

Unit Test Report for Coffee Machine System

- Test Cases Specification
- Test Summary Report

Project Team

Team 4

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1 Introduction

1.1 Objectives

본 문서는 2016년 건국대학교의 소프트웨어공학 개론 강의의 실습과제로 디자인한 Coffee Machine System을 unit단위로 구현하여 Unit testing한 결과 문서이다.

1.2 References

T4-2016.CMS.SRA-2.1

T4-2016.CMS.SDS-2.1

T4-2016.CMS.UTP-1.0

2 Unit test case specification

2.1 Test case specification identifier

Feature	Input	Expected Output
Main suites		
CMS_UTC001	Tem_Toggle_Interface() suite	
CMS_UTC001_001	coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100, 1};	coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100, 0};
CMS_UTC001_002	coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200, 1};	coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200, 0};
CMS_UTC001_003	coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300, 1};	coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300, 0};
CMS_UTC001_004	coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100, 0};	coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100, 1};
CMS_UTC001_005	coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200, 0};	coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200, 1};
CMS_UTC001_006	coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300, 0};	coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300, 1};
CMS_UTC002	Concentration_Set_Interface() suite	

CMS.UTC002_001	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};
CMS.UTC002_002	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};
CMS.UTC002_003	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};
CMS.UTC002_004	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};
CMS.UTC002_005	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};
CMS.UTC002_006	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};
CMS.UTC002_007	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};
CMS.UTC002_008	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};
CMS.UTC002_009	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};
CMS.UTC002_010	conLv = 2; coffeeSetting.tem = 1;	conLv = 2; coffeeSetting.tem = 1;

	coffeeSetting.con = 200; Setting_File.txt = {200 1};	coffeeSetting.con = 200; Setting_File.txt = {200 1};
CMS.UTC002_011	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};
CMS.UTC002_012	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};
CMS.UTC002_013	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};
CMS.UTC002_014	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};
CMS.UTC002_015	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};
CMS.UTC002_016	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};
CMS.UTC002_017	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};
CMS.UTC002_018	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};
CMS.UTC003	B_init() suite	
CMS.UTC003_001	keyNUM.txt = {0};	keyNUM.txt = {0};
CMS.UTC003_002	keyNUM.txt = {124};	keyNUM.txt = {0};
CMS.UTC003_003	keyNUM.txt = {-20};	keyNUM.txt = {0};

CMS.UTC004	HWSwitDown() :: Main Controller Sub Routine suite	
CMS.UTC004_001	HW.txt = {4};	HW.txt = {0};
CMS.UTC004_002	HW.txt = {10};//범위 밖의 값	HW.txt = {0};
CMS.UTC004_003	HW.txt = {-10};	HW.txt = {0};
CMS.UTC004_004	HW.txt = {0};	HW.txt = {0};
CMS.UTC005	statusModify() :: Main Controller Sub Routine suite	
CMS.UTC005_001	status = "Ready"; status.txt = {Ready};	status = "Ready"; status.txt = {Ready};
CMS.UTC005_002	status = "Ready"; status.txt = {Reserv};	status = "Ready"; status.txt = {Ready};
CMS.UTC005_003	status = "Ready"; status.txt = {Account};	status = "Ready"; status.txt = {Ready};
CMS.UTC005_004	status = "Reserv"; status.txt = {Ready};	status = "Reserv"; status.txt = {Reserv};
CMS.UTC005_005	status = "Reserv"; status.txt = {Reserv};	status = "Reserv"; status.txt = {Reserv};
CMS.UTC005_006	status = "Reserv"; status.txt = {Account};	status = "Reserv"; status.txt = {Reserv};
CMS.UTC005_007	status = "Account" status.txt = {Ready};	status = "Account" status.txt = {Account};
CMS.UTC005_008	status = "Reserv"; status.txt = {Account};	status = "Account" status.txt = {Account};
CMS.UTC005_009	status = "Reserv"; status.txt = {Account};	status = "Account" status.txt = {Account};
CMS.UTC006	statusCheck() :: Main Controller Sub Routine suite	
CMS.UTC006_001	status.txt = {Ready}; status = Ready;	status.txt = {Ready}; status = Ready;
CMS.UTC006_002	status.txt = {Ready}; status = Reserv;	status.txt = {Ready}; status = Ready;
CMS.UTC006_003	status.txt = {Ready}; status = Account;	status.txt = {Ready}; status = Ready;
CMS.UTC006_004	status.txt = {Account}; status = Ready;	status.txt = {Account}; status = Account;
CMS.UTC006_005	status.txt = {Account}; status = Reserv;	status.txt = {Account}; status = Account;
CMS.UTC006_006	status.txt = {Account}; status = Account;	status.txt = {Account}; status = Account;
CMS.UTC006_007	status.txt = {Reserv};	status.txt = {Reserv};

	status = Ready;	status = Reserv;
CMS.UTC006_008	status.txt = {Reserv}; status = Reserv;	status.txt = {Reserv}; status = Reserv;
CMS.UTC006_009	status.txt = {Reserv}; status = Account;	status.txt = {Reserv}; status = Reserv;
CMS.UTC007	HWcheck() sutie	
CMS.UTC007_001	HW.txt = {0} HW = 1;	HW = 0;
CMS.UTC007_002	HW.txt = {0} HW = 0;	HW = 0;
CMS.UTC007_003	HW.txt = {1} HW = 0;	HW = 1;
CMS.UTC007_004	HW.txt = {1} HW = 1;	HW = 1;
CMS.UTC007_005	HW.txt = {1} HW = 3;	HW = 1;
CMS.UTC007_006	HW.txt = {2} HW = 0;	HW = 2;
CMS.UTC007_007	HW.txt = {2} HW = 2;	HW = 2;
CMS.UTC007_008	HW.txt = {2} HW = 5;	HW = 2;
CMS.UTC007_009	HW.txt = {3} HW = 0;	HW = 3;
CMS.UTC007_010	HW.txt = {3} HW = 3;	HW = 3;
CMS.UTC007_011	HW.txt = {3} HW = 5;	HW = 3;
CMS.UTC007_012	HW.txt = {4} HW = 0;	HW = 4;
CMS.UTC007_013	HW.txt = {4} HW = 0;	HW = 4;
CMS.UTC007_014	HW.txt = {4} HW = 2;	HW = 4;
CMS.UTC007_015	HW.txt = {5} HW = 0;	HW = 5;
CMS.UTC007_016	HW.txt = {5} HW = 5;	HW = 5;

CMS.UTC007_017	HW.txt = {5} HW = 9;	HW = 5;
CMS.UTC007_018	HW.txt = {9} HW = 0;	HW = 9;
CMS.UTC007_019	HW.txt = {9} HW = 9;	HW = 9;
CMS.UTC007_020	HW.txt = {9} HW = 5;	HW = 9;
CMS.UTC008	keyNUMcheck() suite	
CMS.UTC008_001	keyNUM.txt = {1} keyNUM = 0;	keyNUM = 1;
CMS.UTC008_002	keyNUM.txt = {2} keyNUM = 0;	keyNUM = 2;
CMS.UTC008_003	keyNUM.txt = {3} keyNUM = 0;	keyNUM = 3;
CMS.UTC009	dstatusModify() suite	
CMS.UTC009_001	Dstatus = 1;	Dstatus.txt = {1}
CMS.UTC009_002	Dstatus = 2;	Dstatus.txt = {2}
CMS.UTC009_003	Dstatus = 3;	Dstatus.txt = {3}
CMS.UTC010	accountdataModify() suite	
CMS.UTC010_001	coffeesetting.con= 100; coffeesetting.tem = 0; acData->mode = 3; acData->time = 0;	account.txt = {3 100 0 0}
CMS.UTC010_002	coffeesetting.con= 100; coffeesetting.tem = 1; acData->mode = 3; acData->time = 0;	account.txt = {3 100 1 0}
CMS.UTC010_003	coffeesetting.con= 200; coffeesetting.tem = 0; acData->mode = 3; acData->time = 0;	account.txt = {3 200 0 0}
CMS.UTC010_004	coffeesetting.con= 200; coffeesetting.tem = 1; acData->mode = 3; acData->time = 0;	account.txt = {3 200 1 0}
CMS.UTC010_005	coffeesetting.con= 300; coffeesetting.tem = 0;	account.txt = {3 300 0 0}

	acData->mode = 3; acData->time = 0;	
CMS.UTC010_006	coffeesetting.con= 300; coffeesetting.tem = 1; acData->mode = 3; acData->time = 0;	account.txt = {3 300 1 0}
CMS.UTC010_007	coffeesetting.con= 100; coffeesetting.tem = 0; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 100 0 (int)(time(NULL))}
CMS.UTC010_008	coffeesetting.con= 100; coffeesetting.tem = 1; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 100 1 (int)(time(NULL))}
CMS.UTC010_009	coffeesetting.con= 200; coffeesetting.tem = 0; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 200 0 (int)(time(NULL))}
CMS.UTC010_010	coffeesetting.con= 200; coffeesetting.tem = 1; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 200 1 (int)(time(NULL))}
CMS.UTC010_011	coffeesetting.con= 300; coffeesetting.tem = 0; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 300 0 (int)(time(NULL))}
CMS.UTC010_012	coffeesetting.con= 300; coffeesetting.tem = 1; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 300 1 (int)(time(NULL))}
CMS.UTC010_013	coffeesetting.con= 100; coffeesetting.tem = 0;	account.txt = {2 100 0 (int)(time(NULL))}

	acData->mode = 2; acData->time= (int)(time(NULL));	
CMS_UTC010_014	coffeesetting.con= 100; coffeesetting.tem = 1; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 100 1 (int)(time(NULL))}
CMS_UTC010_015	coffeesetting.con= 200; coffeesetting.tem = 0; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 200 0 (int)(time(NULL))}
CMS_UTC010_016	coffeesetting.con= 200; coffeesetting.tem = 1; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 200 1 (int)(time(NULL))}
CMS_UTC010_017	coffeesetting.con= 300; coffeesetting.tem = 0; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 300 0 (int)(time(NULL))}
CMS_UTC010_018	coffeesetting.con= 300; coffeesetting.tem = 1; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 300 1 (int)(time(NULL))}
CMS_UTC011	main() suite ● testing을 위해 각 케이스마다 return을 받도록 조작.	
CMS_UTC011_001	status = "Account"	Return -1
CMS_UTC011_002	status = "Reserv"	Return -1
CMS_UTC011_003	status = "Ready" HW = 0;	Return 0
CMS_UTC011_004	status = "Ready" HW = 1;	printf("reservBtn accept\n"); acData->mode = 3; printf("complete\n"); Return 1;

CMS.UTC011_005	status = "Ready" HW = 2;	printf("extractBtn acceptWn"); acData->time= (int)(time(NULL)); acData->mode = 1; printf("completeWn"); Return 2;
CMS.UTC011_006	status = "Ready" HW = 3;	printf("cleanBtn acceptWn"); acData->time= (int)(time(NULL)); acData->mode = 2; printf("completeWn"); Return 3;
CMS.UTC011_007	status = "Ready" HW = 4;	printf("concenBtn acceptWn"); printf("conLvWn"); printf("completeWn"); Return 4;
CMS.UTC011_008	status = "Ready" HW = 5;	printf("temBtn acceptWn"); printf("completeWn"); Return 5;
CMS.UTC011_009	status = "Ready" HW = 9;	printf("powerBtn acceptWn"); printf("completeWn"); Return 9;
CMS.UTC011_010	status = "Ready" HW = 9;	
CMS.UTC011_011	status = "Ready" HW = 102;	Return -2;
CMS.UTC011_012	status = "Ready" HW = -30;	Return -2;

Identifier	Input identifier	Output identifier
Order suites		
CMS.UTC012	Order controller suite	
CMS.UTC012_001	accountData.txt = {1, 200, 1, time(NULL)}	reservList.txt에 {1, 200, 1, time(NULL)} 추가. (시간 오름차순)
CMS.UTC012_002	accountData.txt = {2, 100, 1, time(NULL)}	reservList.txt에 {2, 100, 1, time(NULL)} 추가. (시간 오름차순)

CMS.UTC012_003	accountData.txt = {3, 100, 1, 0 }, keyNUM = 1, acData.mode = 1, localTime = 080720 // 7일 10:29에 테스트	reservList.txt에 {2, 100, 1, 1478525100 } 추가. (시간 오름차순)
CMS.UTC012_004	accountData.txt = {3, 100, 1, 0 }, keyNUM = 1 acData.mode = 1 localTime = 090720 // 7일 10:29에 테스트	ERROR : time range over
CMS.UTC012_005	accountData.txt = {3, 100, 1, 0 }, keyNUM = 3, acData.mode = 1, localTime = 080720 // 7일 10:29에 테스트	ERROR : select (account 1, delete 2) range over
CMS.UTC012_006	accountData.txt = {3, 100, 1, 0 } keyNUM = 1 acData.mode = 4 localTime = 080720 // 7일 10:29에 테스트	ERROR : select (extract 1, clean 2) range over
CMS.UTC012_007	accountData.txt = {3, 100, 1, 0 } keyNUM = 2 delNUM = 0	reservList.txt에서 0번째 데이터 제거
CMS.UTC012_008	accountData.txt = {3, 100, 1, 0 } keyNUM = 2 delNUM = -1	ERROR : List range over
CMS.UTC012_009	keyNUM.txt = 1	keyNUM = 1
CMS.UTC013	ResAccount() suite	
CMS.UTC013_001	reservPriorityQ = empty acData.mode = 1 acData.set.con = 100 acData.set.tem = 1 acData.time = time(NULL)	reservPriorityQ에 {1, 100, 1, time(NULL)} 추가 (시간 오름차순)
CMS.UTC013_002	reservPriorityQ = {1, 100, 1, time(NULL)} 노드가 존재 acData.mode = 1 acData.set.con = 100 acData.set.tem = 1, acData.time = time(NULL) + 15	reservPriorityQ에 {1, 100, 1, time(NULL) +15} 추가 (시간 오름차순)
CMS.UTC013_003	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15} 노드가 존재 acData.mode = 1	reservPriorityQ에 {1, 100, 1, time(NULL) +7} 추가 (시간 오름차순)

	acData.set.con = 100 acData.set.tem = 1 acData.time = time(NULL) + 7	
CMS.UTC014	ResDelete() suite	
CMS.UTC014_001	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15}, ... 총 15개의 노드가 존재 delNUM = 0	reservPriorityQ에 0번째 노드 제거 (시간 오름차순)
CMS.UTC014_002	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15}, ... 총 15개의 노드가 존재 delNUM = 14	reservPriorityQ에 14번째 노드 제거 (시간 오름차순)
CMS.UTC014_003	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15}, ... 총 15개의 노드가 존재 delNUM = 7	reservPriorityQ에 7번째 노드 제거 (시간 오름차순)
CMS.UTC015	UTranslate() suite	
CMS.UTC015_001	localTime = 072230 // 7일 10:29에 테스트	acData.time=1478525400
CMS.UTC015_002	localTime = 072259 // 7일 10:29에 테스트	acData.time=1478527140
CMS.UTC015_003	localTime = 080720 // 7일 10:29에 테스트	acData.time=1478525100
Display suites		
CMS.UTC016	Dstatus invalid suite	
CMS.UTC016_001	Dstatus.txt { 비어 있음 }	Error : Dstatus.txt is not exist
CMS.UTC016_002	Dstatus.txt { -1 }	Error : Dstatus invalid
CMS.UTC017	settingFile invalid suite	
CMS.UTC017_001	settingFile.txt { 비어 있음 }	Error : settingFile.txt is not exist
CMS.UTC018	Display info suite	
CMS.UTC018_001	22시 37분 58초에 테스트 Dstatus.txt { 1 } settingFile { 300, 1 } Sensor.txt { 0, 0, 30, 700, 0 } Status.txt { Ready } reservList.txt { 비어 있음 }	CurrentInfo출력 현재 시간 : 22: 37: 58 현재 상태 : 대기중 선택 농도 : 연하게 선택 온도 : HOT 물 잔량 : 700ml

	errMsg.txt { 비어 있음 }	원두 잔량 : 30g 커피 가루 : X 최근 예약 정보 : empty Err msg : empty
CMS.UTC018_002	22시 38분 07초에 테스트 DStatus.txt { 1 } settingFile { 300, 1 } Sensor.txt { 0, 0, 30, 50, 0 } Status.txt { Check } reservList.txt { 비어 있음 } errMsg.txt { "water" }	CurrentInfo출력 현재 시간 : 22: 38: 07 현재 상태 : 대기중 선택 농도 : 연하게 선택 온도 : HOT 물 잔량 : 50ml 원두 잔량 : 30g 커피 가루 : X 최근 예약 정보 : empty Err msg : Water
CMS.UTC018_003	22시 39분 12초에 테스트 DStatus.txt { 1 } settingFile { 200, 1 } Sensor.txt { 0, 0, 5, 500, 0 } Status.txt { check } reservList.txt { 1 100 1 1478526300 } errMsg.txt { "Beans" }	CurrentInfo출력 현재 시간 : 22: 39: 12 현재 상태 : 대기중 선택 농도 : 보통 선택 온도 : HOT 물 잔량 : 500ml 원두 잔량 : 5g 커피 가루 : X 최근 예약 정보 : 추출 / 진하게, HOT / 07:22:45 Err msg : Beans
CMS.UTC018_004	DStatus.txt(Dstatus == 2)	Setting Mode 출력 (단순한 정보 출력부분) =====con set===== 1. 진하게 2. 중간 3. 연하게
CMS.UTC018_005	Dstatus.txt(Dstatus == 3) reservList.txt { 1 100 1 1478526300, 2 100 1 1478526360, 1 200 0 1478526420 }	Reserve Mode 출력 0. 추출 / 진하게 HOT / 7:22:45 1. 청소 / 7:22:46 2. 추출 / 보통 COOL / 7:22:47

		<p>===reserve mode ===</p> <p>1. 예약 모드 설정</p> <p>1) 예약 등록</p> <p>2) 예약 제거</p> <p>등록></p> <p>1. 행동 모드 설정</p> <p>1) 추출</p> <p>2) 청소</p> <p>2. 시간 설정 단계 (DDHHMM)</p> <p>제거></p> <p>1. 제거 번호 설정</p>
Machine suites		
	Running Machine suite	
CMS.UTC019	setD.mode = 2 WD = 650	Status = "Clean" 프로세스 10초 지연 WD = 150
CMS.UTC020	setD.set.con = 100 WD = 150 setD.set.tem = 1	Status = "Steam" 프로세스 10초 지연
CMS.UTC021	Filter.dust = 0 Filter.trash = 0 BD = 15	프로세스 5초 지연 Filter.dust = 1 BD = 5
CMS.UTC022	SetD.mode = 1 setD.set.con = 100 WD = 150 setD.set.tem = 1 CE = 1	Status = "Extract" Filter.trash = 1 프로세스 10초 지연 CE = 0
CMS.UTC023	SetD.mode = 0 Filter.trash = 1	Status = "Trash" Beep음 발생
CMS.UTC024	SetD.mode = 0 Filter.dust = 0 Filter.trash = 1 BD = 7	Status = "Coffee Bean" Beep음 발생
CMS.UTC025	SetD.mode = 0 Filter.dust = 0 Filter.trash = 1 BD = 10	Status = "Water" Beep음 발생

	setD.set.con = 100 WD = 70	
CMS_UTC026	SetD.mode = 0 Filter.dust = 0 Filter.trash = 1 BD = 10 setD.set.con = 100 WD = 150 setD.set.tem = 1 CE = 0	Status = "CUP" Beep음 발생
CMS_UTC027	Machine Controller suite	
CMS_UTC027_001	Rpq->head->next->reserve.time = 1478525400 Curr = 1478566194 // 예약한지 한참 지난 시간에서 컨트롤러를 실행하여 테스트 (POWER가 꺼졌다가 한참 뒤 켜졌을 때 소거되는 예약에 대한 테스트)	ReservPriorityQueue의 헤더 다음 노드 삭제
CMS_UTC027_002	Rpq->head->next->reserv.time = 1478566194 Rpq->head->next->reserv.mode = 1 Rpq->head->next->set.tem = 1 Rpq->head->next->set.com = 100 Wtime = 1478566194	setD.tem = 1 setD.con = 100
CMS_UTC027_003	Rpq->head->next->reserv.time = 14785666518 Rpq->head->next->reserv.mode = 3 Rpq->head->next->set.tem = 1 Rpq->head->next->set.com = 100 Wtime = 14785666194	324초 후 setD.tem = 1 setD.con = 100
Sensor suites		
CMS_UTC028	Water Sensor suite	
CMS_UTC028_001	Sensor.txt = {"0 0 -1 -1 -1"}	WD = -1
CMS_UTC028_002	Sensor.txt = {"1 1 8 0 0"}	WD = 0
CMS_UTC028_003	Sensor.txt = {"-1 -1 0 1 1"}	WD = 1
CMS_UTC028_004	Sensor.txt = {"2 2 100 500 2"}	WD = 500
CMS_UTC029	Filter Holder Sensor suite	
CMS_UTC029_001	Sensor.txt = {"0 0 -1 -1 -1"}	Filter.trash = 0 Filter.dust = 0
CMS_UTC029_002	Sensor.txt = {"1 1 8 0 0"}	Filter.trash = 1 Filter.dust = 1

CMS.UTC029_003	Sensor.txt = {"-1 -1 0 1 1"}	Filter.trash = 0 Filter.dust = 0
CMS.UTC029_004	Sensor.txt = {"2 2 100 500 2"}	Filter.trash = 0 Filter.dust = 0
CMS.UTC030	Coffee Beans Sensor suite	
CMS.UTC030_001	Sensor.txt = {"0 0 -1 -1 -1"}	BD = -1
CMS.UTC030_002	Sensor.txt = {"1 1 8 0 0"}	BD = 8
CMS.UTC030_003	Sensor.txt = {"-1 -1 0 1 1"}	BD = 0
CMS.UTC030_004	Sensor.txt = {"2 2 100 500 2"}	BD = 100
CMS.UTC031	Cup Existence Sensor suite	
CMS.UTC031_001	Sensor.txt = {"0 0 -1 -1 -1"}	CE = 0
CMS.UTC031_002	Sensor.txt = {"1 1 8 0 0"}	CE = 0
CMS.UTC031_003	Sensor.txt = {"-1 -1 0 1 1"}	CE = 1
CMS.UTC031_004	Sensor.txt = {"2 2 100 500 2"}	CE = 0

2.2 Test items

2.3 Input specifications

2.4 Output specifications

3 Environmental needs

4 Unit test summary report

4.1 Test summary report identifier

Feature	Input	Expected Output	
Main suites			PASSED
CMS.UTC001	Tem_Toggle_Interface() suite		PASSED
CMS.UTC001_001	coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100, 1};	coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100, 0};	PASSED
CMS.UTC001_002	coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200, 1};	coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200, 0};	PASSED
CMS.UTC001_003	coffeeSetting.tem = 1;	coffeeSetting.tem = 0;	PASSED

	coffeeSetting.con = 300; Setting_File.txt = {300, 1};	coffeeSetting.con = 300; Setting_File.txt = {300, 0};	
CMS.UTC001_004	coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100, 0};	coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100, 1};	PASSED
CMS.UTC001_005	coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200, 0};	coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200, 1};	PASSED
CMS.UTC001_006	coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300, 0};	coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300, 1};	PASSED
CMS.UTC002	Concentration_Set_Interface() suite		PASSED
CMS.UTC002_001	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	PASSED
CMS.UTC002_002	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	PASSED
CMS.UTC002_003	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	PASSED
CMS.UTC002_004	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	PASSED
CMS.UTC002_005	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	conLv = 1; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	PASSED
CMS.UTC002_006	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	conLv = 1; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	PASSED
CMS.UTC002_007	conLv = 2; coffeeSetting.tem = 0;	conLv = 2; coffeeSetting.tem = 0;	PASSED

	coffeeSetting.con = 100; Setting_File.txt = {100 0};	coffeeSetting.con = 200; Setting_File.txt = {200 0};	
CMS.UTC002_008	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};	PASSED
CMS.UTC002_009	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	PASSED
CMS.UTC002_010	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};	PASSED
CMS.UTC002_011	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	conLv = 2; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	PASSED
CMS.UTC002_012	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	conLv = 2; coffeeSetting.tem = 1; coffeeSetting.con = 200; Setting_File.txt = {200 1};	PASSED
CMS.UTC002_013	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	PASSED
CMS.UTC002_014	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	PASSED
CMS.UTC002_015	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	PASSED
CMS.UTC002_016	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 100; Setting_File.txt = {100 0};	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	PASSED

CMS_UTC002_017	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 100; Setting_File.txt = {100 1};	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 300; Setting_File.txt = {300 0};	PASSED
CMS_UTC002_018	conLv = 3; coffeeSetting.tem = 0; coffeeSetting.con = 200; Setting_File.txt = {200 0};	conLv = 3; coffeeSetting.tem = 1; coffeeSetting.con = 300; Setting_File.txt = {300 1};	PASSED
CMS_UTC003	B_init() suite		PASSED
CMS_UTC003_001	keyNUM.txt = {0};	keyNUM.txt = {0};	PASSED
CMS_UTC003_002	keyNUM.txt = {124};	keyNUM.txt = {0};	PASSED
CMS_UTC003_003	keyNUM.txt = {-20};	keyNUM.txt = {0};	PASSED
CMS_UTC004	HWSwitDown() :: Main Controller Sub Routine suite		PASSED
CMS_UTC004_001	HW.txt = {4};	HW.txt = {0};	PASSED
CMS_UTC004_002	HW.txt = {10}; //범위 밖 의 값	HW.txt = {0};	PASSED
CMS_UTC004_003	HW.txt = {-10};	HW.txt = {0};	PASSED
CMS_UTC004_004	HW.txt = {0};	HW.txt = {0};	PASSED
CMS_UTC005	statusModify() :: Main Controller Sub Routine suite		PASSED
CMS_UTC005_001	status = "Ready"; status.txt = {Ready};	status = "Ready"; status.txt = {Ready};	PASSED
CMS_UTC005_002	status = "Ready"; status.txt = {Reserv};	status = "Ready"; status.txt = {Ready};	PASSED
CMS_UTC005_003	status = "Ready"; status.txt = {Account};	status = "Ready"; status.txt = {Ready};	PASSED
CMS_UTC005_004	status = "Reserv"; status.txt = {Ready};	status = "Reserv"; status.txt = {Reserv};	PASSED
CMS_UTC005_005	status = "Reserv"; status.txt = {Reserv};	status = "Reserv"; status.txt = {Reserv};	PASSED
CMS_UTC005_006	status = "Reserv"; status.txt = {Account};	status = "Reserv"; status.txt = {Reserv};	PASSED
CMS_UTC005_007	status = "Account"; status.txt = {Ready};	status = "Account"; status.txt = {Account};	PASSED
CMS_UTC005_008	status = "Reserv"; status.txt = {Account};	status = "Account"; status.txt = {Account};	PASSED
CMS_UTC005_009	status = "Reserv"; status.txt = {Account};	status = "Account"; status.txt = {Account};	PASSED
CMS_UTC006	statusCheck() :: Main Controller Sub Routine suite		PASSED

CMS.UTC006_001	status.txt = {Ready}; status = Ready;	status.txt = {Ready}; status = Ready;	PASSED
CMS.UTC006_002	status.txt = {Ready}; status = Reserv;	status.txt = {Ready}; status = Ready;	PASSED
CMS.UTC006_003	status.txt = {Ready}; status = Account;	status.txt = {Ready}; status = Ready;	PASSED
CMS.UTC006_004	status.txt = {Account}; status = Ready;	status.txt = {Account}; status = Account;	PASSED
CMS.UTC006_005	status.txt = {Account}; status = Reserv;	status.txt = {Account}; status = Account;	PASSED
CMS.UTC006_006	status.txt = {Account}; status = Account;	status.txt = {Account}; status = Account;	PASSED
CMS.UTC006_007	status.txt = {Reserv}; status = Ready;	status.txt = {Reserv}; status = Reserv;	PASSED
CMS.UTC006_008	status.txt = {Reserv}; status = Reserv;	status.txt = {Reserv}; status = Reserv;	PASSED
CMS.UTC006_009	status.txt = {Reserv}; status = Account;	status.txt = {Reserv}; status = Reserv;	PASSED
CMS.UTC007	HWcheck() sutie		PASSED
CMS.UTC007_001	HW.txt = {0} HW = 1;	HW = 0;	PASSED
CMS.UTC007_002	HW.txt = {0} HW = 0;	HW = 0;	PASSED
CMS.UTC007_003	HW.txt = {1} HW = 0;	HW = 1;	PASSED
CMS.UTC007_004	HW.txt = {1} HW = 1;	HW = 1;	PASSED
CMS.UTC007_005	HW.txt = {1} HW = 3;	HW = 1;	PASSED
CMS.UTC007_006	HW.txt = {2} HW = 0;	HW = 2;	PASSED
CMS.UTC007_007	HW.txt = {2} HW = 2;	HW = 2;	PASSED
CMS.UTC007_008	HW.txt = {2} HW = 5;	HW = 2;	PASSED
CMS.UTC007_009	HW.txt = {3} HW = 0;	HW = 3;	PASSED
CMS.UTC007_010	HW.txt = {3}	HW = 3;	PASSED

	HW = 3;		
CMS.UTC007_011	HW.txt = {3} HW = 5;	HW = 3;	PASSED
CMS.UTC007_012	HW.txt = {4} HW = 0;	HW = 4;	PASSED
CMS.UTC007_013	HW.txt = {4} HW = 0;	HW = 4;	PASSED
CMS.UTC007_014	HW.txt = {4} HW = 2;	HW = 4;	PASSED
CMS.UTC007_015	HW.txt = {5} HW = 0;	HW = 5;	PASSED
CMS.UTC007_016	HW.txt = {5} HW = 5;	HW = 5;	PASSED
CMS.UTC007_017	HW.txt = {5} HW = 9;	HW = 5;	PASSED
CMS.UTC007_018	HW.txt = {9} HW = 0;	HW = 9;	PASSED
CMS.UTC007_019	HW.txt = {9} HW = 9;	HW = 9;	PASSED
CMS.UTC007_020	HW.txt = {9} HW = 5;	HW = 9;	PASSED
CMS.UTC008	keyNUMcheck() suite		PASSED
CMS.UTC008_001	keyNUM.txt = {1} keyNUM = 0;	keyNUM = 1;	PASSED
CMS.UTC008_002	keyNUM.txt = {2} keyNUM = 0;	keyNUM = 2;	PASSED
CMS.UTC008_003	keyNUM.txt = {3} keyNUM = 0;	keyNUM = 3;	PASSED
CMS.UTC009	dstatusModify() suite		PASSED
CMS.UTC009_001	Dstatus = 1;	Dstatus.txt = {1}	PASSED
CMS.UTC009_002	Dstatus = 2;	Dstatus.txt = {2}	PASSED
CMS.UTC009_003	Dstatus = 3;	Dstatus.txt = {3}	PASSED
CMS.UTC010	accountdataModify() suite		PASSED
CMS.UTC010_001	coffeesetting.con= 100; coffeesetting.tem = 0; acData->mode = 3; acData->time = 0;	account.txt = {3 100 0 0}	PASSED
CMS.UTC010_002	coffeesetting.con= 100;	account.txt = {3 100 1 0}	PASSED

	<pre> coffeesetting.tem = 1; acData->mode = 3; acData->time = 0; </pre>		
CMS.UTC010_003	<pre> coffeesetting.con= 200; coffeesetting.tem = 0; acData->mode = 3; acData->time = 0; </pre>	account.txt = {3 200 0 0}	PASSED
CMS.UTC010_004	<pre> coffeesetting.con= 200; coffeesetting.tem = 1; acData->mode = 3; acData->time = 0; </pre>	account.txt = {3 200 1 0}	PASSED
CMS.UTC010_005	<pre> coffeesetting.con= 300; coffeesetting.tem = 0; acData->mode = 3; acData->time = 0; </pre>	account.txt = {3 300 0 0}	PASSED
CMS.UTC010_006	<pre> coffeesetting.con= 300; coffeesetting.tem = 1; acData->mode = 3; acData->time = 0; </pre>	account.txt = {3 300 1 0}	PASSED
CMS.UTC010_007	<pre> coffeesetting.con= 100; coffeesetting.tem = 0; acData->mode = 1; acData->time= (int)(time(NULL)); </pre>	<pre> account.txt = {1 100 0 (int)(time(NULL))} </pre>	PASSED
CMS.UTC010_008	<pre> coffeesetting.con= 100; coffeesetting.tem = 1; acData->mode = 1; acData->time= (int)(time(NULL)); </pre>	<pre> account.txt = {1 100 1 (int)(time(NULL))} </pre>	PASSED
CMS.UTC010_009	<pre> coffeesetting.con= 200; coffeesetting.tem = 0; acData->mode = 1; acData->time= (int)(time(NULL)); </pre>	<pre> account.txt = {1 200 0 (int)(time(NULL))} </pre>	PASSED
CMS.UTC010_010	<pre> coffeesetting.con= 200; coffeesetting.tem = 1; acData->mode = 1; acData->time= </pre>	<pre> account.txt = {1 200 1 (int)(time(NULL))} </pre>	PASSED

	(int)(time(NULL));		
CMS.UTC010_011	coffeesetting.con= 300; coffeesetting.tem = 0; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 300 0 (int)(time(NULL))}	PASSED
CMS.UTC010_012	coffeesetting.con= 300; coffeesetting.tem = 1; acData->mode = 1; acData->time= (int)(time(NULL));	account.txt = {1 300 1 (int)(time(NULL))}	PASSED
CMS.UTC010_013	coffeesetting.con= 100; coffeesetting.tem = 0; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 100 0 (int)(time(NULL))}	PASSED
CMS.UTC010_014	coffeesetting.con= 100; coffeesetting.tem = 1; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 100 1 (int)(time(NULL))}	PASSED
CMS.UTC010_015	coffeesetting.con= 200; coffeesetting.tem = 0; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 200 0 (int)(time(NULL))}	PASSED
CMS.UTC010_016	coffeesetting.con= 200; coffeesetting.tem = 1; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 200 1 (int)(time(NULL))}	PASSED
CMS.UTC010_017	coffeesetting.con= 300; coffeesetting.tem = 0; acData->mode = 2; acData->time= (int)(time(NULL));	account.txt = {2 300 0 (int)(time(NULL))}	PASSED
CMS.UTC010_018	coffeesetting.con= 300; coffeesetting.tem = 1;	account.txt = {2 300 1	PASSED

	acData->mode = 2; acData->time= (int)(time(NULL));	(int)(time(NULL));	
CMS.UTC011	main() suite <ul style="list-style-type: none"> testing을 위해 각 케이스마다 return을 받도록 조작. 		PASSED
CMS.UTC011_001	status = "Account"	Return -1	PASSED
CMS.UTC011_002	status = "Reserv"	Return -1	PASSED
CMS.UTC011_003	status = "Ready" HW = 0;	Return 0	PASSED
CMS.UTC011_004	status = "Ready" HW = 1;	printf("reservBtn acceptWn"); acData->mode = 3; printf("completeWn"); Return 1;	PASSED
CMS.UTC011_005	status = "Ready" HW = 2;	printf("extractBtn acceptWn"); acData->time= (int)(time(NULL)); acData->mode = 1; printf("completeWn"); Return 2;	PASSED
CMS.UTC011_006	status = "Ready" HW = 3;	printf("cleanBtn acceptWn"); acData->time= (int)(time(NULL)); acData->mode = 2; printf("completeWn"); Return 3;	PASSED
CMS.UTC011_007	status = "Ready" HW = 4;	printf("concenBtn acceptWn"); printf("conLvWn"); printf("completeWn"); Return 4;	PASSED
CMS.UTC011_008	status = "Ready" HW = 5;	printf("temBtn acceptWn"); printf("completeWn"); Return 5;	PASSED

CMS.UTC011_009	status = "Ready" HW = 9;	printf("powerBtn acceptWn"); printf("completeWn"); Return 9;	PASSED
CMS.UTC011_010	status = "Ready" HW = 9;		PASSED
CMS.UTC011_011	status = "Ready" HW = 102;	Return -2;	PASSED
CMS.UTC011_012	status = "Ready" HW = -30;	Return -2;	PASSED

Identifier	Input identifier	Output identifier	
Order suites			PASSED
CMS.UTC012	Order controller suite		PASSED
CMS.UTC012_001	accountData.txt = {1, 200, 1, time(NULL)}	reservList.txt에 {1, 200, 1, time(NULL)} 추가. (시간 오름차순)	PASSED
CMS.UTC012_002	accountData.txt = {2, 100, 1, time(NULL)}	reservList.txt에 {2, 100, 1, time(NULL)} 추가. (시간 오름차순)	PASSED
CMS.UTC012_003	accountData.txt = {3, 100, 1, 0 }, keyNUM = 1, acData.mode = 1, localTime = 080720 // 7일 10:29에 테스트	reservList.txt에 {2, 100, 1, 1478525100 } 추가. (시간 오름차순)	PASSED
CMS.UTC012_004	accountData.txt = {3, 100, 1, 0 }, keyNUM = 1 acData.mode = 1 localTime = 090720 // 7일 10:29에 테스트	ERROR : time range over	PASSED
CMS.UTC012_005	accountData.txt = {3, 100, 1, 0 }, keyNUM = 3, acData.mode = 1, localTime = 080720 // 7일 10:29에 테스트	ERROR : select (account 1, delete 2) range over	PASSED
CMS.UTC012_006	accountData.txt = {3, 100, 1, 0 } keyNUM = 1 acData.mode = 4	ERROR : select (extract 1, clean 2) range over	PASSED

	localTime = 080720 // 7일 10:29에 테스트		
CMS.UTC012_007	accountData.txt = {3, 100, 1, 0 } keyNUM = 2 delNUM = 0	reservList.txt에서 0번 째 데이터 제거	PASSED
CMS.UTC012_008	accountData.txt = {3, 100, 1, 0 } keyNUM = 2 delNUM = -1	ERROR : List range over	PASSED
CMS.UTC012_009	keyNUM.txt = 1	keyNUM = 1	PASSED
CMS.UTC013	ResAccount() suite		PASSED
CMS.UTC013_001	reservPriorityQ = empty acData.mode = 1 acData.set.con = 100 acData.set.tem = 1 acData.time = time(NULL)	reservPriorityQ에 {1, 100, 1, time(NULL)} 추 가 (시간 오름차순)	PASSED
CMS.UTC013_002	reservPriorityQ = {1, 100, 1, time(NULL)} 노드가 존재 acData.mode = 1 acData.set.con = 100 acData.set.tem = 1, acData.time = time(NULL) + 15	reservPriorityQ에 {1, 100, 1, time(NULL) +15} 추가 (시간 오름 차순)	PASSED
CMS.UTC013_003	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15} 노드가 존재 acData.mode = 1 acData.set.con = 100 acData.set.tem = 1 acData.time = time(NULL) + 7	reservPriorityQ에 {1, 100, 1, time(NULL) +7} 추가 (시간 오름차 순)	PASSED
CMS.UTC014	ResDelete() suite		PASSED
CMS.UTC014_001	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15}, ... 총 15개의 노드가 존재 delNUM = 0	reservPriorityQ에 0번 째 노드 제거 (시간 오름차순)	PASSED
CMS.UTC014_002	reservPriorityQ = {1, 100, 1, time(NULL)}, {1, 100, 1, time(NULL) +15}, ... 총 15개의 노드가 존재 delNUM = 14	reservPriorityQ에 14번 째 노드 제거 (시간 오름차순)	PASSED
CMS.UTC014_003	reservPriorityQ = {1, 100, 1,	reservPriorityQ에 7번	PASSED

	time(NULL)}, {1, 100, 1, time(NULL) +15}, ... 총 15개의 노드가 존재 delNUM = 7	짜 노드 제거 (시간 오름차순)	
CMS.UTC015	UTranslate() suite		PASSED
CMS.UTC015_001	localTime = 072230 // 7일 10:29에 테스트	acData.time= 1478525400	PASSED
CMS.UTC015_002	localTime = 072259 // 7일 10:29에 테스트	acData.time= 1478527140	PASSED
CMS.UTC015_003	localTime = 080720 // 7일 10:29에 테스트	acData.time= 1478525100	PASSED
Display suites			PASSED
CMS.UTC016	Dstatus invalid suite		PASSED
CMS.UTC016_001	Dstatus.txt { 비어 있음 }	Error : Dstatus.txt is not exist	PASSED
CMS.UTC016_002	Dstatus.txt { -1 }	Error : Dstatus invalid	PASSED
CMS.UTC017	settingFile invalid suite		PASSED
CMS.UTC017_001	settingFile.txt { 비어 있음 }	Error : settingFile.txt is not exist	PASSED
CMS.UTC018	Display info suite		PASSED
CMS.UTC018_001	22시 37분 58초에 테스트 DStatus.txt { 1 } settingFile { 300, 1 } Sensor.txt { 0, 0, 30, 700, 0 } Status.txt { Ready } reservList.txt { 비어 있음 } errMsg.txt { 비어 있음 }	CurrentInfo출력 현재 시간 : 22: 37: 58 현재 상태 : 대기중 선택 농도 : 연하게 선택 온도 : HOT 물 잔량 : 700ml 원두 잔량 : 30g 커피 가루 : X 최근 예약 정보 : empty Err msg : empty	PASSED
CMS.UTC018_002	22시 38분 07초에 테스트 DStatus.txt { 1 } settingFile { 300, 1 } Sensor.txt { 0, 0, 30, 50, 0 } Status.txt { Check } reservList.txt { 비어 있음 } errMsg.txt { "water" }	CurrentInfo출력 현재 시간 : 22: 38: 07 현재 상태 : 대기중 선택 농도 : 연하게 선택 온도 : HOT 물 잔량 : 50ml	PASSED

		원두 잔량 : 30g 커피 가루 : X 최근 예약 정보 : empty Err msg : Water	
CMS.UTC018_003	22시 39분 12초에 테스트 DStatus.txt { 1 } settingFile { 200, 1 } Sensor.txt { 0, 0, 5, 500, 0 } Status.txt { check } reservList.txt { 1 100 1 1478526300 } errMsg.txt { "Beans" }	CurrentInfo출력 현재 시간 : 22: 39: 12 현재 상태 : 대기중 선택 농도 : 보통 선택 온도 : HOT 물 잔량 : 500ml 원두 잔량 : 5g 커피 가루 : X 최근 예약 정보 : 추출 / 진하게, HOT / 07:22:45 Err msg : Beans	PASSED
CMS.UTC018_004	DStatus.txt(Dstatus == 2)	Setting Mode 출력 (단순한 정보 출력부 분) ====con set===== 4. 진하게 5. 중간 6. 연하게	PASSED
CMS.UTC018_005	Dstatus.txt(Dstatus == 3) reservList.txt { 1 100 1 1478526300, 2 100 1 1478526360, 1 200 0 1478526420 }	Reserve Mode 출력 0. 추출 / 진하게 HOT / 7:22:45 1. 청소 / 7:22:46 2. 추출 / 보통 COOL / 7:22:47 ===reserve mode === 1. 예약 모드 설정 1) 예약 등록 2) 예약 제거 등록> 1. 행동 모드 설정	PASSED

		1) 추출 2) 청소 2. 시간 설정 단계 (DDHHMM) 제거> 1. 제거 번호 설정	
Machine suites			PASSED
	Running Machine suite		PASSED
CMS_UTC019	setD.mode = 2 WD = 650	Status = "Clean" 프로세스 10초 지연 WD = 150	PASSED
CMS_UTC020	setD.set.con = 100 WD = 150 setD.set.tem = 1	Status = "Steam" 프로세스 10초 지연	PASSED
CMS_UTC021	Filter.dust = 0 Filter.trash = 0 BD = 15	프로세스 5초 지연 Filter.dust = 1 BD = 5	PASSED
CMS_UTC022	SetD.mode = 1 setD.set.con = 100 WD = 150 setD.set.tem = 1 CE = 1	Status = "Extract" Filter.trash = 1 프로세스 10초 지연 CE = 0	PASSED
CMS_UTC023	SetD.mode = 0 Filter.trash = 1	Status = "Trash" Beep음 발생	PASSED
CMS_UTC024	SetD.mode = 0 Filter.dust = 0 Filter.trash = 1 BD = 7	Status = "Coffee Bean" Beep음 발생	PASSED
CMS_UTC025	SetD.mode = 0 Filter.dust = 0 Filter.trash = 1 BD = 10 setD.set.con = 100 WD = 70	Status = "Water" Beep음 발생	PASSED
CMS_UTC026	SetD.mode = 0 Filter.dust = 0 Filter.trash = 1 BD = 10	Status = "CUP" Beep음 발생	PASSED

	setD.set.con = 100 WD = 150 setD.set.tem = 1 CE = 0		
CMS_UTC027	Machine Controller suite		PASSED
CMS_UTC027_001	Rpq->head->next->reserve.time = 1478525400 Curr = 1478566194 // 예약한지 한참 지난 시간에서 컨트롤러를 실행하여 테스트 (POWER가 꺼졌다가 한참 뒤 켜졌을 때 소거되는 예약에 대한 테스트)	ReservPriorityQueue의 헤더 다음 노드 삭제	PASSED
CMS_UTC027_002	Rpq->head->next->reserv.time = 1478566194 Rpq->head->next->reserv.mode = 1 Rpq->head->next->set.tem = 1 Rpq->head->next->set.com = 100 Wtime = 1478566194	setD.tem = 1 setD.con = 100	PASSED
CMS_UTC027_003	Rpq->head->next->reserv.time = 14785666518 Rpq->head->next->reserv.mode = 3 Rpq->head->next->set.tem = 1 Rpq->head->next->set.com = 100 Wtime = 14785666194	324초 후 setD.tem = 1 setD.con = 100	PASSED
Sensor suites			PASSED
CMS_UTC028	Water Sensor suite		PASSED
CMS_UTC028_001	Sensor.txt = {"0 0 -1 -1 -1"}	WD = -1	PASSED
CMS_UTC028_002	Sensor.txt = {"1 1 8 0 0"}	WD = 0	PASSED
CMS_UTC028_003	Sensor.txt = {"-1 -1 0 1 1"}	WD = 1	PASSED
CMS_UTC028_004	Sensor.txt = {"2 2 100 500 2"}	WD = 500	PASSED
CMS_UTC029	Filter Holder Sensor suite		PASSED
CMS_UTC029_001	Sensor.txt = {"0 0 -1 -1 -1"}	Filter.trash = 0 Filter.dust = 0	PASSED
CMS_UTC029_002	Sensor.txt = {"1 1 8 0 0"}	Filter.trash = 1 Filter.dust = 1	PASSED
CMS_UTC029_003	Sensor.txt = {"-1 -1 0 1 1"}	Filter.trash = 0 Filter.dust = 0	PASSED

CMS.UTC029_004	Sensor.txt = {"2 2 100 500 2"}	Filter.trash = 0 Filter.dust = 0	PASSED
CMS.UTC030	Coffee Beans Sensor suite		PASSED
CMS.UTC030_001	Sensor.txt = {"0 0 -1 -1 -1"}	BD = -1	PASSED
CMS.UTC030_002	Sensor.txt = {"1 1 8 0 0"}	BD = 8	PASSED
CMS.UTC030_003	Sensor.txt = {"-1 -1 0 1 1"}	BD = 0	PASSED
CMS.UTC030_004	Sensor.txt = {"2 2 100 500 2"}	BD = 100	PASSED
CMS.UTC031	Cup Existence Sensor suite		PASSED
CMS.UTC031_001	Sensor.txt = {"0 0 -1 -1 -1"}	CE = 0	PASSED
CMS.UTC031_002	Sensor.txt = {"1 1 8 0 0"}	CE = 0	PASSED
CMS.UTC031_003	Sensor.txt = {"-1 -1 0 1 1"}	CE = 1	PASSED
CMS.UTC031_004	Sensor.txt = {"2 2 100 500 2"}	CE = 0	PASSED

4.2 Evaluation