

Smart Home System (Rules)

hasPresence(?p, "Yes") -> 'TELL 2, 4, hasPresence'(?p, "Yes")

hasPresence(?p, "Yes") -> 'TELL 2, 9, hasPresence'(?p, "Yes")

PresenceDetector(?p), hasLocation(?p, ?loc), hasTemperature(?tmp, "Hot") -> 'TELL 1, 3, hasTemperature'(?tmp, "Hot")

PID(?pid), Person(?p), hasPersonID(?p, ?pid) -> Residents(?p)

hasResidentPerson(?pid, "No") -> 'TELL 7, 9, hasResidentPerson'(?pid, "No")

hasPresence(?p, "Yes") -> 'TELL 2, 3, hasPresence'(?p, "Yes")

Current_Location(?loc), hasPresence(?p, "Yes") -> hasLocation(?p, ?loc)

DetectImage(?p, ?img) -> 'TELL 7, 9, DetectImage'(?p, ?img)

'TELL 2, 4, hasPresence'(?p, "Yes") -> hasPresence(?p, "Yes")

'TELL 8, 2, hasPresence'(?p, "Yes") -> hasPresence(?p, "Yes")

hasLocation(?p, ?loc) -> 'TELL 8, 1, hasLocation'(?p, ?loc)

'TELL 7, 9, hasResidentPerson'(?pid, "No") -> hasResidentPerson(?pid, "No")

Temperature(?tmp), lessThan(?tmp, 15) -> hasTemperature(?tmp, "Cold")

Person(?p), PresenceDetector(?p) -> hasPresence(?p, "Yes")

'TELL 6, 9, BurglarAlarm'(?p, "Honk") -> BurglarAlarm(?p "Honk")

'TELL 2, 9, hasPresence'(?p, "Yes") -> hasPresence(?p, "Yes")

hasPresence(?p, "Yes"), hasResidentPerson(?p, "No") -> BurglarAlarm(?p "Honk")

'TELL 2, 3, hasPresence'(?p, "Yes") -> hasPresence(?p, "Yes")

'TELL 7, 9, DetectImage'(?img, ?loc) -> DetectImage(?img, ?loc)

Person(?p), AuthorizedImage(?p, ?img), DetectImage(?p, ?img), hasAuthorizedPerson(?p, ?apid)
-> Authorized_Persons(?p)

Temperature(?tmp), greaterThan(?tmp, 15), lessThan(?tmp, 28) -> hasTemperature(?tmp, "Normal")

'TELL 1, 3, hasTemperature'(?tmp, "Hot") -> PresenceDetector(?p), hasLocation(?p, ?loc),
hasTemperature(?tmp, "Hot")

'TELL 8, 9, hasLocation'(?p, ?loc) -> hasLocation(?p, ?loc)

BurglarAlarm(?p "Honk") -> 'TELL 6, 9, BurglarAlarm'(?p, "Honk")

hasLocation(?p, ?loc) -> 'TELL 8, 2, hasLocation'(?p, ?loc)

FireAlarm(?f), hasFireDetected(?f, "Yes") -> FireAlarm(?f"Honk")

hasLocation(?p, ?loc) -> 'TELL 8, 9, hasLocation'(?p, ?loc)

hasLocation(?p, ?loc), hasPresence(?p, "Yes") -> TurnLight(?p, "On")

Controller(?con), DetectImage(?img, ?loc), NoticeSuspiciousPerson(?susp, "Yes") ->
SuspiciousPersonDetectedAtLocation(?susp, ?loc)

hasLocation(?p, ?loc) -> 'TELL 8, 4, hasLocation'(?p, ?loc)

hasPresence(?p, "Yes") -> 'TELL 8, 2, hasPresence'(?p, "Yes")

Temperature(?tmp), greaterThan(?tmp, 28) -> hasTemperature(?tmp, "Hot")

'TELL 5, 9, FireAlarm'(?f, "Honk") -> FireAlarm(?f"Honk")

Person(?p), AuthorizedImage(?p, ?img), DetectImage(?p, ?img), hasResidentPerson(?p, ?pid) ->
Residents(?p)

'TELL 8, 1, hasLocation'(?p, ?loc) -> Person(?p), PresenceDetector(?p), hasLocation(?p, ?loc)

'TELL 7, 9, hasAuthorizedPerson'(?apid, "No") -> hasAuthorizedPerson(?apid, "No")

'TELL 8, 4, hasLocation'(?p, ?loc) -> Person(?p), PresenceDetector(?p), hasLocation(?p, ?loc)

'TELL 8, 2, hasLocation'(?p, ?loc) -> PresenceDetector(?p), hasLocation(?p, ?loc)

hasFireDetected(?f, "Honk") -> 'TELL 5, 9, FireAlarm'(?f, "Honk")

hasLocation(?p, ?loc), hasPresence(?p, "Yes"), hasTemperature(?tmp, "Hot") -> TurnAC(?loc, "On")

hasAuthorizedPerson(?apid, "No") -> 'TELL 7, 9, hasAuthorizedPerson'(?apid, "No")