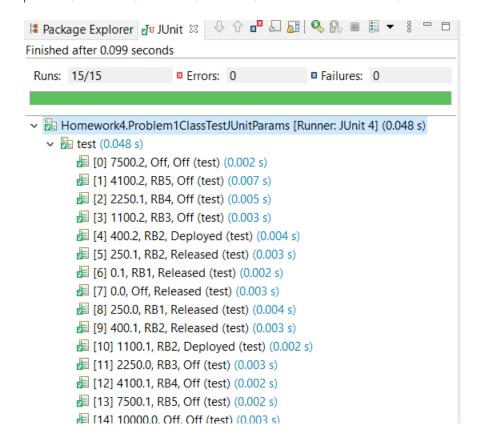
Assignment 4

FNU GAURAVDEEP SINGH 1001827248 CSE 5321-001

Task 1:

Test Case	Input	Expected Outputs		
Number	AGL (feet)	motorState	chuteState	Basis Path
1	7500.2	Off	Off	16-17-38
2	4100.2	RB5	Off	16-19-20-38
3	2250.1	RB4	Off	16-19-22-23-38
4	1100.2	RB3	Off	16-19-22-25-26-38
5	400.2	RB2	Deployed	16-19-22-25-28-29-38
6	250.1	RB2	Released	16-19-22-25-28-31-32-38
7	0.1	RB1	Released	16-19-22-25-28-31-34-35-38
8	0.0	Off	Released	16-19-22-25-28-31-34-37-38
9	250.0	RB1	Released	-
10	400.1	RB2	Released	-
11	1100.1	RB2	Deployed	-
12	2250.0	RB3	Off	-
13	4100.1	RB4	Off	-
14	7500.1	RB5	Off	-
1 5	10000.0	Off	Off	-



```
1 package Homework4;
                                                                                                  Problem1ClassTestJUnitParams (Jul 30, 2020 10:43:16 PM)
  2⊕ import static junitparams.JUnitParamsRunner.$; ...
                                                                                                   Flement
                                                                                                                                             Coverage
 12

→ BHW4

                                                                                                                                            56.7 %
    @RunWith(JUnitParamsRunner.class)
 13
                                                                                                     56.7 %
    public class Problem1ClassTestJUnitParams {
                                                                                                        56.7 %
 15
                                                                                                            Problem2Class.java
                                                                                                                                                 0.0 %
         private Problem1Class prb1;
 16
                                                                                                            Problem4Class.java
                                                                                                                                                 0.0 %
18⊝
         @SuppressWarnings("unused")
                                                                                                            Problem5Class.java
                                                                                                                                                 0.0 %
         private static final Object[] parametersForProblem1ClassTest () {
 19
                                                                                                            Problem3Class.java
                                                                                                                                                 0.0 %
 20
             return $(
                                                                                                            Problem2ClassAlarm.java
                                                                                                                                                 0.0 %
21 //
22 //
                     Parameters are: (1,2,3)
1=AGL, 2=motorState, 3=chuteState
                                                                                                            Problem6Class.iava
                                                                                                                                                 0.0 %
                                                                                                            Problem1Class.iava
                                                                                                                                            _
                                                                                                                                                96.8 %
                                                                                                            Problem1ClassTestJUnitParams.java
 24
                     $(7_500.2,
                                   motorStates. Off, chuteStates. Off),
                                                                                                                                           100.0 %
                      Test case 2
                     $(4_100.2,
                                   motorStates. RB5, chuteStates. Off),
                      Test case
                     $(2_250.1, motorStates.RB4, Test case 4
 28
                                                       chuteStates. Off),
                     $(1_100.2,
 30
                                   motorStates.RB3,
                                                       chuteStates.Off),
                      Test case 5
                      $(400.2, motorStates.RB2, chuteStates.Deployed),
 33
                      Test case 6
                     $(250.1, motorStates.RB2, chuteStates.Released),
Test case 7
 34
 36
                     $(0.1, motorStates.RB1,
                                                   chuteStates. Released),
                      Test case 8
 38
                      $(0.0, motorStates.Off, chuteStates.Released),
 39
                     %(250.0, motorStates.RB1, chuteStates.Released),
Test case 10
 42
                     $(400.1, motorStates. RB2, chuteStates. Released),
                      Test case 11
 44
                     $(1_100.1, motorStates.RB2, chuteStates.Deployed),
                          case 12
 45
                     $(2_250.0, motorStates.RB3, Test case 13
                                                       chuteStates. Off),
 48
                     $(4_100.1,
                                    motorStates. RB4, chuteStates. Off),
                      Test case 14
                     $(7_500.1, motorStates.RB5, chuteStates.Off),
Test case 15
 50
                     $(10_000.0,
                                    motorStates. Off, chuteStates. Off)
                                                                                                  Problem1ClassTestJUnitParams (Jul 30, 2020 10:43:16 PM)
28
                    $(2_250.1, motorStates. RB4, chuteStates. Off),
                     Test case 4
                                                                                                                                             Coverage
30
                    $(1_100.2, motorStates.RB3, chuteStates.Off),
                                                                                                   56.7 %
31
                     Test case 5
                                                                                                     56.7 %
32
                    $(400.2, motorStates.RB2, chuteStates.Deployed),

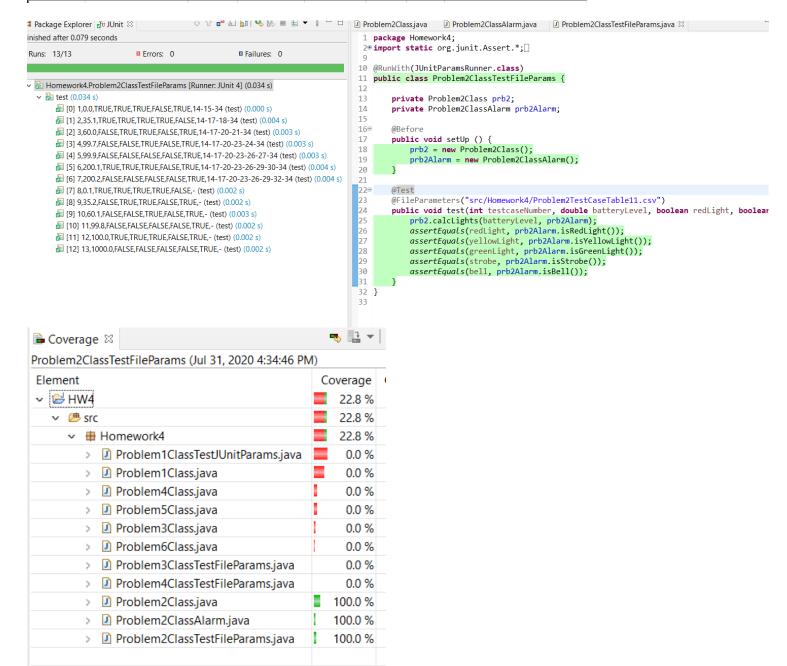
→ 

Homework4

                                                                                                                                            56.7 %
                     Test case 6
                                                                                                            Problem2Class.java
                                                                                                                                                 0.0 %
34
                     $(250.1, motorStates. RB2, chuteStates. Released),
                                                                                                            Problem4Class.java
                                                                                                                                                 0.0 %
35
                                                                                                                                                 0.0 %
36
                    $(0.1, motorStates. RB1, chuteStates. Released),
                                                                                                            Problem5Class.iava
37
                     Test case 8
                                                                                                             Problem3Class.iava
                                                                                                                                                 0.0 %
38
                     $(0.0, motorStates.Off, chuteStates.Released),
                                                                                                            Problem2ClassAlarm.java
                                                                                                                                                 0.0 %
39
                     Test case 9
                                                                                                            Problem6Class.java
                                                                                                                                                 0.0 %
40
                    $(250.0, motorStates. RB1, chuteStates. Released),
                                                                                                            Problem1Class.java
                                                                                                                                                96.8 %
41
                     Test case 10
                                                                                                            Problem1ClassTestJUnitParams.java 100.0 %
12
                    $(400.1, motorStates. RB2, chuteStates. Released),
43
                     Test case 11
14
                    $(1_100.1, motorStates.RB2,
                                                       chuteStates.DepLoyed),
45
                     Test case 12
                    $(2_250.0, motorStates.RB3,
46
                                                       chuteStates. Off).
17
   //
                     Test case 13
                    $(4_100.1,
                                   motorStates. RB4, chuteStates. Off),
48
19
   //
                     Test case 14
50
                    $(7_500.1, motorStates.RB5,
                                                       chuteStates. Off),
51
                     Test case 15
52
                    $\( 10_000.0, motorStates.\( 0ff, \) chuteStates.\( 0ff) \)
53
54
            );
55
       }
56
57⊝
       @Before
        public void setUp () {
58
            prb1 = new Problem1Class();
59
50
       }
51
       @Test
52⊝
53
       @Parameters(method="parametersForProblem1ClassTest")
        public void test(double AGL, Problem1Class.motorStates expMS, Problem1Class.chut
54
55
            prb1.controlLanding(AGL);
            assertEquals(expMS, prb1.getMs());
assertEquals(expCS, prb1.getCs());
56
57
58
59 }
```

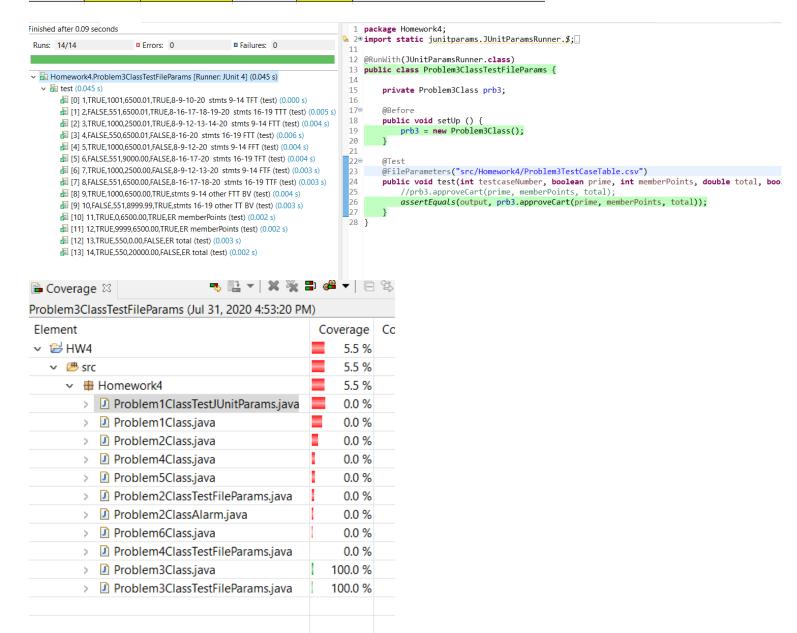
Task 2:

Test Case	Input	Expected Outputs					
Number	batteryLevel (watts)	red	yellow	green	strobe	bell	Basis Path
1	0.0	TRUE	TRUE	TRUE	FALSE	TRUE	14-15-34
2	35.1	TRUE	TRUE	TRUE	TRUE	FALSE	14-17-18-34
3	60.0	FALSE	TRUE	TRUE	FALSE	TRUE	14-17-20-21-34
4	99.7	FALSE	FALSE	TRUE	FALSE	TRUE	14-17-20-23-24-34
5	99.9	FALSE	FALSE	FALSE	FALSE	TRUE	14-17-20-23-26-27-34
6	200.1	TRUE	TRUE	TRUE	FALSE	TRUE	14-17-20-23-26-29-30-34
7	200.2	FALSE	FALSE	FALSE	FALSE	TRUE	14-17-20-23-26-29-32-34
8	0.1	TRUE	TRUE	TRUE	TRUE	FALSE	-
9	35.2	FALSE	TRUE	TRUE	FALSE	TRUE	-
10	60.1	FALSE	FALSE	TRUE	FALSE	TRUE	-
11	99.8	FALSE	FALSE	FALSE	FALSE	TRUE	-
12	100.0	TRUE	TRUE	TRUE	FALSE	TRUE	-
13	1,000.0	FALSE	FALSE	FALSE	FALSE	TRUE	-



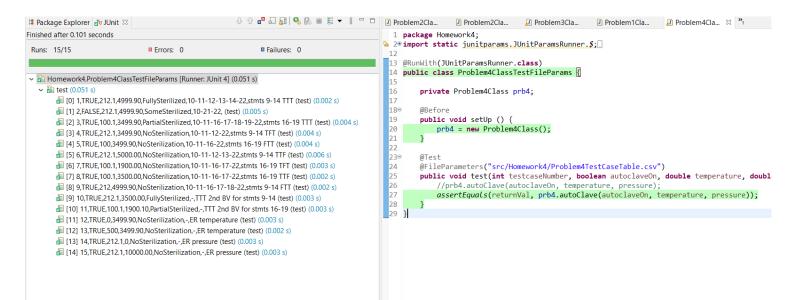
Task 3:

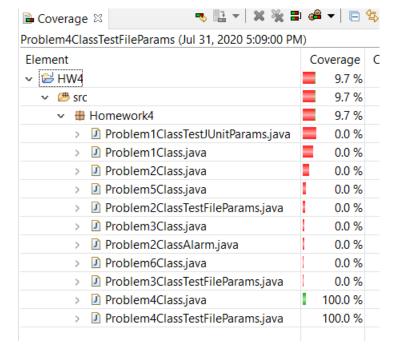
Test Case		Inputs		Exp Out	
Number	prime	memberPoints	total	Return	Basis Path
1	TRUE	1001	6500.01	TRUE	8-9-10-20 stmts 9-14 TFT
2	FALSE	551	6500.01	TRUE	8-16-17-18-19-20 stmts 16-19 TTT
3	TRUE	1000	2500.01	TRUE	8-9-12-13-14-20 stmts 9-14 FTT
4	FALSE	550	6500.01	FALSE	8-16-20 stmts 16-19 FTT
5	TRUE	1000	6500.01	FALSE	8-9-12-20 stmts 9-14 FFT
6	FALSE	551	9000.00	FALSE	8-16-17-20 stmts 16-19 TFT
7	TRUE	1000	2500.00	FALSE	8-9-12-13-20 stmts 9-14 FTF
8	FALSE	551	6500.00	FALSE	8-16-17-18-20 stmts 16-19 TTF
9	TRUE	1000	6500.00	TRUE	stmts 9-14 other FTT BV
10	FALSE	551	8999.99	TRUE	stmts 16-19 other TT BV
11	TRUE	0	6500.00	TRUE	ER memberPoints
12	TRUE	9999	6500.00	TRUE	ER memberPoints
13	TRUE	550	0.00	FALSE	ER total
14	TRUE	550	20000.00	FALSE	ER total



Task 4:

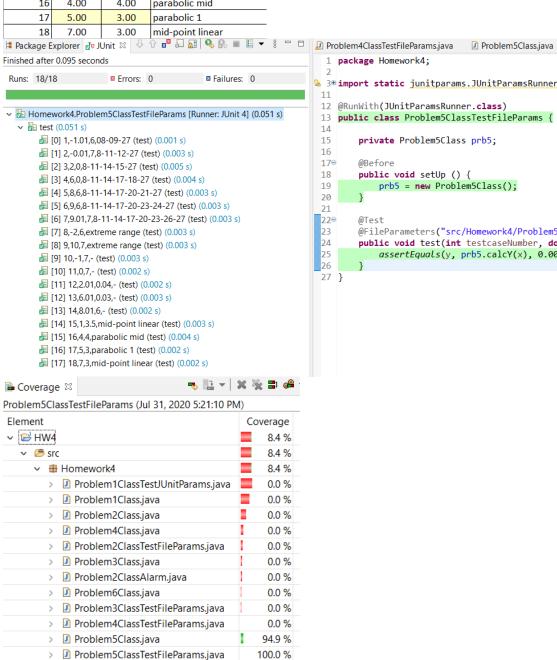
	Inputs		Exp Out			
Test Case		temperature	pressure			
Number	autoclave	(degrees F)	(psi)	return	Basis Path	Comments
1	TRUE	212.1	4999.9	FullySterilized	10-11-12-13-14-22	stmts 9-14 TTT
2	FALSE	212.1	4999.9	SomeSterilized	10-21-22	
3	TRUE	100.1	3499.9	PartialSterilized	10-11-16-17-18-19-22	stmts 16-19 TTT
4	TRUE	212.1	3499.9	NoSterilization	10-11-12-22	stmts 9-14 TFT
5	TRUE	100.0	3499.9	NoSterilization	10-11-16-22	stmts 16-19 FTT
6	TRUE	212.1	5000.0	NoSterilization	10-11-12-13-22	stmts 9-14 TTF
7	TRUE	100.1	1900.0	NoSterilization	10-11-16-17-22	stmts 16-19 TFT
8	TRUE	100.1	3500.0	NoSterilization	10-11-16-17-22	stmts 16-19 TTF
9	TRUE	212.0	4999.9	NoSterilization	10-11-16-17-18-22	stmts 9-14 FTT
10	TRUE	212.1	3500.0	FullySterilized	-	TTT 2nd BV for stmts 9-14
11	TRUE	100.1	1900.1	PartialSterilized	-	TTT 2nd BV for stmts 16-19
12	TRUE	0.0	3499.9	NoSterilization	-	ER temperature
13	TRUE	500.0	3499.9	NoSterilization	-	ER temperature
14	TRUE	212.1	0.0	NoSterilization	-	ER pressure
15	TRUE	212.1	10000.0	NoSterilization	-	ER pressure





Task 5:

Test Case	Inputs	Exp Out	
Number	х	У	Basis Path
1	-1.01	6.00	8-9-27
2	-0.01	7.00	8-11-12-27
3	2.00	0.00	8-11-14-15-27
4	6.00	0.00	8-11-14-17-18-27
5	8.00	6.00	8-11-14-17-20-21-27
6	9.00	6.00	8-11-14-17-20-23-24-27
7	9.01	7.00	8-11-14-17-20-23-26-27
8	-2.00	6.00	extreme range
9	10.00	7.00	extreme range
10	-1.00	7.00	-
11	0.00	7.00	-
12	2.01	0.04	-
13	6.01	0.03	-
14	8.01	6.00	-
15	1.00	3.50	mid-point linear
16	4.00	4.00	parabolic mid
17	5.00	3.00	parabolic 1
18	7.00	3.00	mid-point linear



```
package Homework4;
🦠 3⊕import static junitparams.JUnitParamsRunner.$;[
11
    @RunWith(JUnitParamsRunner.class)
 12
    public class Problem5ClassTestFileParams {
14
15
        private Problem5Class prb5;
16
17⊜
        public void setUp () {
18
            prb5 = new Problem5Class();
19
20
 21
22⊝
23
        @FileParameters("src/Homework4/Problem5TestCaseTable.csv")
24
        public void test(int testcaseNumber, double x, double y, String bpNumber) {
 25
            assertEquals(y, prb5.calcY(x), 0.001);
26
27 }
```

₽roblem5ClassTestFileParams.java ⋈