Use Case: Process Calls

Actor	System
1. Provides Scenario File with 0 or more Call Records and specifies 1 or more Ambulances.	2. Reads the Call Records from Scenario File into an incoming Call Queue. Generates unique Ambulances. Makes note of the first Call Record Received Time as current time.
	3. Checks Call Queue for Call Record. If Call Queue empty, [RULE 1][ALT-1]
	4. If Call Queue not empty, polls all Call Records that have Received Time equal to current time from Call Queue into Call Priority Queue.
	5. Checks for available Ambulance. If Ambulance available, and Call Priority Queue not empty, poll Call Priority Queue and assign Ambulance to Call Record, Repeat step 5. Else, continue to Step 6.
	6. Advance current time by 1 minute. Continue at Step 3.
	7. [ALT-1] (not complete) Continue at Step 5. (complete) Return Call Records.
[RULE 1]	Process Calls Complete if: ● Call Queue empty ● Call Priority Queue empty ● All Ambulances are available

Provides scenario file and number of Ambulances

Process Calls Interface

Read File

Scenario File

Call Queue

Generate Ambulances

Ambulance

Poll Call Queue into Priority Queue

Call Queue

Call Priority Queue

Call Record

Ambulance

Check Available Ambulance

Advance Time

Ambulance

Assign Ambulance To Call

Call Record

Return Call Records

Check all Ambulances Available

Ambulance

Check Priority Queue Empty

Call Priority Queue

Check Call Queue Empty

Call Queue

Check Process Calls Complete