

Software Testing  
Iteration 2  
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1. N = total # classes : 26  
locs = total # lines of codes(\*) : 666  
locsavg = average # lines of codes(\*) : locs/N 25.615  
Mavg = average # methods per class : 3.192  
Mmax = max # methods per class : 12  
cabe = the total McCabe complexity : 269  
cabeavg = average McCabe complexity per class : 10.346
2. These are our characteristics and blocks:

Characteristic	Block #1	Block #2	Block #3
End of game	Reached Exit	Death	Quit Game
Attacking	Yes	No	
Dying	Yes	No	
Getting kills	Yes	No	
Use items	Yes	No	

These are our choices for the coverage, giving us ECC:

Combat\_Kill\_Die\_UselItems

Death | Yes | Yes | Yes | Yes

NOCombat\_ReachEnd

Reached Exit | No | No | No | No

NOCombat\_EscGame

Quit Game | No | No | No | No

### 3. Unit Test

T = number of test cases (*) :	51
Cov = achieved code test coverage :	57.66%
T locs = total # lines of codes of your unit-tests :	558
T locsavg = average # unit-tests' lines of codes per target class :	35
E = total time spent on writing and executing tests (from iteration 1) :	9 hours
Eavg = average effort per target class :	33.75 min.
bugs = total number of bugs ever found by unit testing from iteration 1:	11
(*) we define this to be the number of your test methods.	

#### System Tests

total # lines of codes of testing infrastructure :	102
<b>testing of RZone</b>	
T = total number of test scenarios :	3
BBCov = achieved black box coverage :	100% ECC
CCov = achieved code coverage :	85.52%
<b>testing of RNode</b>	
T = total number of test scenarios :	3
BBCov = achieved black box coverage :	100% ECC
CCov = achieved code coverage :	86.54%
<b>testing of RAlert</b>	
T = total number of test scenarios :	3
CCov = achieved code coverage :	86.37%
<b>testing of REndZone</b>	
T = total number of test scenarios :	3
CCov = achieved code coverage :	86.37%
<b>testing of S1</b>	
T = total number of test scenarios :	3
CCov = achieved code coverage :	85.86%
<b>testing of S2</b>	
T = total number of test scenarios :	3
CCov = achieved code coverage :	85.86%
Slocs = total # lines of codes of your specifications :	51
E = total time spent on constructing specifications and their tests :	18 hours
Slocsavg = average # lines of code per specification :	8.5
Eavg = average effort : $E/(\sum T + \#S)$	0.75
bugs = total number of bugs ever found by this system-level testing :	21

4. As optionals, we fully implemented Section 4. We added the test statistics of S1 and S2 to the table above.