## Render3D + colors: Dict + textures: Dict - \_\_scene: vpython::scene \_\_ball\_radius: float \_\_ball\_position: vpython::vector - \_\_\_ball: vpython::sphere x degree: float \_\_y\_degree: float - \_\_axis\_x: vpython::vector \_\_axis\_y: vpython::vector \_\_labyrinth: vpython::compound - \_\_init\_\_(geometry: Geometry, scene\_width=800, scene\_height=600, scene\_range=20, ball\_position=None: np::float32[2]) \_\_render\_scene(geometry: Geometry) \_\_render\_box(geometry: Geometry) - \_\_render\_field(geometry: Geometry) \_\_render\_ball(x: float, y: float) + ball visibility(visible: boolean) + move\_ball(x: float, y: float) + rotate\_by(x\_degree=None: float, y\_degree=None: float) + rotate\_to(x\_degree=None: float, y\_degree=None: float) + get\_x\_rad() + get\_y\_rad() 0..1 Geometry initializes Layout LabyrinthEnv LabLayouts::Geometry **BallPhysics** - position: np::float32[2] - \_\_velocity: np::float32[2] - x rad: float - \_\_y\_rad: float - \_\_5\_7g: float urr: float · \_\_urr\_edge: float - \_\_geometry: Geometry - corners: list + dt: float + is\_ball\_in\_hole: boolean - \_\_init\_\_(geometry: Geometry, dt: float) - \_\_init\_corners() - \_\_step(x\_rad: float, y\_rad: float) - \_\_detection\_and\_process\_collision() - detect ball in hole() + get\_velocity() + set\_position(position: np::float32[2]) + reset(position: np::float32[2]) + step(x\_rad: float, y\_rad: float, number\_steps=1: int, position=None: np::float32[2])