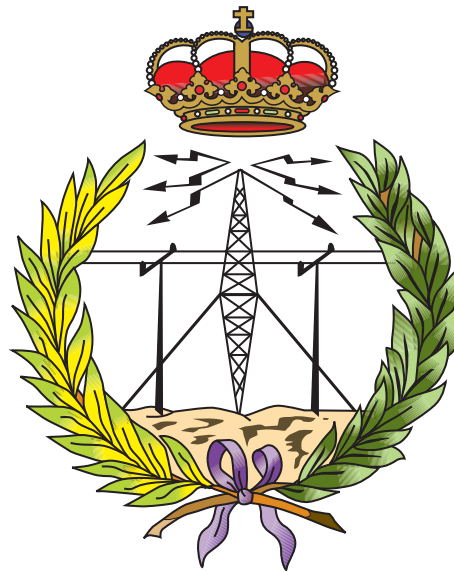TECHNICAL UNIVERSITY OF MADRID

SCHOOL OF TELECOMMUNICATIONS SYSTEMS AND ENGINEERING

## Semester Project

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Smart Lighting

UBIQUITOUS AND SECURE NETWORKS AND SERVICES

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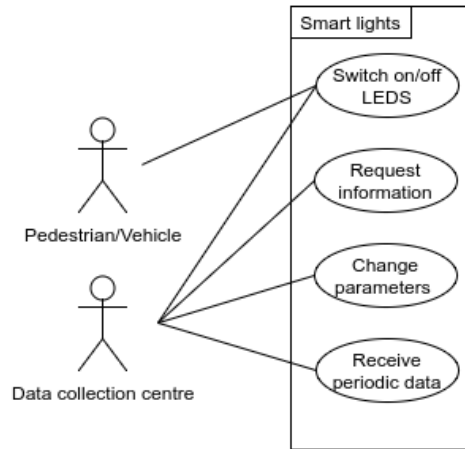
Figure 3.1: General use



Table 3.1: General use

| Name | General use |
|---|---|
| Scope and Objectives | The lights on the lampposts switch on/off depending on the information of the movement and light sensor of the motes (if the light is low and the movement sensor detects something, the lights turn on, otherwise they turn off). The data collection centre receives periodically this data and it is capable to change some parameters or request some information of the motes. |
| Actors | <ul><li>Pedestrians/vehicles</li><li>Data control department of the city</li></ul> |
| Preconditions | <ul><li>The sensor nodes are on</li><li>A pedestrian/vehicle comes/goes away from the node</li></ul> |
| Post-conditions | <ul><li>The lights will turn on/off</li><li>All the measured information will be sent to the city data manager</li></ul> |
| Sequence Description | 1. Obtain measurements of movement, temperature, humidity and light.<br>2. If there is a change in the movement sensor and the light measured is low, toggle the lights on the node.<br>3. Send the status of light to the data control department of the city. |
| Exceptions | The node is not able to communicate with the data control department of the city. |