

소프트웨어 V&V

System Test Report [Team B6] - 2nd Cycle

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Spec Review - Stage 1000 Planning

- Stage 1000. Planning
 - Activity 1001. Draft Plan
 - Activity 1003. Define Requirements
 - Activity 1004. Record Terms in Glossary
 - Activity 1006. Define Business Use Case
 - Activity 1009. Develop System Test Cases

→ 모두 다 새로운 내용으로 잘 반영됨

Spec Review - Stage 2030 Analysis

- Stage 2030. Analysis
 - Activity 2131. Use Case
 - 18개의 Use Case 내용 명세. 모두 다 새로운 내용으로 잘 반영된 것 확인
 - UI 에 대한 Use Case 명세가 많았지만 삭제하여 반영된 것 확인
 - Activity 2133. Define System Sequence Diagram
 - N 개의 System Sequence Diagram 을 하나의 Diagram에 표기하였는데 분리한 것 확인
 - 아직도 남아있는 Diagram 확인하여 명세



Spec Review - Stage 2040 Design

- Stage 2040. Design

- Activity 2041. Design Real Use Cases

- 18개의 Use Case 내용 명세. 모두 다 새로운 내용으로 잘 반영된 것 확인

- UI 에 대한 Use Case 명세가 많았는데 삭제하여 반영된 것 확인

- Activity 2043. Define Interaction Diagram

- Diagram 의 Message 표기 방법을 지적하였지만 Diagram을 그리는 도구의 한계가 있다고 하여 받아 드림

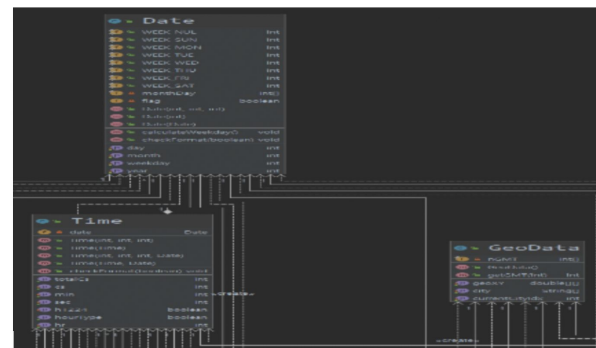
- Actor 가 System 인 Diagram 을 많이 그려져 있어 명세. 삭제한 것을 확인

- Activity 2044. Define Design Class Diagram

- 기존의 Use case 상에서 언급이 없었던 내용이었지만,

현재 시계의 System에 중요하게 기능상으로

핵심적인 부분이 아니라고 판단하여 받아 드림.



System Testing Report - Category-partition

- Category - partition Testing Report

Group	Category	Values	Description	
Mode	모드	Clock	시계	
		Alarm	알람	
		Timer	타이머	
		Stopwatch	스톱워치	
		World Time	세계시각	
		Sunrise/Sunset FunctionSelector	일출/일몰 기능 선택	
Config	설정	Set	설정 모드	
		Default	기본 모드	
Clock	모드	Running	동작중인 상태	
		NotRunning	동작이 멈춘 상태	
Buzzer	모드	Running	알람이 울리고 있는 상태	
		NotRunning	알람이 울리지 않는 상태	
Action	모드	pressNone	아무 버튼을 누르지 않은 상태	
		pressMode	모드 버튼을 누른 상태	
		pressSet	Set 버튼을 누른 상태	
		pressUP	UP 버튼을 누른 상태	
		pressDOWN	DOWN 버튼을 누른 상태	
		pressMultiBtn	2개 이상의 버튼을 누른 상태	
FunctionCounts	모드	Under4	활성화된 상태가 4개 이하	
		Equal4	활성화된 상태가 4개	
		Over4	활성화된 상태가 4개 이상	
		Year	Under 0000	년도가 0000 미만으로 되는 상태
			InRange	년도가 4자리로 정상적인 상태
			Over 9999	년도가 9999 초과인 상태
		Month	Under 1	월이 1 미만으로 되는 상태
			InRange	월의 자리수로 정상적인 상태
			Over 12	월이 12 초과인 상태
		Day	Under 1	일이 1 미만으로 되는 상태
			InRange	해당 월의 마지막 일이 정상인 상태
			Over lastDay	해당 월의 마지막 일이 초과인 상태
Date	notinRange	요일이 월-일요일이 아닌 상태		
	InRange	요일이 월-일요일인 상태		
	Under 0	시가 0 미만으로 되는 상태		
Hour	InRange	시의 자리수로 정상적인 상태		
	Over 23	시가 23을 초과로 되는 상태		
	Under 0	분이 00 미만으로 되는 상태		
Min	InRange	분의 자리수가 정상적인 상태		
	Over MaxMin	기능의 표시 가능한 범을 넘는 상태		
	Under 0	초가 0 미만으로 되는 상태		
Sec	InRange	초의 자리수가 정상적인 상태		
	Over 59	초가 59를 초과로 되는 상태		
	Exist	선택된 도수가 표시되는 상태		
City	noExist	선택된 도수가 표시되는 상태		
	Exist	선택된 도수가 표시되는 상태		
	notinRange	알람 리스트가 4개가 아닌 상태		
AlarmPage	모드	InRange	알람 리스트가 4개인 상태	

```

Mode:
  timeKeeping, (property tk)
  alarm, (property all)
  timer, (property ti)
  stopwatch, (property sw)
  world time, (property wt)
  sunrise/sunset, (property srs)
  functionSelector, (property fs)

Config:
  set, [if low]
  default, [if rfs]

Clock:
  running(start),
  notRunning(pause), [if tk && !srs && !fs]

Buzzer:
  running,
  notRunning,

Action:
  pressNone,
  pressMode,
  pressSet,
  pressUP,
  pressDOWN,
  pressMultiBtn, [error]

FunctionCounts:
  under 4, [error]
  equals 4,
  over 4, [error]

Value:
  Year:
    under 0000, [error]
    InRange, [if tk || wt || srs]
    over 9999, [error]

  Month:
    under 1, [error]
    InRange, [if tk || wt || srs]
    over 12, [error]

  Day:
    under 1, [error]
    InRange, [if tk || wt || srs]
    over LastDay, [error]

  Date:
    notInRange, [error]
    InRange, [if tk || wt || srs]

  Hour:
    under 00, [error]
    InRange, [if ts]
    over 23, [error]

  Min:
    under 00, [error]
    InRange, [error]
    over MaxMin, [error]

  Sec:
    under 00, [error]
    InRange, [if ts || sw || fs]
    over 59, [error]

  City:
    exist, [if tk || wt || srs || all]
    nonExist, [if ts || sw || fs]

AlarmPage:
  notInRange, [error]
  InRange, [if all]
  
```

System Testing Report - Category-partition

#	Mode	Config	Check	Busor	Action	FunctionCount	Year	Month	Day	Date	Hour	Min	Sec	City	AlarmPage	TEST
1	timekeeping	set	running	default	preMode	equi	4									PASS
2	timekeeping	set	running	default	preMode	equi	4									PASS
3	timekeeping	set	running	default	preMode	equi	4									PASS
4	timekeeping	set	92 timer	default	noRunning	preMode	equi	4								PASS
5	timekeeping	set	93 timer	default	noRunning	preMode	equi	4								PASS
6	timekeeping	set	94 timer	default	noRunning	preMode	equi	4								PASS
7	timekeeping	set	95 timer	default	noRunning	preMode	equi	4								PASS
8	timekeeping	set	96 timer	default	noRunning	preMode	equi	4								PASS
9	timekeeping	set	97 timer	default	noRunning	preMode	equi	4								PASS
10	timekeeping	set	98 timer	default	noRunning	preMode	equi	4								PASS
11	timekeeping	default	100 timer	default	noRunning	preMode	equi	4								PASS
12	timekeeping	default	101 stopwch	default	running	preMode	equi	4								PASS
13	timekeeping	default	102 stopwch	default	running	preMode	equi	4								PASS
14	timekeeping	default	103 stopwch	default	running	preMode	equi	4								PASS
15	timekeeping	default	104 stopwch	default	running	preMode	equi	4								PASS
16	timekeeping	default	105 stopwch	default	running	preMode	equi	4								PASS
17	timekeeping	default	106 stopwch	default	running	preMode	equi	4								PASS
18	timekeeping	default	107 stopwch	default	running	preMode	equi	4								PASS
19	timekeeping	default	108 stopwch	default	running	preMode	equi	4								PASS
20	timekeeping	default	109 stopwch	default	running	preMode	equi	4								PASS
21	alarm	set	110 stopwch	default	noRunning	preMode	equi	4								PASS
22	alarm	set	111 stopwch	default	noRunning	preMode	equi	4								PASS
23	alarm	set	112 stopwch	default	noRunning	preMode	equi	4								PASS
24	alarm	set	113 stopwch	default	noRunning	preMode	equi	4								PASS
25	alarm	set	114 stopwch	default	noRunning	preMode	equi	4								PASS
26	alarm	set	115 stopwch	default	noRunning	preMode	equi	4								PASS
27	alarm	set	116 stopwch	default	noRunning	preMode	equi	4								PASS
28	alarm	set	117 stopwch	default	noRunning	preMode	equi	4								PASS
29	alarm	set	118 stopwch	default	noRunning	preMode	equi	4								PASS
30	alarm	set	119 stopwch	default	noRunning	preMode	equi	4								PASS
31	alarm	set	120 stopwch	default	noRunning	preMode	equi	4								PASS
32	alarm	set	121 world time	set	running	preMode	equi	4								PASS
33	alarm	set	122 world time	set	running	preMode	equi	4								PASS
34	alarm	set	123 world time	set	running	preMode	equi	4								PASS
35	alarm	set	124 world time	set	running	preMode	equi	4								PASS
36	alarm	set	125 world time	set	running	preMode	equi	4								PASS
37	alarm	set	126 world time	set	running	preMode	equi	4								PASS
38	alarm	set	127 world time	set	running	preMode	equi	4								PASS
39	alarm	set	128 world time	set	running	preMode	equi	4								PASS
40	alarm	set	129 world time	set	running	preMode	equi	4								PASS
41	alarm	default	130 world time	set	running	preMode	equi	4								PASS
42	alarm	default	131 world time	set	noRunning	preMode	equi	4								PASS
43	alarm	default	132 world time	set	noRunning	preMode	equi	4								PASS
44	alarm	default	133 world time	set	noRunning	preMode	equi	4								PASS
45	alarm	default	134 world time	set	noRunning	preMode	equi	4								PASS
46	alarm	default	135 world time	set	noRunning	preMode	equi	4								PASS
47	alarm	default	136 world time	set	noRunning	preMode	equi	4								PASS
48	alarm	default	137 world time	set	noRunning	preMode	equi	4								PASS
49	alarm	default	138 world time	set	noRunning	preMode	equi	4								PASS
50	alarm	default	139 world time	set	noRunning	preMode	equi	4								PASS
51	alarm	default	140 world time	set	noRunning	preMode	equi	4								PASS
52	alarm	default	141 world time	default	running	preMode	equi	4								PASS
53	alarm	default	142 world time	default	running	preMode	equi	4								PASS
54	alarm	default	143 world time	default	running	preMode	equi	4								PASS
55	alarm	default	144 world time	default	running	preMode	equi	4								PASS
56	alarm	default	145 world time	default	running	preMode	equi	4								PASS
57	alarm	default	146 world time	default	running	preMode	equi	4								PASS
58	alarm	default	147 world time	default	running	preMode	equi	4								PASS
59	alarm	default	148 world time	default	running	preMode	equi	4								PASS
60	alarm	default	149 world time	default	running	preMode	equi	4								PASS
61	timer	set	151 world time	default	noRunning	preMode	equi	4								PASS
62	timer	set	152 world time	default	noRunning	preMode	equi	4								PASS
63	timer	set	153 world time	default	noRunning	preMode	equi	4								PASS
64	timer	set	154 world time	default	noRunning	preMode	equi	4								PASS
65	timer	set	155 world time	default	noRunning	preMode	equi	4								PASS
66	timer	set	156 world time	default	noRunning	preMode	equi	4								PASS
67	timer	set	157 world time	default	noRunning	preMode	equi	4								PASS
68	timer	set	158 world time	default	noRunning	preMode	equi	4								PASS
69	timer	set	159 world time	default	noRunning	preMode	equi	4								PASS
70	timer	set	160 world time	default	noRunning	preMode	equi	4								PASS
71	timer	set	161 sun/mon/travel	set	running	preMode	equi	4								PASS
72	timer	set	162 sun/mon/travel	set	running	preMode	equi	4								PASS
73	timer	set	163 sun/mon/travel	set	running	preMode	equi	4								PASS
74	timer	set	164 sun/mon/travel	set	running	preMode	equi	4								PASS
75	timer	set	165 sun/mon/travel	set	running	preMode	equi	4								PASS
76	timer	set	166 sun/mon/travel	set	running	preMode	equi	4								PASS
77	timer	set	167 sun/mon/travel	set	running	preMode	equi	4								PASS
78	timer	set	168 sun/mon/travel	set	running	preMode	equi	4								PASS
79	timer	set	169 sun/mon/travel	set	running	preMode	equi	4								PASS
80	timer	set	170 sun/mon/travel	set	running	preMode	equi	4								PASS
81	timer	default	171 sun/mon/travel	default	running	preMode	equi	4								PASS
82	timer	default	172 sun/mon/travel	default	running	preMode	equi	4								PASS
83	timer	default	173 sun/mon/travel	default	running	preMode	equi	4								PASS
84	timer	default	174 sun/mon/travel	default	running	preMode	equi	4								PASS
85	timer	default	175 sun/mon/travel	default	running	preMode	equi	4								PASS
86	timer	default	176 sun/mon/travel	default	running	preMode	equi	4								PASS
87	timer	default	177 sun/mon/travel	default	running	preMode	equi	4								PASS
88	timer	default	178 sun/mon/travel	default	running	preMode	equi	4								PASS
89	timer	default	179 sun/mon/travel	default	running	preMode	equi	4								PASS
90	timer	default	180 sun/mon/travel	default	running	preMode	equi	4								PASS
91	timer	default	181 functionSelector	set	running	preMode	equi	4								PASS
92	timer	default	182 functionSelector	set	running	preMode	equi	4								PASS
93	timer	default	183 functionSelector	set	running	preMode	equi	4								PASS
94	timer	default	184 functionSelector	set	running	preMode	equi	4								PASS
95	timer	default	185 functionSelector	set	running	preMode	equi	4								PASS
96	timer	default	186 functionSelector	set	running	preMode	equi	4								PASS
97	timer	default	187 functionSelector	set	running	preMode	equi	4								PASS
98	timer	default	188 functionSelector	set	running	preMode	equi	4								PASS
99	timer	default	189 functionSelector	set	running	preMode	equi	4								PASS
100	timer	default	190 functionSelector	set	running	preMode	equi	4								PASS

- Test Case

- NO Constraints - 5,878,656
- Error - 577
- Property - Total 190
 - Pass - 190
 - Fail - 0
 - Rate - 100%

System Testing Report - Pairwise Testing

- Pairwise Testing (PICT)
- Total -35, Pass - 35, Fail - 0
→ Rate - 100%

#	Mode	Config	Clock	Buzzer	Action	FunctionCount	Year	Month	Day	Date	Hour	Min	Sec	City	AlarmPage	Test
1	Alarm	Set	Running	Running	pressUP	equals4	NotUse	NotUse	NotUse	valid	valid	NotUse	valid	valid	PASS	
2	Timer	Default	NotRunning	NotRunning	pressSet	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	NotUse	valid	NotUse	NotUse	PASS
3	Alarm	Default	NotRunning	NotRunning	pressSet	equals4	NotUse	NotUse	NotUse	NotUse	valid	NotUse	NotUse	valid	valid	PASS
4	Worldtime	Default	Running	NotRunning	pressUP	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
5	Stopwatch	Default	NotRunning	Running	pressNone	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	NotUse	PASS
6	FunctionSelector	Set	Running	Running	pressSet	equals4	NotUse	NotUse	NotUse	NotUse	valid	valid	valid	NotUse	NotUse	PASS
7	Stopwatch	Default	Running	NotRunning	pressMode	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	NotUse	PASS
8	Timer	Set	NotRunning	Running	pressUP	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	NotUse	PASS
9	Sunrise/Sunset	Set	Running	Running	pressUP	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
10	Alarm	Set	NotRunning	Running	pressMode	equals4	NotUse	NotUse	NotUse	NotUse	valid	NotUse	valid	valid	valid	PASS
11	Worldtime	Set	Running	NotRunning	pressNone	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
12	Timer	Default	Running	NotRunning	pressMode	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	NotUse	PASS
13	Sunrise/Sunset	Default	Running	NotRunning	pressNone	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
14	Stopwatch	Default	NotRunning	NotRunning	pressSet	equals4	NotUse	NotUse	NotUse	NotUse	valid	valid	valid	NotUse	NotUse	PASS
15	TimeKeeping	Set	Running	Running	pressMode	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
16	FunctionSelector	Set	Running	NotRunning	pressNone	equals4	NotUse	NotUse	NotUse	NotUse	valid	NotUse	valid	NotUse	NotUse	PASS
17	Alarm	Set	Running	NotRunning	pressDown	equals4	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	valid	valid	PASS
18	Sunrise/Sunset	Default	Running	Running	pressDown	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
19	Worldtime	Default	Running	Running	pressMode	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
20	FunctionSelector	Set	Running	NotRunning	pressUP	equals4	NotUse	NotUse	NotUse	NotUse	valid	NotUse	valid	NotUse	NotUse	PASS
21	Timer	Default	NotRunning	Running	pressNone	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	NotUse	valid	NotUse	NotUse	PASS
22	FunctionSelector	Set	Running	NotRunning	pressDown	equals4	NotUse	NotUse	NotUse	NotUse	valid	NotUse	valid	NotUse	NotUse	PASS
23	Stopwatch	Default	NotRunning	Running	pressDown	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	NotUse	valid	NotUse	NotUse	PASS
24	FunctionSelector	Set	Running	NotRunning	pressMode	equals4	NotUse	NotUse	NotUse	NotUse	valid	valid	valid	NotUse	NotUse	PASS
25	Worldtime	Set	Running	Running	pressSet	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
26	TimeKeeping	Default	Running	NotRunning	pressSet	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
27	TimeKeeping	Default	Running	NotRunning	pressNone	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
28	TimeKeeping	Set	Running	Running	pressDown	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
29	Sunrise/Sunset	Default	Running	Running	pressMode	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
30	Timer	Default	NotRunning	NotRunning	pressDown	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	NotUse	PASS
31	Worldtime	Default	Running	Running	pressDown	equals4	valid	valid	valid	valid	valid	NotUse	valid	valid	NotUse	PASS
32	Sunrise/Sunset	Default	Running	Running	pressSet	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
33	Stopwatch	Default	Running	Running	pressUP	equals4	NotUse	NotUse	NotUse	NotUse	NotUse	NotUse	valid	NotUse	NotUse	PASS
34	TimeKeeping	Default	Running	NotRunning	pressUP	equals4	valid	valid	valid	valid	valid	valid	valid	valid	NotUse	PASS
35	Alarm	Set	Running	Running	pressNone	equals4	NotUse	NotUse	NotUse	NotUse	valid	valid	NotUse	valid	valid	PASS

```

Mode: TimeKeeping, Alarm, Timer, Stopwatch, Worldtime, Sunrise/Sunset, FunctionSelector
Config: Set, Default
Clock: Running, NotRunning
Buzzer: Running, NotRunning
Action: pressNone, pressSet, pressUP, pressDown
FunctionCount: equals4
Year: valid, NotUse
Month: valid, NotUse
Day: valid, NotUse
Date: valid, NotUse
Hour: valid, NotUse
Min: valid, NotUse
Sec: valid, NotUse
City: valid, NotUse
AlarmPage: valid, NotUse

IF [Mode] in ("TimeKeeping", "Sunrise/Sunset", "FunctionSelector", "Worldtime") THEN [Clock] = "Running";
IF [Mode] in ("Stopwatch") THEN [Config] = "Default";
IF [Mode] in ("FunctionSelector") THEN [Config] = "Set";

IF [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Year] = "valid";
IF NOT [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Year] = "NotUse";

IF [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Date] = "valid";
IF NOT [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Date] = "NotUse";

IF [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Month] = "valid";
IF NOT [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Month] = "NotUse";

IF [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Day] = "valid";
IF NOT [Mode] in ("Worldtime", "Sunrise/Sunset", "TimeKeeping") THEN [Day] = "NotUse";

IF [Mode] in ("TimeKeeping", "Worldtime", "Sunrise/Sunset", "Alarm") THEN [City] = "valid";
IF NOT [Mode] in ("TimeKeeping", "Worldtime", "Sunrise/Sunset", "Alarm") THEN [City] = "NotUse";

IF [Mode] in ("Timer", "Stopwatch") THEN [Hour] = "NotUse";
IF NOT [Mode] in ("Timer", "Stopwatch") THEN [Hour] = "valid";

IF [Mode] in ("Alarm") THEN [Sec] = "NotUse";
IF NOT [Mode] in ("Alarm") THEN [Sec] = "valid";

IF [Mode] in ("Alarm") THEN [AlarmPage] = "valid";
IF NOT [Mode] in ("Alarm") THEN [AlarmPage] = "NotUse";
    
```


System Testing Report - Brute Force Testing

- Brute Force Testing
- Total - 19, Pass - 18, Fail - 1
→ Rate - 94.7%

BruteForce2-5/2nd Iteration #82

🔓 Open wjp103 opened this issue 1 hour ago · 0 comments



wjp103 commented 1 hour ago



Expected output:

타이머를 시작하면 Sec 가 0초가 되면 알람이 울려야 한다.

Result:

타이머를 설정하면 타이머는 자동으로 실행되는데 화면의 숫자가 바뀌지 않았는데 알람이 울린다.



wjp103 added the **Todo** label 1 hour ago

Test	Num	Expected Output	Test Output
Timekeeping	1-1	9999년도에서 증가할 경우 0으로 바뀜	Pass
	1-2	0년도에서 감소할 경우 9999년도로 됨	Pass
	1-3	12월에서 증가할 때, 1월이 나와야 함	Pass
	1-4	1월에서 감소할 때, 12월이 나와야 함	Pass
	1-5	각 달의 마지막 일자 다음에 1일 나와야 함	Pass
	1-6	1일에서 감소할 때, 각 달의 마지막 일자가 나와야 함	Pass
	1-7	23시에서 증가할 때, 0이 나와야 함	Pass
	1-8	0시에서 감소할 때, 23이 나와야 함	Pass
	1-9	59분에서 증가할 때, 0이 나와야 함	Pass
	1-10	0분에서 감소할 때, 59가 나와야 함	Pass
	1-11	윤년이 적용되어야 한다	Pass
Timer	2-1	59분에서 증가할 때, 0이 나와야 함	Pass
	2-2	0분에서 감소할 때, 59가 나와야 함	Pass
	2-3	59초에서 증가할 때, 0초이 나와야 함	Pass
	2-4	0초에서 감소할 때, 59초가 나와야 함	Pass
	2-5	타이머를 시작하면 Sec 가 0초가 되면 알람이 울려야 한다	Fail
Stopwatch	3-1	23:59:59 에서 1초 증가하면 00:00:00이 되어야 함	Pass
Alarm	4-1	알람이 2개가 동시에 울릴 때 한번 누르면 둘다 꺼진다	Pass
	4-2	알람 리스트를 모두 설정하고 알람 리스트들이 순서대로 보여져야 한다	Pass
Results			18/19 = 94.7%

Static Analysis

i. Findbugs

No	Category
1	Bad practice
2	Correctness
3	Experimental
4	Internationalization
5	Malicious code vulnerability
6	Multithreaded correctness
7	Performance
8	Security
9	Dodgy code

ii. PMD

No	Category
1	Best practice
2	Code Style
3	Documentation
4	Error phone
5	Multithreading
6	Performance
7	Security

iii. CheckStyle

No	Category
1	Annotations
2	Block Checks
3	Class Design
4	Coding
5	Headers
6	Imports
7	Javadoc Comments
8	Metrics
9	Miscellaneous
10	Modifiers
11	Naming Conventions
12	Regexp
13	Size Violations
14	Whitespace

→ 이 3개의 정적 분석 툴 Rule들에 대하여 자체적인 검수 작업을 통해 중요하지 않다고 생각한 rules 을 제거.

Filters

- Type
 - Bug 20
 - Vulnerability 8
 - Code Smell 212
- Severity
 - Blocker 8
 - Critical 29
 - Major 111
 - Minor 62
 - Info 30
- Resolution
- Status
- Security Category
- Creation Date
- Language
- Rule
 - 69 shown [Show Less](#)

The screenshot shows a GitHub repository page for 'KUSVV / SMA_B6'. It displays static analysis results from KUSVVSMA_INT. The interface includes a 'Filters' sidebar on the left, a main area with a Kanban board showing issues in 'To do', 'In progress', and 'Done' states, and a detailed view of a 'Code Smell' issue on the right. The issue view shows the title 'Static Analysis - Code smell #81', its severity, and a 'Close issue' button.

Static Analysis

SMA_B6 ☆ master

Last analysis had 1 warning June 17, 2020, 12:27 AM Version not provided

Overview Issues Security Hotspots Measures Code Activity Project Settings Project information

Project Overview

SMA_B6 View as List 13 files

Coverage 69.9%

New Code: Since June 17, 2020

	Coverage	Uncovered Lines	Uncovered Conditions
src/main/java/Clock.java	40.5%	73	52
src/main/java/FunctionSelector.java	57.5%	61	47
src/main/java/WorldClock.java	64.9%	14	13
src/main/java/StopWatch.java	68.8%	13	12
src/main/java/Date.java	70.1%	14	30
src/main/java/GeoData.java	75.0%	4	-
src/main/java/Alarm.java	75.4%	22	19
src/main/java/Geo.java	77.6%	18	21
src/main/java/DisplayManager.java	83.6%	9	0
src/main/java/Time.java	86.4%	4	12
src/main/java/TickManagement.java	91.2%	1	2
src/main/java/Buzzer.java	92.0%	1	1
src/main/java/Timer.java	94.2%	2	6

13 of 13 shown

Overview

- Lines to Cover 0
- Uncovered Lines 0
- Conditions to Cover 0
- Uncovered Conditions 0

Overall

- Coverage 69.9%
- Lines to Cover 1,039
- Uncovered Lines 236
- Line Coverage 77.3%
- Conditions to Cover 457
- Uncovered Conditions 215
- Condition Coverage 53.0%

Duplications

Size

Complexity

Issues

SMA Quality

Rename Copy

Conditions

Add Condition

Conditions on New Code

Metric	Operator	Value	Edit	Delete
Condition Coverage	is less than	60.0%		

Conditions on Overall Code

Metric	Operator	Value	Edit	Delete
Condition Coverage	is less than	60.0%		
Line Coverage	is less than	60.0%		
Unit Test Success (%)	is less than	100%		

Jenkins

- Number : 27
- Status : Failure 😞
- Time : 2020-06-17 00:28:09
- URL : http://ctip.s5kywa1k3r.codes:8080/job/SMA_B6/27/
- Test Summary :
 - Total : 60
 - Failed : 7
 - Passed : 53
 - Skipped : 0
 - Failed_tests :

```
AlarmTest.testRingAlarm(),FunctionSelectorTest.testCreateFunction(),GeoTest.getSunsetTime(),GeoTest.getSunriseTime(),TimerTest.testMyTurn(),WorldClockTest.testSetCity(),FunctionSelectorTest.testTimeout()
```
- Log :

→ 1. 해당 Condition Coverage 가 53.0% 여서 기준에 충족하지 않은 점.

→ 2. Junit Test 53/60 = 0.8833, 88% 여서 기준에 충족하지 않아서 Build Failed 발생.