



Coffemaker – Unit Test

T3

201010006 김경환

201312000 유준희

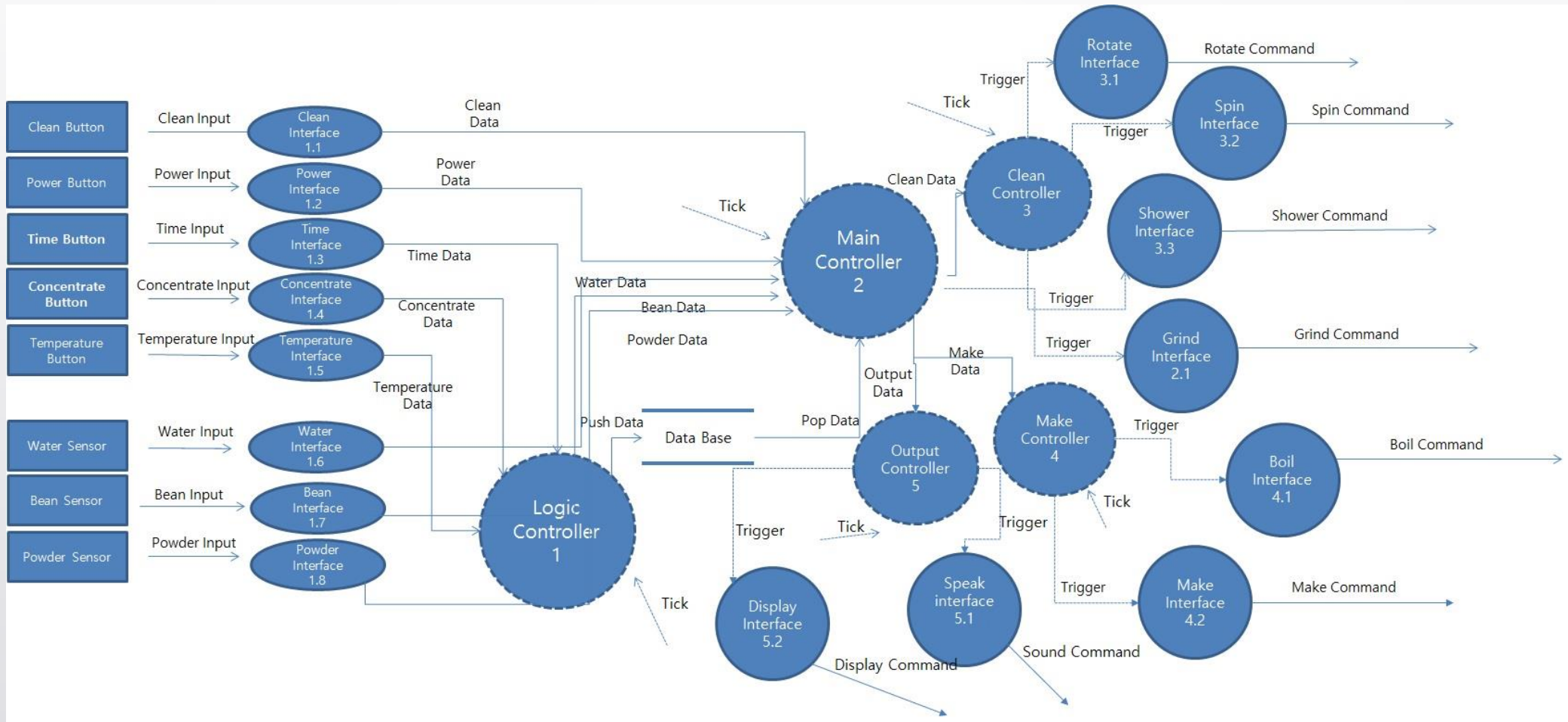
201311323 황성연

201311315 조희권



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Features to be tested

ID	NAME	DESCRIPTION
1	Logic Controller	각각의 인터페이스에서 온 데이터들을 종합해 Structure 형태로 만들어 Data Base에 저장시키거나 Main Controller에 보내준다.
2	Main Controller	Clean Data, Power Data, Processed Data, Pop Data를 받아서 Clean Controller에서 청소동작을, Make Controller에 커피제작을, output Controller에 출력동작을 하게하고, Grind Interface에 직접적으로 커피가루를 만들게 한다.
3	Clean Controller	Main Controller로부터 신호를 받아 Rotate Interface, Spin Interface, Shower Interface를 작동시켜 청소작동을 하게한다.
4	Make Controller	Main Controller로부터 신호를 받아 Boil Interface, Make Interface에 신호를 보내 커피제작과정을 수행하도록 한다.
5	Output Controller	Main Controller로부터 신호를 받아 Speak Interface, Display Interface에 신호를 보내어 출력작업을 수행하도록 한다.

Features not to be tested

ID	NAME	Description
1.1	Clean Interface	청소버튼이 눌러졌는지 감지하여 Main Controller로 보내준다.
1.2	Power Interface	전원버튼이 눌러졌는지 감지하여 Main Controller로 보내준다.
1.3	Time Interface	예약 시간의 입력을 받는 인터페이스로, 시간데이터를 Logic Controller로 보내준다.
1.4	Concentrate Interface	농도 데이터를 받아서 Logic Controller로 보내준다.
1.5	Temperature Interface	온도 데이터를 받아서 Logic Controller로 보내준다.
1.6	Water Interface	현재 물의 잔량의 데이터를 Logic Controller로 보내준다.
1.7	Bean Interface	현재 원두의 잔량의 데이터를 Logic Controller로 보내준다.
1.8	Powder Interface	현재 커피가루의 잔량의 데이터를 Logic Controller로 보내준다.
5.1	Speak Interface	Output Controller로부터 신호를 받아 Speak을 수행하도록 한다.
5.2	Display Interface	Output Controller로부터 신호를 받아 Display를 수행하도록 한다.

Test Identification

Identifier	Feature(Process DFD)	Valid / Invalid value
Coffemaker_0_000_000	1.Logic Controller	Time Input : 0 Concentrate Input : 100 Temperature Input : 0
Coffemaker_0_000_001	1.Logic Controller	Time Input : 0 Concentrate Input : 200 Temperature Input : 0
Coffemaker_0_000_002	1.Logic Controller	Time Input : 0 Concentrate Input : 300 Temperature Input : 1
Coffemaker_0_000_003	1.Logic Controller	Time Input : 11061525 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_004	1.Logic Controller	Time Input : 11052300 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_005	1.Logic Controller	Time Input : 5260900 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_006	1.Logic Controller	Time Input : 5310930 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_007	1.Logic Controller	Time Input : 3010000 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_008	1.Logic Controller	Time Input : 12252100 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_009	1.Logic Controller	Time Input : 8230830 Concentrate Input : 100 Temperature Input :
Coffemaker_0_000_010	1.Logic Controller	Time Input : 8231200 Concentrate Input : 100 Temperature Input :

Test Identification

Identifier	Feature(Process DFD)	Valid / Invalid value
Coffemaker_0_001_000	2.Main Controller	Clean Data : 1 Power Data : 0 Water Data : 0 Bean Data : 0 Powder Data : 0
Coffemaker_0_001_001	2.Main Controller	Clean Data : 0 Power Data : 0 Water Data : 5 Bean Data : 5 Powder Data : 5
Coffemaker_0_001_002	2.Main Controller	Clean Data : 0 Power Data : 0 Water Data : 100 Bean Data : 5 Powder Data : 5
Coffemaker_0_001_003	2.Main Controller	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 5 Powder Data : 20
Coffemaker_0_001_004	2.Main Controller	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 300 Powder Data : 5

Coffemaker_0_001_005	2.Main Controller	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 300 Powder Data : 300
Coffemaker_0_001_006	2.Main Controller	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 0 Powder Data : 5
Coffemaker_0_001_007	2.Main Controller	Clean Data : 0 Power Data : 1 Water Data : 0 Bean Data : 0 Powder Data : 0



Test Identification

Identifier	Feature(Process DFD)	Valid / Invalid value
Coffemaker_0_002_000	3.Clean Controller	Clean Data : 0
Coffemaker_0_002_001	3.Clean Controller	Clean Data : 1



Test Identification

Identifier	Feature(Process DFD)	Valid / Invalid value
Coffemaker_003_000	4.Make Controller	Concentrate Input : 100 Temperature Input : 0
Coffemaker_003_001	4.Make Controller	Concentrate Input : 200 Temperature Input : 0
Coffemaker_003_002	4.Make Controller	Concentrate Input : 300 Temperature Input : 0
Coffemaker_003_004	4.Make Controller	Concentrate Input : 100 Temperature Input : 1
Coffemaker_003_005	4.Make Controller	Concentrate Input : 200 Temperature Input : 1
Coffemaker_003_000	4.Make Controller	Concentrate Input : 100 Temperature Input : 0



Test Identification

Identifier	Feature(Process DFD)	Valid / Invalid value
Coffemaker_0_0 04_000	5.Output Controller	Input : 1, 0
Coffemaker_0_0 04_001	5.Output Controller	Input : 2, 0
Coffemaker_0_0 04_002	5.Output Controller	Input : 3, 0
Coffemaker_0_0 04_003	5.Output Controller	Input : 4, 0
Coffemaker_0_0 04_004	5.Output Controller	Input : 0, 3
Coffemaker_0_0 04_005	5.Output Controller	Input : 0, 2
Coffemaker_0_0 04_006	5.Output Controller	Input : 1, 1



Test Case Specification

Identifier	Input Specification	Output Specification
Coffemaker_0_000_000	Time Input : 0 Concentrate Input : 100 Temperature Input : 0	call pushCoffeeData()
Coffemaker_0_000_001	Time Input : 0 Concentrate Input : 200 Temperature Input : 0	call pushCoffeeData()
Coffemaker_0_000_002	Time Input : 0 Concentrate Input : 300 Temperature Input : 1	call pushCoffeeData()
Coffemaker_0_000_003	Time Input : 11061525 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_004	Time Input : 11052300 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_005	Time Input : 5260900 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_006	Time Input : 5310930 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_007	Time Input : 3010000 Concentrate Input : 100 Temperature Input :	call pushReserveData()

Test Case Specification

Identifier	Input Specification	Output Specification
Coffemaker_0_000_000	Time Input : 0 Concentrate Input : 100 Temperature Input : 0	call pushCoffeeData()
Coffemaker_0_000_001	Time Input : 0 Concentrate Input : 200 Temperature Input : 0	call pushCoffeeData()
Coffemaker_0_000_002	Time Input : 0 Concentrate Input : 300 Temperature Input : 1	call pushCoffeeData()
Coffemaker_0_000_003	Time Input : 11061525 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_004	Time Input : 11052300 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_005	Time Input : 5260900 Concentrate Input : 100 Temperature Input :	call pushReserveData()

Coffemaker_0_000_006	Time Input : 5310930 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_007	Time Input : 3010000 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_008	Time Input : 12252100 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_009	Time Input : 8230830 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_010	Time Input : 8231200 Concentrate Input : 100 Temperature Input :	call pushReserveData()
Coffemaker_0_000_1_000	Clean Data : 1 Power Data : 0 Water Data : 0 Bean Data : 0 Powder Data : 0	Call Clean Controller

Test Case Specification

Coffemaker_0_001_001	Clean Data : 0 Power Data : 0 Water Data : 5 Bean Data : 5 Powder Data : 5
Coffemaker_0_001_002	Clean Data : 0 Power Data : 0 Water Data : 100 Bean Data : 5 Powder Data : 5
Coffemaker_0_001_003	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 5 Powder Data : 20
Coffemaker_0_001_004	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 300 Powder Data : 5
Coffemaker_0_001_005	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 300 Powder Data : 300
Coffemaker_0_001_006	Clean Data : 0 Power Data : 0 Water Data : 200 Bean Data : 0 Powder Data : 5

Coffemaker_0_001_007	Clean Data : 0 Power Data : 1 Water Data : 0 Bean Data : 0 Powder Data : 0	Power Off
Coffemaker_0_002_000	Clean Data : 0	Output : 0 청소되지 않음
Coffemaker_0_002_001	Clean Data : 1	Output : 1
Coffemaker_0_003_000	Concentrate Input : 100 Temperature Input : 0	Output : 1 커피가 만들어짐
Coffemaker_0_003_001	Concentrate Input : 200 Temperature Input : 0	Output : 1 커피가 만들어짐
Coffemaker_0_003_002	Concentrate Input : 300 Temperature Input : 0	Output : 1 커피가 만들어짐
Coffemaker_0_003_004	Concentrate Input : 100 Temperature Input : 1	Output : 1 커피가 만들어짐
Coffemaker_0_003_005	Concentrate Input : 200 Temperature Input : 1	Output : 1 커피가 만들어짐
Coffemaker_0_004_000	Input : 1, 0	printf("1)Make\n"); printf("2)Cleaning\n");
Coffemaker_0_004_001	Input : 2, 0	printf("concentrate: ");
Coffemaker_0_004_002	Input : 3, 0	printf("temperature : ") ;
Coffemaker_0_004_003	Input : 4, 0	printf("time : ");
Coffemaker_0_004_004	Input : 0, 3	비프음
Coffemaker_0_004_005	Input : 0, 2	비프음