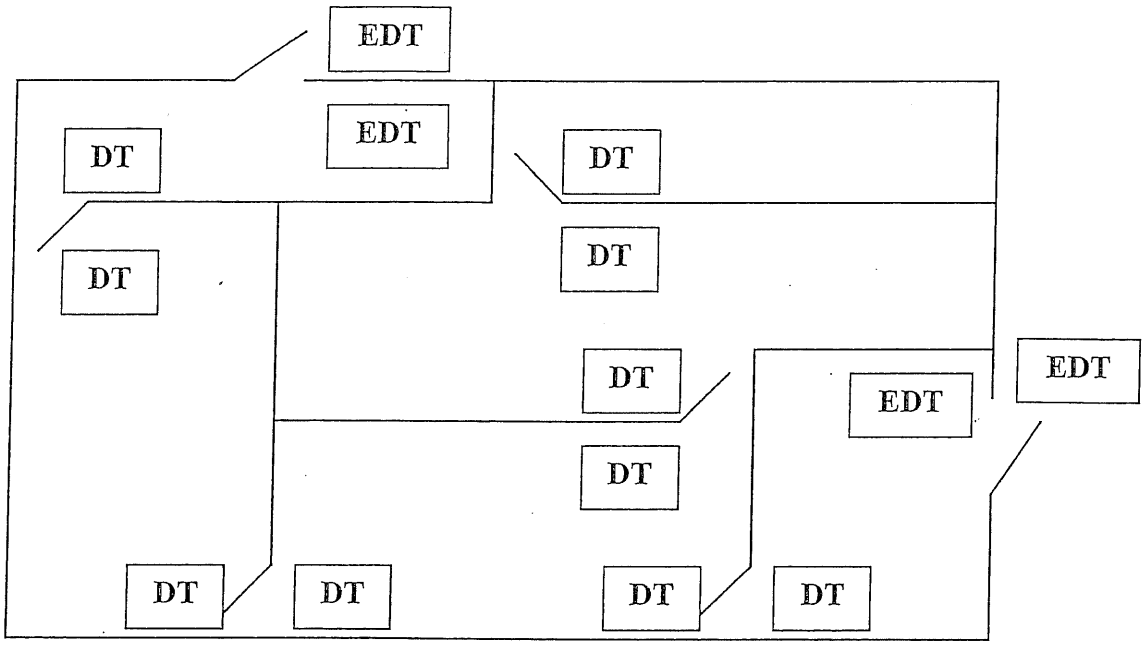
USE CASE: ACCESS CONTROL SYSTEM

The following figure shows a building floor that needs an "Access Control System" (ACS). Each internal door in the floor is equipped with a "Door Terminal" (DT) which consists of a card reader, an alphanumeric keyboard, and a small display. Every external door is equipped with an "Extended Door Terminal" (EDT) which is a DT plus a microphone.



Every employee uses a card and a 4 digits PIN to access the building or access any room. Visitors (who do not usually access the building) use the EDT to communicate (via the microphone) with somebody in the building who will grant them access using its card and PIN. The system is also used by a security guard and an administrator. The administrator performs maintenance tasks: registering new employees, removing employees, and modifying information about employees. Moreover, the system is used to make sure that the security guard follows every night its main assignment which consists of checking every door and room of the floor. The system generates every night a schedule for the security guard (list of ordered rooms to visit) and the security guard must follow the schedule using its personal card and PIN to check every door and room in the schedule. Every terminal (DT and EDT) may be used to activate the fire alarm. This can be done by any person and no card nor PIN is required. Finally, the system must record every entry and exit into/from the building of visitors and employees (for visitors their name, address, and visit reason is recorded).

QUESTION: Identify all the actors of this system and obtain a use cases model.

Additional requirement: There is a sensor on each door that triggers an alarm if a door remains open more than 5 minutes.