

## Distance Class Test Plan

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Test Case 1    Test instantiate default

Operation	Purpose	Object State	Expected Result
Distance d1 = new Distance()	To create a distance using default values	feet = 1  inches = 1	A new Distance  object with default values for attributes
d1.getFeet()	Verify instantiation, accessor method.		1
d1.getInches()	Verify instantiation, accessor method.		1

Test Case 2    Test instantiate client

Operation	Purpose	Object State	Expected Result
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with  client supplied values for the attributes
d2.getFeet()	Verify instantiation, accessor method.		3
d2.getInches()	Verify instantiation, accessor method.		3

Test Case 3    Test feet mutator legal

Operation	Purpose	Object State	Expected Result
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d2.setFeet(5)	To test mutator with legal input.	Feet = 5  Inches = 3	
d2.getFeet()			5

Test Case 4    Test inches mutator legal

Operation	Purpose	Object State	Expected Result
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d2.setInches(5)	To test mutator with legal input.	Feet = 3  Inches = 5	
d2.getInches()			5

Test Case 5    Test feet mutator illegal

<b>Operation</b>	<b>Purpose</b>	<b>Object State</b>	<b>Expected Result</b>
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d2.setFeet(-3)	To test mutator with illegal input.		Illegal Argument Exception

Test Case 6    Test inches mutator illegal

<b>Operation</b>	<b>Purpose</b>	<b>Object State</b>	<b>Expected Result</b>
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d2.setInches(-3)	To test mutator with illegal input.		Illegal Argument Exception

Test Case 7    Test get distance

<b>Operation</b>	<b>Purpose</b>	<b>Object State</b>	<b>Expected Result</b>
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d2.getDistance()	To test accessor method		39 inches

Test Case 8    Test Add method legal

<b>Operation</b>	<b>Purpose</b>	<b>Object State</b>	<b>Expected Result</b>
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d2.addDistance(d1)	To test add method with legal input.	Feet = 4  Inches = 4	
d2.getDistance()			52 inches

Test Case 9 Test sub method legal

Operation	Purpose	Object State	Expected Result
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d1.subDistance(d1)	To test sub method with legal input.	Feet = 2  Inches = 2	
d1.getDistance()			26 inches

Test Case 10 Test add method illegal

Operation	Purpose	Object State	Expected Result
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d1.addDistance(5,-3)	To test add method with illegal input.		Illegal Argument Exception

Test Case 11 Test sub method illegal

<b>Operation</b>	<b>Purpose</b>	<b>Object State</b>	<b>Expected Result</b>
Distance d2 = new Distance(3,3)	To create a distance with client supplied values.	feet = 3  inches = 3	A new Distance with client supplied values for the attributes
d1.subDistance(-5,3)	To test sub method with illegal input.		Illegal Argument Exception