ECU1 operation

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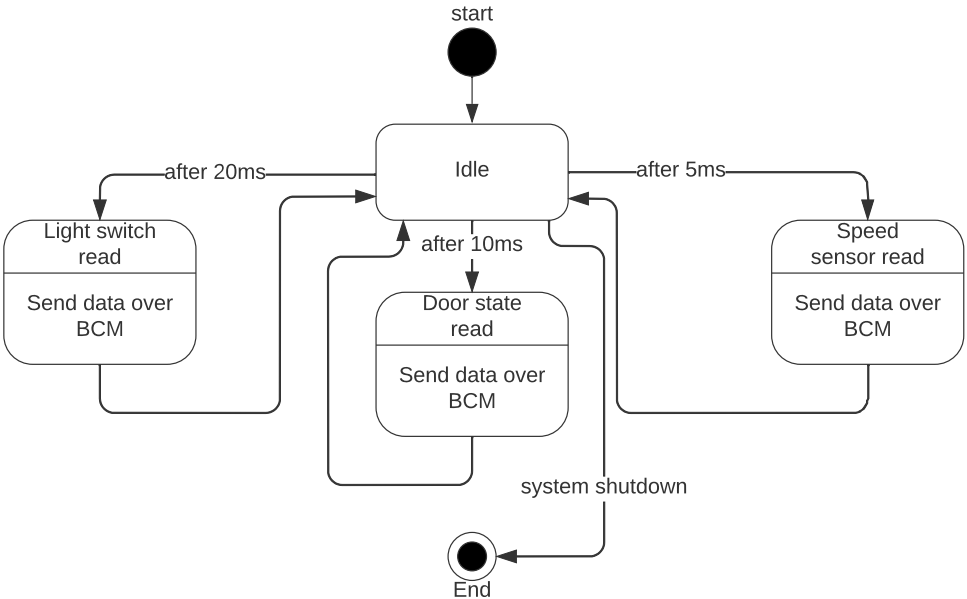

ECU2 operation

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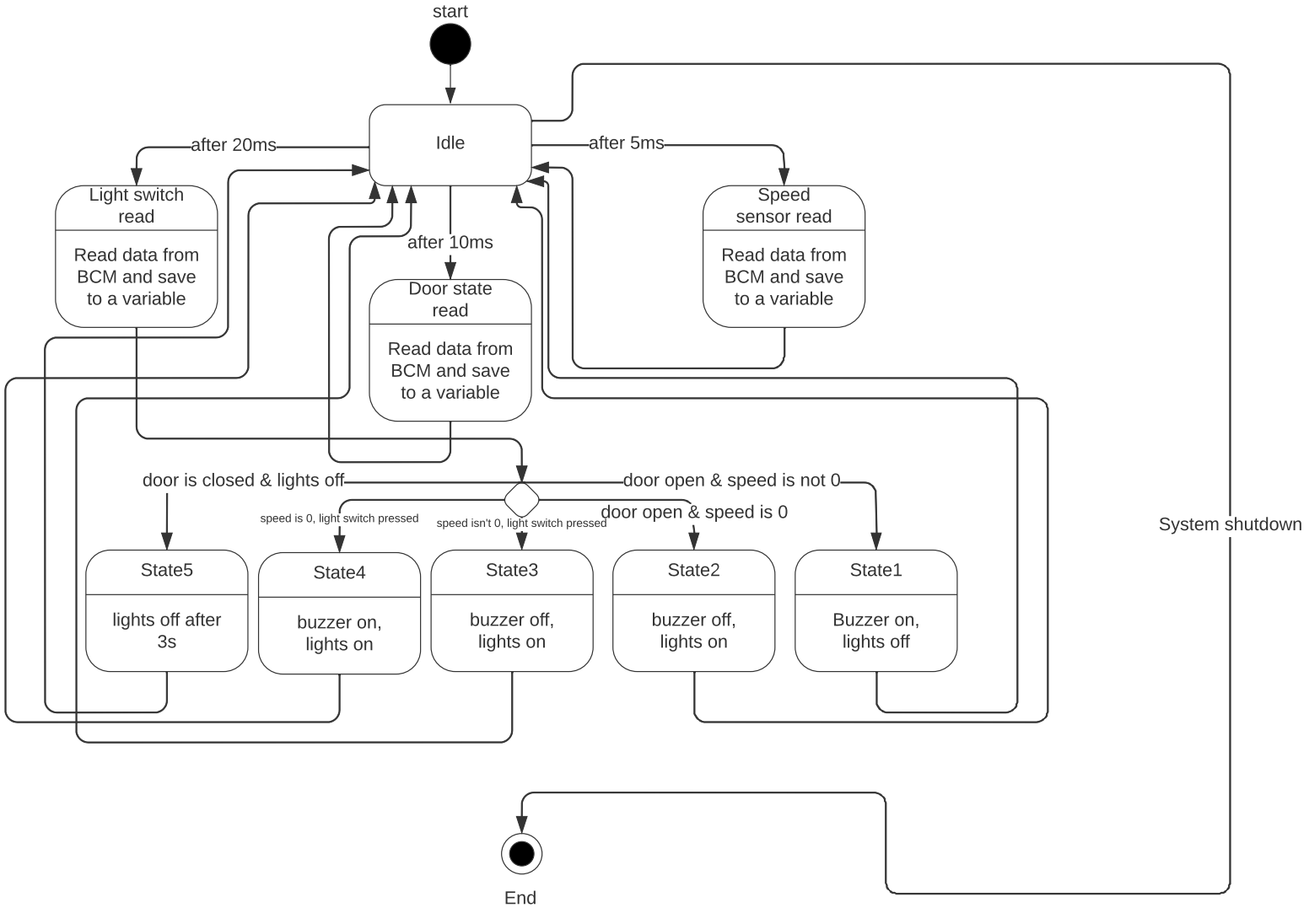

ECU1 components

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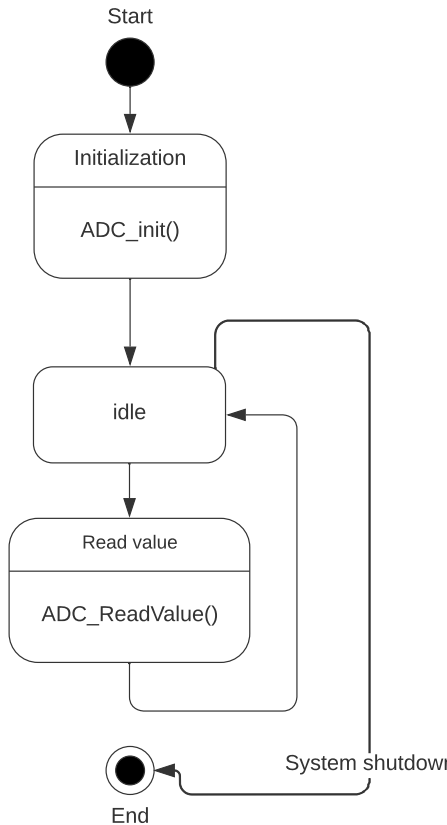
ADC



ECU1 components

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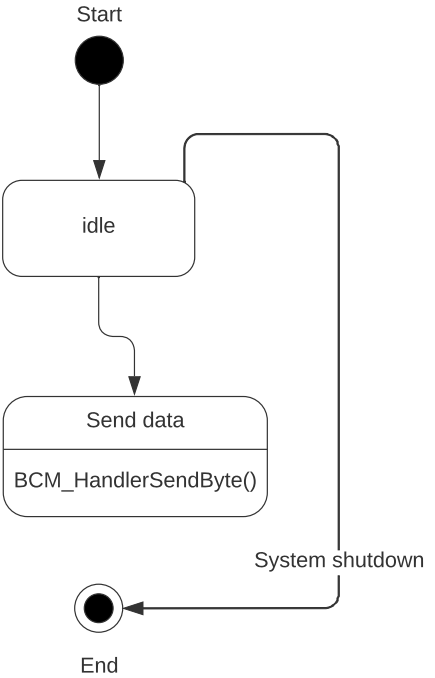
BCM Handler



ECU1 components

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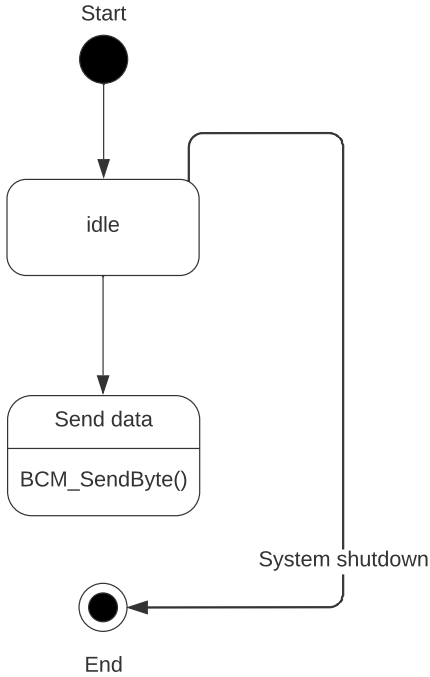
BCM



ECU1 components

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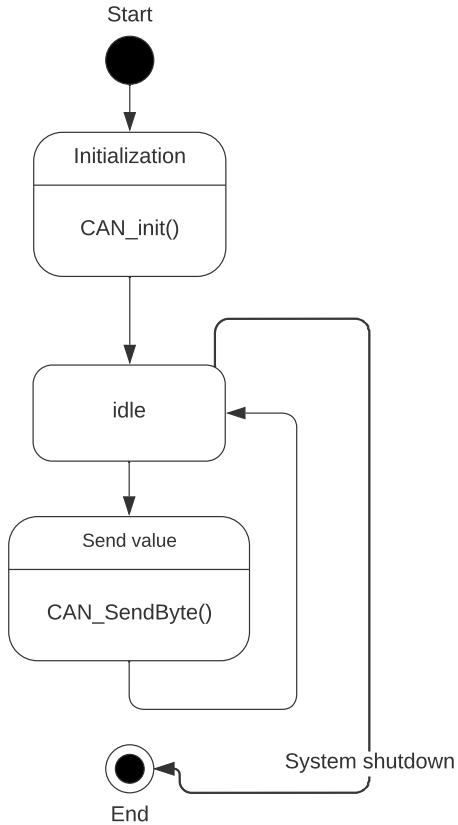
CAN



ECU1 components

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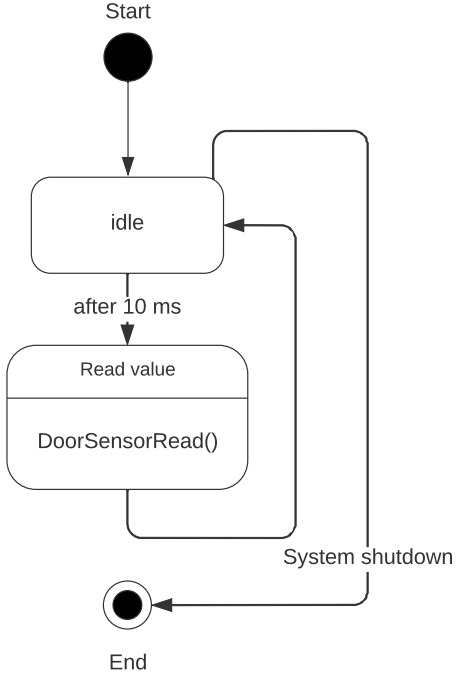
Door sensor



ECU1 components

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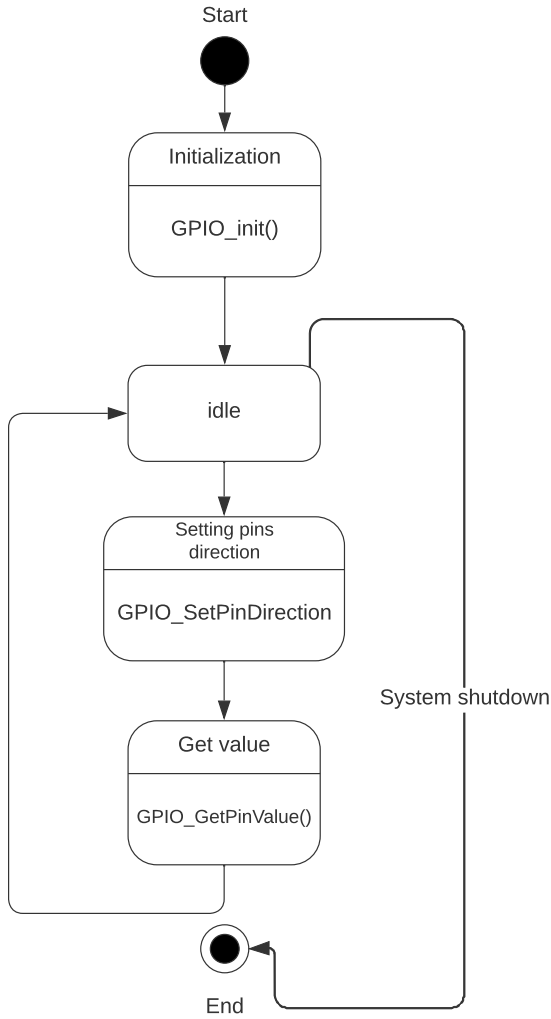
GPIO



ECU1 components

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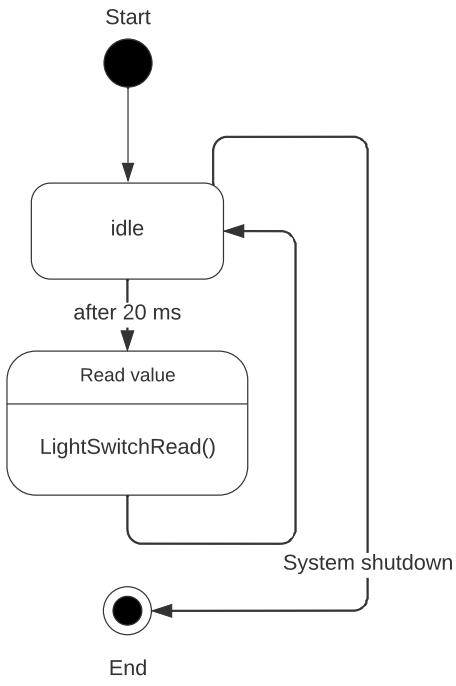
Light switch



ECU1 components

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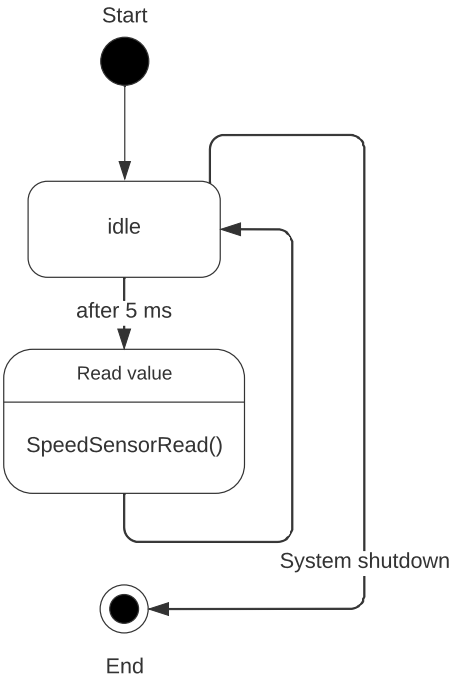
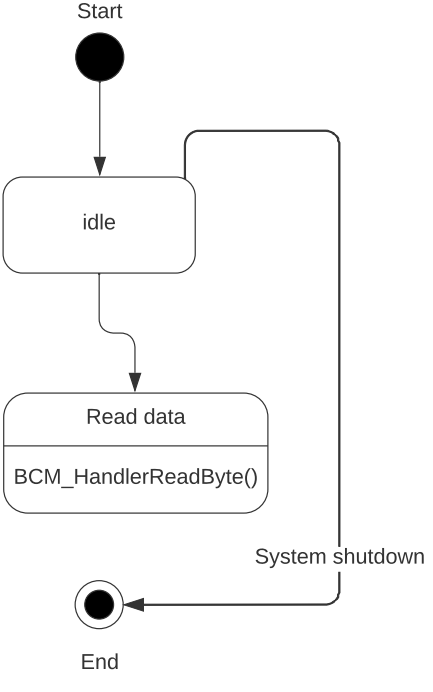
Speed sensor



ECU2 components

Omar Mustafa | September 17, 2022

BCM Handler



ECU2 components

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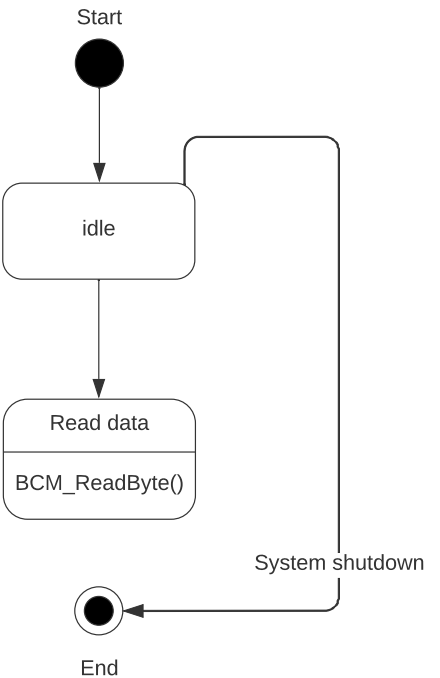
BCM



ECU2 components

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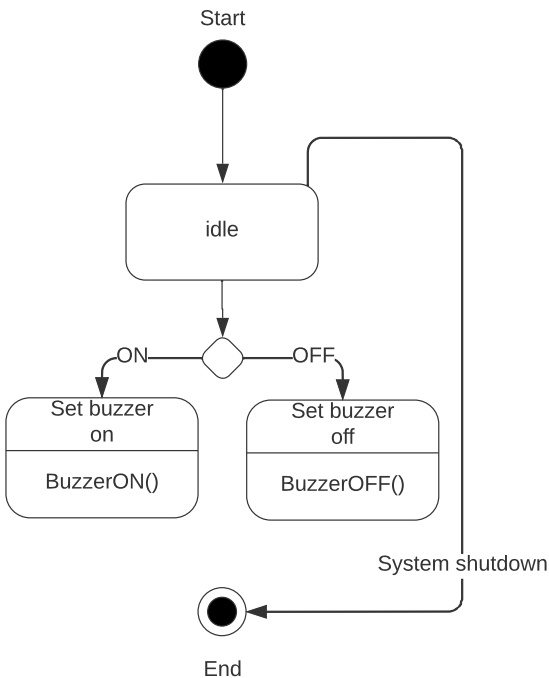
Buzzer



ECU2 components

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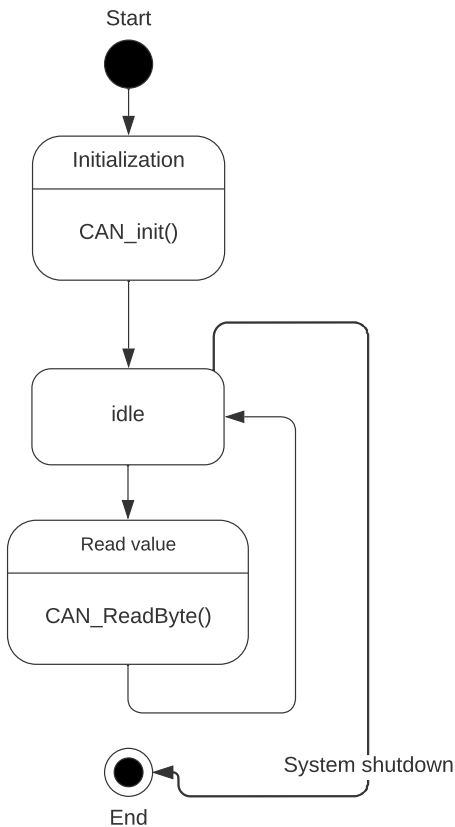
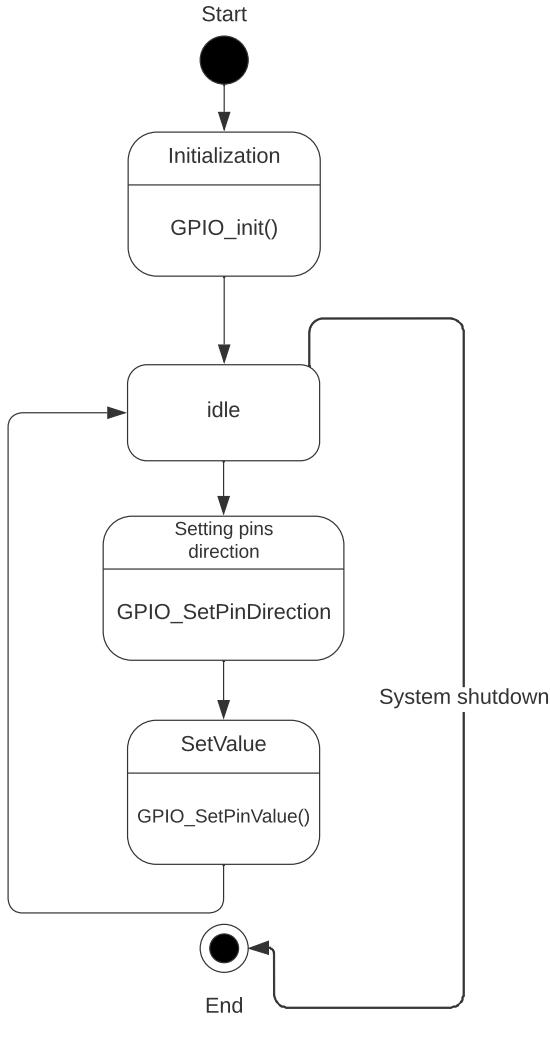
CAN



ECU2 components

Omar Mustafa | September 17, 2022

GPIO



ECU2 components

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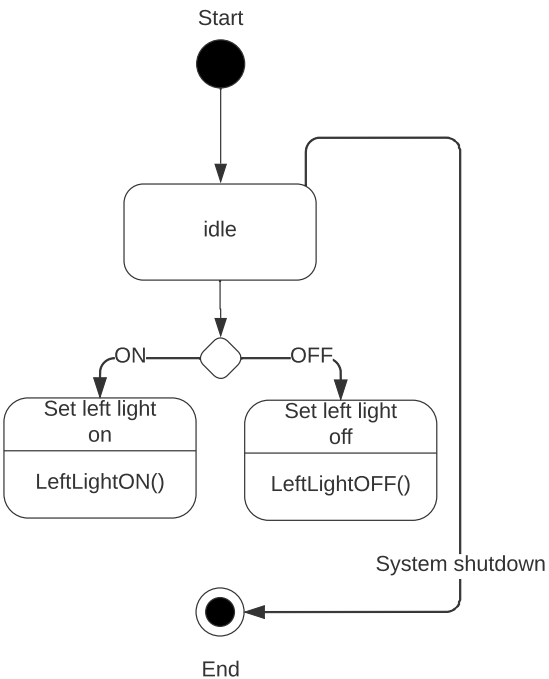
Left light



ECU2 components

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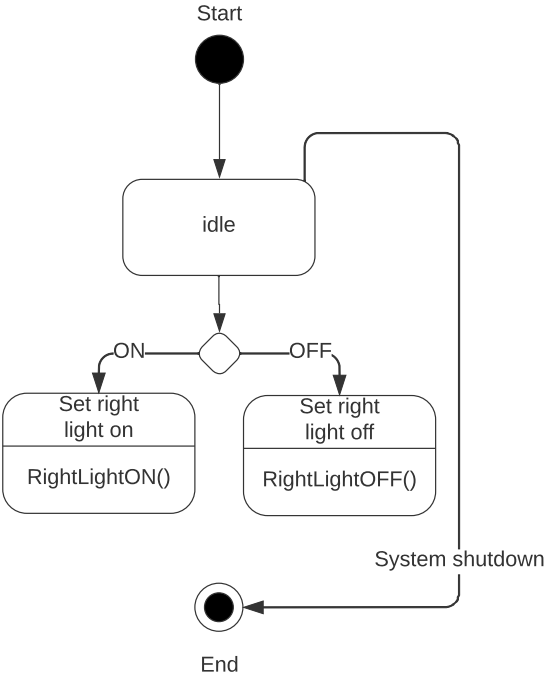
Right light



Sequence diagram for ECU1

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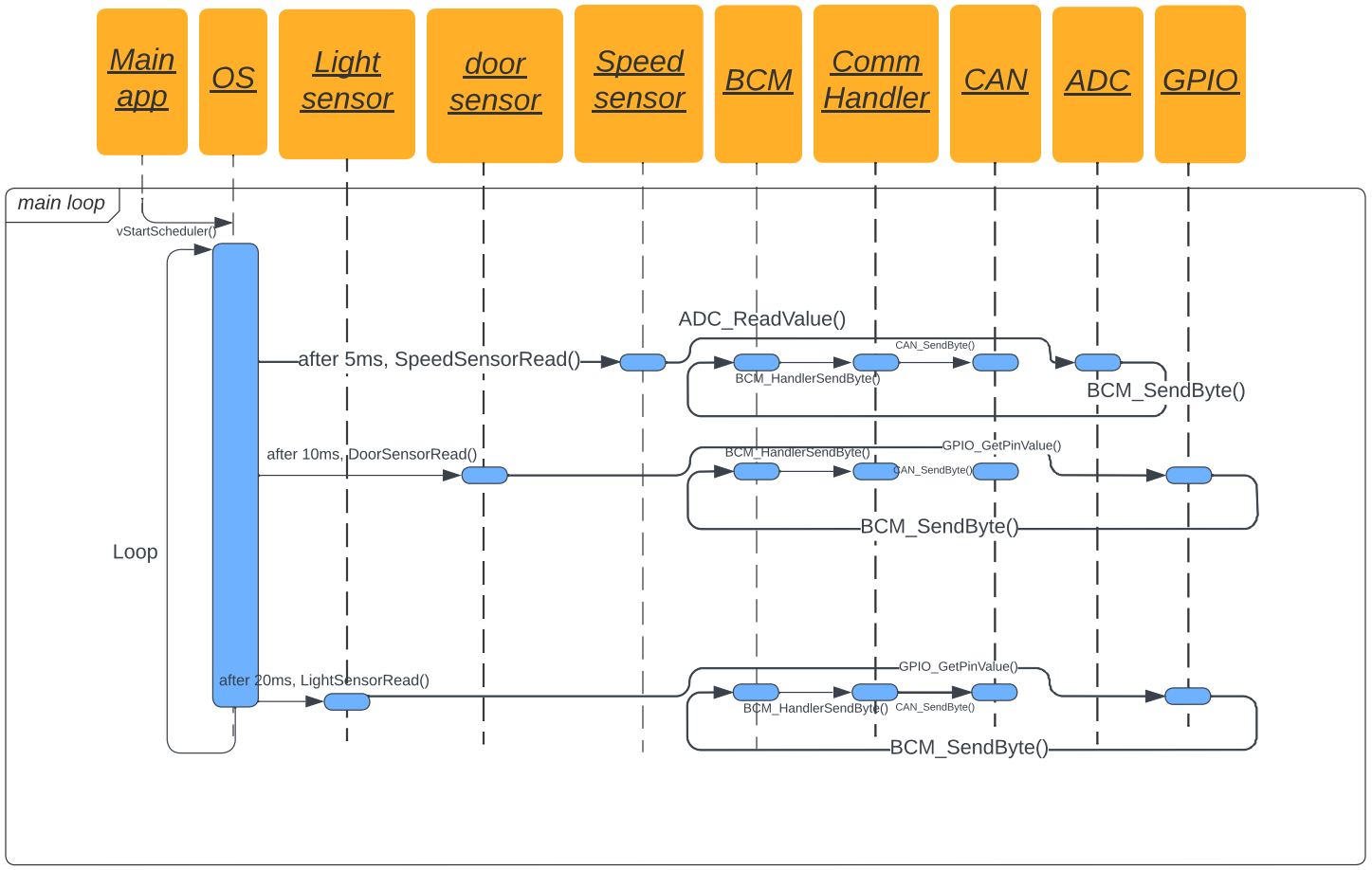

Sequence diagram for ECU2

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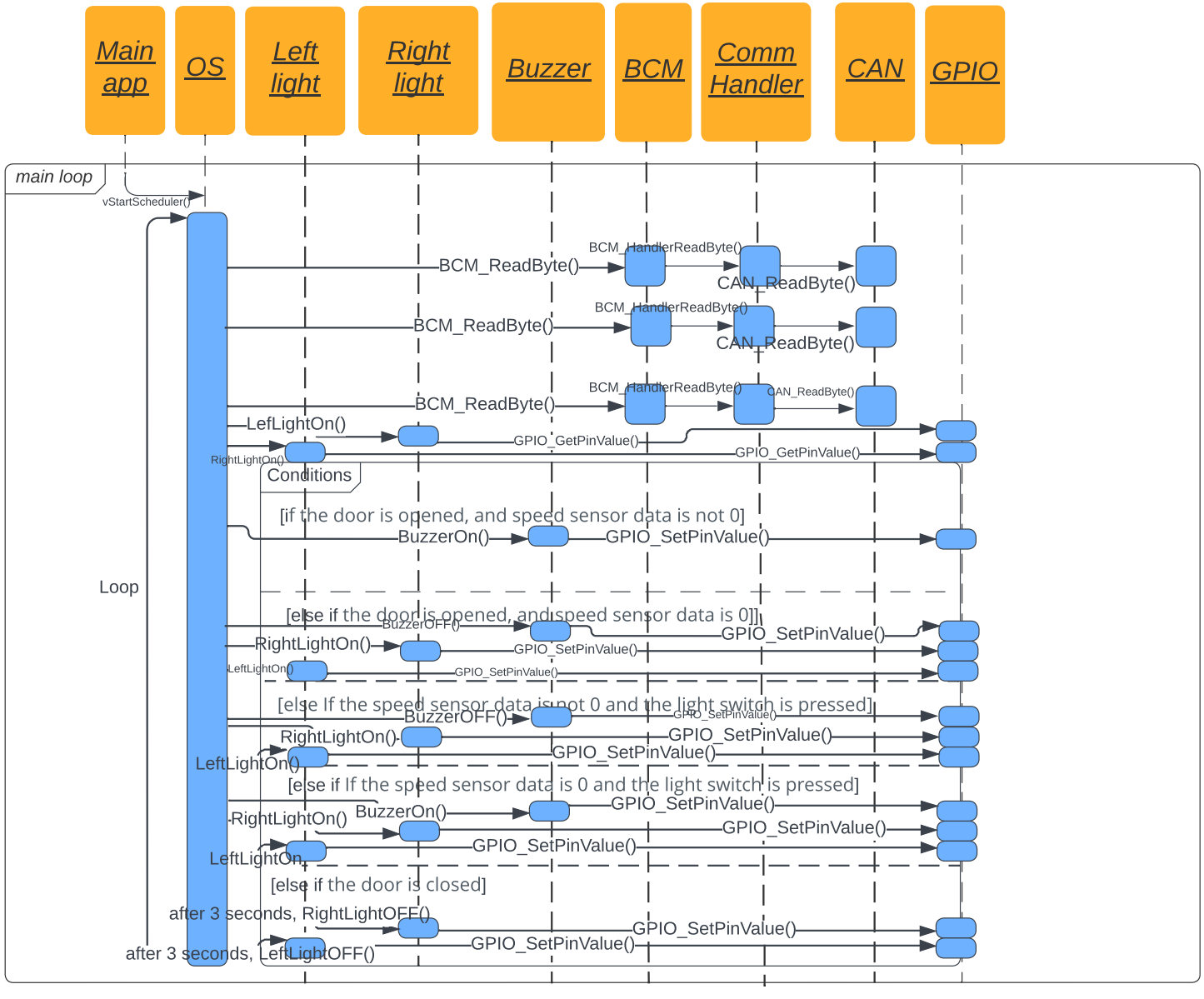
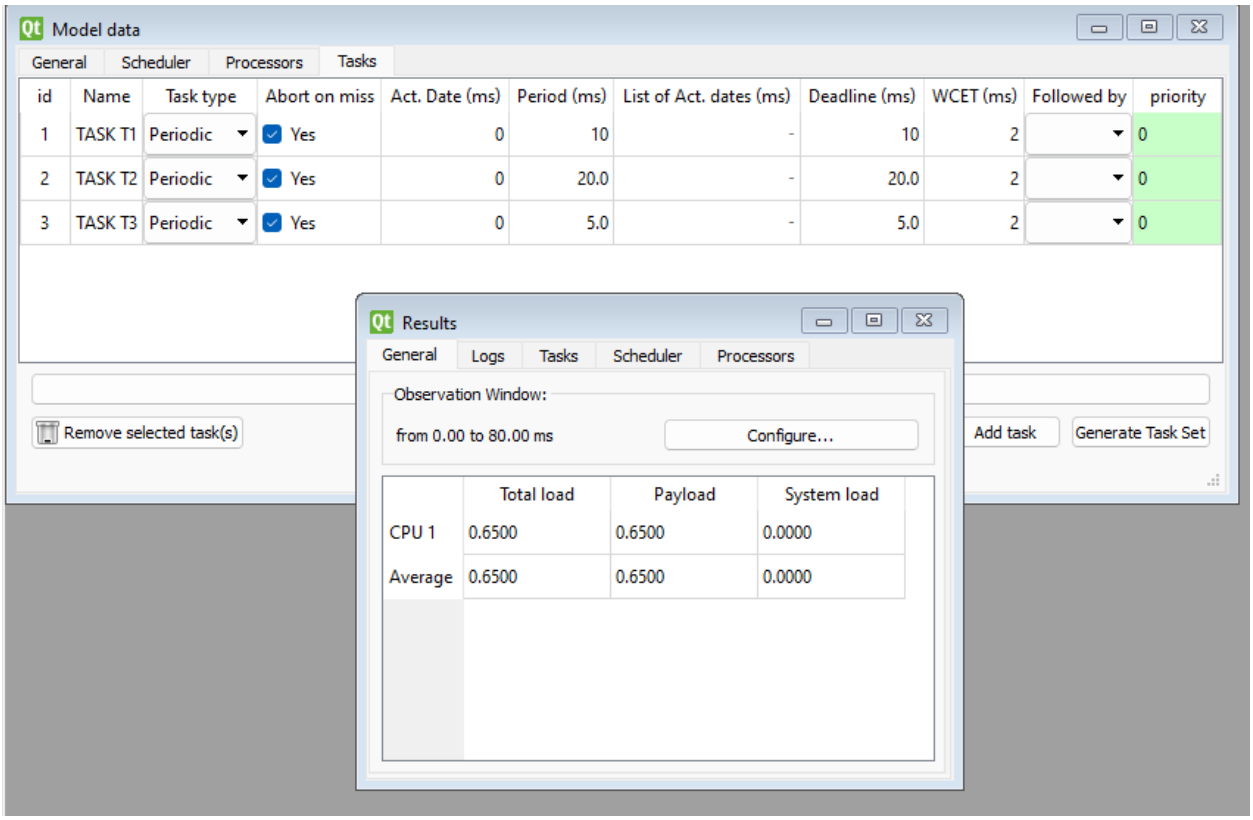
Calculating cpu load:
Assuming that periodicity equals deadline
and Assuming all tasks' execution time is 2ms
Applying the tasks on the offline simulator pointed that the cpu load is 65%