

Real Time Group



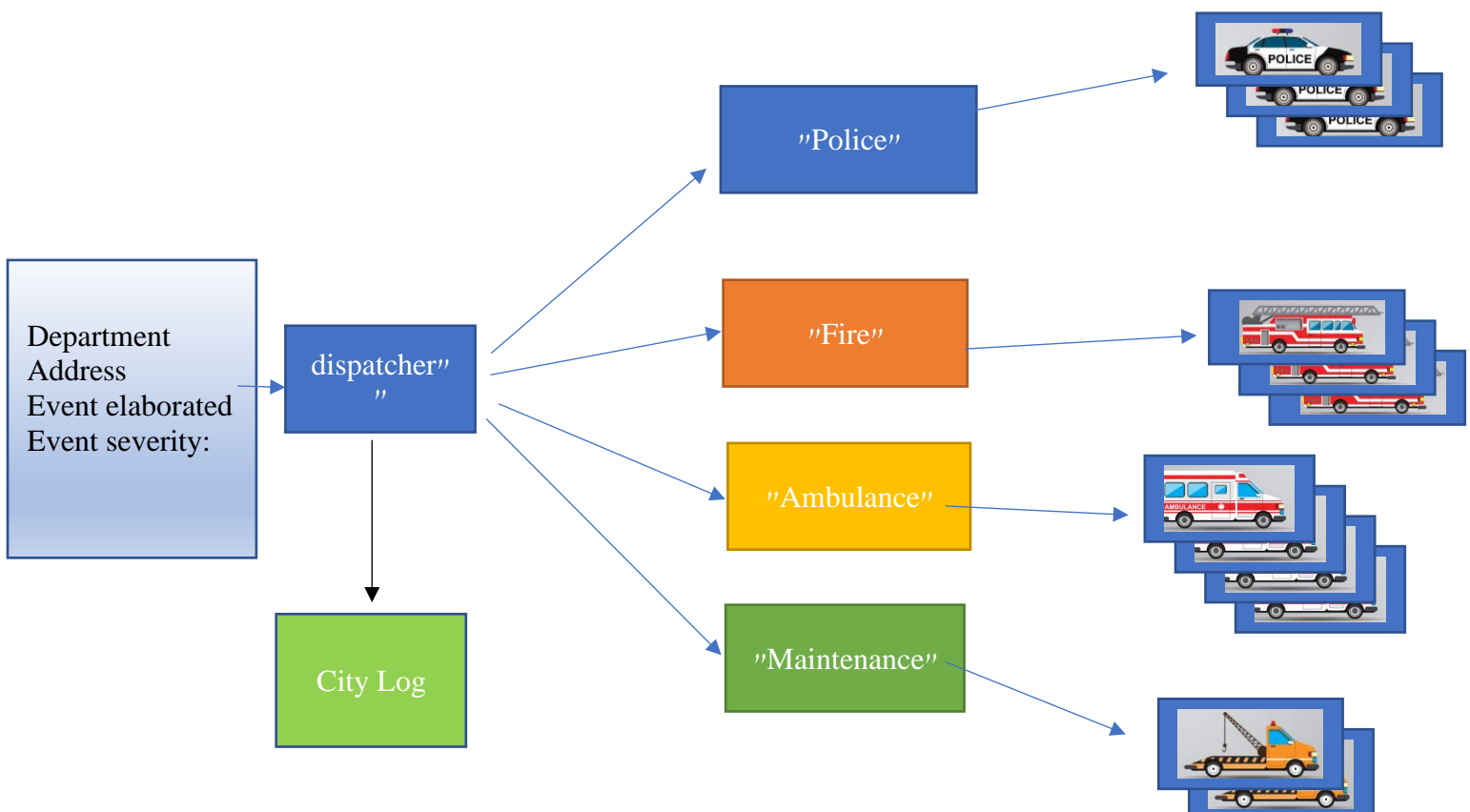
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Embedded Linux Project -1

Project: City dispatch simulation

For your half course project, you need to simulate a "City Dispatch" unit in which:

1. Different Events are inserted into the centralized city "dispatcher data base".
and are saved at the dispatcher in some sort of job-queue.
2. Each event has the following structure:
 - a. Handling department – 8 bit variable
 - b. Address (house number and street name) – array of 100 characters
 - c. The event elaborated - array of 100 characters
 - d. Event severity:
 - i. Critical
 - ii. Warning
 - iii. Notice
3. Events should be read one by one from the data base and based on the "department field" sent to the appropriate department (have a look at the figure below)
4. Use the "socat" utility in order to simulate the connection to the departments
 - a. Please choose the best "data base" for the incoming events and implement it.
 - b. please implement the process reading the events from data base and sending them to the appropriate department (using socat).
 - c. Please log (save to file) all incoming and outgoing events.



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5. Another process should be used for inserting new events into the job-queue.
 - a. Implement the above process, it should send an event every second.
 - b. Please keep track of how many events are send (for each department).
6. Each department should be running a process that will do the following
 - a. Receive the incoming event
 - b. Create a new child process and Send it the event for handling (just print "event processed" and sleep for couple of seconds).
 - c. After waking up, child process should notify the parent if the event processing was successful or not .
 - d. Each department should have a track of how many events have been processed.

GOOD LUCK