Noun Extraction:

The door of the garage in an apartment building basement is opened from the outside by means of a magnetic card.  From the inside it is opened by a floor sensor tripped by an exiting car.  There is also a manual unit with open, close, and stop buttons inside the garage.  Sensors in the door frame are tripped when the door reaches the fully closed and fully opened positions.  An optical sensor mounted on the door frame ensures that the doorway is free from obstacles, stopping the door from closing if the light beam is broken.  When the door has been either fully opened or stopped for 1 minute, it automatically starts moving down, provided there is no obstacle.

**Stage 3: Identify all nouns in above Paragraph**

The **door** of the **garage** in an **apartment** **building** **basement** is opened from the outside by means of a **magnetic card**.  From the inside it is opened by a **floor sensor** tripped by an exiting **car**.  There is also a manual unit with open, close, and stop **buttons** inside the **garage**.  **Sensors** in the **door** **frame** are tripped when the **door** reaches the fully closed and fully opened positions.  An **optical sensor** mounted on the **door frame** ensures that the doorway is free from **obstacles**, stopping the **door** from closing if the light beam is broken.  When the door has been either fully opened or stopped for 1 minute, it automatically starts moving down, provided there is no **obstacle**.

**Stage 4- Remove abstract nouns and those outside the problem boundary:**

Nouns outside the boundary: garage, Apartment, Building, Basement, Frame

Abstract Nouns: Obstacles, Sensors, Magnetic card

**Stage 5 step 1- Produce the first cut of a UML class diagram:**

Remaining Nouns : Door and Buttons.

Which leaves two entity classes Door class and Button class

|  |
| --- |
| **Door** |
| Obstacles: Boolean |
| Sensor |
| Opened By ()(Possible values Magnetic card,Sensor or button ) |

|  |
| --- |
| **Button** |
| Open |
| Close |
| Stop |

