TEAM 2

Object Oriented Design

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Use Case #1

Update

Name	1. 전원 켜기
Actor	User (Primary), SweepingUnit(Supporting), DustSensor(Supporting), ObstacleSensor(Supporting)
Pre-Requisites	RVC의 전원이 꺼져있는 상태이다.
Typical Courses of Events	(R): RVCSystem, (U): User, (S): SweepingUnit, (D): DustSensor, (O): ObstacleSensor 1. (U)가 (R)의 전원을 킨다. 2. (R)의 전원이 켜진다. 3. (R)이 (S)의 전원을 킨다. 4. (R)이 (D)의 전원을 킨다. 5. (R)이 (O)의 전원을 킨다.
Alternative Courses of Events	N/A
Exceptional Courses of Events	N/A

Use Case #2

Update

Name	2. 전원 끄기
Actor	User (Primary), SweepingUnit(Supporting), DustSensor(Supporting), ObstacleSensor(Supporting)
Pre-Requisites	RVC의 전원이 켜져있는 상태이다.
Typical Courses of Events	(R): RVCSystem, (U): User, (S): SweepingUnit, (D): DustSensor, (O): ObstacleSensor 1. (U)가 (R)의 전원을 끈다. 2. (R)이 (S)의 전원을 끈다. 3. (R)이 (D)의 전원을 끈다. 4. (R)이 (O)의 전원을 끈다. 5. (R)의 전원이 꺼진다.
Alternative Courses of Events	N/A
Exceptional Courses of Events	N/A

Use Case #3

Update

Name	3. 청소 시작
Actor	User(Primary), SweepingUnit(Supporting), ObstacleSensor(Supporting), DustSensor(Supporting)
Pre-Requisites	RVC의 전원이 켜져있다.
Typical Courses of Events	(R): RVCSystem, (U): User 1. (U)가 (R)에게 청소 시작을 지시한다. 2. Ref : UC#7을 시작한다. 3. Ref : UC#6을 시작한다. 4. Ref : UC#5를 시작한다.
Alternative Courses of Events	N/A
Exceptional Courses of Events	N/A

Use Case #4

Update

Name	4. 청소 종료
Actor	User(Primary)
Pre-Requisites	RVC가 청소를 진행 중이다.
Typical Courses of Events	(R): RVCSystem, (U): User 1. (U)가 (R)에게 청소 중지를 지시한다.
Alternative Courses of Events	N/A
Exceptional Courses of Events	N/A

Use Case #5

Update

Name	5. 전진 이동
Actor	DriveMotor(Supporting), SweepingUnit(Supporting)
Pre-Requisites	RVC가 청소를 진행 중이다.
Typical Courses of Events	(R): RVCSystem, (S): SweepingUnit, (M): DriveMotor 1. (R)이 (S)에게 켜져 있는지 물어본다. 2. (S)가 켜져 있는 것을 (R)이 인식하면, (R)은 (M)을 전진하도록 한다.
Alternative Courses of Events	N/A
Exceptional Courses of Events	N/A

Use Case #6

Update

Name	6. 먼지 감지 및 청소
Actor	DustSensor(Supporting), SweepingUnit (Supporting)
Pre-Requisites	RVC가 청소를 진행 중이다.
Typical Courses of Events	(R): RVCSystem, (D): DustSensor, (S): SweepingUnit 1. (R)이 (D)에게 먼지 감지를 요청한다. 2. (D)가 (R)에게 먼지 감지 여부를 알려준다. 3. 먼지가 감지되었다면, (R)이 (S)의 파워를 증폭 모드로 설정한다.
Alternative Courses of Events	Line 3: 먼지가 감지되지 않았다면, (R)이 (S)의 파워를 일반 모드로 설정한다.
Exceptional Courses of Events	N/A

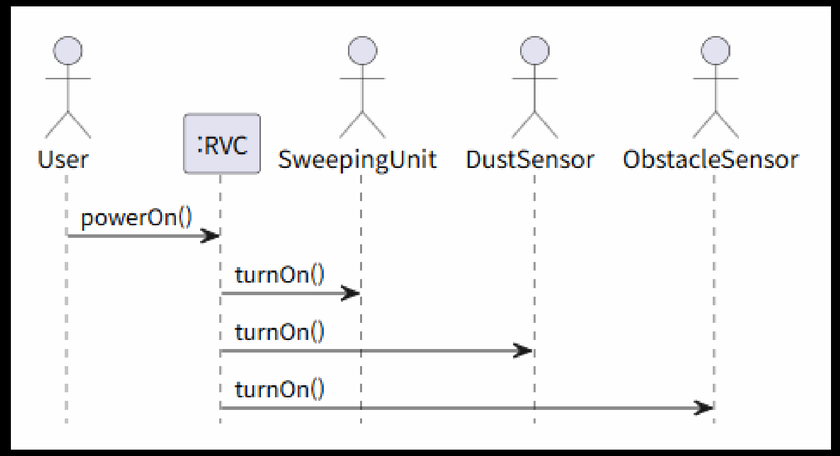
Use Case #7

Update

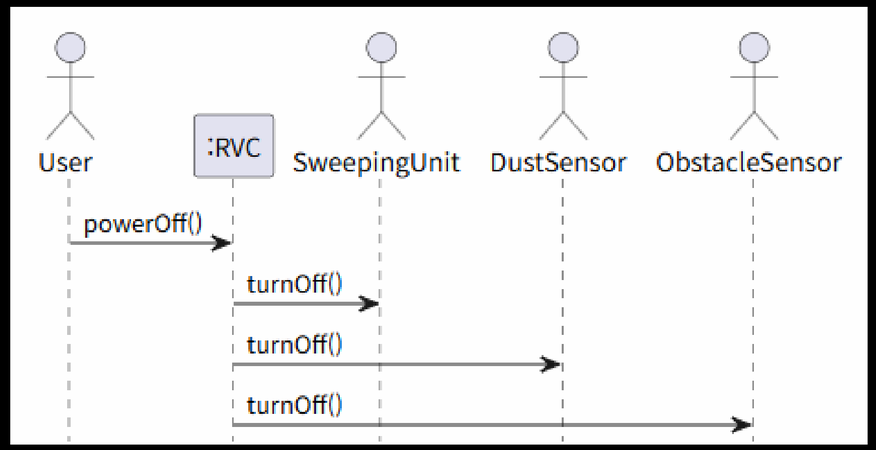
Name	7. 장애물 감지 및 회피
Actor	ObstacleSensor(Supporting), SweepingUnit(Supporting), DriveMotor(Supporting), DustSensor(Supporting)
Pre-Requisites	RVC가 청소 중이다.
Typical Courses of Events	(R): RVCSystem, (S): SweepingUnit, (M): DriveMotor, (O): ObstacleSensor, (D): DustSensor 1. (R)이 (O)에게 장애물 감지를 요청한다. 2. (O)가 (R)에게 장애물 정보를 알려준다. 3. 정면에서 장애물이 감지되었다면, (R)이 (S)를 끈다. 4. (R)이 (M)의 이동을 중단한다. 5. 좌측에 장애물이 없다면, (R)은 (M)이 좌측으로 회전하도록 한다. 6. (R)이 (S)를 켠다.
Alternative Courses of Events	Line 5: 좌측에 장애물이 있고 우측에 장애물이 없다면, (R)은 (M)이 우측으로 회전하도록 한다. Line 5: 좌측과 우측에 모두 장애물이 있다면, (R)은 (M)이 후진하도록 한 뒤 정지시키고 좌측으로 회전하도록 한다.
Exceptional Courses of Events	Line 5~6: 사방에 장애물이 있다면, (R)은 (D)의 전원을 끄고 청소를 종료한다.

System Sequence Diagram

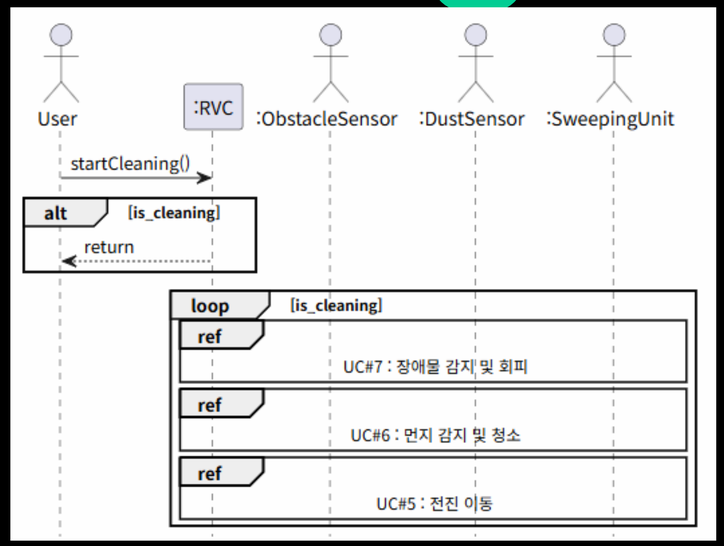
Update



UC #1



UC #2



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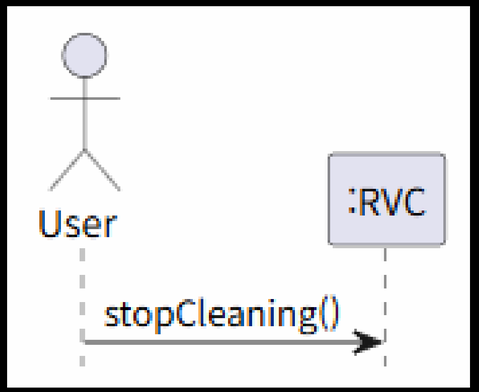
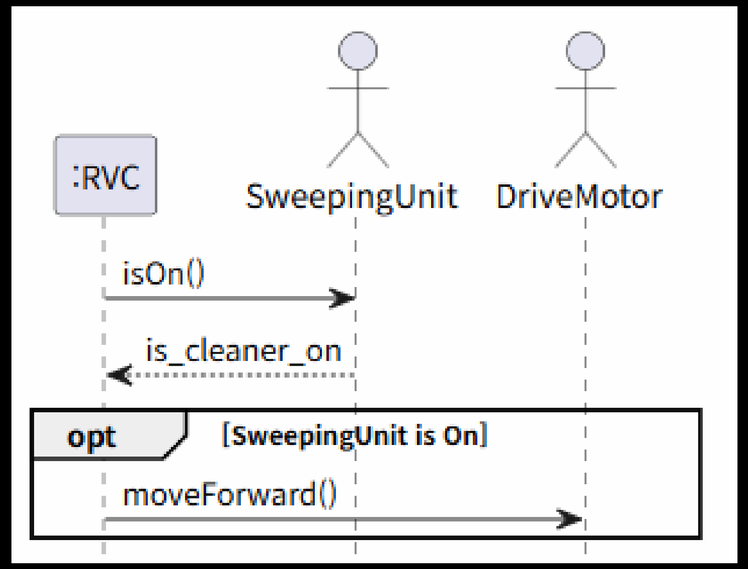


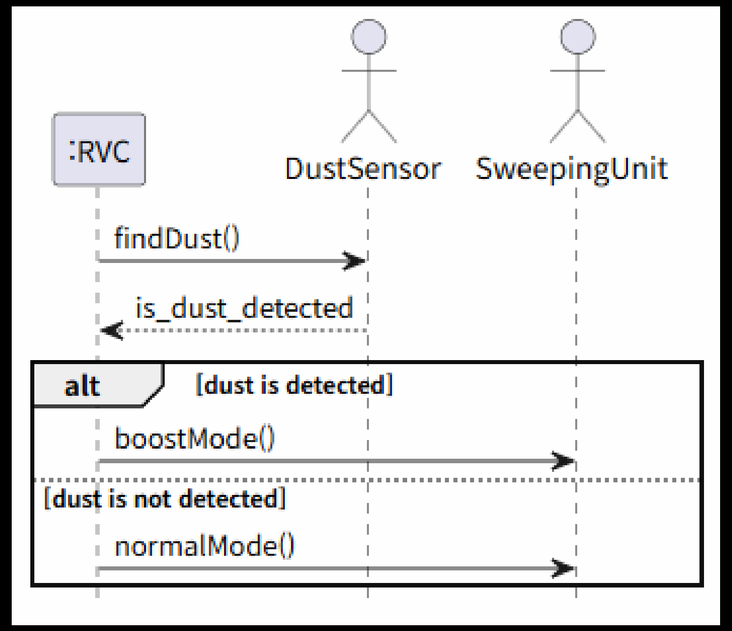
UC #4

System Sequence Diagram

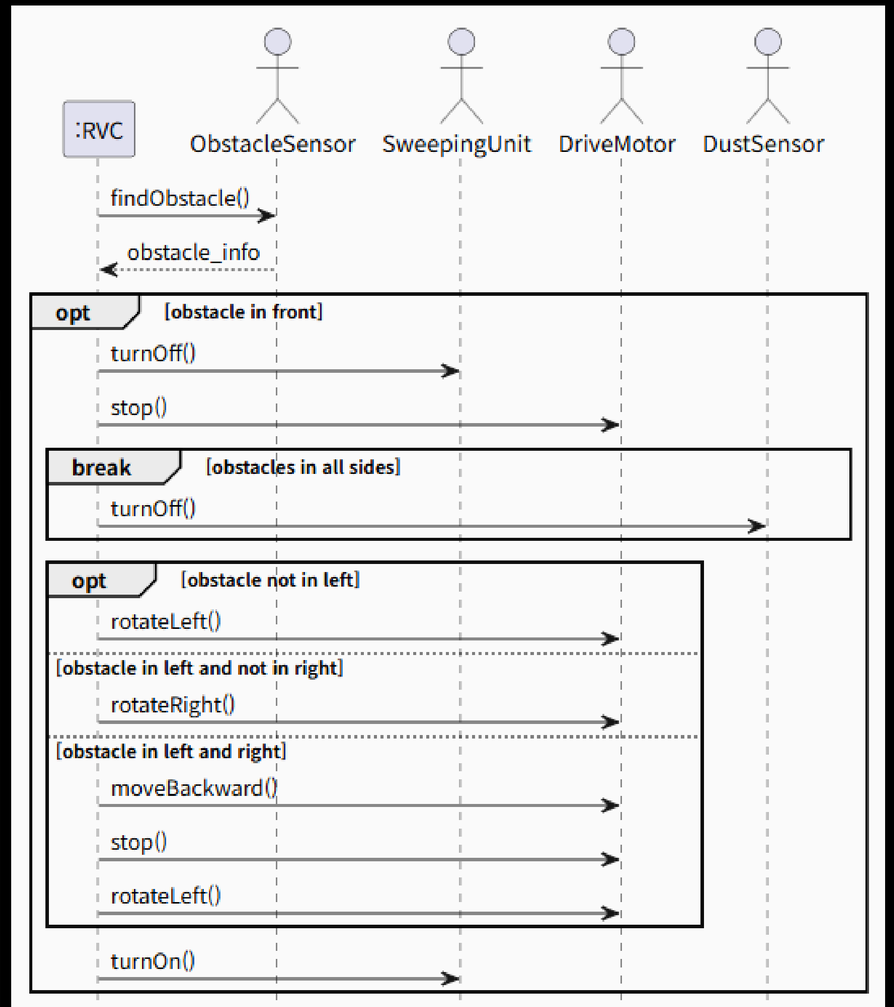
Update



UC #5



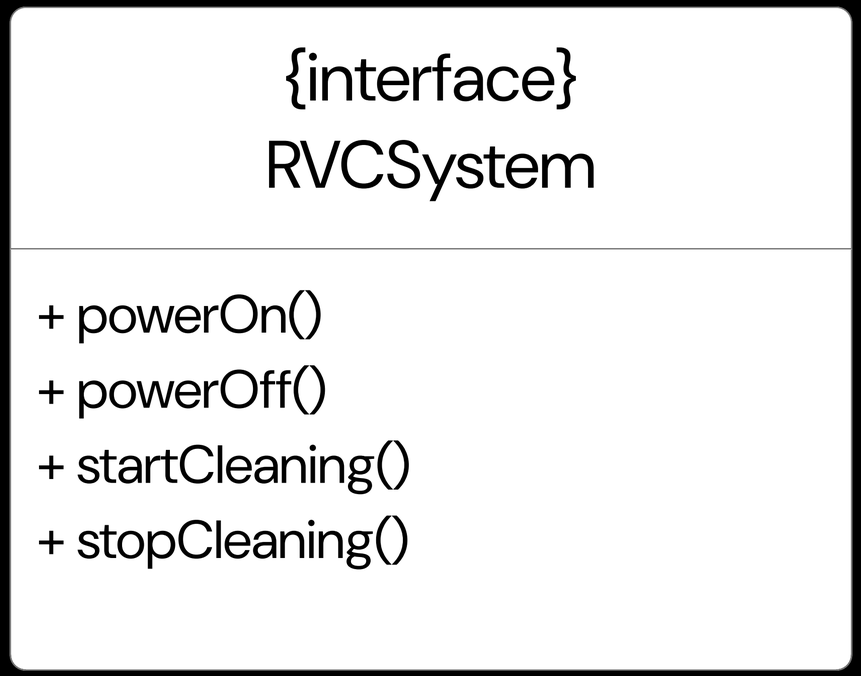
UC #6



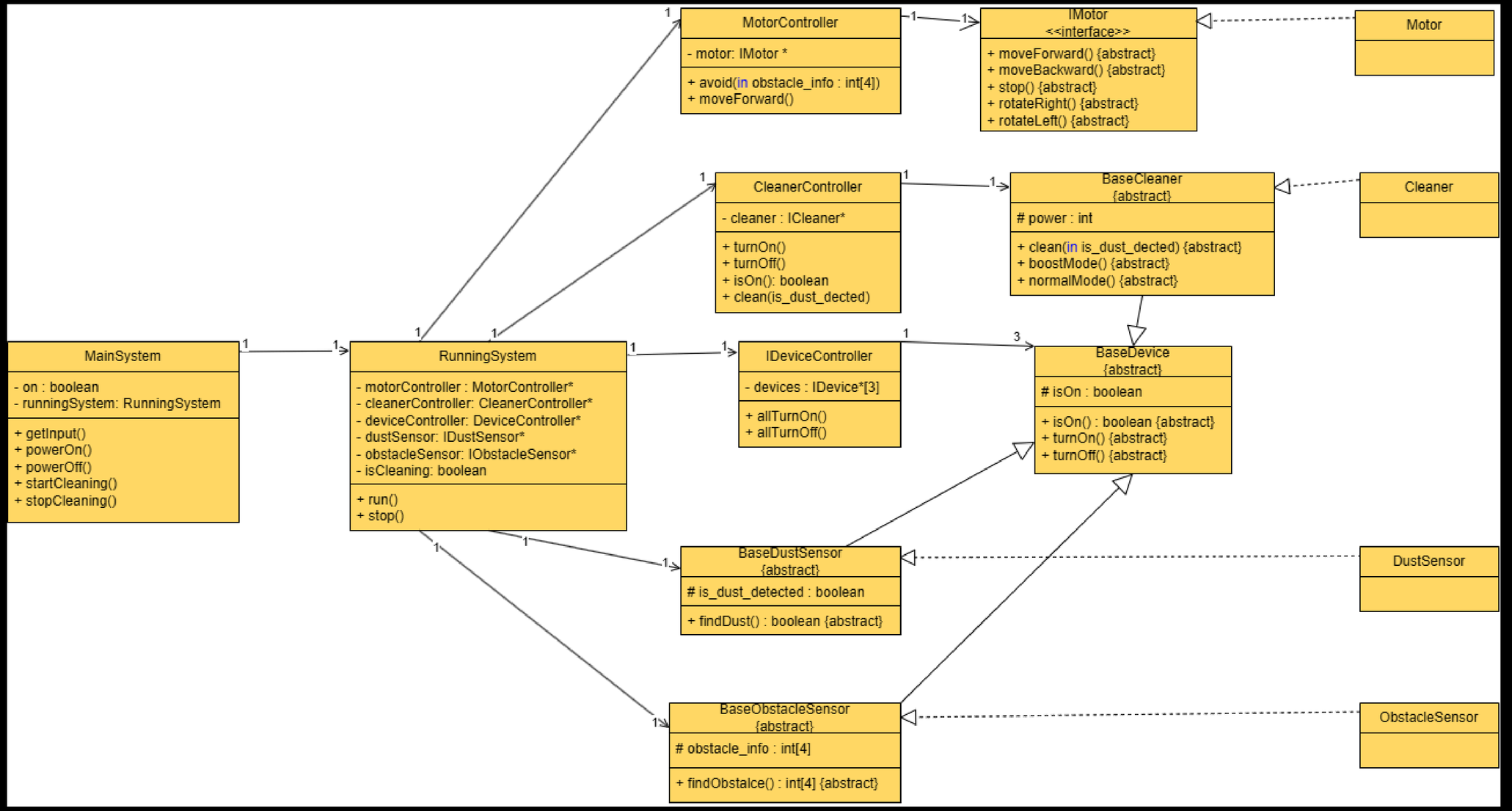
UC #7

System Operations

Update

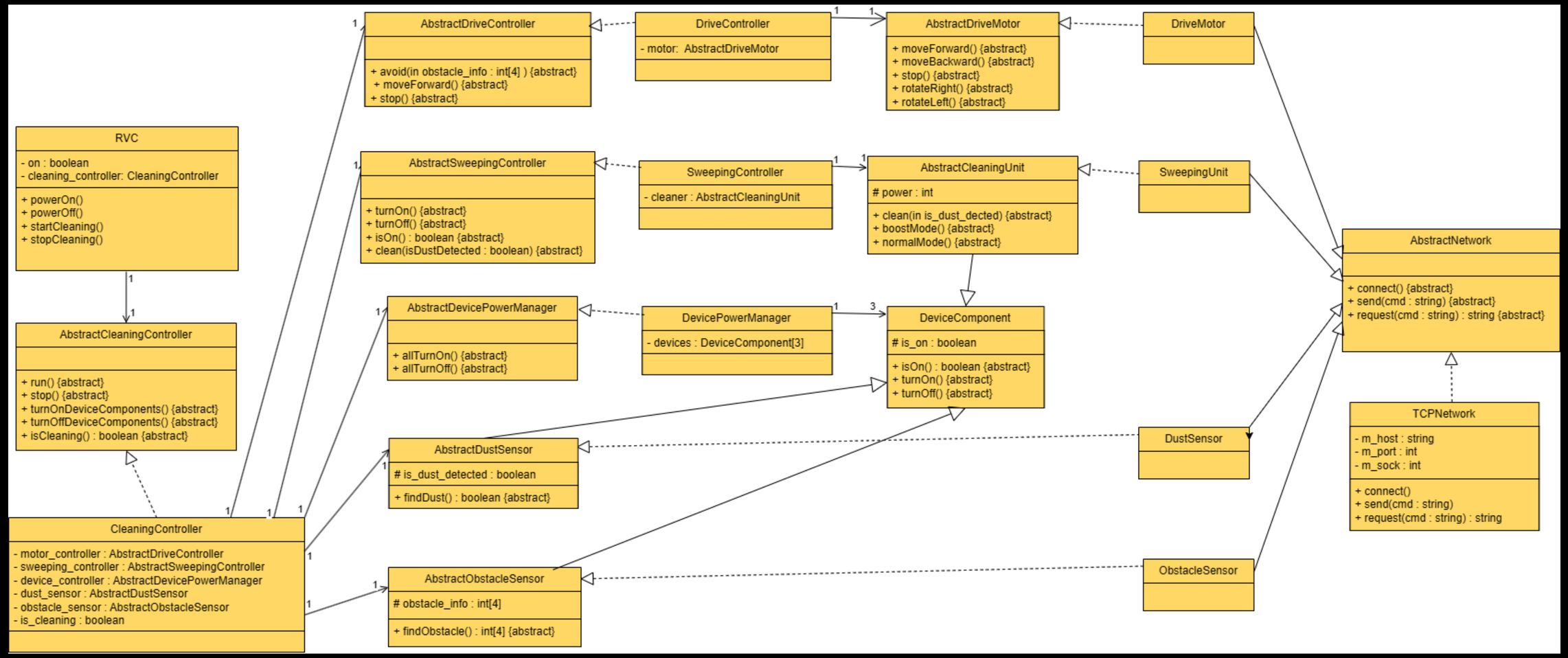


Class Diagram

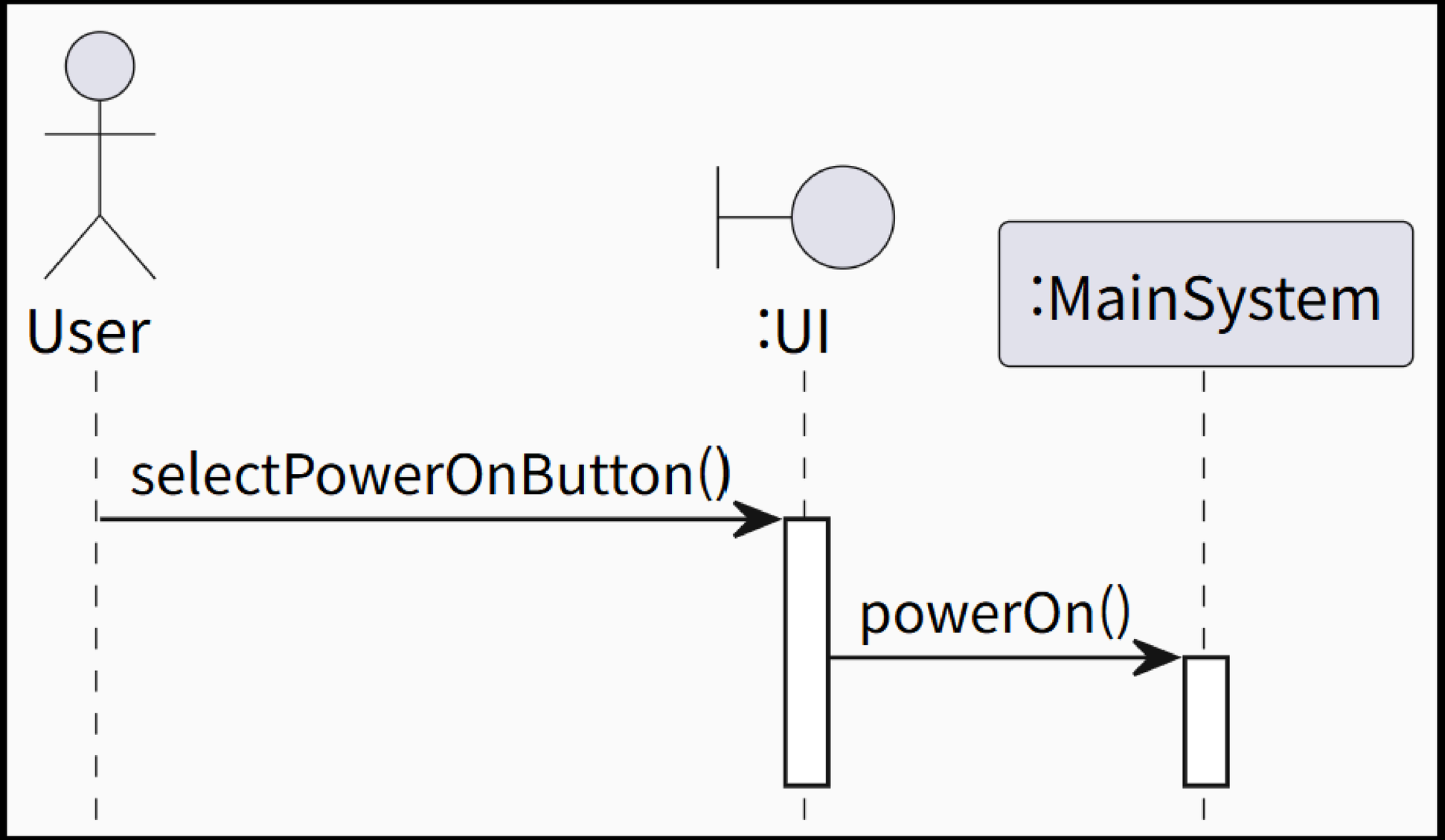


Class Diagram

Update

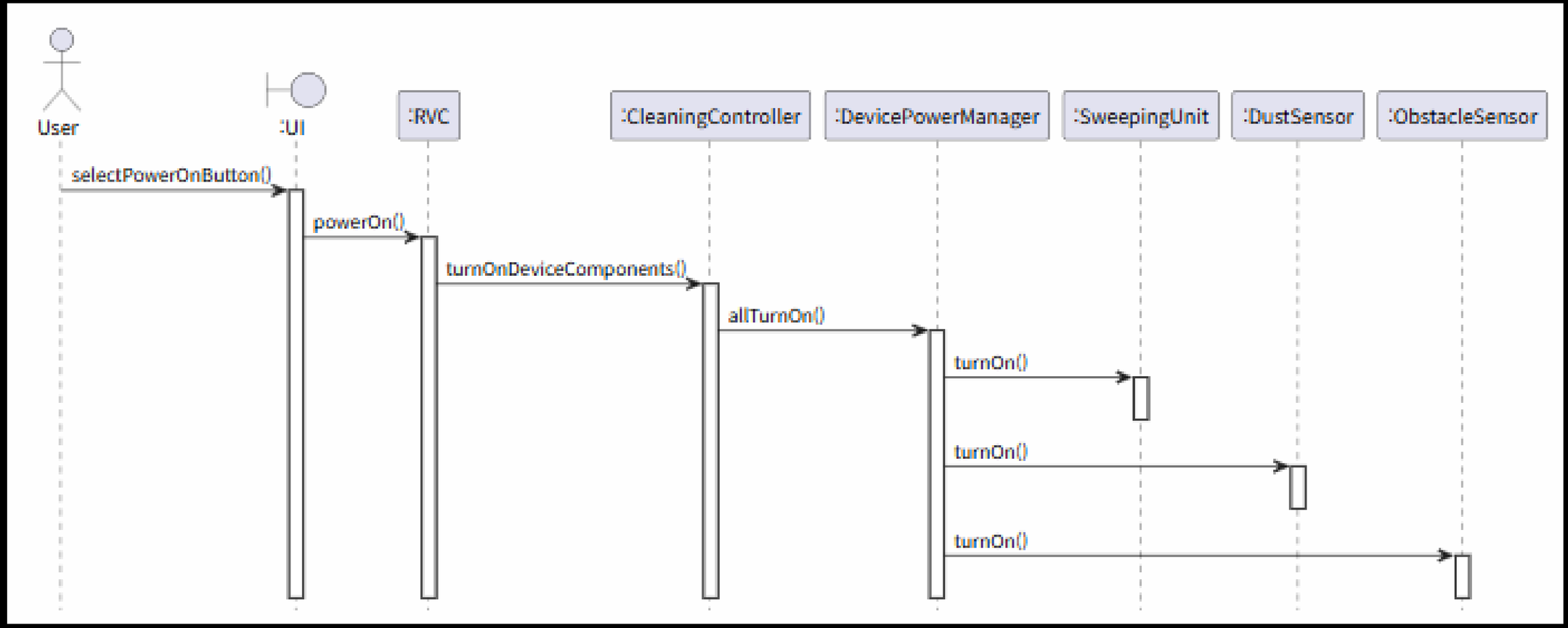


Sequence Diagram : UC #1

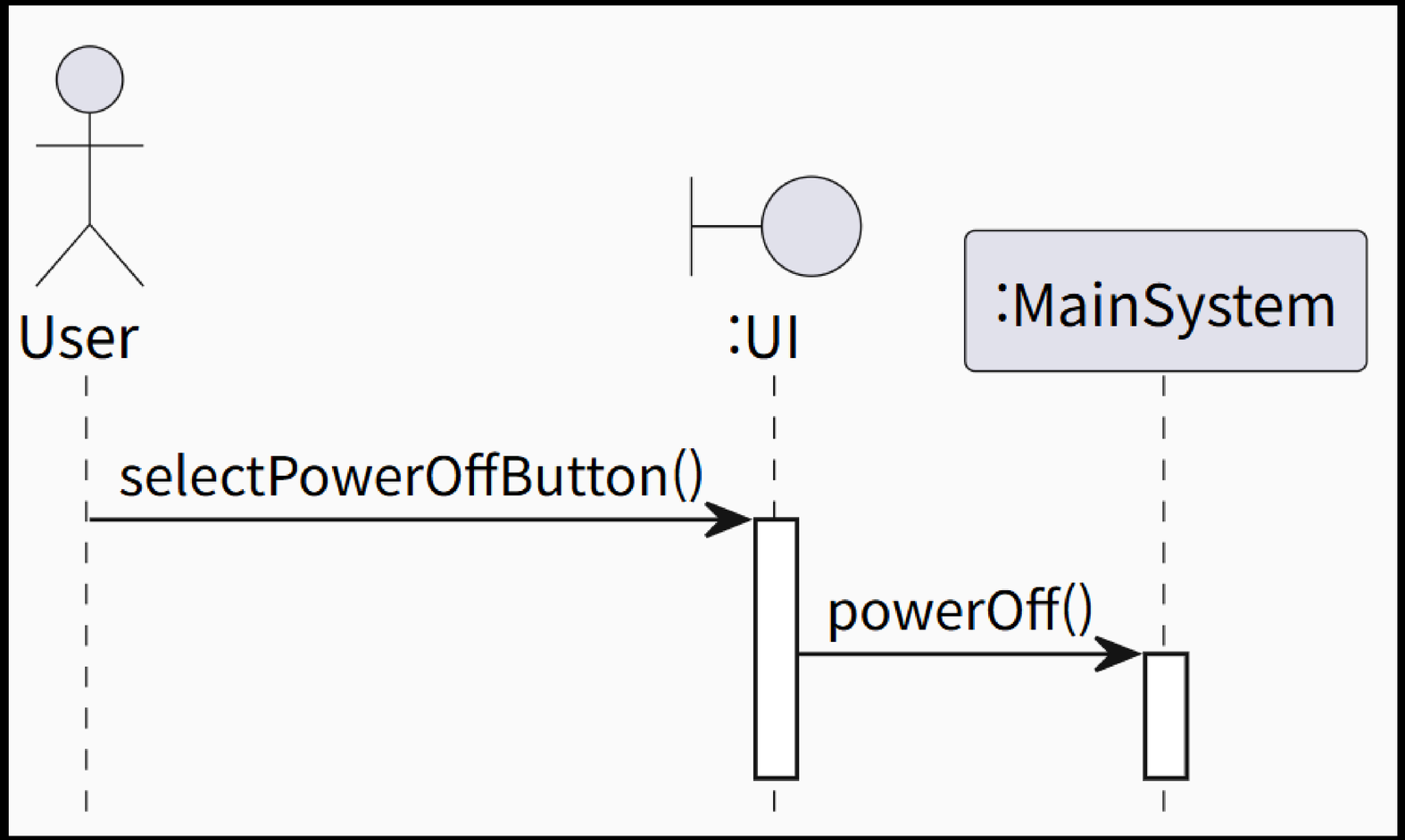


Sequence Diagram : UC #1

Update



Sequence Diagram : UC #2



Sequence Diagram : UC #2

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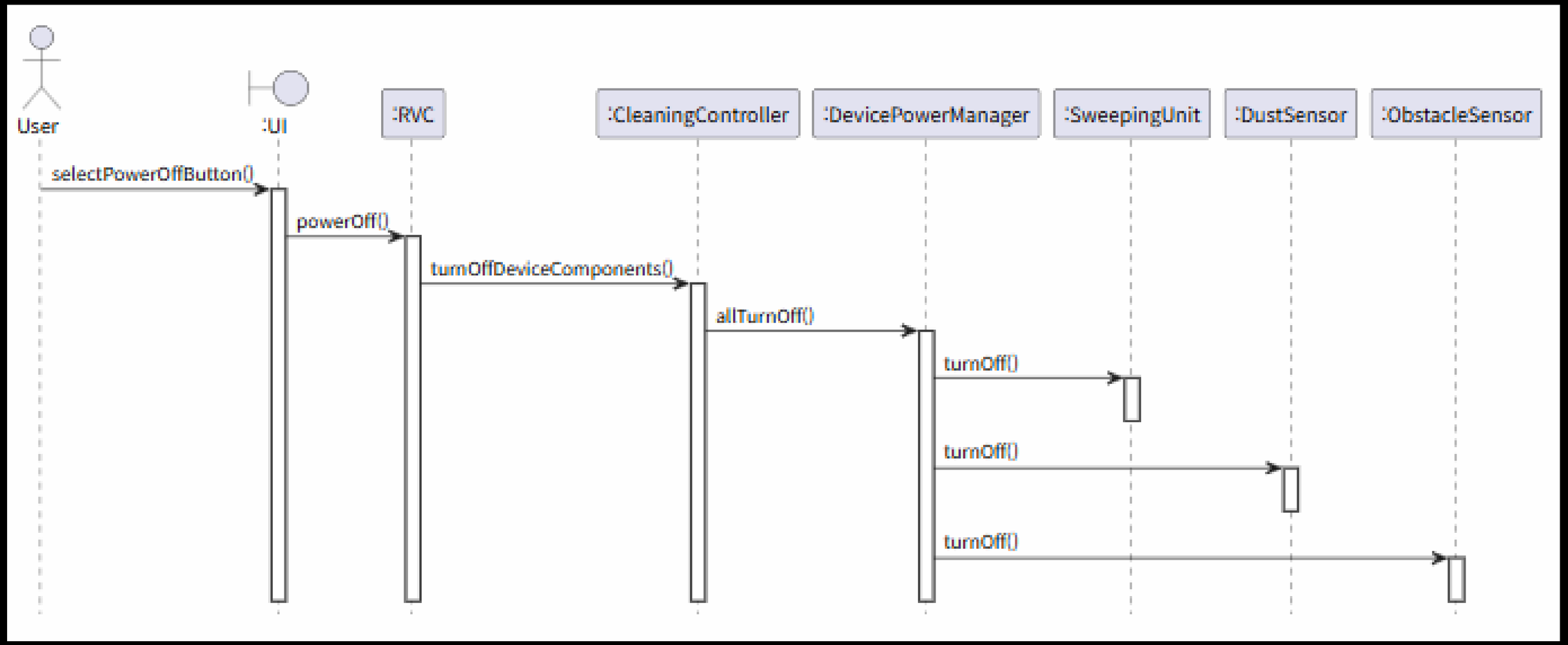
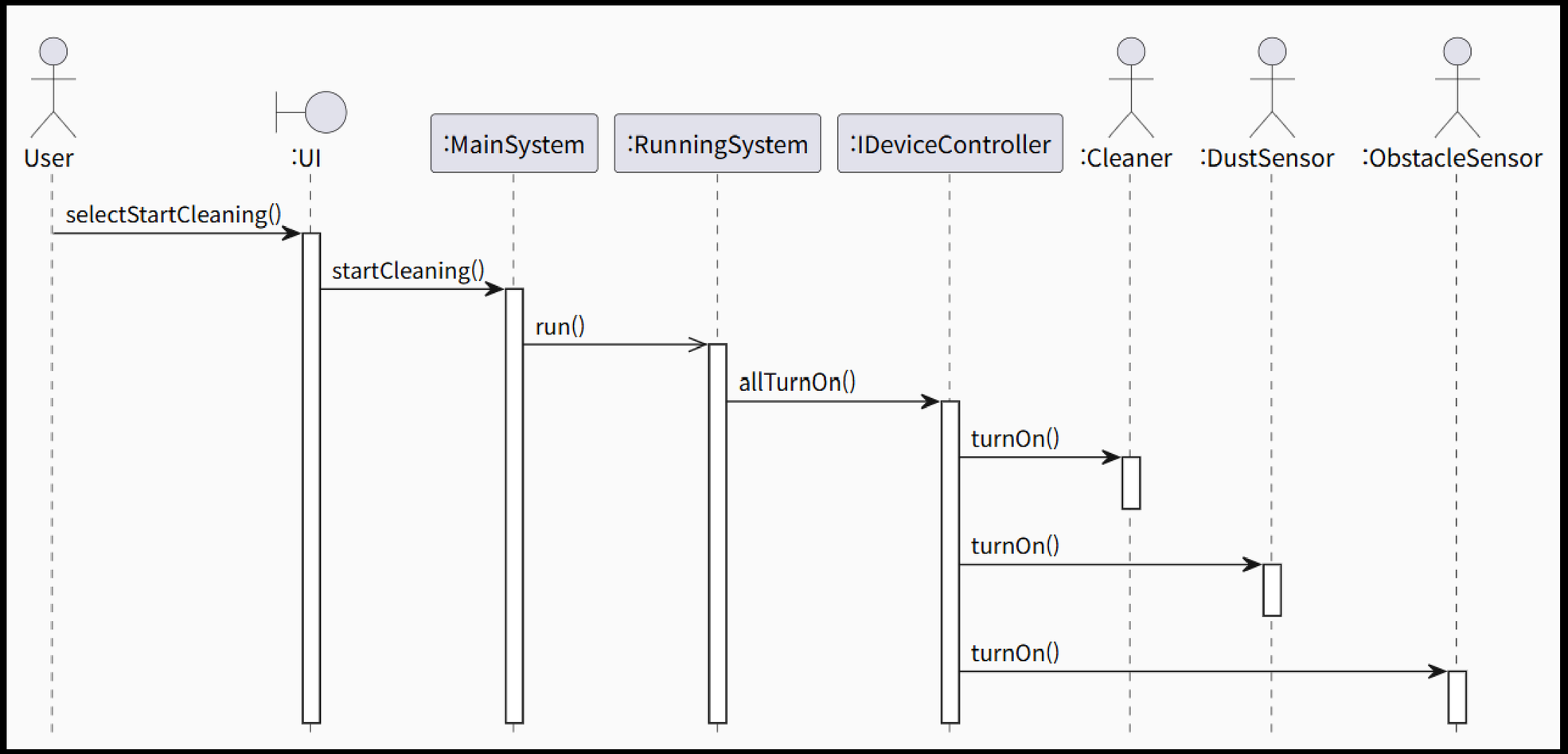


Sequence Diagram : UC #3



Sequence Diagram : UC #3

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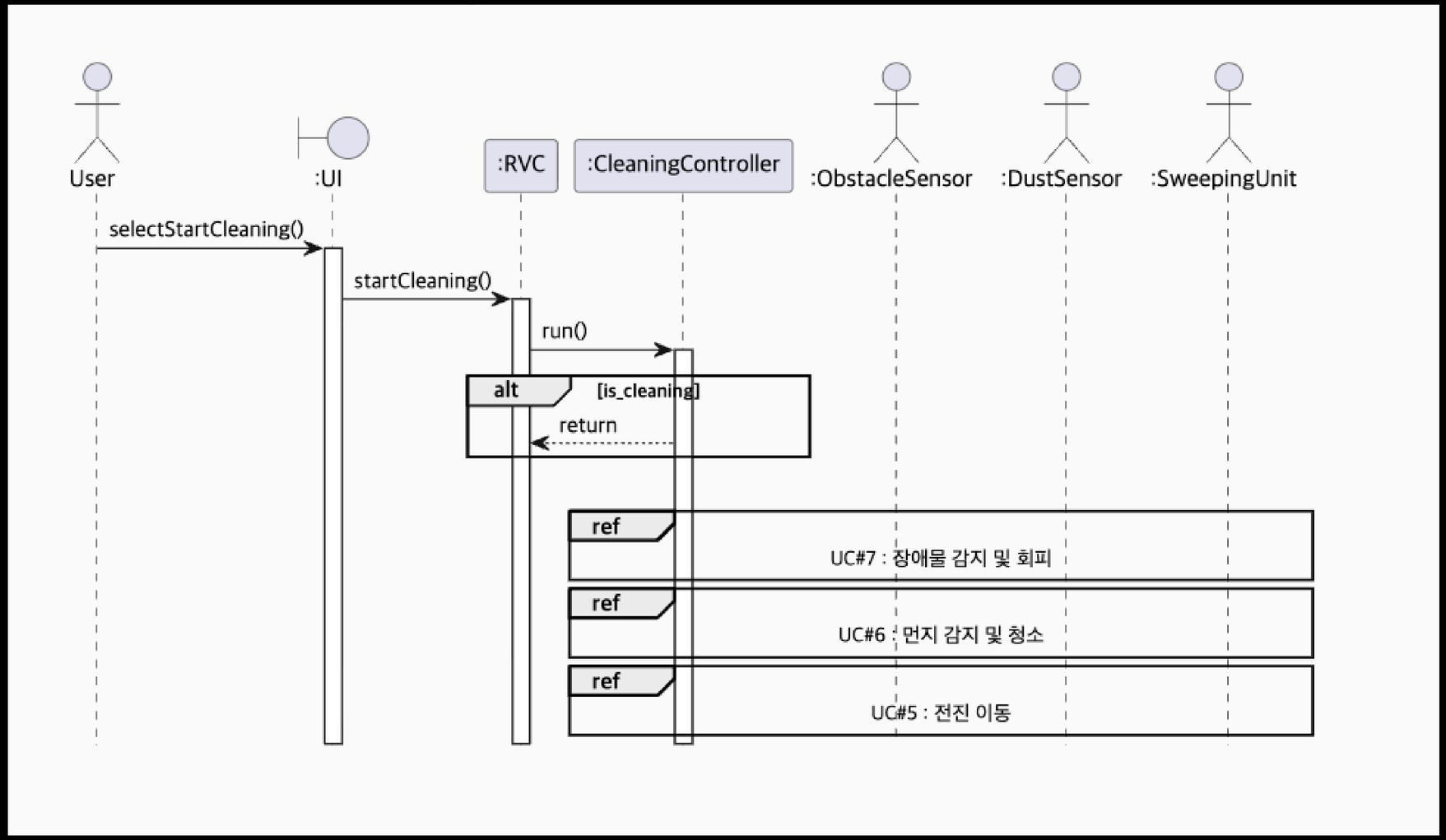
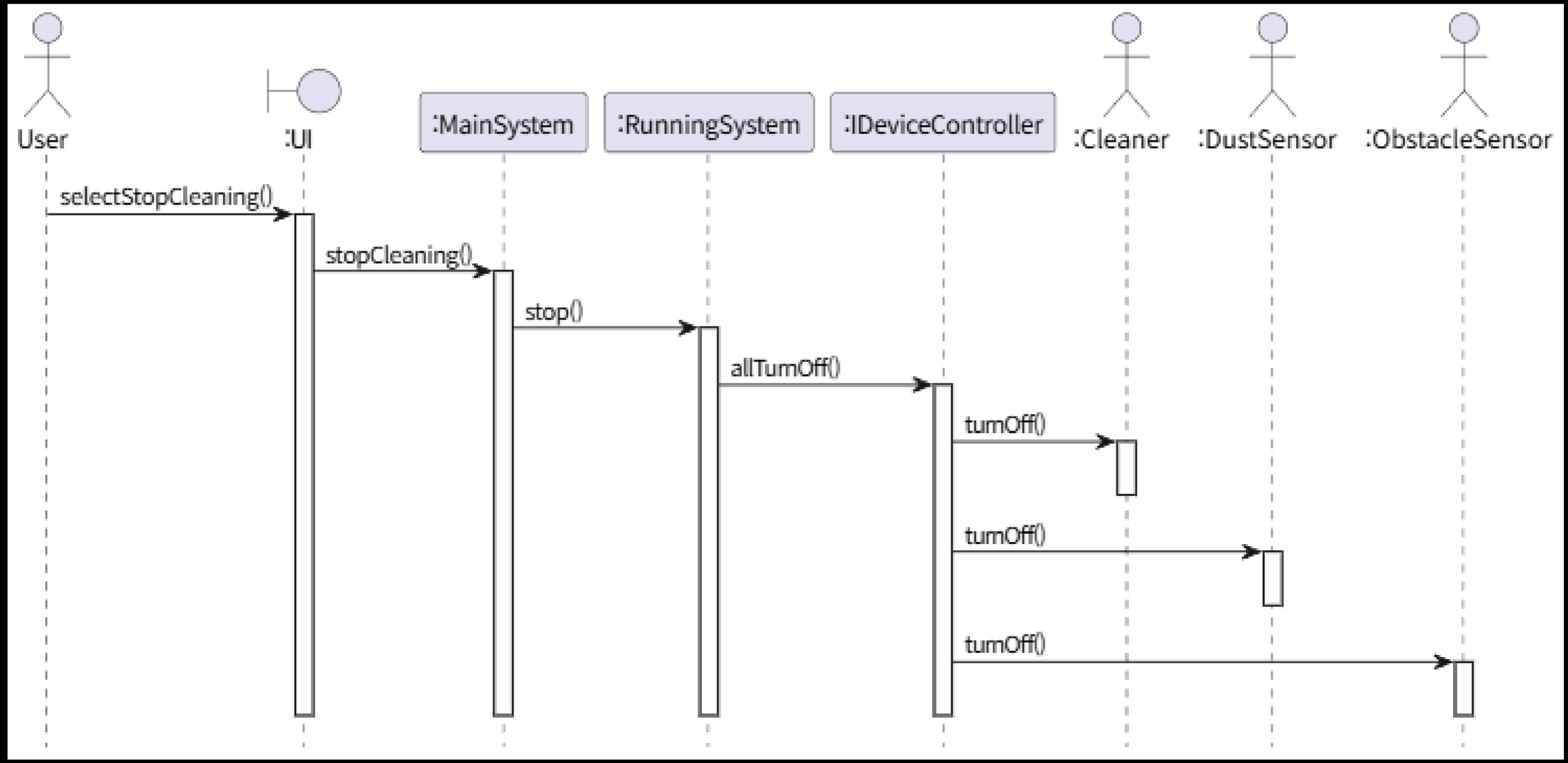
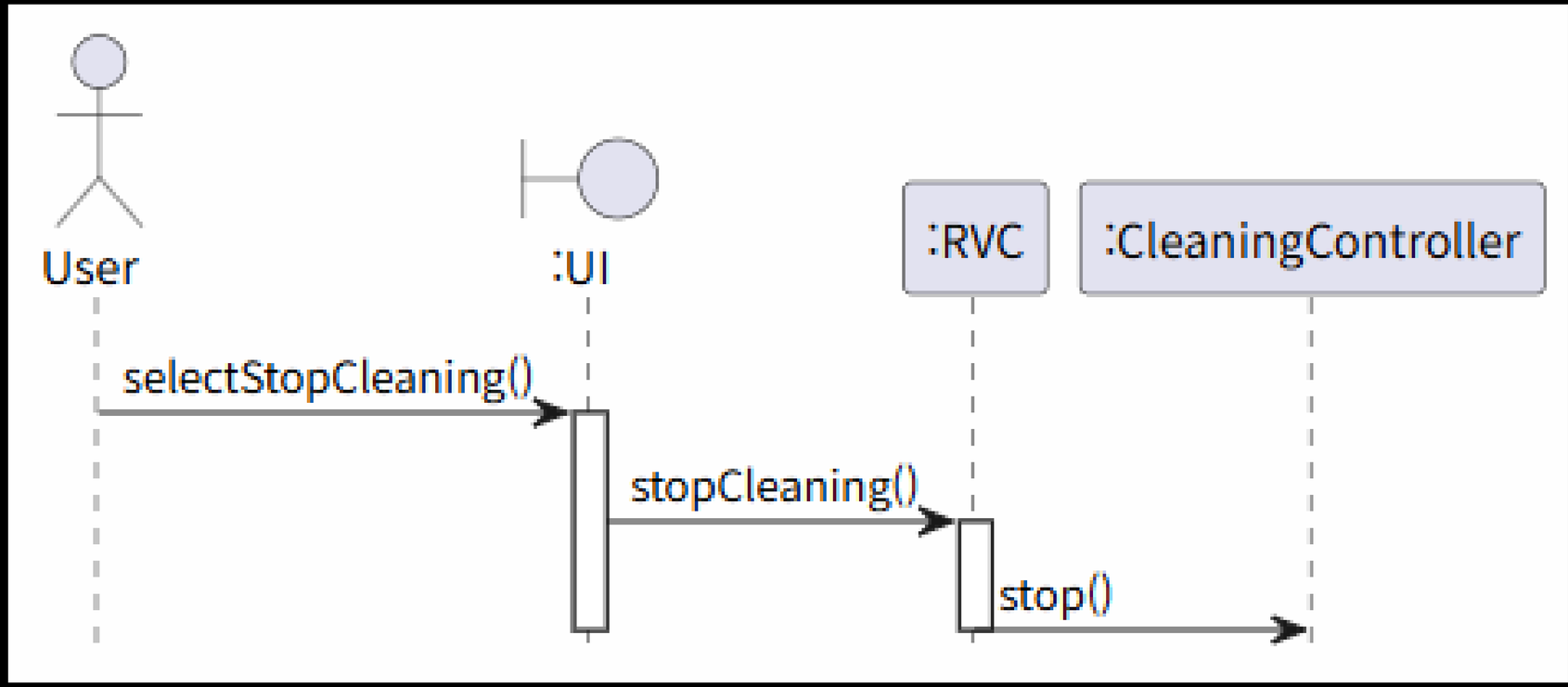


Sequence Diagram : UC #4

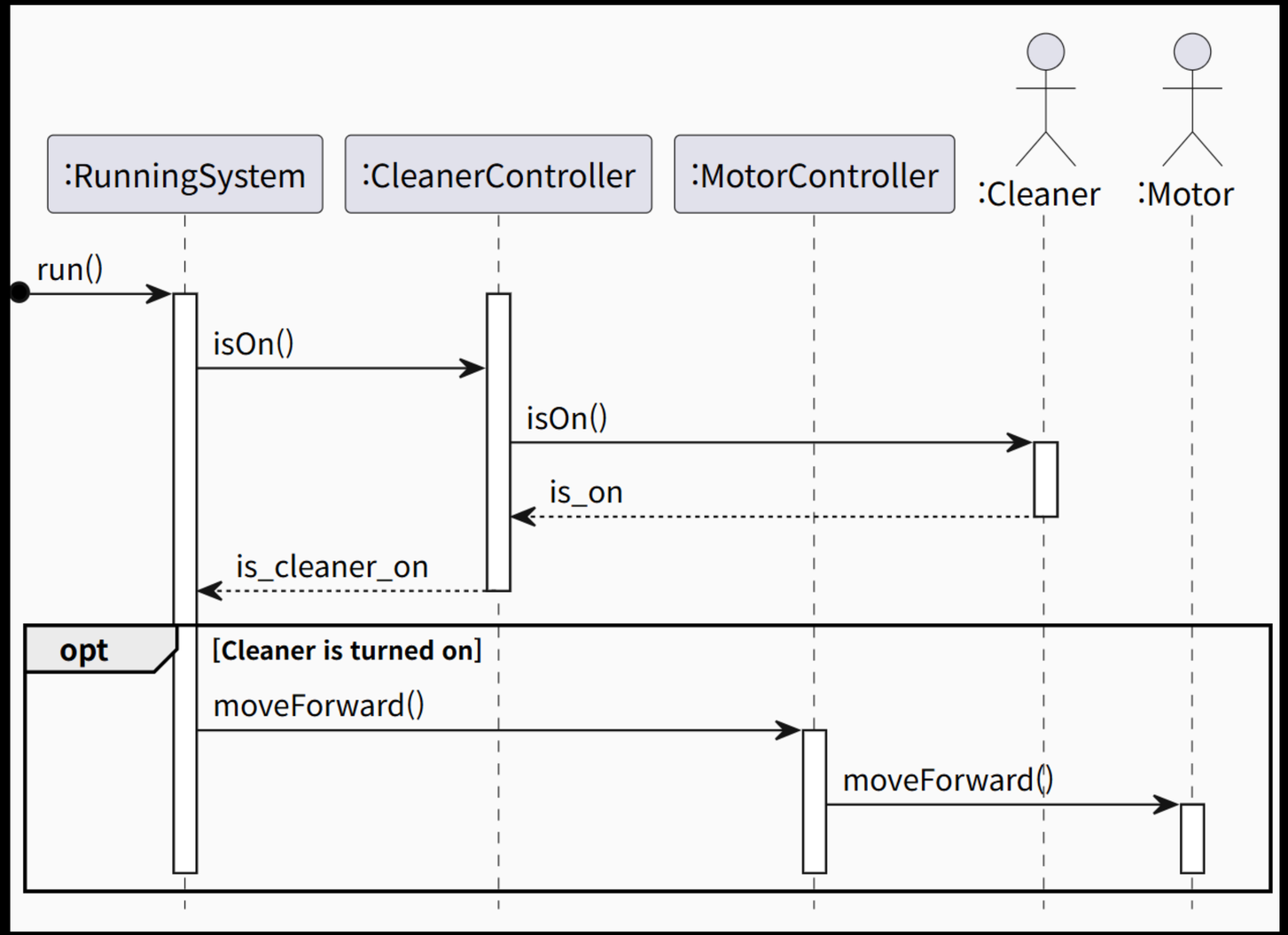


Sequence Diagram : UC #4

Update

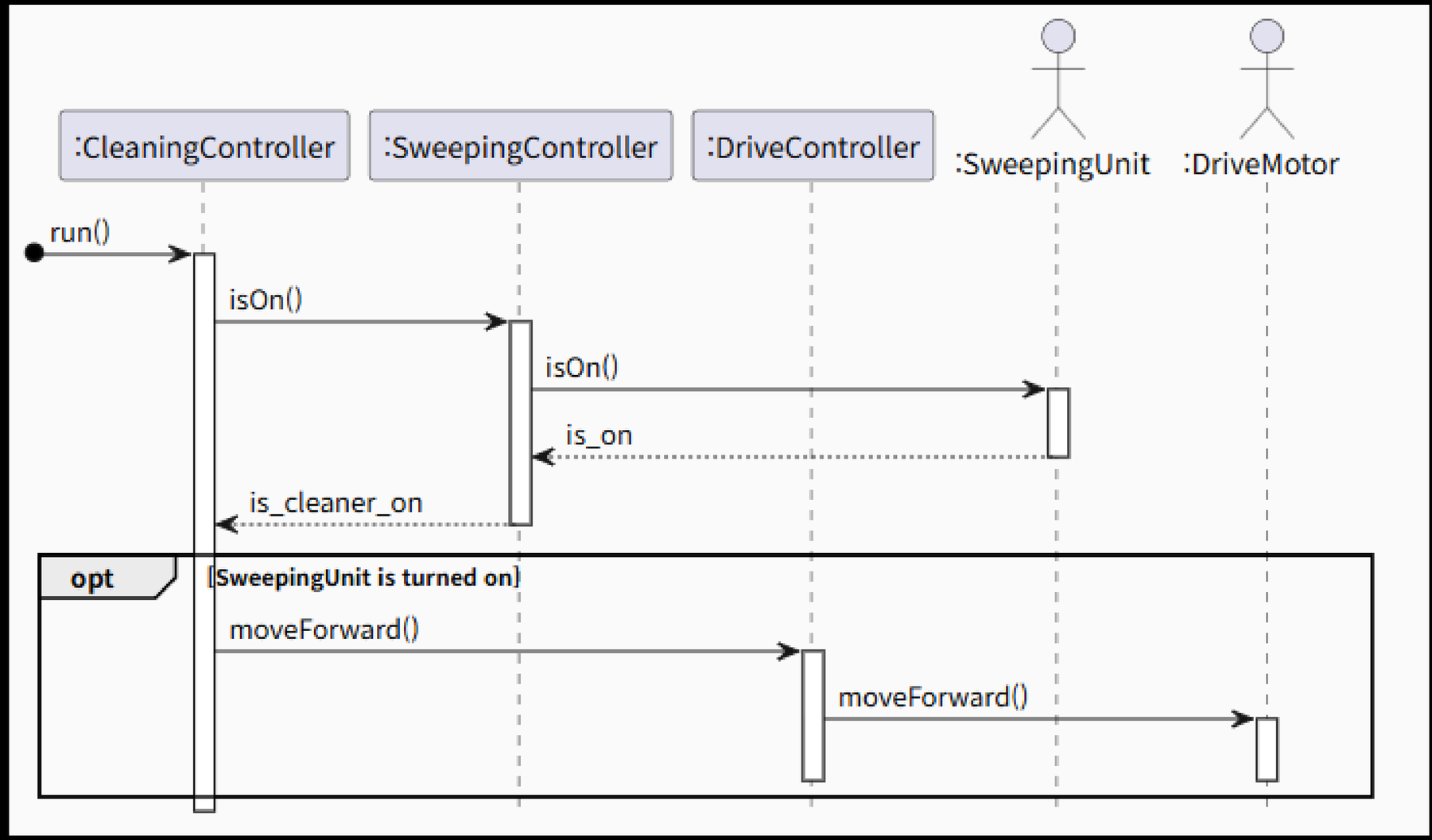


Sequence Diagram : UC #5

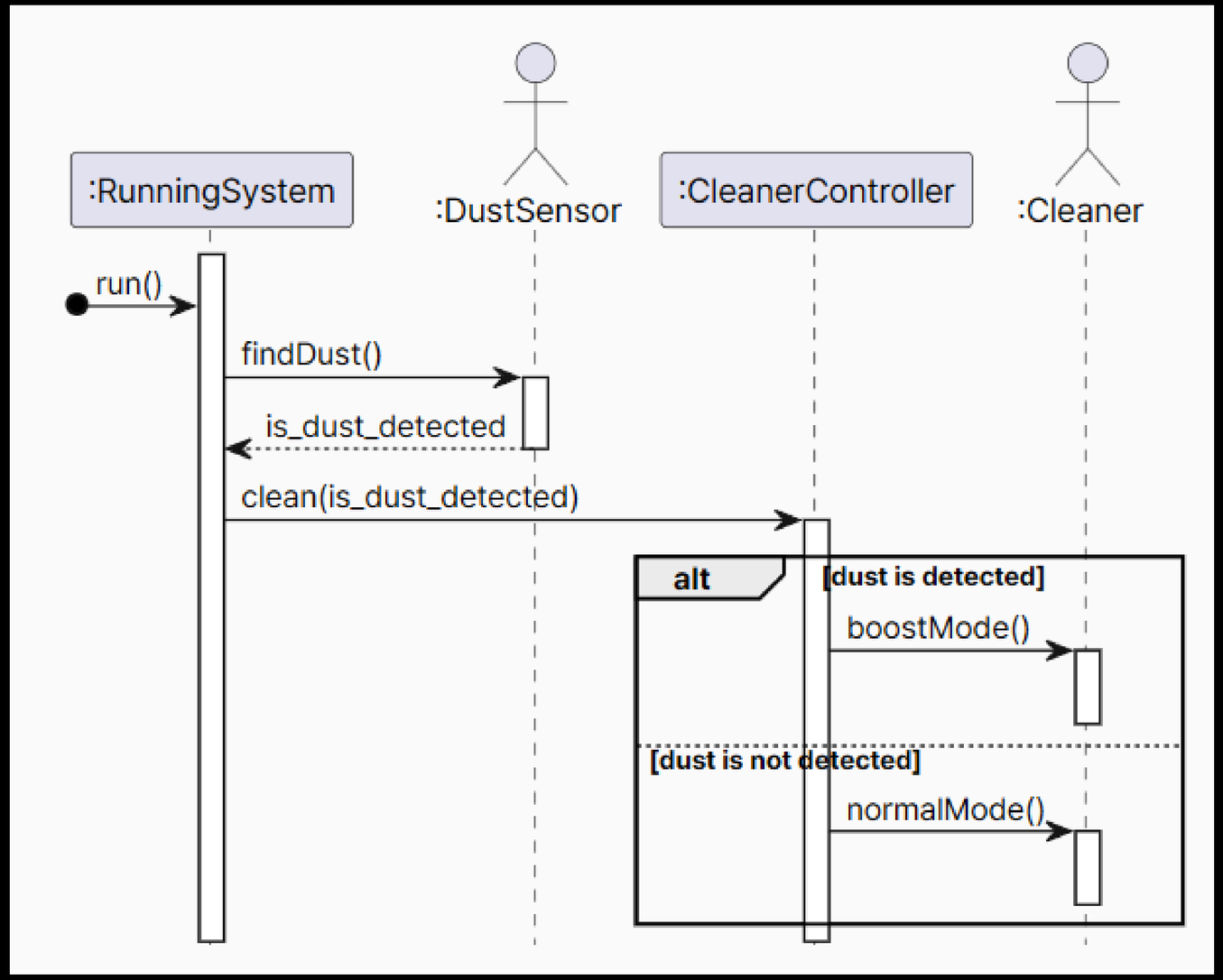


Sequence Diagram : UC #5

Update



Sequence Diagram : UC #6



Sequence Diagram : UC #6

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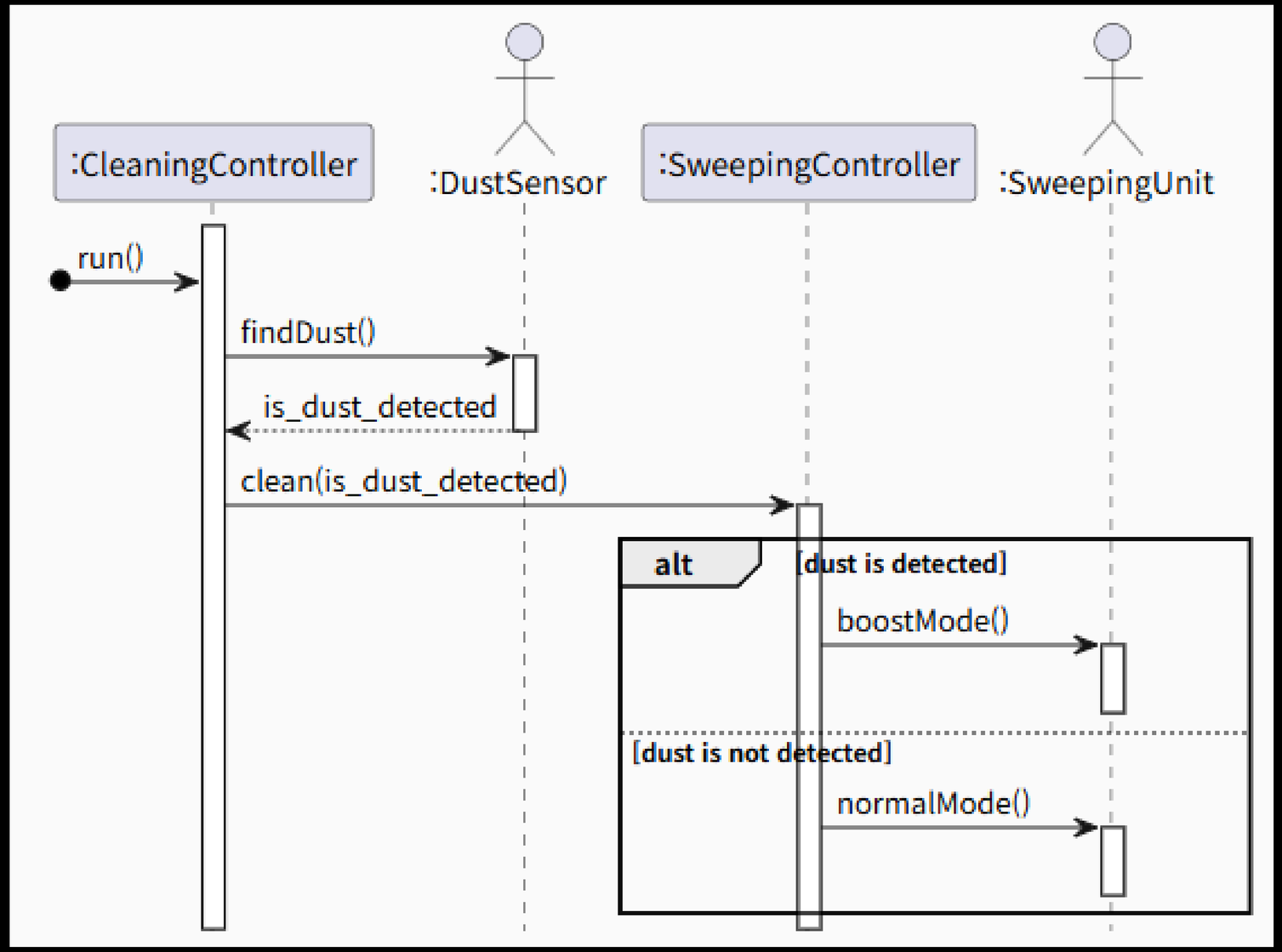
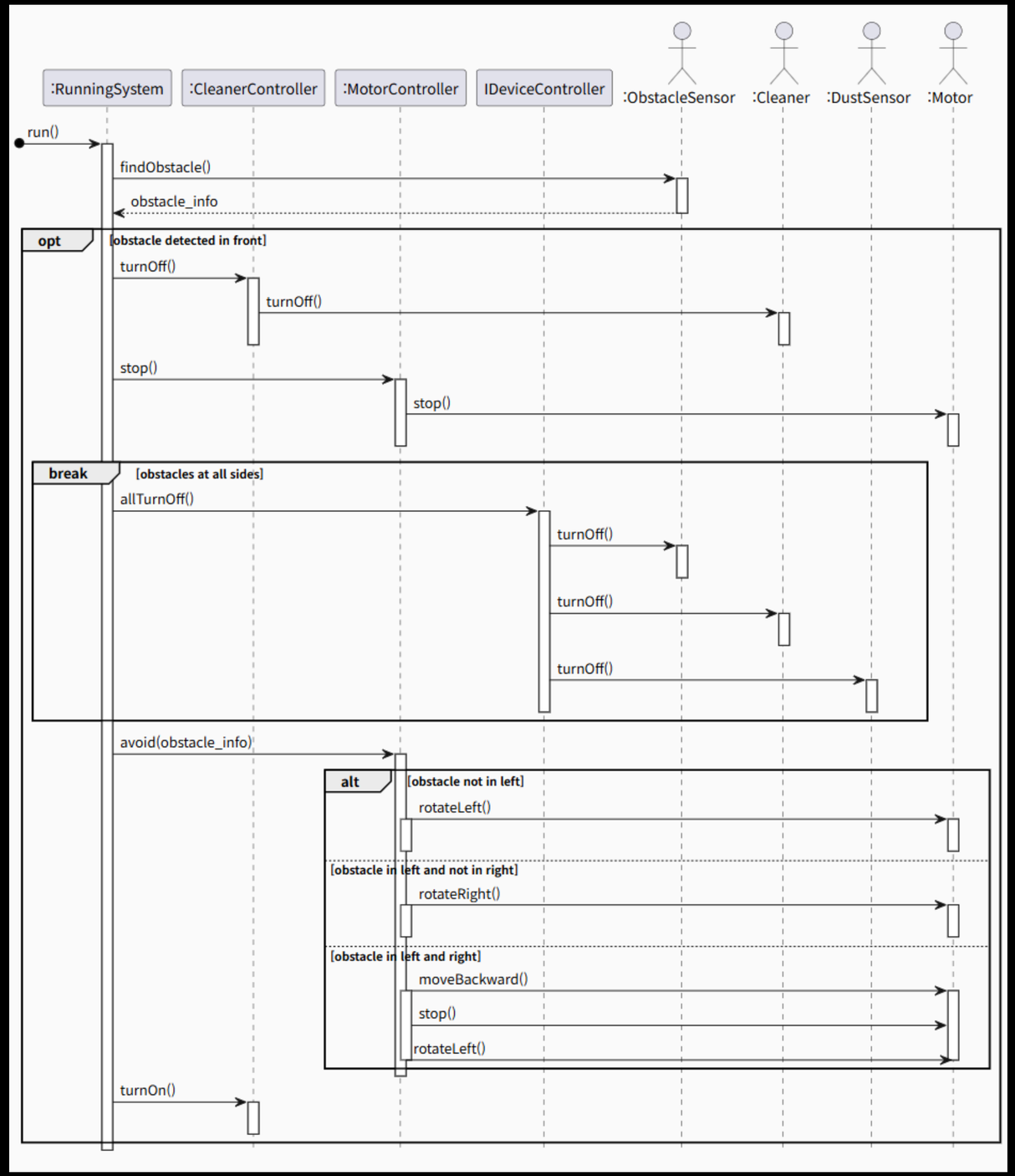


Sequence Diagram : UC #7



Sequence Diagram : UC #7

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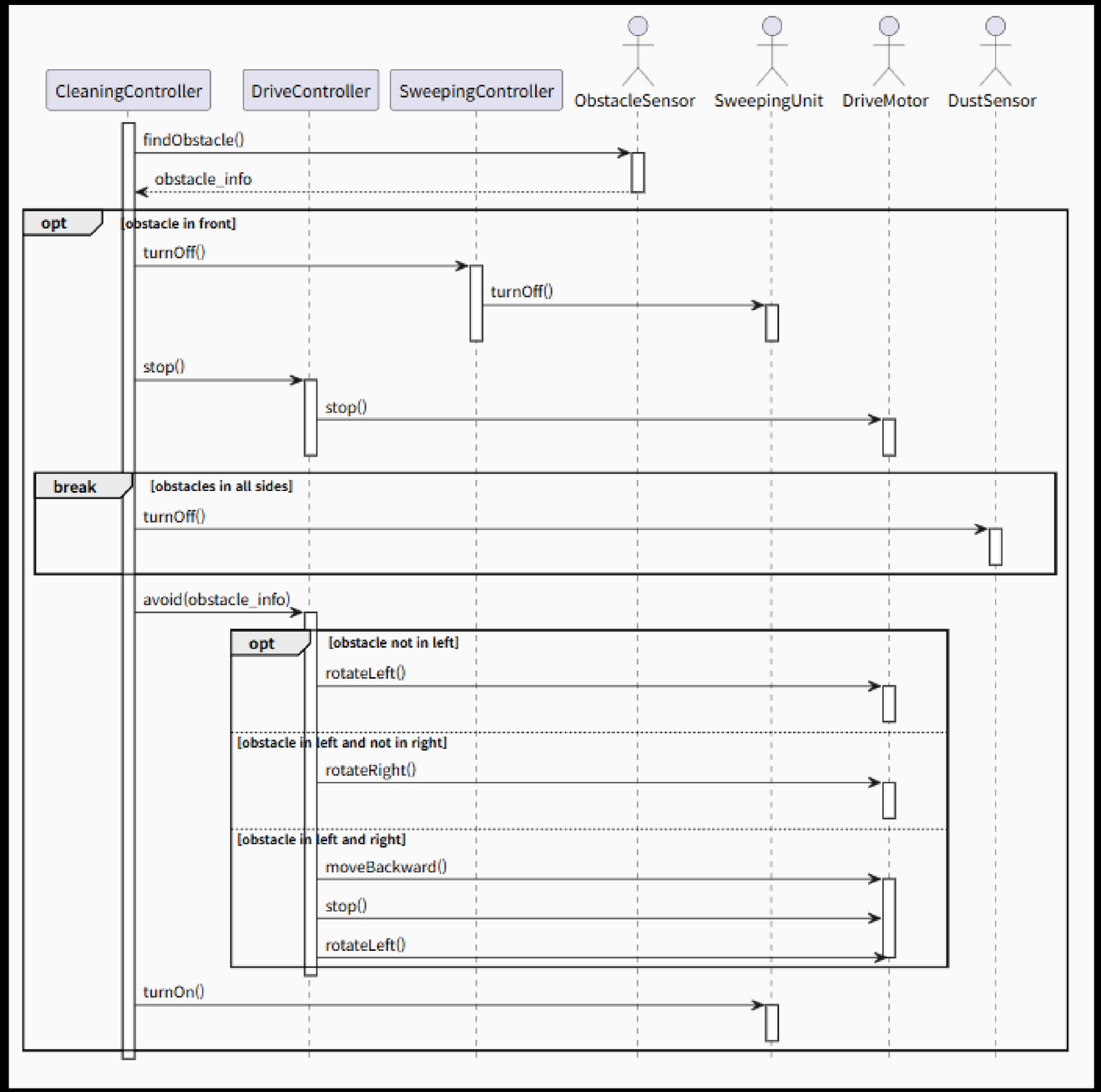
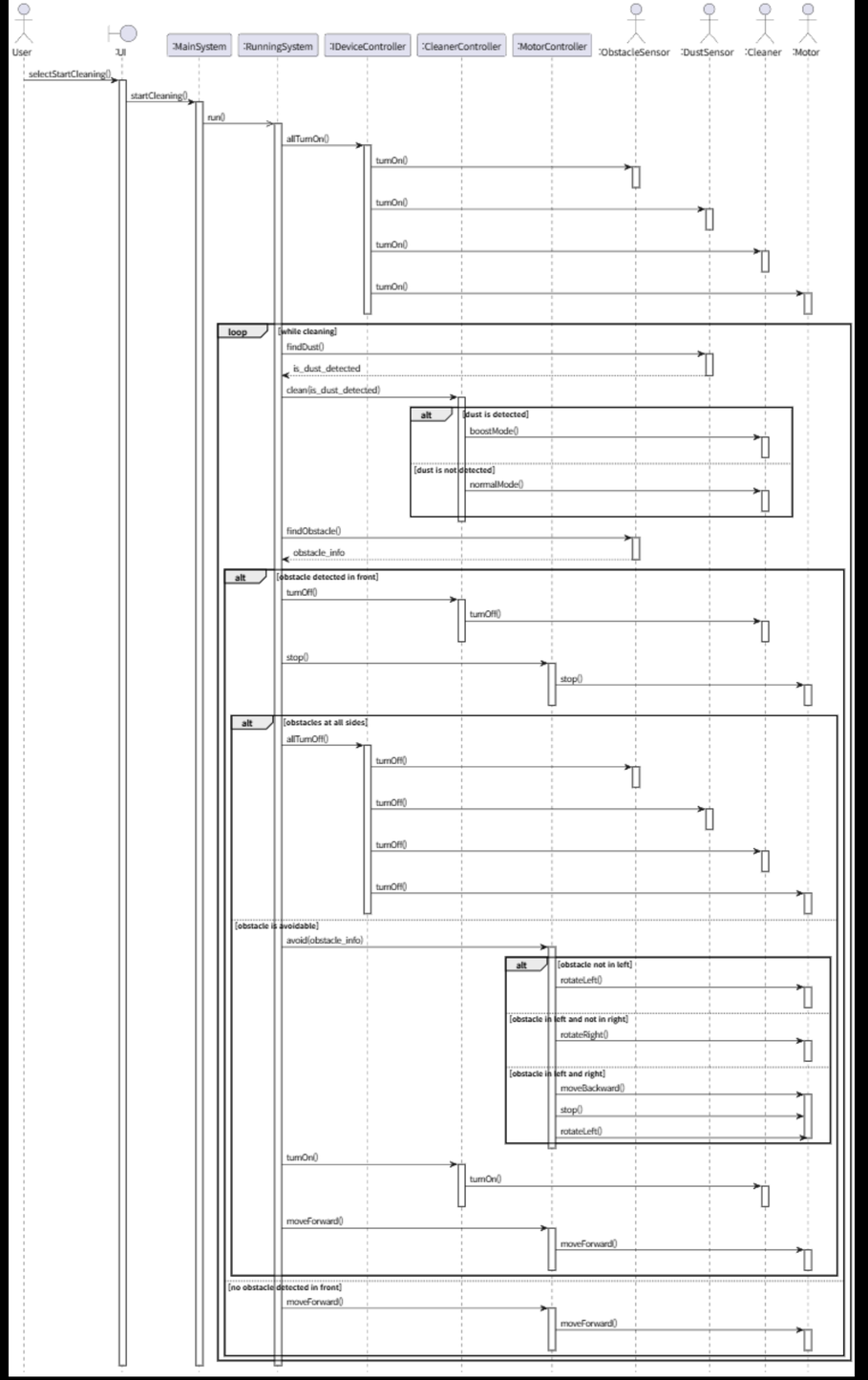
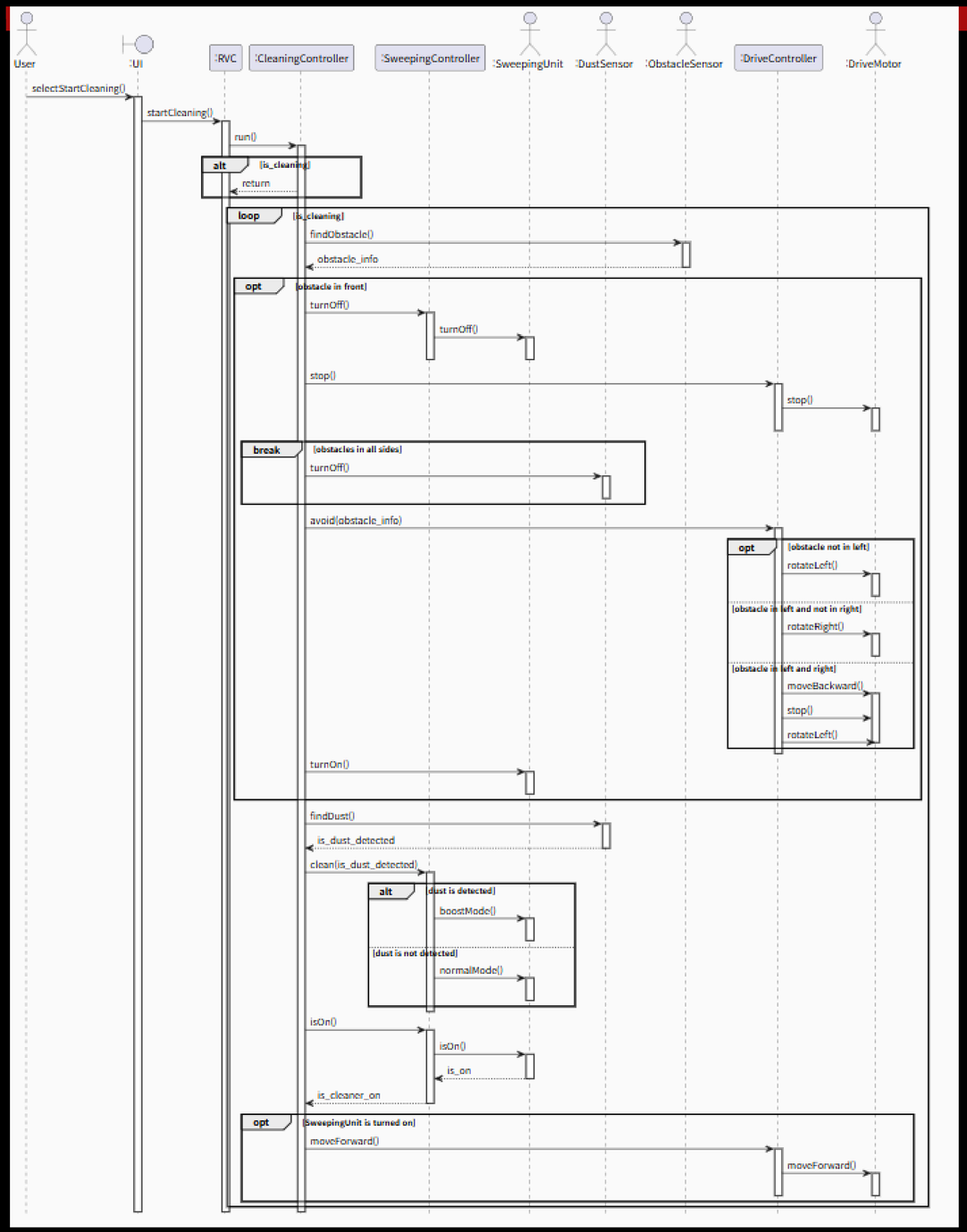


Sequence Diagram : Whole Sequence



Sequence Diagram : Whole Sequence



Update

Thank you!