**Sprint Planning**

**Sprint 1**

**Sprint Goal**

The goal of sprint 1 was to finish most of the hardware sensor part and the edge device of the parking system

**Sprint 1 Backlog**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Item | Dependencies | Value (1-20) | Date Needed |
| 1. | Utilizes ultrasonic sensors to detect the presence of vehicle | - | 18 | Sprint 1 |
| 2. | Utilizes RFID readers and tags to identify a specific parking slot for the visitor to park their vehicles | - | 19 | Sprint 1 |
| 3. | Barriers to manage the vehicles from entering and leaving the car park | - | 17 | Sprint 1 |
| 4. | Parking lock to prevent the visitor from disorderly parking | 2 | 16 | Sprint 1 |
| 5. | Image recognition for car plate detection | 2 | 20 | Sprint 1 |
| 6. | Edge Platform for local management | 1,2,3,7 | 14 | Sprint 1 |

**WBS**

**Item 0: Sprint planning (1 hour)**

**Item 1: Utilizes ultrasonic sensors to detect the presence of vehicle (3 hour)**

T1: Hardware wiring (1 hour)

T2: Code the ultrasonic sensor (1 hour)

* Data extraction (30 minutes)
* Data transmission (30 minutes)

T3: Product Testing (1 hour)

**Item 2: Utilizes RFID readers and tags to identify a specific parking slot for the visitor to park their vehicles (4 hours)**

T1: Research (30 minutes)

T2: Connect the RFID readers to the Arduino (1 hour)

T3: Code the RFID tag (2 hour)

* Data extraction (1 hour)
* Data transmission (1 hour)

T4: Testing (30 minutes)

**Item 3: Barriers to manage the vehicles from entering and leaving the car park (3 hour)**

T1: Hardware wiring (1 hour)

T2: Coding (1 hour)

* Data extraction (30 minutes)
* Data transmission (30 minutes)

T3: Product Testing (1 hour)

**Item 4: Parking lock to prevent the visitor from disorderly parking (3 hour)**

T1: Hardware wiring (1hour)

T2: Coding (1 hour)

* Data extraction (30 minutes)
* Data transmission (30 minutes)

T3: Product Testing (1 hour)

**Item 5: Image recognition of car plate detection (5 hour)**

T1: Research (30 minutes)

T2: Hardware wiring (30 minutes)

T3: Coding (3 hours)

* Data extraction (1 hour 30 minutes)
* Data transmission (1 hour 30 minutes)

T4: Product Testing (1 hour)

**Item 6: Edge Platform for local management (13 hour)**

T1: Research (1 hour)

* Python (30 minutes)
* Others (30 minutes)

T2: Coding (11 hours)

* Data receiving (5 hour)
* Data transmission (5 hour)
* Wi-Fi Connectivity (1 hour)

T3: Product Testing (1 hour)

**Total hours we had now: 32 hour / in Trello is 31 hours cause no sprint planning**

