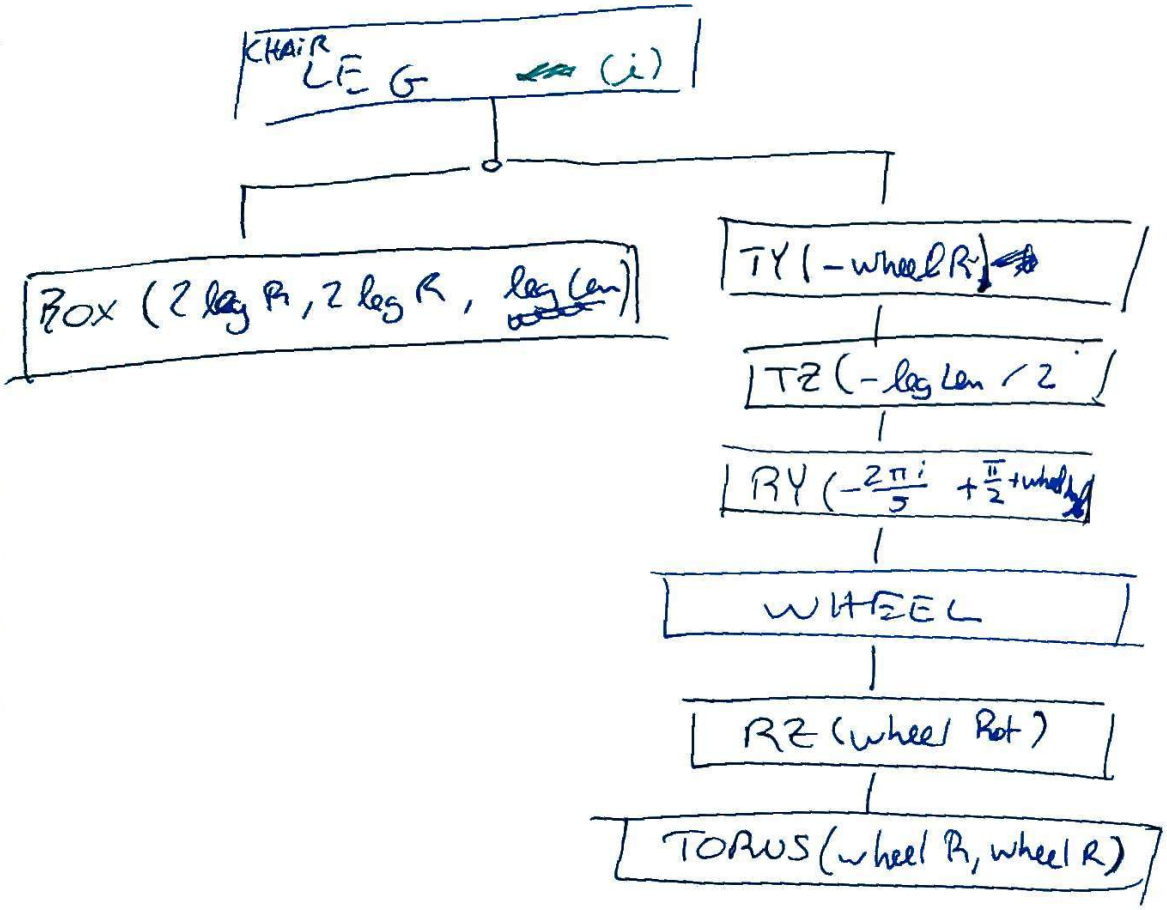


$x_0 = -width/2 + 2r$

$y_0 = -topHeight - topDepth/2$

$z_0 = -height/2 + 2r$


CHAIR
TY (2wheel R + Rod Height /2)
CHAIR ROD
BOX (rod R*2, Rod Height, rod R*2)
TY(Rod Height + Seat Thickness)
RY(Chair Angle)
SEAT
i=0
i=1
i=2
i=3
i=4
RY(2πi / 5)
TZ(- leg Len / 2)
TY(- Rod Height / 2 - leg R)
RY(2πi / 2)
CHAIR LEG



wheel Angle is an angle computed from the Chair Angle & the linear Speed. whenever there is linear speed the difference between the Chair Angle & wheel Angle is calculated and adjusted based on the ratio between the linear Speed and the top Speed. That adjusted step is then added to the wheel Angle.

wheel Rot is an angle that is incremented based on the linear Speed.