|  |  |  |
| --- | --- | --- |
| Task name | Task periodicity deadline | Task execution time (Assumed) |
| Speed sensor | 5 | 1 ms |
| Door\_sensor | 10 | 1 ms |
| Light switch | 20 | 1 ms |
| Comm manager | 5 | 1 ms |
| CAN module | 5 | 1 ms |

**ECU1**

1. **Task Parameters:**
2. **Hyperperiod:**

Equals the least common factor between the task’s periodicities = 20 ms

1. **CPU load**

ECU1 CPU load = ((4x1) +(2x1) +(1x1) +(4x1) +(4x1))/20= 75%

**ECU2**

1. **Task Parameters:**

|  |  |  |
| --- | --- | --- |
| Task name | Task periodicity deadline | Task execution time (Assumed) |
| CAN module | **5** | **1 ms** |
| Data handler | **5** | **1 ms** |
| Buzzer control | **5** | **1 ms** |
| Lights control | **5** | **1 ms** |

1. **Hyperperiod:**

Equals the least common factor between the task’s periodicities = 5 ms

1. **CPU load**

ECU2 CPU load = ((1x1) +(1x1) +(1x1) +(1x1))/5= 80%

**The system is schedulable**