

# PROJECT 1

Cluster 4

*Testing and Documentation*

## TEST REPORT

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*Submitted by*

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The image shows a software window titled "BARNHILL FASTENER COMPANY". Inside the window, there are several input fields and checkboxes. The "Skill level" is a dropdown menu. The "Number of hours worked" is a text box containing the number "0". There are three checkboxes for insurance: "Medical insurance", "Dental insurance", and "Long-term disability insurance". There is one checkbox for "Retirement plan" with the label "Check if applicable". At the bottom right, there are two buttons: "Calculate pay" and "Reset form". Below these buttons is a large, empty rectangular area for displaying the results.

### Initial state of the program

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The words “initial state” to be used in this test report refers to the very first state of the components of the program: such as their enabled or disabled state, checked or unchecked state, and initial text values when the program opens.

As depicted in the image above, the following are the initial state of the components:

- Skill level combo box – selected index is –1 or null
- Number of hours worked text box – Number “0” as an initial text value
- Medical insurance checkbox – disabled and unchecked
- Dental insurance checkbox – disabled and unchecked
- Long-term disability insurance checkbox – disabled and unchecked
- Retirement plan checkbox – disabled and unchecked
- Display pay calculation text area – null texts

TEST CASE IDENTIFICATION					
<b>Title</b>	TEST_CASE_01				
<b>Objective or description</b>	User attempts to click “Calculate pay” button, without changing the state of the components, or program by default in all means.				
<b>No. of test steps or conditions</b>	1	<b>Cumulative hours required to write test case</b>	0:05	<b>Hours required to perform test</b>	0:01

TEST CASE SETUP / PREPARATION / CONDITIONS	
<b>No.</b>	<b>Setup description</b>
1	The application must be installed and has been opened.
2	All components of the application must be in their initial state.

TEST CASE OVERVIEW AND TEST STEPS					
<b>Step No.</b>	<b>Step description</b>	<b>Component/input</b>	<b>Expected results</b>	<b>Actual results</b>	<b>Status (Passed or Failed)</b>
1	Click “Calculate pay” button.	skillLevel index = -1	Program must display an error message: “Number of hours should be between 1.00 and 168.00 inclusive.”	Program must display an error message: “Number of hours should be between 1.00 and 168.00 inclusive.”	Passed
		hoursWorked = 0			

TEST CASE IDENTIFICATION					
<b>Title</b>	TEST_CASE_02				
<b>Objective or description</b>	User enters number of hours worked, and then clicks “Calculate pay” button, with skill level is left unchanged to initial state.				
<b>No. of test steps or conditions</b>	2	<b>Cumulative hours required to write test case</b>	0:05	<b>Hours required to perform test</b>	0:01

TEST CASE SETUP / PREPARATION / CONDITIONS	
No.	Setup description
1	The application must be installed and has been opened.
2	All components of the application must be in their initial state.

TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component/input	Expected results	Actual results	Status (Passed or Failed)
1	Enter number of hours worked; e.g. 30	hoursWorked = 30	Program accepts the input.	Program accepts the input.	Passed
2	Click “Calculate pay” button.	skillLevel index = -1	Program must display an error message: “Please select a skill level.”	Program displays an error message: “Please select a skill level.”	Passed

TEST CASE IDENTIFICATION					
Title	TEST_CASE_03				
Objective or description	User enters details for Skill Level 1, with valid regular hours worked.				
No. of test steps or conditions	3	Cumulative hours required to write test case	0:05	Hours required to perform test	0:02

TEST CASE SETUP / PREPARATION / CONDITIONS	
No.	Setup description
1	The application must be installed and has been opened.
2	All components of the application must be in their initial state.

TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 1” for Skill Level.	skillLevel index = 0	Level 1 must be selected.	Level 1 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and disabled state.	Component is in unchecked and disabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
2	Enter number of hours worked; e.g. 30	hoursWorked = 30	Program accepts the input.	Program accepts the input.	Passed
3	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		Hours worked	30:00	30:00	Passed
		Hourly pay rate	\$ 19.00	\$ 19.00	Passed
		Regular pay (30:00)	\$ 570.00	\$ 570.00	Passed
		Overtime pay (00:00)	\$ 0.00	\$ 0.00	Passed
		Gross pay	\$ 570.00	\$ 570.00	Passed
		Total deduction	\$ 0.00	\$ 0.00	Passed
		Net pay	\$ 570.00	\$ 570.00	Passed
		Superannuation	\$ 0.00	\$ 0.00	Passed

TEST CASE IDENTIFICATION					
<b>Title</b>	TEST_CASE_04				
<b>Objective or description</b>	User enters details for Skill Level 1, with valid overtime hours worked.				
<b>No. of test steps or conditions</b>	3	<b>Cumulative hours required to write test case</b>	0:05	<b>Hours required to perform test</b>	0:02

TEST CASE SETUP / PREPARATION / CONDITIONS	
No.	Setup description
1	The application must be installed and has been opened.
2	All components of the application must be in their initial state.

TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 1” for Skill Level.	skillLevel index = 0	Level 1 must be selected.	Level 1 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and disabled state.	Component is in unchecked and disabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
2	Enter number of hours worked; e.g. 50	hoursWorked = 50	Program accepts the input.	Program accepts the input.	Passed
3	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		Hours worked	30:00	30:00	Passed
		Hourly pay rate	\$ 19.00	\$ 19.00	Passed
		Regular pay (40:00)	\$ 760.00	\$ 760.00	Passed
		Overtime pay (10:00)	\$ 285.00	\$ 285.00	Passed
		Gross pay	\$ 1,045.00	\$ 1,045.00	Passed
		Total deduction	\$ 0.00	\$ 0.00	Passed
		Net pay	\$ 1,045.00	\$ 1,045.00	Passed
		Superannuation	\$ 0.00	\$ 0.00	Passed

TEST CASE IDENTIFICATION					
Title	TEST_CASE_05				
Objective or description	User enters details for Skill Level 2, with valid regular hours worked.				
No. of test steps or conditions	6	Cumulative hours required to write test case	0:10	Hours required to perform test	0:05
TEST CASE SETUP / PREPARATION / CONDITIONS					
No.	Setup description				
1	The application must be installed and has been opened.				
2	All components of the application must be in their initial state.				
TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 2” for Skill Level.	skillLevel index = 1	Level 2 must be selected.	Level 2 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and enabled state.	Component is in unchecked and enabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
			Retirement plan checkbox	Must be in unchecked and disabled state.	Component is in unchecked and disabled state.
2	Enter number of hours worked; e.g. 30	hoursWorked = 30	Program accepts the input.	Program accepts the input.	Passed
3	Tick medical insurance checkbox.	Medical insurance checkbox	Must be in checked state.	Component is in checked state.	Passed
4	Tick dental insurance checkbox.	Dental insurance checkbox			Passed
5	Tick long-term disability insurance checkbox.	Long-term disability insurance checkbox			Passed
6	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		Hours worked	30:00	30:00	Passed
		Hourly pay rate	\$ 23.00	\$ 23.00	Passed
		Regular pay (30:00)	\$ 690.00	\$ 690.00	Passed
		Overtime pay (00:00)	\$ 0.00	\$ 0.00	Passed
		Gross pay	\$ 690.00	\$ 690.00	Passed
		Total deduction	\$ 61.50	\$ 61.50	Passed
		Net pay	\$ 690.00	\$ 690.00	Passed
Superannuation	\$ 0.00	\$ 0.00	Passed		

TEST CASE IDENTIFICATION					
Title	TEST_CASE_06				
Objective or description	User enters details for Skill Level 2, with valid overtime hours worked, and medical and dental insurances.				
No. of test steps or conditions	5	Cumulative hours required to write test case	0:10	Hours required to perform test	0:05
TEST CASE SETUP / PREPARATION / CONDITIONS					
No.	Setup description				
1	The application must be installed and has been opened.				
2	All components of the application must be in their initial state.				
TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 2” for Skill Level.	skillLevel index = 1	Level 2 must be selected.	Level 2 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and enabled state.	Component is in unchecked and enabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
			Retirement plan checkbox	Must be in unchecked and disabled state.	Component is in unchecked and disabled state.
2	Enter number of hours worked; e.g. 44	hoursWorked = 44	Program accepts the input.	Program accepts the input.	Passed
3	Tick medical insurance checkbox.	Medical insurance checkbox	Must be in checked state.	Component is in checked state.	Passed
4	Tick dental insurance checkbox.	Dental insurance checkbox			Passed
5	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		Hours worked	44:00	44:00	Passed
		Hourly pay rate	\$ 23.00	\$ 23.00	Passed
		Regular pay (40:00)	\$ 920.00	\$ 920.00	Passed
		Overtime pay (04:00)	\$ 138.00	\$ 138.00	Passed
		Gross pay	\$ 1,058.00	\$ 1,058.00	Passed
		Total deduction	\$ 44.50	\$ 44.50	Passed
		Net pay	\$ 1,013.50	\$ 1,013.50	Passed
	Superannuation	\$ 0.00	\$ 0.00	Passed	



TEST CASE IDENTIFICATION					
Title	TEST_CASE_07				
Objective or description	User enters details for Skill Level 3, with valid regular hours worked, all insurances selected and a retirement plan.				
No. of test steps or conditions	7	Cumulative hours required to write test case	0:10	Hours required to perform test	0:05
TEST CASE SETUP / PREPARATION / CONDITIONS					
No.	Setup description				
1	The application must be installed and has been opened.				
2	All components of the application must be in their initial state.				
TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 3” for Skill Level.	skillLevel index = 2	Level 3 must be selected.	Level 3 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and enabled state.	Component is in unchecked and enabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
2	Enter number of hours worked; e.g. 35	hoursWorked = 35	Program accepts the input.	Program accepts the input.	Passed
3	Tick medical insurance checkbox.	Medical insurance checkbox	Must be in checked state.	Component is in checked state.	Passed
4	Tick dental insurance checkbox.	Dental insurance checkbox			Passed
5	Tick long-term disability insurance checkbox.	Long-term disability insurance checkbox			Passed
6	Tick retirement plan checkbox.	Retirement plan checkbox			Passed
7	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		Hours worked	35:00	35:00	Passed
		Hourly pay rate	\$ 27.00	\$ 27.00	Passed
		Regular pay (35:00)	\$ 945.00	\$ 945.00	Passed
		Overtime pay (00:00)	\$ 0.00	\$ 0.00	Passed
		Gross pay	\$ 945.00	\$ 945.00	Passed
		Total deduction	\$ 61.50	\$ 61.50	Passed
		Net pay	\$ 883.50	\$ 883.50	Passed
	Superannuation	\$ 28.35	\$ 28.35	Passed	

TEST CASE IDENTIFICATION					
Title	TEST_CASE_08				
Objective or description	User enters details for Skill Level 3, with valid regular hours worked, no insurance options, but has a retirement plan, and with an attempt to click “Reset form” button.				
No. of test steps or conditions	5	Cumulative hours required to write test case	0:10	Hours required to perform test	0:05
TEST CASE SETUP / PREPARATION / CONDITIONS					
No.	Setup description				
1	The application must be installed and has been opened.				
2	All components of the application must be in their initial state.				
TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 3” for Skill Level.	skillLevel index = 2	Level 3 must be selected.	Level 3 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and enabled state.	Component is in unchecked and enabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
2	Enter number of hours worked; e.g. 37.5	hoursWorked = 37.5	Program accepts the input.	Program accepts the input.	Passed
3	Tick retirement plan checkbox.	Retirement plan checkbox	Must be in checked state.	Component is in checked state.	Passed
4	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		Hours worked	37:30	37:30	Passed
		Hourly pay rate	\$ 27.00	\$ 27.00	Passed
		Regular pay (37:30)	\$ 1,012.50	\$ 1,012.50	Passed
		Overtime pay (00:00)	\$ 0.00	\$ 0.00	Passed
		Gross pay	\$ 1,012.50	\$ 1,012.50	Passed
		Total deduction	\$ 0.00	\$ 0.00	Passed
		Net pay	\$ 1,012.50	\$ 1,012.50	Passed
Superannuation	\$ 30.38	\$ 30.38	Passed		
5	Click “Reset form” button	skillLevel index = −1	Skill level texts must be null.	Skill level texts are null.	Passed
		Medical insurance checkbox	Must be in unchecked and disabled state.	Component is in unchecked and disabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
		Breakdown text area	Must be empty.	Text area is empty.	Passed

TEST CASE IDENTIFICATION					
Title	TEST_CASE_09				
Objective or description	User enters details for Skill Level 3, with ‘one hour’ as number hour worked, all insurances selected and no retirement plan, to demonstrate invalid net pay.				
No. of test steps or conditions	7	Cumulative hours required to write test case	0:10	Hours required to perform test	0:05
TEST CASE SETUP / PREPARATION / CONDITIONS					
No.	Setup description				
1	The application must be installed and has been opened.				
2	All components of the application must be in their initial state.				
TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 3” for Skill Level.	skillLevel index = 2	Level 3 must be selected.	Level 3 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and enabled state.	Component is in unchecked and enabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
2	Enter number of hours worked; e.g. 1	hoursWorked = 1	Program accepts the input.	Program accepts the input.	Passed
3	Tick medical insurance checkbox.	Medical insurance checkbox	Must be in checked state.	Component is in checked state.	Passed
4	Tick dental insurance checkbox.	Dental insurance checkbox			Passed
5	Tick long-term disability insurance checkbox.	Long-term disability insurance checkbox			Passed
7	Click “Calculate pay” button.	n/a	Pay breakdown calculation must be displayed in the text area.	Pay breakdown calculation is displayed in the text area.	Passed
		n/a	A popup warning message must appear indicating “total deduction is larger than gross pay”.	A popup warning message appears indicating “total deduction is larger than gross pay”.	Passed
		Hours worked	1:00	1:00	Passed
		Hourly pay rate	\$ 27.00	\$ 27.00	Passed
		Regular pay (01:00)	\$ 27.00	\$ 27.00	Passed
		Overtime pay (00:00)	\$ 0.00	\$ 0.00	Passed
		Gross pay	\$ 27.00	\$ 27.00	Passed
		Total deduction	\$ 61.50	\$ 61.50	Passed
		Net pay	\$ −34.50	\$ −34.50	Passed
		Superannuation	\$ 0.00	\$ 0.00	Passed

TEST CASE IDENTIFICATION					
Title	TEST_CASE_10				
Objective or description	User attempts to enter invalid number of hours worked.				
No. of test steps or conditions	9	Cumulative hours required to write test case	0:15	Hours required to perform test	0:07
TEST CASE SETUP / PREPARATION / CONDITIONS					
No.	Setup description				
1	The application must be installed and has been opened.				
2	All components of the application must be in their initial state.				
TEST CASE OVERVIEW AND TEST STEPS					
Step No.	Step description	Component affected or data value	Expected results	Actual results	Status (Passed or Failed)
1	Select “Level 1” for Skill Level.	skillLevel index = 0	Level 1 must be selected.	Level 1 is selected.	Passed
		Medical insurance checkbox	Must be in unchecked and disabled state.	Component is in unchecked and disabled state.	Passed
		Dental insurance checkbox			Passed
		Long-term disability insurance checkbox			Passed
		Retirement plan checkbox			Passed
2	Enter text ‘A’ in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = ‘A’	An error message must appear on the text area asking user to enter appropriate number of hours.	An error message appears on the text area asking user to enter appropriate number of hours.	Passed
3	Enter text ‘\$’ in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = ‘\$’			Passed
4	Enter texts “XY” in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = “XY”			Passed
5	Enter number –1 in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = –1	An error message must appear on the text area asking user to enter number of hours between 1.00 and 168.00 inclusive.	An error message appears on the text area asking user to enter number of hours between 1.00 and 168.00 inclusive.	Passed
6	Enter number 0 in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = 0			Passed
7	Enter number 168.01 in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = 168.01			Passed
8	Enter number 0.1 in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = 0.1	Program must accept the input, and display necessary data for pay breakdown calculation in text area.	Program accepts the input, and then displays necessary data for pay breakdown calculation in text area.	Passed
9	Enter number 167.99 in number of hours worked text field, then click “Calculate pay” button.	hoursWorked = 167.99			Passed