

Unit Test Report for Coffee Machine System

- Test Cases Specification
- Test Summary Report

Project Team

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1 Introduction

1.1 Objectives

본 문서는 Coffee Machine System의 Unit Test를 수행한 결과에 대한 Report 문서이다.
Test 요소들에 대한 Test case와 Test 수행결과에 대한 내용을 담고 있다.

1.2 References

[2016SE_B][T1]SRA_Ver3.0

[2016SE_B][T1]SDS_Ver2.0

2 Unit test case specification

2.1 Test case specification identifier

Identifier	Input Specification	Output Specification
CMS_UTD _2.1.1_000_0	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 0 converted_Sensors_Data -> cSD_vWater : 100 controller_Data_Storage ->nWater : 200	lcd_Command->code : 7 Call Error
CMS_UTD _2.1.1_000_1	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 0 converted_Sensors_Data -> cSD_vWater : 500 controller_Data_Storage ->nWater : 200 converted_Sensors_Data ->cSD_isTrash : true	lcd_Command->code : 13 Call Error
CMS_UTD _2.1.1_000_2	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 0 converted_Sensors_Data -> cSD_vWater : 500 controller_Data_Storage ->nWater : 200 converted_Sensors_Data ->cSD_isTrash : false converted_Sensors_Data	lcd_Command->code : 12 Call Error

	->cSD_vBean : 0 converted_Sensors_Data ->cSD_vPowder : 0	
CMS_UTD _2.1.1_000_3	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 1 converted_Sensors_Data -> cSD_vWater : 100	lcd_Command->code : 7 Call Error
CMS_UTD _2.1.1_001	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 0	lcd_Command->code : 1 Call Smash
CMS_UTD _2.1.1_002	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 0	lcd_Command->code : 2 Call Boil
CMS_UTD _2.1.1_003	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 0	lcd_Command->code : 3 Call Extract
CMS_UTD _2.1.1_004	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 1	lcd_Command->code : 5 Call Machine Clean
CMS_UTD _2.1.1_005	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 2	lcd_Command->code : 6 Call Concentrate
CMS_UTD _2.1.1_006	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 3	lcd_Command->code : 9 Call Supplement
CMS_UTD _2.1.1_007	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 4	lcd_Command->code : 10 Call Trash_Off
CMS_UTD _2.1.1_008	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 5	lcd_command->code: 4 Call Reserve
CMS_UTD _2.1.1_009	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : 6	Call Change_Temperature
CMS_UTP _2.1.1_010	controller_Data_Storage->when : -1 converted_Buttons_Data->isStop : true	Call Stop
CMS_UTD _2.1.2_001	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vBean : 10 converted_Sensors_Data -> cSD_vPowder : 0 lcd_Command->code : 1	converted_Buttons_Data->mode : 0 controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vBean : 0 converted_Sensors_Data -> cSD_vPowder : 10
CMS_UTD _2.1.2_002	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vBean : 10 converted_Sensors_Data -> cSD_vPowder : 10	Smash 실행 안함

	lcd_Command->code : 1	
CMS_UTD _2.1.3_000	controller_Data_Storage->when : -1 controller_Data_Storage->isHot : true controller_Data_Storage->boiled : false lcd_Command->code : 2	controller_Data_Storage->when : -1 controller_Data_Storage-> isHot : false controller_Data_Storage-> boiled : true
CMS_UTD _2.1.3_001	controller_Data_Storage->when : -1 controller_Data_Storage->isHot : false lcd_Command->code : 2	boil 실행 안함
CMS_UTD _2.1.4_000	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vPowder : 10 converted_Sensors_Data -> cSD_vWater : 500 controller_Data_Storage ->nWater : 200 lcd_Command->code : 3	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vPowder : 10 converted_Sensors_Data -> cSD_vWater : 300 controller_Data_Storage ->nWater : 200 lcd_Command->code : 3
CMS_UTD _2.1.5_000	controller_Data_Storage->when : -1 Input_select input : 1 Input_h input: 2 Input_m input : 30	controller_Data_Storage-> cDS_mode : 0
CMS_UTD _2.1.5_001	controller_Data_Storage->when : -1 Input_select input : 2 Input_h input: 3 Input_m input : 40	controller_Data_Storage-> cDS_mode : 1
CMS_UTD _2.1.5_002	controller_Data_Storage->when : -1 Input_select input : 2 Input_h input: 3 Input_m input : 91	재입력 요청
CMS_UTD _2.1.5_002	controller_Data_Storage->when : -1 Input_select input : 2 Input_h input: 30 Input_m input : 50	재입력 요청
CMS_UTD _2.1.6_000	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vWater : 500 lcd_Command->code : 5	converted_Buttons_Data->mode : -1 controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vWater : 0

		lcd_Command->code : 8
CMS_UTD _2.1.7_000	controller_Data_Storage->when : -1 lcd_Command->code : 6 concentrate input : 2	converted_Buttons_Data->mode : -1 controller_Data_Storage->when : -1 lcd_Command->code : 8 controller_Data_Storage-> nWater : 200
CMS_UTD _2.1.7_001	controller_Data_Storage->when : -1 lcd_Command->code : 6 concentrate input : 8	Concentrate input 재입력 요구
CMS_UTD _2.1.9_000	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vWater : 500 converted_Sensors_Data -> cSD_vBean : 10 converted_Sensors_Data -> cSD_vPowder : 10 converted_Sensors_Data -> cSD_isTrash : false	save_command->vWater : 500 save_command->vBean :10 save_command->vPowder :10 save_command->isTrash : false
CMS_UTD _2.1.11_000	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vBean : 0 input1 input : 1 input2 input : 10	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data -> cSD_vBean : 10
CMS_UTD _2.1.11_001	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vPowder : 0 input1 input : 2 input2 input : 10	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data -> cSD_vPowder : 10
CMS_UTD _2.1.11_002	controller_Data_Storage->when : -1 converted_Sensors_Data -> cSD_vWater : 0 input1 input : 3 input2 input : 300	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data -> cSD_vWater : 300
CMS_UTD _2.1.11_003	controller_Data_Storage->when : -1 input1 input : 5	실행 되지만 변하는 값 없음 converted_Buttons_Data->mode : -1
CMS_UTD _2.1.11_004	controller_Data_Storage->when : -1 input1 input : 1 input2 input : 1000	controller_Data_Storage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data ->

		cSD_vBean : 100
CMS_UTD _2.1.11_005	controller_Data_Stroage->when : -1 input1 input : 2 input2 input : 200	controller_Data_Stroage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data -> cSD_vPowder : 10
CMS_UTD _2.1.11_006	controller_Data_Stroage->when : -1 input1 input : 3 input2 input : 2000	controller_Data_Stroage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data -> cSD_vWater : 1000
CMS_UTD _2.1.12_000	controller_Data_Stroage->when : -1 converted_Sensors_Data -> cSD_isTrash : true	controller_Data_Stroage->when : -1 converted_Buttons_Data->mode : -1 converted_Sensors_Data -> cSD_isTrash : false lcd_command->code : 8
CMS_UTD _2.1.12_001	controller_Data_Stroage->when : -1 converted_Sensors_Data -> cSD_isTrash : false	Trash_Off가 실행되지 않음 converted_Buttons_Data->mode : -1
CMS_UTD _2.1.13_000	controller_Data_Stroage->when : -1 controller_Data_Stroage->isHot : false	controller_Data_Stroage->when : -1 converted_Buttons_Data->mode : -1 controller_Data_Stroage-> isHot : true lcd_Command->code : 8
CMS_UTD _2.1.13_001	controller_Data_Stroage->when : -1 controller_Data_Stroage->isHot : true	controller_Data_Stroage->when : -1 converted_Buttons_Data->mode : -1 controller_Data_Stroage-> isHot : false lcd_Command->code : 8

2.2 Test items

<Table 3 Test Design Identification> 참조

2.3 Input specifications

<Table 4 Test Case Identification> 참조

2.4 Output specifications

<Table 4 Test Case Identification> 참조

3 Environmental needs

Coffee Machine System의 Unit Test를 위한 환경적 요구사항은 다음과 같다.

(1) Hardware & Platform

GCC compiler/linker

(2) Continuous Testing & Integrated Platform Environment

Cygwin

(3) Framework

CUnit

4 Unit test summary report

4.1 Test summary report identifier

Identifier	Result
CMS_UTD _2.1.1_000_0	Passed
CMS_UTD _2.1.1_000_1	Passed
CMS_UTD _2.1.1_000_2	Passed
CMS_UTD _2.1.1_000_3	Passed
CMS_UTD _2.1.1_001	Passed
CMS_UTD _2.1.1_002	Passed
CMS_UTD _2.1.1_003	Passed
CMS_UTD _2.1.1_004	Passed
CMS_UTD _2.1.1_005	Passed
CMS_UTD _2.1.1_006	Passed

CMS_UTD _2.1.1_007	Passed
CMS_UTD _2.1.1_008	Passed
CMS_UTD _2.1.1_009	Passed
CMS_UTP _2.1.1_010	Passed
CMS_UTD _2.1.2_001	Passed
CMS_UTD _2.1.2_002	Passed
CMS_UTD _2.1.3_000	Passed
CMS_UTD _2.1.3_001	Passed
CMS_UTD _2.1.4_000	Passed
CMS_UTD _2.1.5_000	Passed
CMS_UTD _2.1.5_001	Passed
CMS_UTD _2.1.5_002	Passed
CMS_UTD _2.1.5_002	Passed
CMS_UTD _2.1.6_000	Passed
CMS_UTD _2.1.7_000	Passed
CMS_UTD _2.1.7_001	Passed
CMS_UTD _2.1.9_000	Passed
CMS_UTD _2.1.11_000	Passed
CMS_UTD _2.1.11_001	Passed

CMS_UTD _2.1.11_002	Passed
CMS_UTD _2.1.11_003	Passed
CMS_UTD _2.1.11_004	Passed
CMS_UTD _2.1.11_005	Passed
CMS_UTD _2.1.11_006	Passed
CMS_UTD _2.1.12_000	Passed
CMS_UTD _2.1.12_001	Passed
CMS_UTD _2.1.13_000	Passed
CMS_UTD _2.1.13_001	Passed

4.2 Evaluation

Total test case : 37개

Passed : 37개

Failed : 0개