

# Test plan Embedded System Project

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## Introduction

In the following document the test cases for the simulator are listed and executed.

<b>* Test case #: 1</b> <b>Designed by: Hussam Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Turning the LMS on.</b> <b>Test Case name: LMS On</b> <b>Design Date: 12-09-19</b> <b>Execution Date: 24-11-19</b>				
<b>Pre-Conditions:</b> LMS is off, all switches are off besides the door lock which is up				
step	action	Expected result	pass/fail	comment
1	Move on/off switch up	LMS turns on at starting position, coins LEDs are off and LED above program A is on	Pass	

<b>* Test case #: 2</b> <b>Designed by: Husasm Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Selecting Program B</b> <b>Test Case name: Program B select</b> <b>Design Date: 21-09-19</b> <b>Execution Date: 24-11-19</b>				
<b>Pre-Conditions:</b> Test case #1				
step	action	Expected result	pass/fail	comment
1	Press Program Btn	LED A is off, LED B is on	Pass	

* Test case #: 3		Test Case name: Program C select		
Designed by: Hussam Ayoub		Design Date: 21-09-19		
Executed by: Hussam Ayoub		Execution Date: 24-11-19		
Short Description: Selecting Program C				
Pre-Conditions:				
Test case #2				
step	action	Expected result	pass/fail	comment
1	Press Program Btn	LED B is off LED C is on	Pass	

<b>* Test case #: 4</b>		<b>Test Case name: Program A select</b>		
<b>Designed by: Hussam Ayoub</b>		<b>Design Date: 21-09-19</b>		
<b>Executed by: Hussam Ayoub</b>		<b>Execution Date: 24-11-19</b>		
<b>Short Description: Selecting Program A</b>				
<b>Pre-Conditions:</b>				
Test case #3				
<b>step</b>	<b>action</b>	<b>Expected result</b>	<b>pass/fail</b>	<b>comment</b>
1	Press Program Btn	LED C is off Led A is on	Pass	

* Test case #: 5		Test Case name: 10 cents coin		
Designed by: Hussam Ayoub		Design Date: 21-09-19		
Executed by: Hussam Ayoub		Execution Date: 25-11-19		
Short Description: Inserting 10 cents coin				
Pre-Conditions:				
Test Case #1				
step	action	Expected result	pass/fail	comment
1	Press 10 cents btn	first LED at 10 cents turns on	Pass	
2	Press 10 cents btn	second LED at 10 cents turns on	Pass	
3	Press 10 cents btn	third LED at 10 cents turns on	Pass	
4	Press 10 cents btn	Nothing happens	Pass	

<b>* Test case #: 6</b> <b>Designed by: Hussam Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Inserting 50 cents coin</b>					<b>Test Case name: 50 cents coin</b> <b>Design Date: 21-09-19</b> <b>Execution Date: 25-11-19</b>
<b>Pre-Conditions:</b> Test Case #1					
step	action	Expected result	pass/fail	comment	
1	Press 50 cents btn	First LED at 50 cents turns on	Pass		
2	Press 50 cents btn	second LED at 50 cents turns on	Pass		
3	Press 50 cents btn	third LED at 50 cents turns on	Pass		
4	Press 50 cents btn	Nothing happens	Pass		

<b>Test case #: 7</b> <b>Designed by: Hussam Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Inserting 200 cents coin</b>					<b>Test Case name: 200 cents coin</b> <b>Design Date: 21-09-19</b> <b>Execution Date: 25-11-19</b>
<b>Pre-Conditions:</b> Test Case #1					
step	action	Expected result	pass/fail	comment	
1	Press 200 cents btn	First LED at 200 cents turns on	Pass		
2	Press 200 cents btn	second LED at 200 cents turns on	Pass		
3	Press 200 cents btn	Nothing happens	Pass		

<b>* Test case #: 8</b> <b>Designed by: Hussam Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Clear the coins</b>					<b>Test Case name: Clear coins</b> <b>Design Date: 21-09-19</b> <b>Execution Date: 25-11-19</b>
<b>Pre-Conditions:</b> Test #5, Test #6, Test #7					
step	action	Expected result	pass/fail	comment	
1	Press Clear btn	All LEDs above coins turn off	Pass		

<b>Test case #: 9</b> <b>Designed by: Hussam Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Add units of soap to first compartment</b>					<b>Test Case name: Add soap 1st</b> <b>Design Date: 21-09-19</b> <b>Execution Date: 21-11-19</b>
<b>Pre-Conditions:</b> Test case #1					
step	action	Expected result	pass/fail	comment	
1	Open soap 1 switch	Nothing happens	pass		
2	Close soap 1 switch	Soap 1 led blinks	Pass		
5	Open soap 1 switch	Soap 1 led blinks	Pass		
6	Close soap 1 switch	Soap 1 led stays on	Pass		

<b>Test case #: 10</b> <b>Designed by: Hussam Ayoub</b> <b>Executed by: Hussam Ayoub</b> <b>Short Description: Add units of soap to the second compartment</b>					<b>Test Case name: Add soap 2nd</b> <b>Design Date: 21-09-19</b> <b>Execution Date: 25-11-19</b>
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**Pre-Conditions:**

Test case #1

step	action	Expected result	pass/fail	comment
1	Open soap 2 switch	Nothing happens	Pass	`
2	Close soap 2 switch	Soap 2 led blinks	Pass	
3	Open soap 2 switch	Soap 2 led blinks	Pass	
4	Close soap 2 switch	Soap2 led blinks	Pass	
5	Open soap 2 switch	Soap 2 led blinks	Pass	
6	Close soap 2 switch	Soap 2 led stays on	Pass	

**Test case #: 11****Test Case name: Closing door****Designed by: Hussam Ayoub****Design Date: 23-09-19****Executed by: Hussam Ayoub****Execution Date: 25-11-19****Short Description: Closing the washing machine door****Pre-Conditions:**

Test case #1

step	action	Expected result	pass/fail	comment
1	Move "Lock door" switch up	Nothing happens	pass	No available Led to show that door is closed

<b>Test case #: 12</b>		<b>Test Case name: Starting wash</b>		
<b>Designed by: Hussam Ayoub</b>		<b>Design Date: 21-09-19</b>		
<b>Executed by: Hussam Ayoub</b>		<b>Execution Date: 25-11-19</b>		
<b>Short Description: Start of a wash program</b>				
<b>Pre-Conditions:</b> Test case #1-11				
step	action	Expected result	pass/fail	comment
1	Press start button	Lock led turns on Coins LED's cleared Wash starts	Pass	

<b>Test case #: 13</b>		<b>Test Case name: wash functionality</b>		
<b>Designed by: Hussam Ayoub</b>		<b>Design Date: 02-01-20</b>		
<b>Executed by: Hussam Ayoub</b>		<b>Execution Date: 02-01-20</b>		
<b>Short Description: functionality during wash</b>				
<b>Pre-Conditions:</b>				
Test case #12				
<b>step</b>	<b>action</b>	<b>Expected result</b>	<b>pass/fail</b>	<b>comment</b>
1	Open soap 1 switch	Nothing happens	Pass	
2	Close soap 1 switch	Nothing happens	Pass	
3	Open soap 2 switch	Nothing happens	Pass	
4	Close soap 2 switch	Nothing happens	Pass	
5	Press program button	Nothing happens	Pass	
6	Close door switch	Nothing happens	Pass	
7	Press 10 cents btn	First led at 10 cents on	Pass	
8	Press 10 cents btn	second led at 10 cents on	Pass	

9	Press 10 cents btn	third led at 10 cents on	Pass	
10	Press 10 cents btn	Nothing happens	Pass	
11	Press 50 cents btn	First led at 50 cents on	Pass	
12	Press 50 cents btn	second led at 50 cents on	Pass	
13	Press 50 cents btn	third led at 50 cents on	Pass	
14	Press 50 cents btn	Nothing happens	Pass	
15	Press 200 cents btn	First led at 200 cents on	Pass	
16	Press 200 cents btn	Second led at 200 cents on	Pass	
17	Press 200 cents btn	Nothing happens	Pass	
18	Press clear btn	All coins LED's off	Pass	
19	Press start btn	Nothing happens	pass	

**Test case #: 13**

**Test Case name: safe mode**

**Designed by: Hussam Ayoub**

**Design Date: 02-01-20**

**Executed by: Hussam Ayoub**

**Execution Date: 02-01-20**

**Short Description: safe mode actions**

**Pre-Conditions:**

Test case #12

step	action	Expected result	pass/fail	comment
1	Close pressure switch	If water is needed Wash stops and current program led blinks for 10 Sink open until water tank is empty All program LED's blink for 5 seconds Washing machine goes to idle	pass	

<b>Test case #: 14</b>		<b>Test Case name: safe mode</b>		
<b>Designed by: Hussam Ayoub</b>		<b>Design Date: 02-01-20</b>		
<b>Executed by: Hussam Ayoub</b>		<b>Execution Date: 02-01-20</b>		
<b>Short Description: safe mode actions</b>				
<b>Pre-Conditions:</b>				
Test case #12				
<b>step</b>	<b>action</b>	<b>Expected result</b>	<b>pass/fail</b>	<b>comment</b>
1	Close pressure switch	If water is needed Wash stops and current program led blinks.	pass	
2	Opens pressure switch within 10 min	Wash continues	pass	