Phase 1

1. communication
2. state machine
3. hardware + HAL (example : turnLight(GREEN, traficLightNo) , isCarSensorNo3On())
4. log + configure + thread & IPC tools (mutex, sem)

Phase 2

1. Msgs types from each Moudle:
   - OAM → Control & Emulation : start/end/pause
   - Control & Emulation → OAM : ack
   - Emulation → Control : events (sensors + crash\police)
   - OAM → Emulation : crash\polise

2. Control :
   - Listening to events from world emulation
   - Listening to status changes from OEM
   - major state machine : states – off , police , crash , normal , pause
   - secondary states machine on normal, police, pause
   - sending traffic lights status to OEM every second

3. Emulation :
   - Listening to status changes from OEM
   - generate random events and send to Control
   - send police/crash to Control when receiving from OEM
   - state machine : off , pause (including police & crash) , normal
   - controlling and reading sensors and traffic lights through HAL

4. OAM :
   - sending statuses to Control and Emulation : request → ack from both → start
   - display traffic lights current status (received from control)