

Homework3 Memo

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i) I think the difficult parts for this assignment is to figure out how to decouple the button and light bulb as it says the dependency inversion.

ii) The lines of code in each class are listed below:

Button:18

Buttons:5

PushDownButton:30

TestPushDownButton:13

TestButton:15

LightBulbs:5

LightBulb:9

TestLightBulb:13

Total:108






iii) The unit test coverage is 100% as the graph shown below:

TableLamp (2016-10-11 17:49:21)				
Element	Coverage ^	Covered Instructions	Missed Instructions	Total Instructions
TableLamp	100.0 %	137	0	137
src	100.0 %	137	0	137
button	100.0 %	110	0	110
Button.java	100.0 %	20	0	20
PushDownButton.java	100.0 %	41	0	41
TestButton.java	100.0 %	23	0	23
TestPushDownButton.java	100.0 %	26	0	26
lightbulb	100.0 %	27	0	27
LightBulb.java	100.0 %	11	0	11
TestLightBulb.java	100.0 %	16	0	16

iv) The cyclomatic complexity is shown in the coverage report exported by Eclipse, which is specified as row "Cxtty"

 [TableLamp \(2016-10-11 17:49:21\)](#) >  [TableLamp](#) >  [src](#)  [Sessions](#)

src

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxtty	Missed	Lines	Missed	Methods	Missed	Classes
 button		100%		83%	1	15	0	39	0	12	0	4
 lightbulb		100%		n/a	0	6	0	11	0	6	0	2
Total	0 of 137	100%	1 of 6	83%	1	21	0	50	0	18	0	6

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