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| Assignment 1 | | Project Summary | |
| Course | | Practical Robotics and Smart Things - 2020 | |
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| Project author | | | |
| № | Pseudonym | | Face-to-face/ online |
| 1 | maya | | face-to-face |

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| Project name | Pet Feeder |

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| 1. Short project description (Business needs and system features) |
| Nowadays IoT is facing great development. Its various applications range in all kind of human activities. The following project concentrates in its use in the everyday life, and more precisely pet care. The idea is to build smart widget that will take care of pet feeding throughout the day while the owner is not home.  The hardware implementation is based on Raspberry Pi 3 (Model B) single board computer, equipped with following sensors:   * *Raspberry Pi camera (v2)* - used to take user’s pictures and send them to the face recognition service; * *PIR motion detector* - activating the camera and the detection;   ICM actuators include:   * Continuous rotation servo – rotating the portion wheel   The ICM has the following main modes of operation:   * *Sleeping mode* – during which the pet feeder is inactive; * *Dog recognition mode* – activated around feeding times and on owner demand; * *Feeding mode* - activated when dog is recognized;     There will also be a mobile application through which the owner can monitor whether the pet has eaten its portion and to manually give additional one.  The main user roles (actors in UML) are:   * *Unregistered User* – his only option is to register; * *Registered User* – can register a pet feeding machine, obtain information about current feeding process and manually feed pet from one of the registered machines; |

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| 1. Main Use Cases / Scenarios | | |
| **Use case name** | **Brief Descriptions** | **Actors Involved** |
| * 1. **Register** | Unregistered user can register in the system through the mobile application. | *Unregistered user* |
| * 1. **Add feeding machine** | *Registered user* can add a feeding machine to configure and monitor. | *Registered user* |
| * 1. **Delete feeding machine** | *Registered user* can remove feeding machines from the ones it has registered. | *Registered user* |
| * 1. **Login** | *Registered user* must log in the system so to identify himself. | *Registered user* |
| * 1. **Manually feed** | *Registered user* can choose to manually feed his pet from some of his registered feeding machines. | *Registered user* |
| * 1. **Set feeding times** | *Registered user* can set how many times and at what hour his pet must be fed. | *Registered user* |