

Coffee Machine System

Team 6

Team Presentation 1

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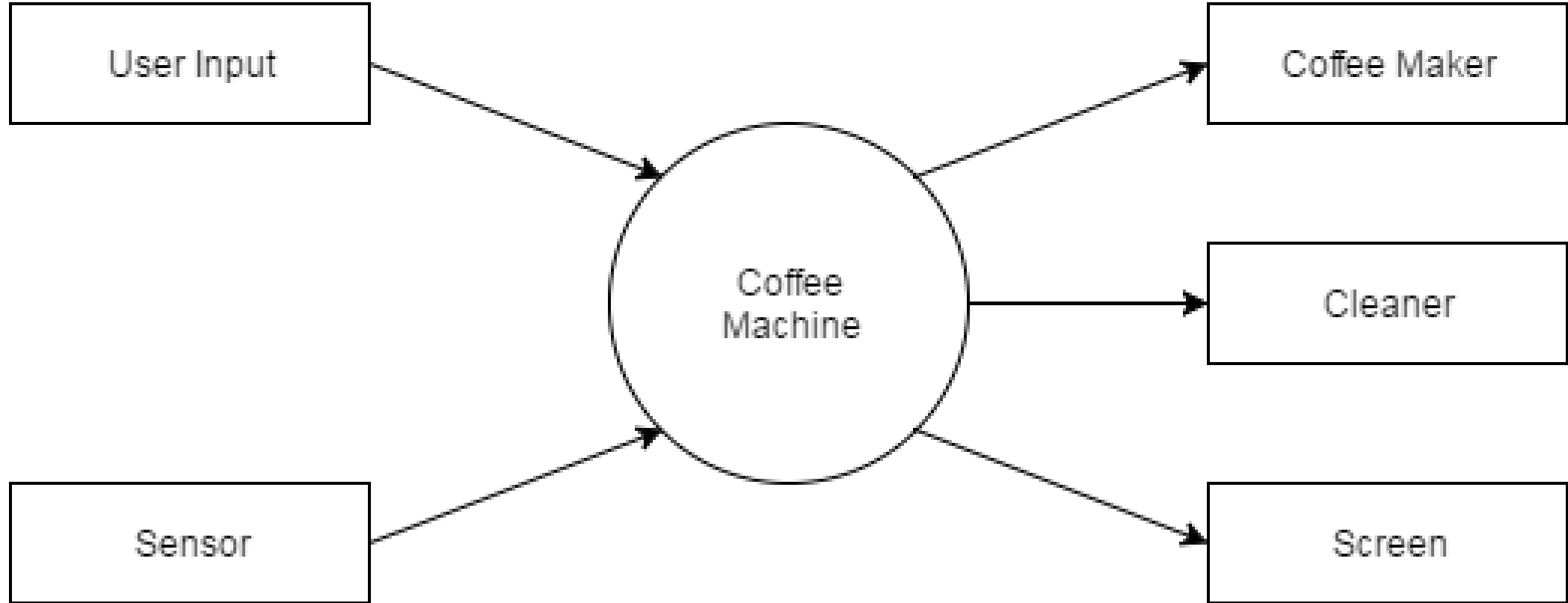
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Product Functions

- Coffee Machine은 커피 추출이 가능하다.
- Coffee Machine 의 커피 추출은 조건에 따라 불가능 할 수 있다.
- Coffee Machine 의 커피 추출은 사용자의 기호에 따라 세팅 할 수 있다.
- Coffee Machine 은 예약이 가능하다.
- Coffee Machine 은 커피가루가 없을 경우 원두를 자동으로 분쇄 후 커피를 추출 한다.
- Coffee Machine 은 물과 커피의 잔량을 지속적으로 User에게 알려 준다.
- Coffee Machine 의 물과 커피는 User에 의해 충전된다.
- Coffee Machine 은 Machine의 내부를 청소 할 수 있다.

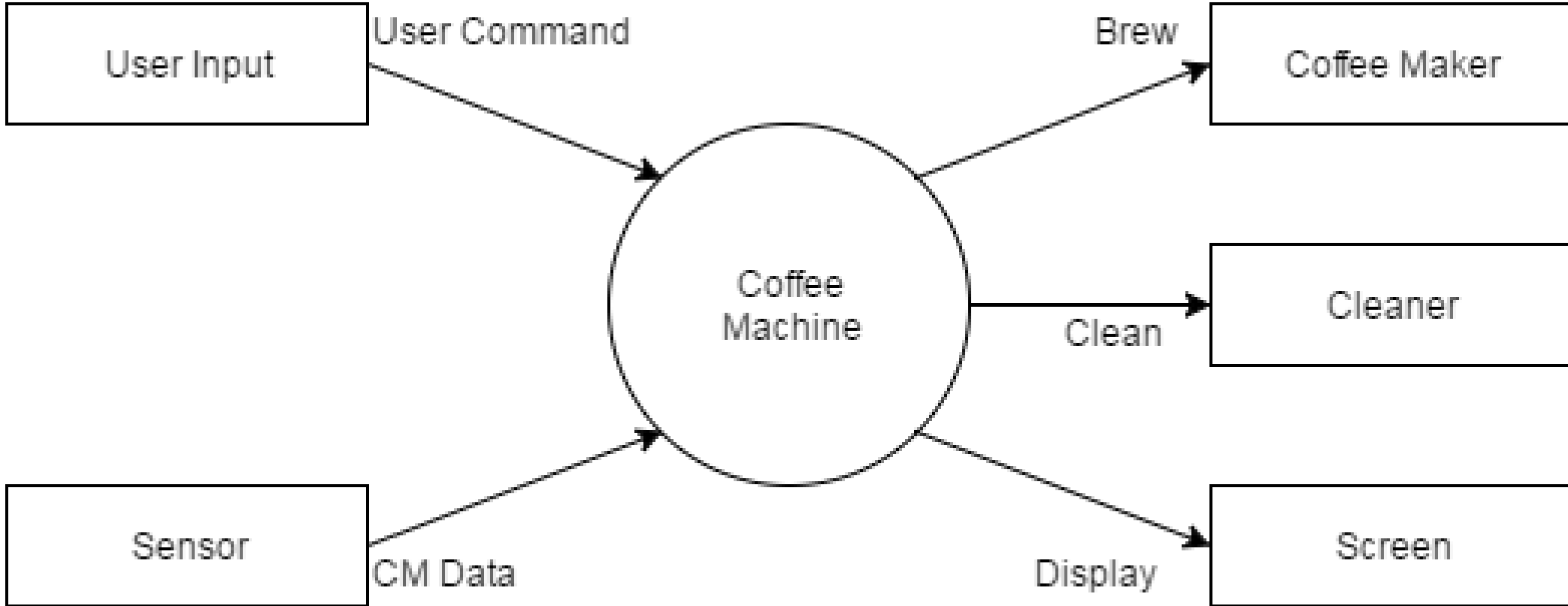
Basic System Context Diagram



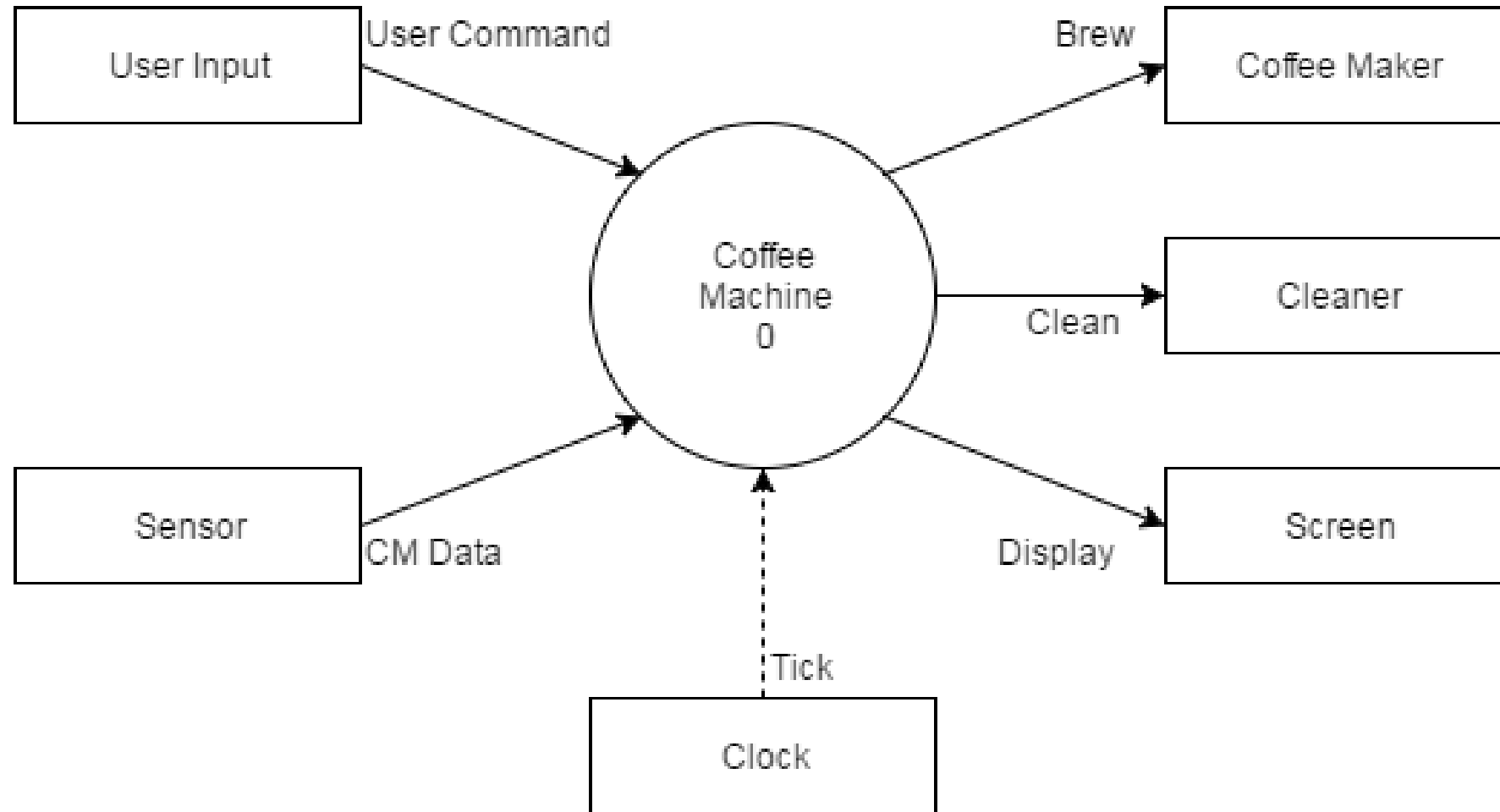
Event List

I/O Event	Description
User Command	사용자가 입력한 명령
CM Data	센서에서 인지한 CM의 데이터
Brew	Controller가 분석하여 Coffee Maker에 작업을 명령
Clean	Controller가 분석하여 Cleaner에 작업을 명령
Display	Controller가 분석하여 Screen에 화면을 출력

System Context Diagram



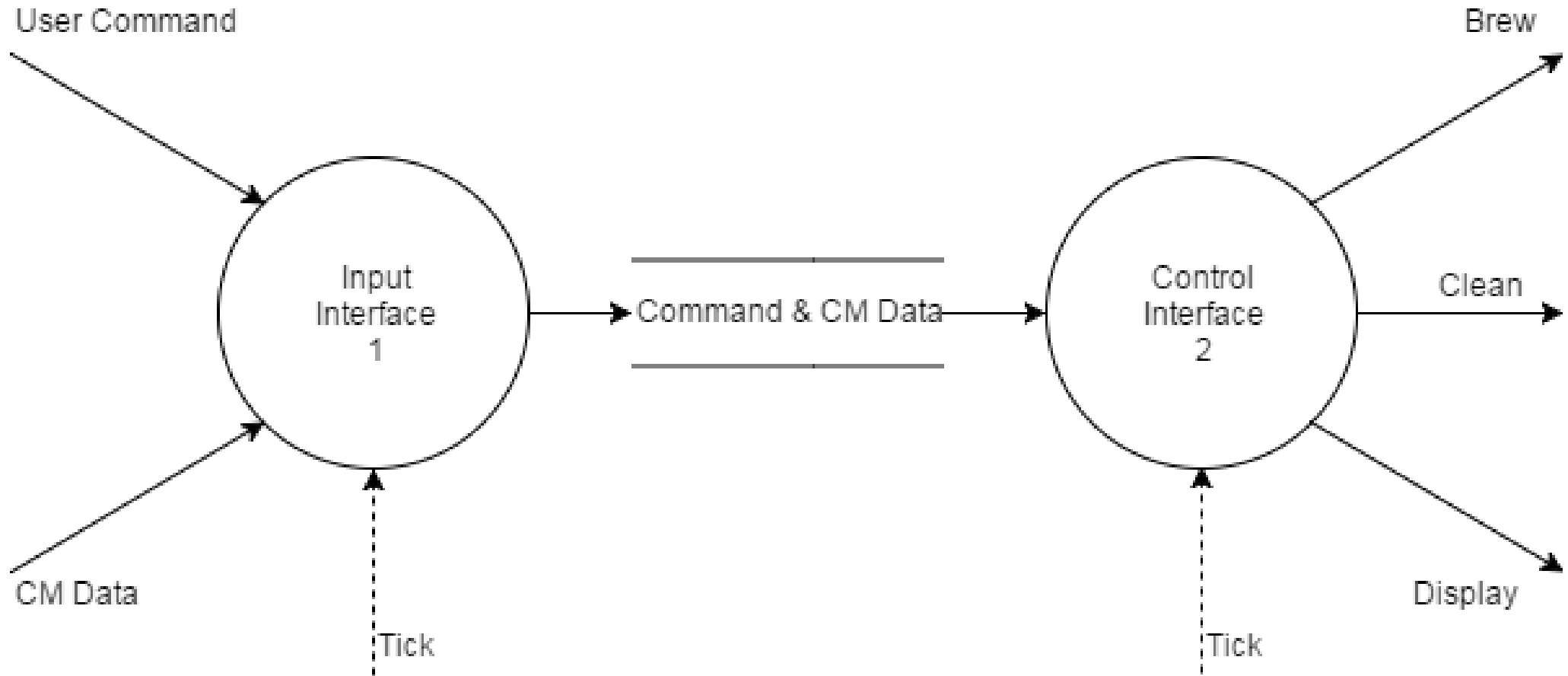
Data Flow Diagram Lv.0



Data Dictionary Lv.0

Data Name	Description	Format / Type
User Command	사용자가 입력한 명령	String Command
CM Data	CM의 데이터	String curTime, status, coffeeReserve, cleanerReserve, concentration Boolean temperature Int water, bean Char powder, cleanPowder
Brew	커피추출에 필요한 데이터와 명령	String command, concentration Boolean Temperature
Clean	청소 명령	String command
Display	스크린에 출력할 데이터와 명령	String curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Int water, bean Char powder, cleanPowder

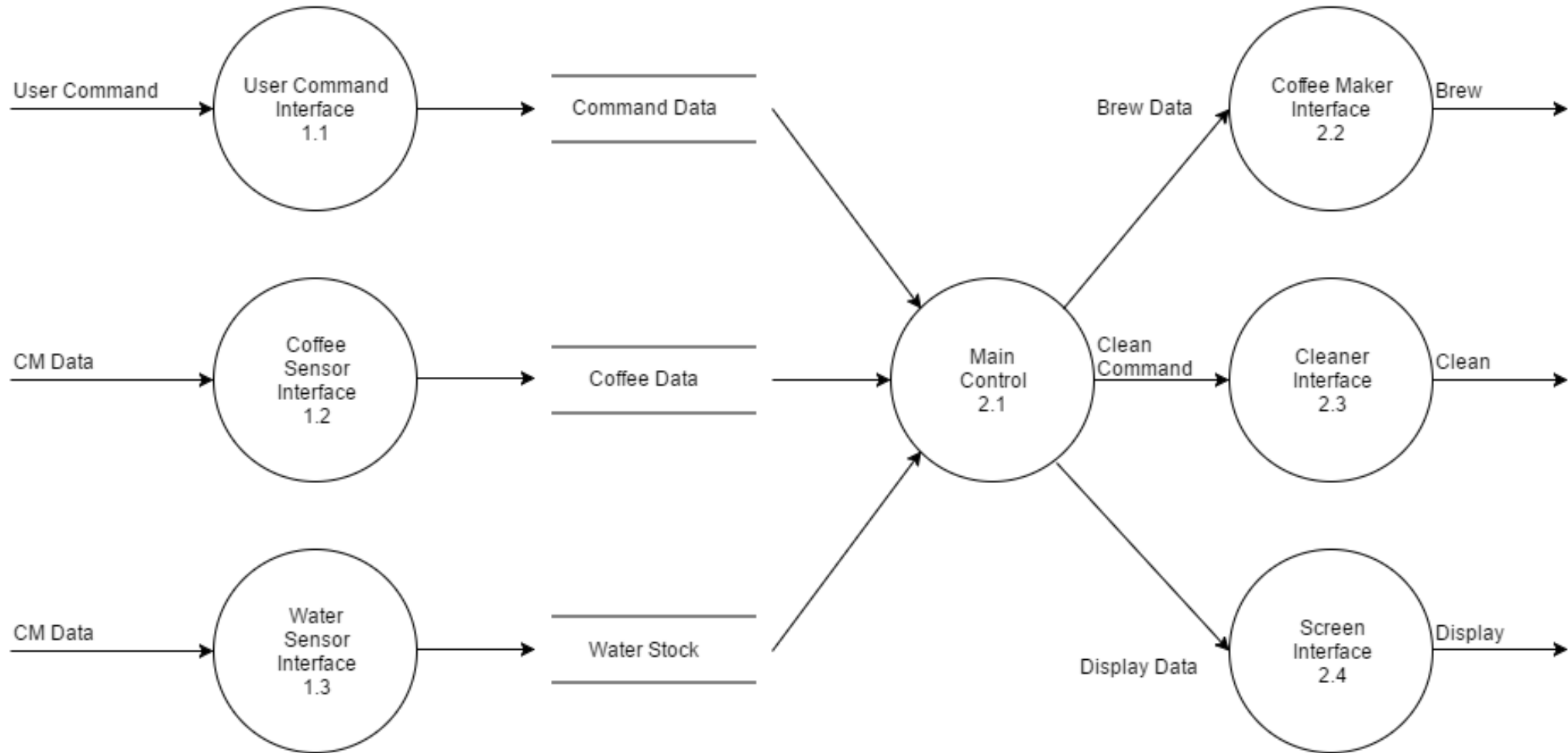
Data Flow Diagram Lv.1



Data Dictionary Lv.1

Data Name	Description	Format / Type
User Command	사용자가 입력한 명령	String Command
Brew	커피추출에 필요한 데이터와 명령	String command, concentration Boolean temperature
Clean	청소 명령	String command
Display	스크린에 출력할 데이터와 명령	String curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Int water, bean Char powder, cleanPowder
CM Data	CM의 데이터	String curTime, status, concentration, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder
Command & CM Data	사용자의 명령과 CM의 데이터	String command, curTime, status, concentration, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder

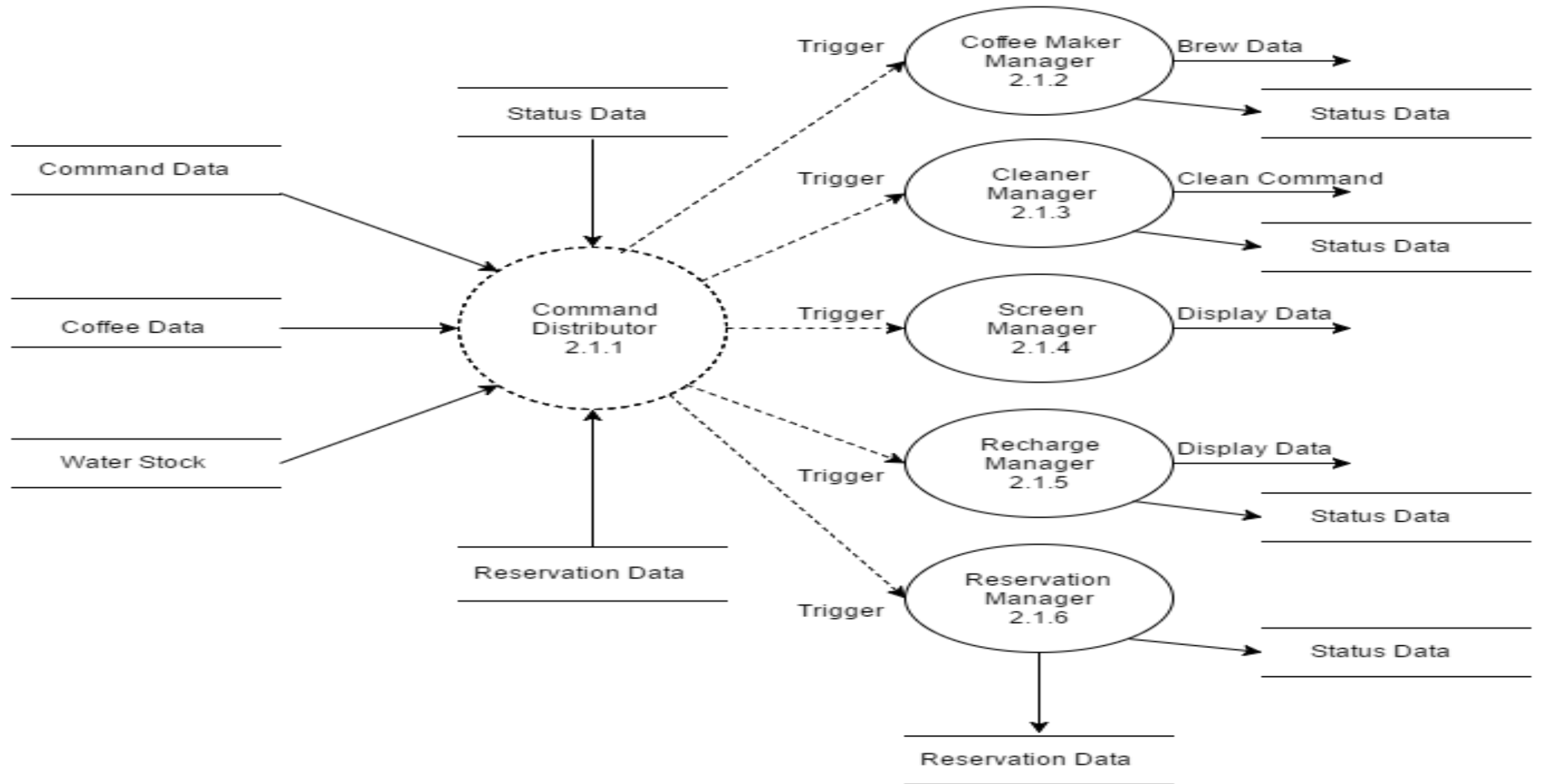
Data Flow Diagram Lv.2



Data Dictionary Lv.2

Data Name	Description	Format / Type
User Command	사용자가 입력한 명령	String Command
Brew	커피추출에 필요한 데이터와 명령	String command, concentration Boolean temperature
Clean	청소 명령	String command
Display	스크린에 출력할 데이터와 명령	String curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Int water, bean Char powder, cleanPowder
CM Data	CM의 데이터	String curTime, status, concentration, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder
Command & CM Data	사용자의 명령과 CM의 데이터	String command, curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder
Command Data	사용자의 명령 데이터	String Command
Coffee Data	커피 관련 데이터	Int bean Char powder, cleanPowder
Water stock	물의 저장량 데이터	Int water
Brew data	커피 추출 관련 데이터	String concentration Boolean temperature
Clean command	청소 명령	String command
Display Data	화면 출력에 필요한 데이터	String curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder

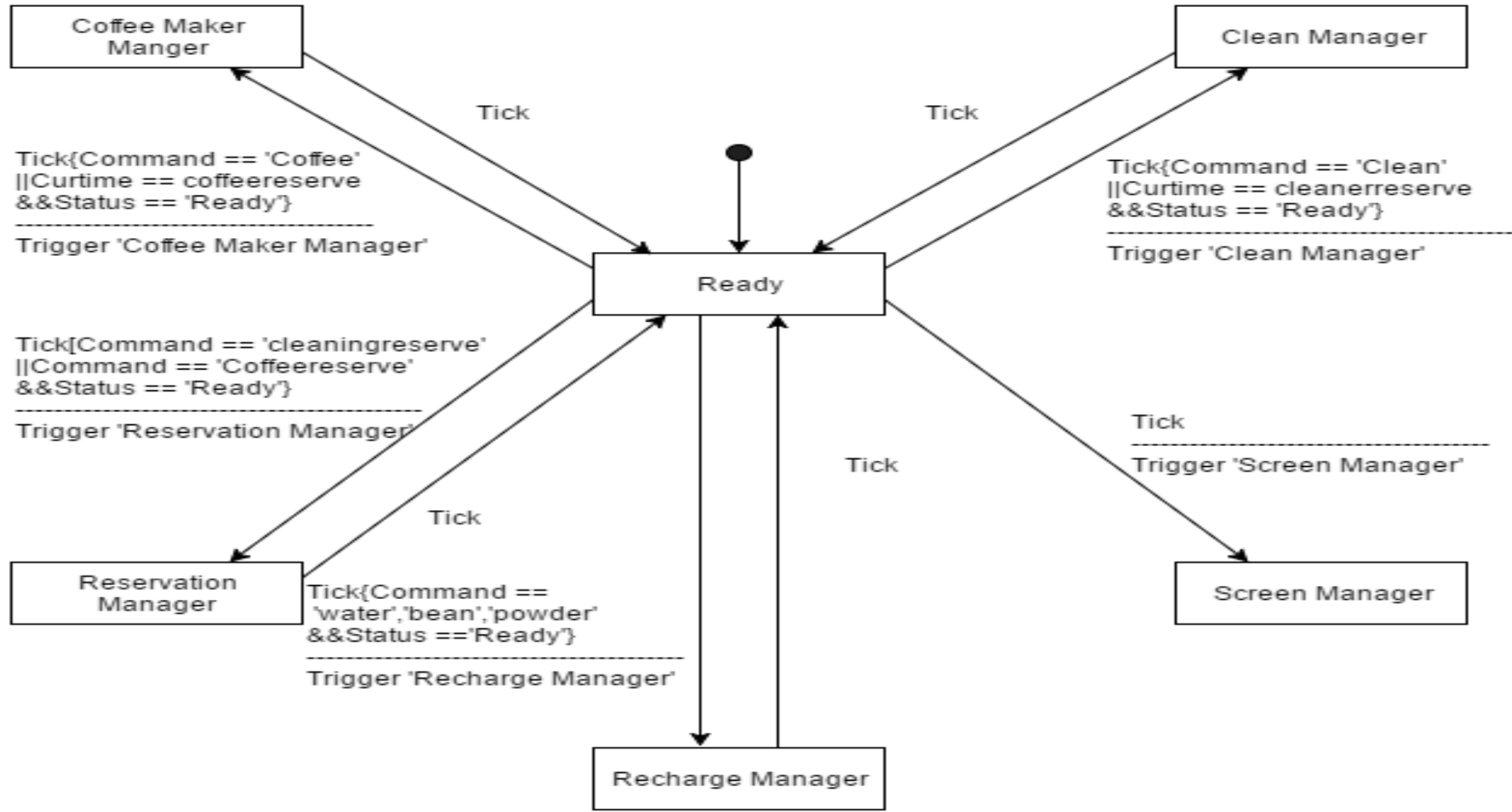
Data Flow Diagram Lv.3



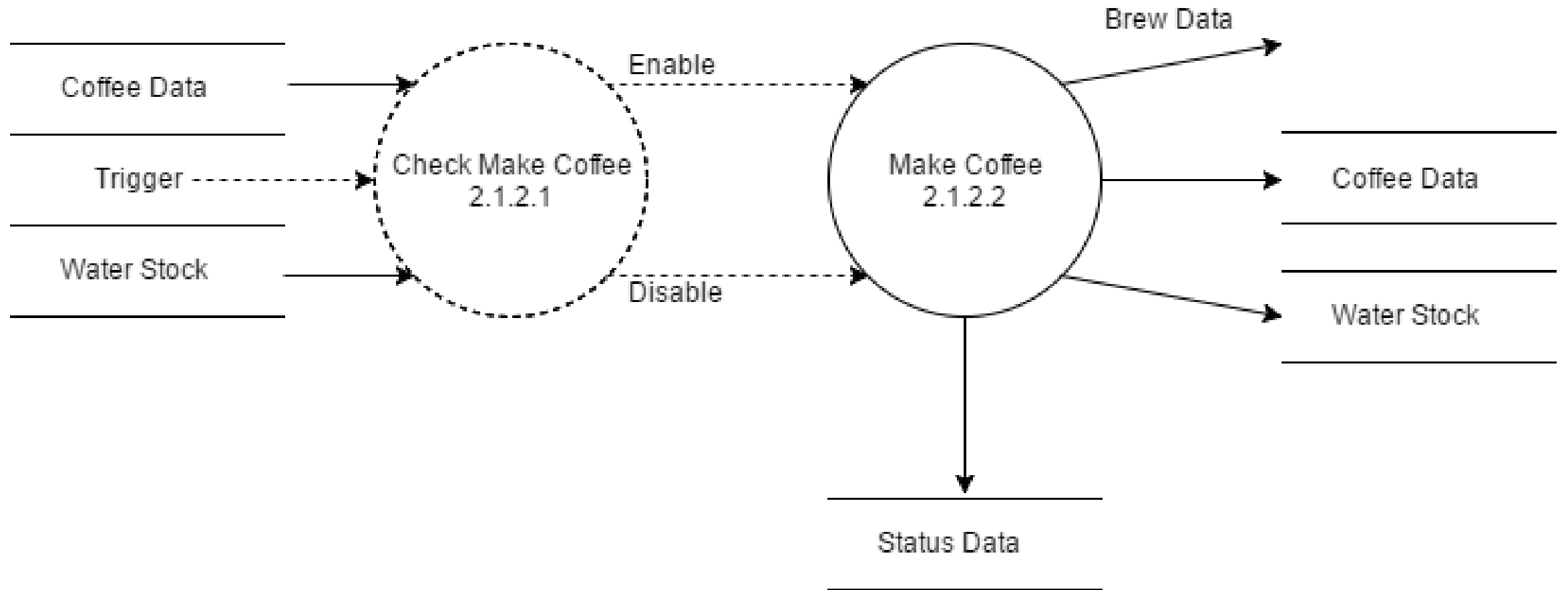
Data Dictionary Lv.3

Data Name	Description	Format / Type
Command Data	사용자의 명령 데이터	String Command
Coffee Data	커피 관련 데이터	Int bean Char powder, cleanPowder
Water stock	물의 저장량 데이터	Int water
Brew data	커피 추출 관련 데이터	String concentration Boolean temperature
Clean command	청소 명령	String command
Display Data	화면 출력에 필요한 데이터	String command, curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder
Reservation Data	청소와 커피의 예약 데이터	String coffeeReserve, cleanerReserve
Status Data	CM의 현재 상태	String Status

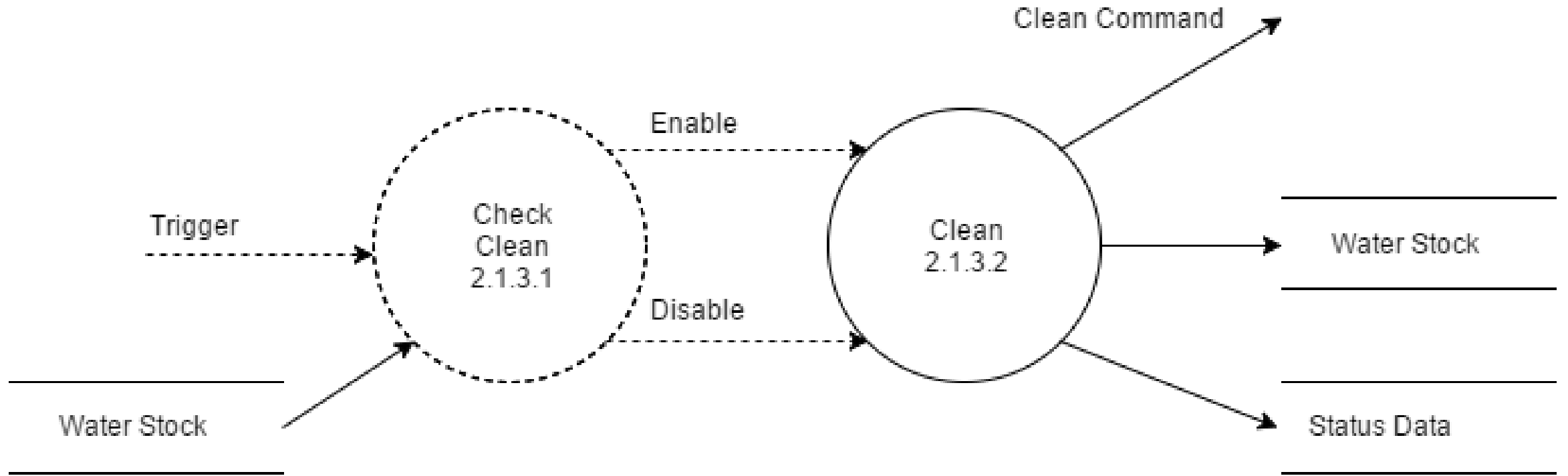
State Transition Diagram Command Distributor



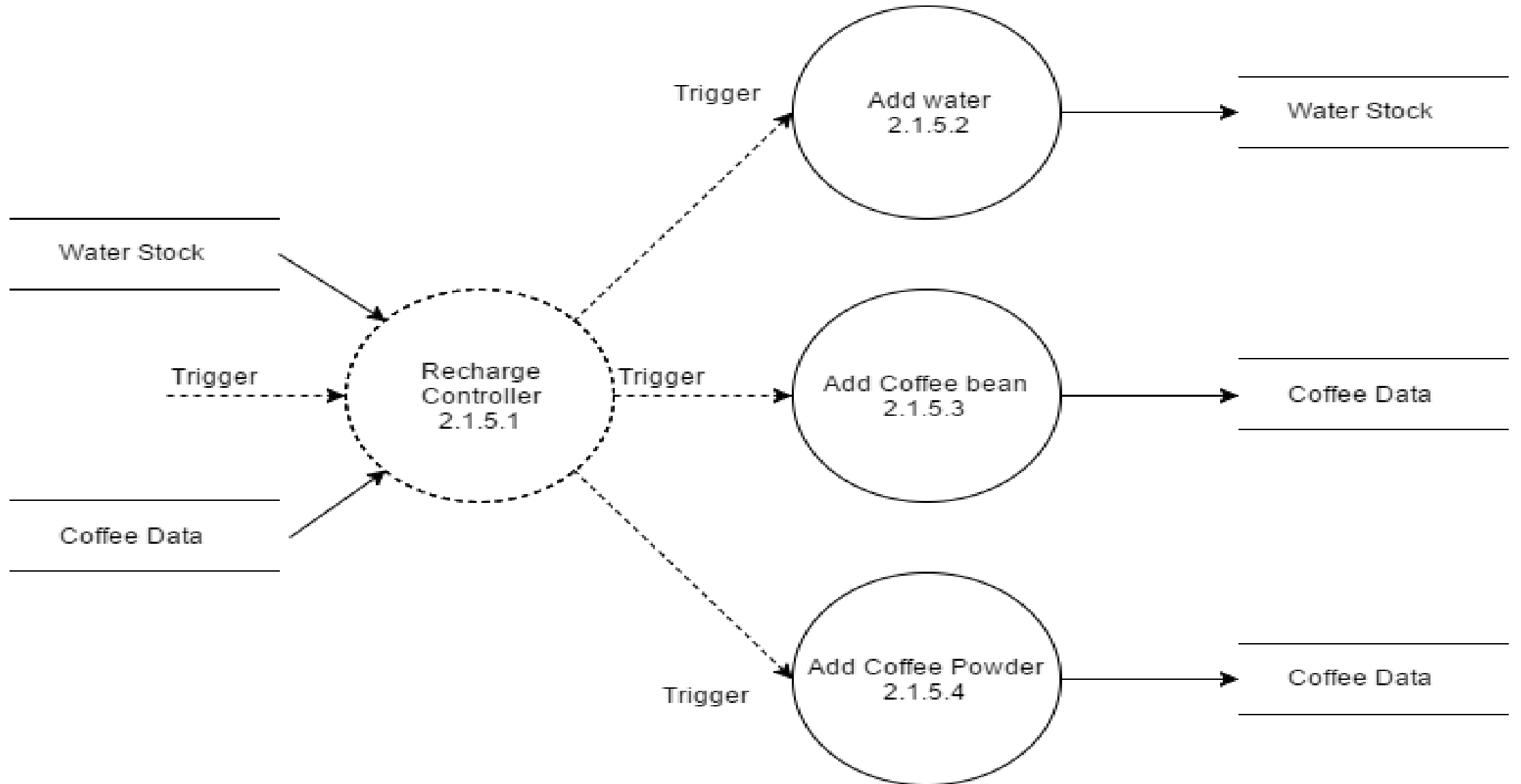
Data Flow Diagram Lv.4 (1)



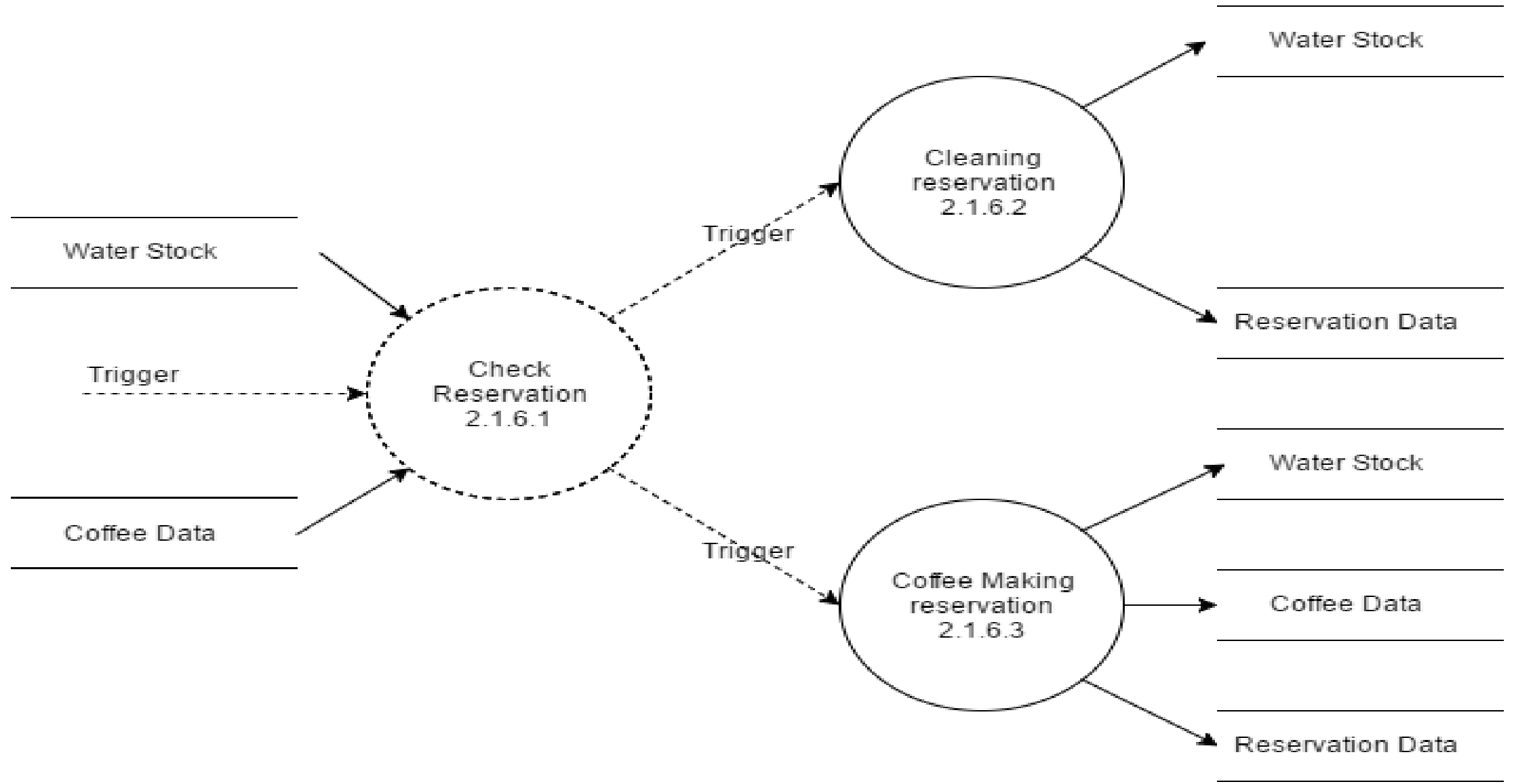
Data Flow Diagram Lv.4 (2)



Data Flow Diagram Lv.4 (3)



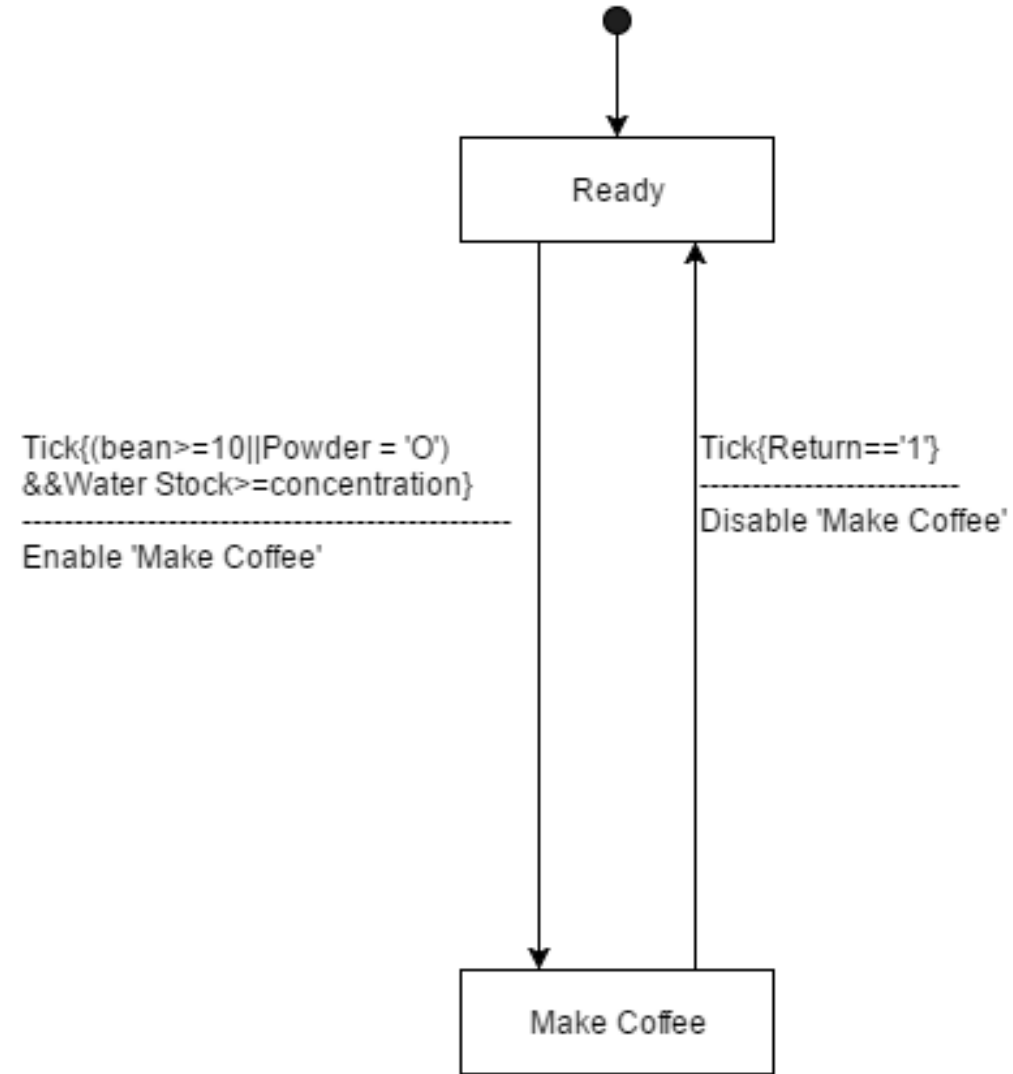
Data Flow Diagram Lv.4 (4)



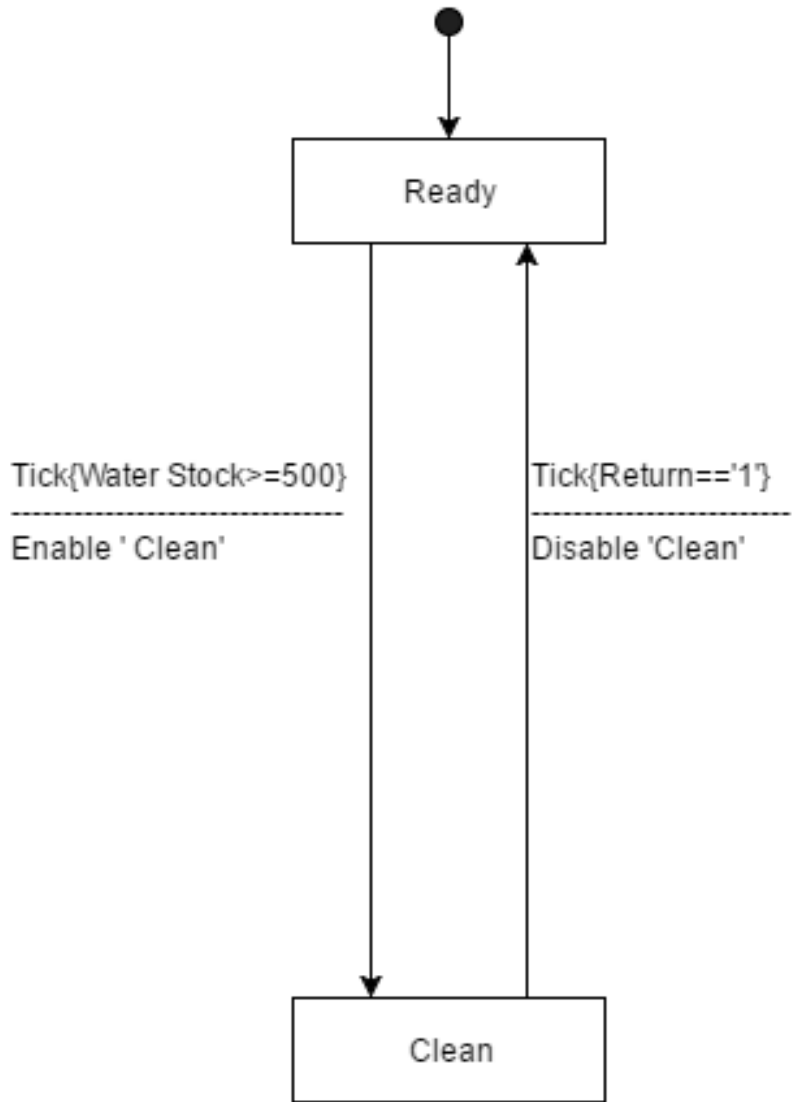
Data Dictionary Lv.4

Data Name	Description	Format / Type
Command Data	사용자의 명령 데이터	String Command
Coffee Data	커피 관련 데이터	Int bean Char powder, cleanPowder
Water stock	물의 저장량 데이터	Int water
Brew data	커피 추출 관련 데이터	String concentration Boolean temperature
Clean command	청소 명령	String command
Display Data	화면 출력에 필요한 데이터	String command, curTime, status, concentration, temperature, coffeeReserve, cleanerReserve Boolean temperature Int water, bean Char powder, cleanPowder
Reservation Data	청소와 커피의 예약 데이터	String coffeeReserve, cleandReserve
Status Data	CM의 현재 상태	String Status

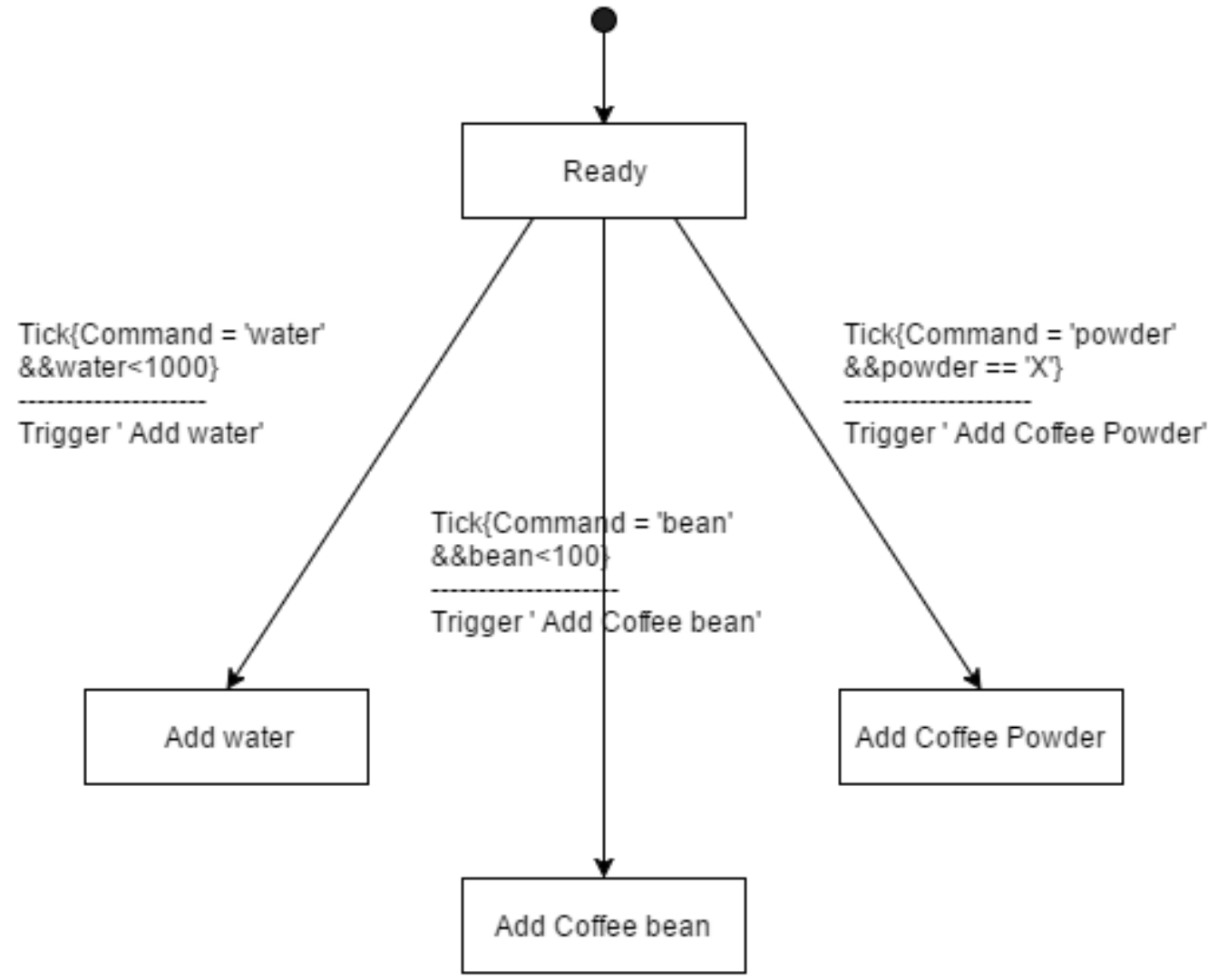
State Transition Diagram Check Make Coffee



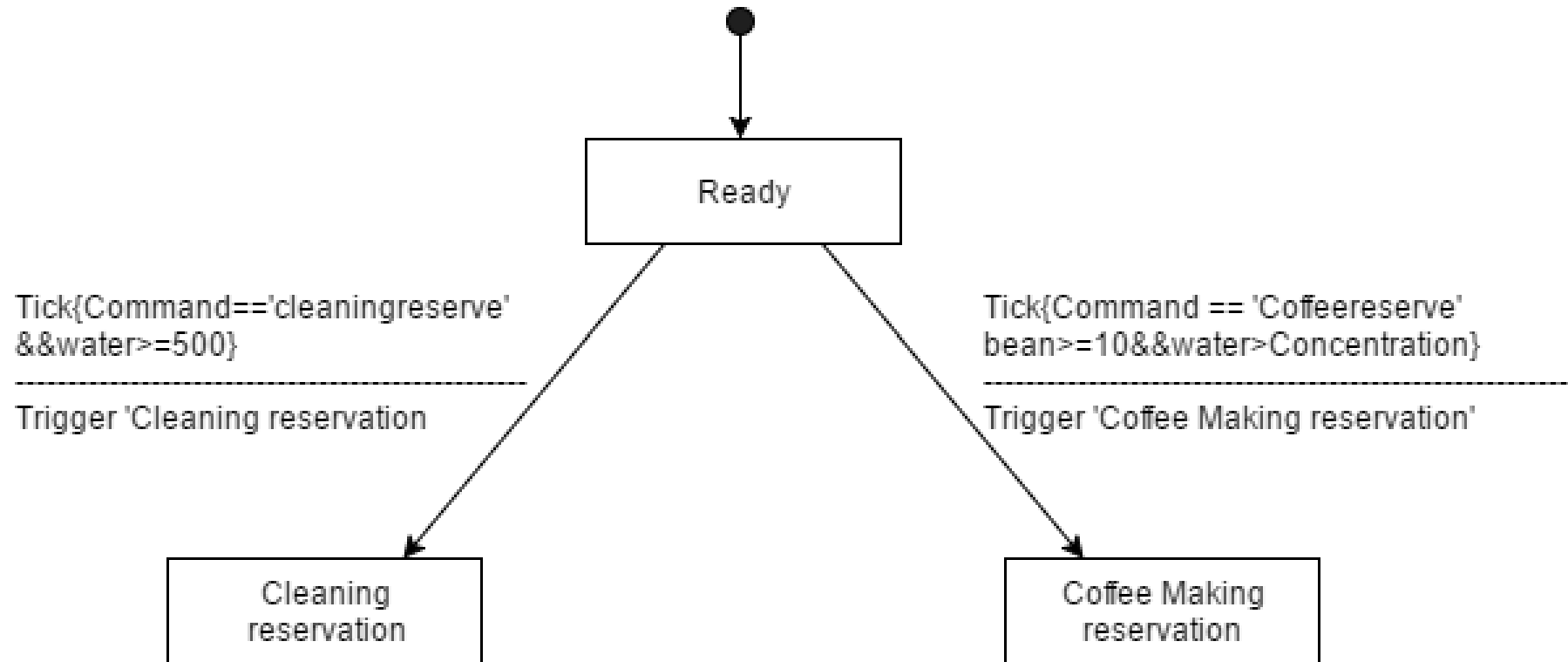
State Transition Diagram Check Clean



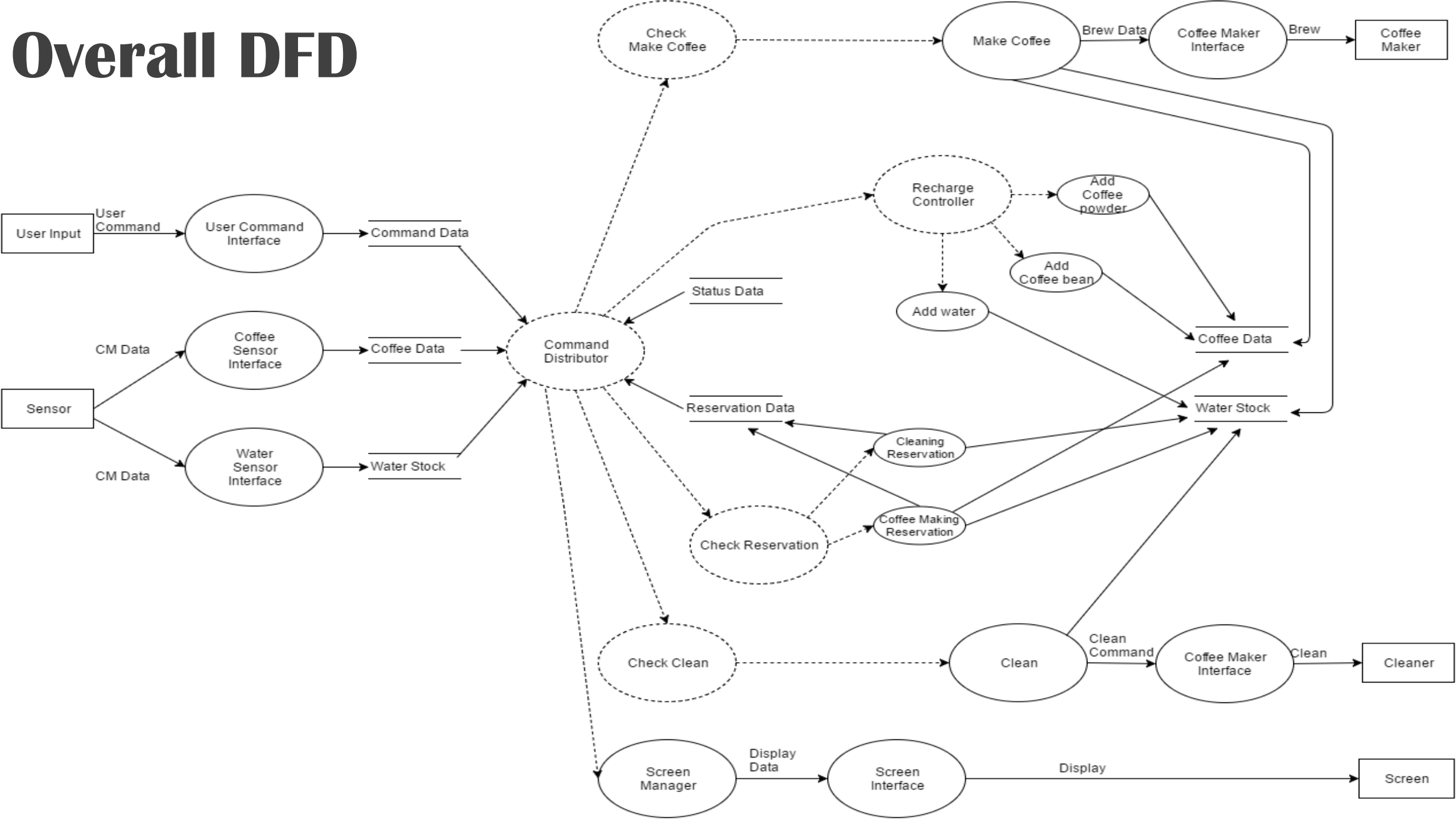
State Transition Diagram Recharge Controller



State Transition Diagram Check Reservation



Overall DFD



Thank you