

Lab – Code Coverage Analysis – Answer Template

SE3010 – SEPQM

Semester 1

Task 2

Table 1: Test cases to test the Ward Application.

#Test Case	Test Inputs		Expected Result	Actual Result	Test Result (Pass/Fail)
	Admitted	Discharged			
1	20	5	Move 5 patient to the next ward Admit 10 patients to this ward, Request for more medical officers	Move 5 patient to the next ward Admit 10 patients to this ward, Request for more medical officers	Pass
2	62	10	ATTENTION! Insufficient medical facilities!	ATTENTION! Insufficient medical facilities!	Pass
3	2	5	All patients admitted without any issues	All patients admitted without any issues Ward is not in a critical stage	Fail
4	50	20	Move 15 patients to the next hospital Move 10 patients to the next ward Admit 5 patients to this ward	Move 15 patients to the next hospital Move 10 patients to the next ward Admit 5 patients to this ward, Request for more medical officers	Fail
5	40	38	Admit to this ward	Admit to this ward	Pass

Task 3

Statement Coverage	$= \frac{(20 + 1 + 6 + 5 + 3)}{36} * 100\% = \frac{35}{36} * 100\% = 97.22\%$
Decision Coverage	$= \frac{(4 + 1 + 2 + 1 + 2)}{12} * 100\% = \frac{10}{12} * 100\% = 83.33\%$

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Path Coverage	$= \frac{5}{7} * 100\% = 71.42\%$
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Task 4

#Test Case	Test Inputs		Expected Result
	Admitted	Discharged	
1	22	15	Admit to this ward, Request more medical officers and admit to this ward
2	8	20	Ward is not in a critical stage

BSc (Hons) in Information Technology Year 3

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SE3010 – SEPQM

Semester 1

Task 5

#Test Case	Test Inputs		Expected Result	Actual Result	Test Result (Pass/Fail)
	Admitted	Discharged			
1	20	5	Move 5 patient to the next ward Admit 10 patients to this ward, Request for more medical officers	Move 5 patient to the next ward Admit 10 patients to this ward, Request for more medical officers	Pass
2	62	10	ATTENTION! Insufficient medical facilities!	ATTENTION! Insufficient medical facilities!	Pass
3	2	5	All patients admitted without any issues	All patients admitted without any issues Ward is not in a critical stage	Fail
4	50	20	Move 15 patients to the next hospital Move 10 patients to the next ward Admit 5 patients to this ward	Move 15 patients to the next hospital Move 10 patients to the next ward Admit 5 patients to this ward, Request for more medical officers	Fail
5	40	38	Admit to this ward	Admit to this ward	Pass
6	22	15	Admit to this ward, Request more medical officers and admit to this ward	Admit to this ward, Request more medical officers and admit to this ward	Pass
7	8	20	All patients admitted without any issues Ward is not in a critical stage	All patients admitted without any issues	Fail

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Code segment with error	Code segment after fixing the error
<pre>{ System.out.println("All patients admitted without any issues"); if(surplus > -10) System.out.println("Ward is not in a critical stage"); }</pre>	<pre>{ System.out.println("All patients admitted without any issues"); if(surplus < -10) System.out.println("Ward is not in a critical stage"); }</pre>