Assignment: Simulation Part 1

Write a python program that uses objects to simulate a physician's office as an event system. This system will help us answer questions like 'if a clinic receives 20 patients per hour, how many doctors does it need to avoid additional delay?'

Consider the following prompt:

"Patients arrive in a waiting room, and then are triaged by a triage nurse. They then proceed to one of the six ‘exam rooms’ where they can see a physician for a random number of minutes (15-20). If the exam rooms are all full, they will go to the waiting area instead. When done, they proceed to an exit. Each cycle of the simulation represents 1 minute, and transitions between areas are instant."

Answer the following questions to help:

How (what programming structure) do we need to use to model the different components of the simulation:

* Waiting room
* Exam room
* Patient
* Nurse
* Physician

Patients can be in the waiting area twice: once when they arrive, and after visiting with a triage nurse. How can we tell them apart?  
  
Write a python program that models the necessary data for the entire simulation. You should include classes for the physician, nurse, and patient, as well as structures for the rest of the doctor's office.

Submit a link to your homework on github.