

KEY: **Orange Highlight** = Test added during this milestone

Red Highlight = Impossible Test Case

Test	Equivalence class partitioning(Wect, Sect, Wrect, Srect)			
PredicatedListTest .testDecorated	<ul style="list-style-type: none">Variables:<ul style="list-style-type: none">List length LEquivalence classes<ul style="list-style-type: none">L1: L = 0L2: L > 0Thus, wect and sect are both covered by using an empty list and a nonempty<ul style="list-style-type: none">This is already doneWrect and Srect would involve L < 0 but this is not possibleWrect and srect are covered by testing of a null variable list			
PredicatedListTest .testEquals	<ul style="list-style-type: none">Variables:<ul style="list-style-type: none">List length LEquivalence classes<ul style="list-style-type: none">L1: L = 0L2: L > 0Thus, wect and sect are both covered by using an empty list and a nonempty<ul style="list-style-type: none">This is already doneWrect and Srect would involve L < 0 but this is not possibleWrect and srect are covered by testing of a null variable list			
PredicatedListTest .testHashCode	<ul style="list-style-type: none">Variables:<ul style="list-style-type: none">List length LEquivalence classes<ul style="list-style-type: none">L1: L = 0L2: L > 0Thus, wect and sect are both covered by using an empty list and a nonempty<ul style="list-style-type: none">This is already doneWrect and Srect would involve L < 0 but this is not possibleWrect and srect are covered by testing of a null variable list			
PredicatedListTest .testGet	<ul style="list-style-type: none">Variables:<ul style="list-style-type: none">List length LIndex IEquivalence classes<ul style="list-style-type: none">L1: L = 0L2: L > 0I1: I < 0I2: I >= 0 && I < LI3: I >= LWect<ul style="list-style-type: none"> <table><tr><td>ID</td><td>L</td><td>I</td></tr></table>	ID	L	I
ID	L	I		

	<table><tr><td>WECT1</td><td>L1</td><td>I1</td></tr><tr><td>WECT2</td><td>L2</td><td>I2</td></tr><tr><td>WECT3</td><td>L1</td><td>I3</td></tr></table> <ul style="list-style-type: none">• Sect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>I</td></tr><tr><td>SECT1</td><td>L1</td><td>I1</td></tr><tr><td>SECT2</td><td>L2</td><td>I1</td></tr><tr><td>SECT3</td><td>L1</td><td>I2</td></tr><tr><td>SECT4</td><td>L2</td><td>I2</td></tr><tr><td>SECT5</td><td>L1</td><td>I3</td></tr><tr><td>SECT6</td><td>L2</td><td>I3</td></tr></table>○<ul style="list-style-type: none">• Wrect and Srect would involve $L < 0$ but this is not possible• Wrect and srect are covered by WECT1, WECT3, SECT1, SECT2, SECT5, and SECT6• Wrect and srect are also covered by testing of a null variable list	WECT1	L1	I1	WECT2	L2	I2	WECT3	L1	I3	ID	L	I	SECT1	L1	I1	SECT2	L2	I1	SECT3	L1	I2	SECT4	L2	I2	SECT5	L1	I3	SECT6	L2	I3
WECT1	L1	I1																													
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SECT4	L2	I2																													
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PredicatedListTest .testIndexOf	<ul style="list-style-type: none">• Variables:<ul style="list-style-type: none">○ List length L○ Object O• Equivalence classes<ul style="list-style-type: none">○ L1: $L = 0$○ L2: $L > 0$○ O1: O is in list○ O2: O is not in list• Wect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>O</td></tr><tr><td>WECT1</td><td>L1</td><td>O1</td></tr><tr><td>WECT2</td><td>L2</td><td>O2</td></tr></table>• Sect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>I</td></tr><tr><td>SECT1</td><td>L1</td><td>O1</td></tr></table>	ID	L	O	WECT1	L1	O1	WECT2	L2	O2	ID	L	I	SECT1	L1	O1															
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SECT1	L1	O1																													

	<table><tr><td>SECT2</td><td>L2</td><td>O1</td></tr><tr><td>SECT3</td><td>L1</td><td>O2</td></tr><tr><td>SECT4</td><td>L2</td><td>O2</td></tr></table> <ul style="list-style-type: none">○• Wrect and Srect would involve $L < 0$ but this is not possible• Wrect and srect are covered by WECT1, SECT1• Wrect and srect are also covered by testing of a null variable list	SECT2	L2	O1	SECT3	L1	O2	SECT4	L2	O2																								
SECT2	L2	O1																																
SECT3	L1	O2																																
SECT4	L2	O2																																
PredicatedListTest .tesetLastIndexOf	<ul style="list-style-type: none">• Variables:<ul style="list-style-type: none">○ List length L○ Object O• Equivalence classes<ul style="list-style-type: none">○ L1: $L = 0$○ L2: $L > 0$○ O1: O is only instance of O in list○ O2: multiple instances of O in list○ O3: O is not in list• Wect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>O</td></tr><tr><td>WECT1</td><td>L1</td><td>O1</td></tr><tr><td>WECT2</td><td>L2</td><td>O2</td></tr><tr><td>WECT3</td><td>L1</td><td>O3</td></tr></table>• Sect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>I</td></tr><tr><td>SECT1</td><td>L1</td><td>O1</td></tr><tr><td>SECT2</td><td>L2</td><td>O1</td></tr><tr><td>SECT3</td><td>L1</td><td>O2</td></tr><tr><td>SECT4</td><td>L2</td><td>O2</td></tr><tr><td>SECT5</td><td>L1</td><td>O3</td></tr><tr><td>SECT6</td><td>L2</td><td>O3</td></tr></table>○• Wrect and Srect would involve $L < 0$ but this is not possible• Wrect and srect are covered by WECT1, WECT3, SECT1, SECT3• Wrect and srect are also covered by testing of a null variable list	ID	L	O	WECT1	L1	O1	WECT2	L2	O2	WECT3	L1	O3	ID	L	I	SECT1	L1	O1	SECT2	L2	O1	SECT3	L1	O2	SECT4	L2	O2	SECT5	L1	O3	SECT6	L2	O3
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SECT5	L1	O3																																
SECT6	L2	O3																																

PredicatedListTest
.testRemove

- Variables:
 - List length L
 - Index I
- Equivalence classes
 - L1: L = 0
 - L2: L > 0
 - I1: I < 0
 - I2: I >= 0 && I < L
 - I3: I >= L
- Wect
 -

ID	L	I
WECT1	L1	I1
WECT2	L2	I2
WECT3	L1	I3

- Sect
 -

ID	L	I
SECT1	L1	I1
SECT2	L2	I1
SECT3	L1	I2
SECT4	L2	I2
SECT5	L1	I3
SECT6	L2	I3

-
- Wrect and Srect would involve L < 0 but this is not possible
- Wrect and srect are covered by WECT1, WECT3, SECT1, SECT2, SECT5, and SECT6
- Wrect and srect are also covered by testing of a null variable list

PredicatedListTest
.testAdd

- Variables:
 - List length L
 - Object O
- Equivalence classes
 - L1: L = 0
 - L2: L > 0
 - O1: O can be inserted in list
 - O2: O cannot be inserted in list
- Wect
 -

	<table><tr><td>ID</td><td>L</td><td>O</td></tr><tr><td>WECT1</td><td>L1</td><td>O1</td></tr><tr><td>WECT2</td><td>L2</td><td>O2</td></tr></table> <ul style="list-style-type: none">• Sect<ul style="list-style-type: none">◦<table><tr><td>ID</td><td>L</td><td>I</td></tr><tr><td>SECT1</td><td>L1</td><td>O1</td></tr><tr><td>SECT2</td><td>L2</td><td>O1</td></tr><tr><td>SECT3</td><td>L1</td><td>O2</td></tr><tr><td>SECT4</td><td>L2</td><td>O2</td></tr></table>◦<ul style="list-style-type: none">• Wrect and Srect would involve $L < 0$ but this is not possible• Wrect and srect are covered by testing of a null variable list	ID	L	O	WECT1	L1	O1	WECT2	L2	O2	ID	L	I	SECT1	L1	O1	SECT2	L2	O1	SECT3	L1	O2	SECT4	L2	O2
ID	L	O																							
WECT1	L1	O1																							
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SECT1	L1	O1																							
SECT2	L2	O1																							
SECT3	L1	O2																							
SECT4	L2	O2																							
PredicatedListTest .testAddAll	<ul style="list-style-type: none">• Variables:<ul style="list-style-type: none">◦ List length L◦ List of objects O• Equivalence classes<ul style="list-style-type: none">◦ L1: $L = 0$◦ L2: $L > 0$◦ O1: O can be fully inserted into list◦ O2: O can be partially inserted into list◦ O3: O cannot be inserted at all into list• Wect<ul style="list-style-type: none">◦<table><tr><td>ID</td><td>L</td><td>O</td></tr><tr><td>WECT1</td><td>L1</td><td>O1</td></tr><tr><td>WECT2</td><td>L2</td><td>O2</td></tr><tr><td>WECT3</td><td>L1</td><td>O3</td></tr></table>• Sect<ul style="list-style-type: none">◦<table><tr><td>ID</td><td>L</td><td>I</td></tr><tr><td>SECT1</td><td>L1</td><td>O1</td></tr><tr><td>SECT2</td><td>L2</td><td>O1</td></tr><tr><td>SECT3</td><td>L1</td><td>O2</td></tr></table>	ID	L	O	WECT1	L1	O1	WECT2	L2	O2	WECT3	L1	O3	ID	L	I	SECT1	L1	O1	SECT2	L2	O1	SECT3	L1	O2
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PredicatedListTest.testListIterator	<ul style="list-style-type: none">• Variables:<ul style="list-style-type: none">○ List length L• Equivalence classes<ul style="list-style-type: none">○ L1: $L = 0$○ L2: $L > 0$• Thus, wect and sect are both covered by using an empty list and a nonempty<ul style="list-style-type: none">○ This is already done• Wrect and Srect would involve $L < 0$ but this is not possible• Wrect and srect are covered by testing of a null variable list																												
PredicatedListTest.testSet	<ul style="list-style-type: none">• Variables:<ul style="list-style-type: none">○ List length L○ Index I○ Object O• Equivalence classes<ul style="list-style-type: none">○ L1: $L = 0$○ L2: $L > 0$○ I1: $I < 0$○ I2: $I \geq 0 \ \&\& \ I < L$○ I3: $I \geq L$○ O1: O can be inserted○ O2: O cannot be inserted• Wect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>I</td><td>O</td></tr><tr><td>WECT1</td><td>L1</td><td>I1</td><td>O1</td></tr><tr><td>WECT2</td><td>L2</td><td>I2</td><td>O2</td></tr><tr><td>WECT3</td><td>L1</td><td>I3</td><td>O1</td></tr></table>• Sect<ul style="list-style-type: none">○<table><tr><td>ID</td><td>L</td><td>I</td><td>O</td></tr><tr><td>SECT1</td><td>L1</td><td>I1</td><td>O1</td></tr><tr><td>SECT2</td><td>L2</td><td>I1</td><td>O1</td></tr></table>	ID	L	I	O	WECT1	L1	I1	O1	WECT2	L2	I2	O2	WECT3	L1	I3	O1	ID	L	I	O	SECT1	L1	I1	O1	SECT2	L2	I1	O1
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SECT3	L1	I2	O1
SECT4	L2	I2	O1
SECT5	L1	I3	O1
SECT6	L2	I3	O1
SECT7	L1	I1	O2
SECT8	L2	I1	O2
SECT9	L1	I2	O2
SECT10	L2	I2	O2
SECT11	L1	I3	O2
SECT12	L2	I3	O2

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- Wrect and Srect would involve $L < 0$ but this is not possible
- Wrect and srect are covered by WECT1, WECT3, SECT1, SECT2, SECT3, SECT5, SECT6, SECT7, SECT9, SECT10, SECT11, SECT12
- Wrect and srect are also covered by testing of a null variable list

Test	Boundary Value Analysis															
PredicatedListTest .testGet	<ul style="list-style-type: none">• Variables:<ul style="list-style-type: none">○ List length L○ Index I• Test Set<ul style="list-style-type: none">○ BVL: {nom: L = 0, nom: L > 0}○ BVI: {min-: I = -1, min: I = 0, min+: I = 1, nom: 1 < I < L, max-: I = L - 2, max: I = L - 1, max+: I = L}• BVA (basic)<ul style="list-style-type: none">○<table><tr><th>ID</th><th>L</th><th>I</th></tr><tr><td>BVA (basic) 1</td><td>L > 0</td><td>0</td></tr><tr><td>BVA (basic) 2</td><td>L > 0</td><td>1</td></tr><tr><td>BVA (basic) 3</td><td>L > 0</td><td>nom</td></tr><tr><td>BVA (basic) 4</td><td>L > 0</td><td>L - 2</td></tr></table>	ID	L	I	BVA (basic) 1	L > 0	0	BVA (basic) 2	L > 0	1	BVA (basic) 3	L > 0	nom	BVA (basic) 4	L > 0	L - 2
ID	L	I														
BVA (basic) 1	L > 0	0														
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BVA (basic) 4	L > 0	L - 2														

	<table><tr><td>BVA (basic) 5</td><td>L > 0</td><td>L - 1</td></tr></table> <ul style="list-style-type: none">BVA (robust)<ul style="list-style-type: none"><table><tr><td>ID</td><td>L</td><td>I</td></tr><tr><td>BVA (robust) 1</td><td>L > 0</td><td>-1</td></tr><tr><td>BVA (robust) 2</td><td>L > 0</td><td>0</td></tr><tr><td>BVA (robust) 3</td><td>L > 0</td><td>1</td></tr><tr><td>BVA (robust) 4</td><td>L > 0</td><td>nom</td></tr><tr><td>BVA (robust) 5</td><td>L > 0</td><td>L - 2</td></tr><tr><td>BVA (robust) 6</td><td>L > 0</td><td>L - 1</td></tr><tr><td>BVA (robust) 7</td><td>L > 0</td><td>L</td></tr></table>	BVA (basic) 5	L > 0	L - 1	ID	L	I	BVA (robust) 1	L > 0	-1	BVA (robust) 2	L > 0	0	BVA (robust) 3	L > 0	1	BVA (robust) 4	L > 0	nom	BVA (robust) 5	L > 0	L - 2	BVA (robust) 6	L > 0	L - 1	BVA (robust) 7	L > 0	L
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BVA (robust) 7	L > 0	L																										
PredicatedListTest.testSet	<ul style="list-style-type: none">Variables:<ul style="list-style-type: none">List length LIndex IObject OTest Set<ul style="list-style-type: none">BVL: {nom: L = 0, nom: L > 0}BVI: {min-: I = -1, min: I = 0, min+: I = 1, nom: 1 < I < L, max-: I = L - 2, max: I = L - 1, max+: I = L}BVO: {nom: O can be inserted, nom: O cannot be inserted}BVA (basic)<ul style="list-style-type: none"><table><tr><td>ID</td><td>L</td><td>I</td><td>O</td></tr><tr><td>BVA (basic) 1</td><td>L > 0</td><td>0</td><td>O can be inserted</td></tr><tr><td>BVA (basic) 2</td><td>L > 0</td><td>1</td><td>O can be inserted</td></tr><tr><td>BVA (basic) 3</td><td>L > 0</td><td>nom</td><td>O can be inserted</td></tr><tr><td>BVA (basic) 4</td><td>L > 0</td><td>L - 2</td><td>O can be inserted</td></tr><tr><td>BVA (basic)</td><td>L > 0</td><td>L - 1</td><td>O can be</td></tr></table>	ID	L	I	O	BVA (basic) 1	L > 0	0	O can be inserted	BVA (basic) 2	L > 0	1	O can be inserted	BVA (basic) 3	L > 0	nom	O can be inserted	BVA (basic) 4	L > 0	L - 2	O can be inserted	BVA (basic)	L > 0	L - 1	O can be			
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5			inserted
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- BVA (robust)
 - | ID | L | I | O |
|----------------|---------|---------|-------------------|
| BVA (robust) 1 | $L > 0$ | -1 | O can be inserted |
| BVA (robust) 2 | $L > 0$ | 0 | O can be inserted |
| BVA (robust) 3 | $L > 0$ | 1 | O can be inserted |
| BVA (robust) 4 | $L > 0$ | nom | O can be inserted |
| BVA (robust) 5 | $L > 0$ | $L - 2$ | O can be inserted |
| BVA (robust) 6 | $L > 0$ | $L - 1$ | O can be inserted |
| BVA (robust) 7 | $L > 0$ | L | O can be inserted |

Test	Decision Table																
PredicatedListTest.testEquals	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Objects are equal?● Actions<ul style="list-style-type: none">○ A1: Objects are found to be equal● Table<ul style="list-style-type: none">○<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>Expected Output</th></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>True</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>False</td></tr></table>	Test Case ID	C1	C2	Expected Output	TC1	Y/T	-	-	TC2	N/F	Y/T	True	TC3	N/F	N/F	False
Test Case ID	C1	C2	Expected Output														
TC1	Y/T	-	-														
TC2	N/F	Y/T	True														
TC3	N/F	N/F	False														

	<ul style="list-style-type: none">○																
PredicatedListTest.testGet	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Index in range?● Actions<ul style="list-style-type: none">○ A1: Object is gotten● Table<ul style="list-style-type: none">○<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>Expected Output</th></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Object at index</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>Error</td></tr></table>○	Test Case ID	C1	C2	Expected Output	TC1	Y/T	-	-	TC2	N/F	Y/T	Object at index	TC3	N/F	N/F	Error
Test Case ID	C1	C2	Expected Output														
TC1	Y/T	-	-														
TC2	N/F	Y/T	Object at index														
TC3	N/F	N/F	Error														
PredicatedListTest.testIndexOf	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Object in list?● Actions<ul style="list-style-type: none">○ A1: Index is gotten● Table<ul style="list-style-type: none">○<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>Expected Output</th></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Index of object</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>-1</td></tr></table>○	Test Case ID	C1	C2	Expected Output	TC1	Y/T	-	-	TC2	N/F	Y/T	Index of object	TC3	N/F	N/F	-1
Test Case ID	C1	C2	Expected Output														
TC1	Y/T	-	-														
TC2	N/F	Y/T	Index of object														
TC3	N/F	N/F	-1														
PredicatedListTest.testSetLastIndexOf	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Object in list?● Actions<ul style="list-style-type: none">○ A1: Index is gotten● Table<ul style="list-style-type: none">○<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>Expected Output</th></tr></table>	Test Case ID	C1	C2	Expected Output												
Test Case ID	C1	C2	Expected Output														

	<table><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Index of object</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>-1</td></tr></table> <ul style="list-style-type: none">○	TC1	Y/T	-	-	TC2	N/F	Y/T	Index of object	TC3	N/F	N/F	-1				
TC1	Y/T	-	-														
TC2	N/F	Y/T	Index of object														
TC3	N/F	N/F	-1														
PredicatedListTest.testRemove	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Object in list?● Actions<ul style="list-style-type: none">○ A1: Object removed● Table<ul style="list-style-type: none">○<table><tr><td>Test Case ID</td><td>C1</td><td>C2</td><td>Expected Output</td></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Object removed</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>No change</td></tr></table>○	Test Case ID	C1	C2	Expected Output	TC1	Y/T	-	-	TC2	N/F	Y/T	Object removed	TC3	N/F	N/F	No change
Test Case ID	C1	C2	Expected Output														
TC1	Y/T	-	-														
TC2	N/F	Y/T	Object removed														
TC3	N/F	N/F	No change														
PredicatedListTest.testAdd	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Object can be inserted?● Actions<ul style="list-style-type: none">○ A1: Object is inserted● Table<ul style="list-style-type: none">○<table><tr><td>Test Case ID</td><td>C1</td><td>C2</td><td>Expected Output</td></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Object inserted</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>No change</td></tr></table>○	Test Case ID	C1	C2	Expected Output	TC1	Y/T	-	-	TC2	N/F	Y/T	Object inserted	TC3	N/F	N/F	No change
Test Case ID	C1	C2	Expected Output														
TC1	Y/T	-	-														
TC2	N/F	Y/T	Object inserted														
TC3	N/F	N/F	No change														
PredicatedListTest.testAddAll	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?																

	<ul style="list-style-type: none"><ul style="list-style-type: none">○ C2: Objects can be inserted?● Actions<ul style="list-style-type: none">○ A1: Objects are inserted● Table<ul style="list-style-type: none">○<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>Expected Output</th></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Objects inserted</td></tr><tr><td>TC3</td><td>N/F</td><td>N/F</td><td>No change</td></tr></table>○	Test Case ID	C1	C2	Expected Output	TC1	Y/T	-	-	TC2	N/F	Y/T	Objects inserted	TC3	N/F	N/F	No change														
Test Case ID	C1	C2	Expected Output																												
TC1	Y/T	-	-																												
TC2	N/F	Y/T	Objects inserted																												
TC3	N/F	N/F	No change																												
PredicatedListTest.testSet	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Index in range?○ C3: Object can be inserted● Actions<ul style="list-style-type: none">○ A1: Object at index is set● Table<ul style="list-style-type: none">○<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>C3</th><th>Expected Output</th></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Y/T</td><td>Object at index is set</td></tr><tr><td>TC3</td><td>N/F</td><td>Y/T</td><td>N/F</td><td>Error</td></tr><tr><td>TC4</td><td>N/F</td><td>N/F</td><td>Y/T</td><td>Error</td></tr><tr><td>TC5</td><td>N/F</td><td>N/F</td><td>N/F</td><td>Error</td></tr></table>○	Test Case ID	C1	C2	C3	Expected Output	TC1	Y/T	-	-	-	TC2	N/F	Y/T	Y/T	Object at index is set	TC3	N/F	Y/T	N/F	Error	TC4	N/F	N/F	Y/T	Error	TC5	N/F	N/F	N/F	Error
Test Case ID	C1	C2	C3	Expected Output																											
TC1	Y/T	-	-	-																											
TC2	N/F	Y/T	Y/T	Object at index is set																											
TC3	N/F	Y/T	N/F	Error																											
TC4	N/F	N/F	Y/T	Error																											
TC5	N/F	N/F	N/F	Error																											
PredicatedListTest.testSublist	<ul style="list-style-type: none">● Conditions<ul style="list-style-type: none">○ C1: L <= 0?○ C2: Start index in range?○ C3: End index in range?● Actions<ul style="list-style-type: none">○ A1: Sublist is made● Table<ul style="list-style-type: none">○																														

		<table><tr><th>Test Case ID</th><th>C1</th><th>C2</th><th>C3</th><th>Expected Output</th></tr><tr><td>TC1</td><td>Y/T</td><td>-</td><td>-</td><td>-</td></tr><tr><td>TC2</td><td>N/F</td><td>Y/T</td><td>Y/T</td><td>Sublist</td></tr><tr><td>TC3</td><td>N/F</td><td>Y/T</td><td>N/F</td><td>Error</td></tr><tr><td>TC4</td><td>N/F</td><td>N/F</td><td>Y/T</td><td>Error</td></tr><tr><td>TC5</td><td>N/F</td><td>N/F</td><td>N/F</td><td>Error</td></tr></table>	Test Case ID	C1	C2	C3	Expected Output	TC1	Y/T	-	-	-	TC2	N/F	Y/T	Y/T	Sublist	TC3	N/F	Y/T	N/F	Error	TC4	N/F	N/F	Y/T	Error	TC5	N/F	N/F	N/F	Error
Test Case ID	C1	C2	C3	Expected Output																												
TC1	Y/T	-	-	-																												
TC2	N/F	Y/T	Y/T	Sublist																												
TC3	N/F	Y/T	N/F	Error																												
TC4	N/F	N/F	Y/T	Error																												
TC5	N/F	N/F	N/F	Error																												

Test	Data Flow Coverage				
PredicatedListTest.testEquals	<ul style="list-style-type: none">	Criterion	object	Program Paths	Test Inputs
		All-def	<99, 100>	<99, 100>	(object = {2, 4, 6, 8, 10})
		All-use	<99, 100>	<99, 100>	(object = {2, 4, 6, 8, 10})
		All-P-user-some-C-uses	<99, 100>	<99, 100>	(object = {2, 4, 6, 8, 10})
		All-C-user-some-P-uses	<99, 100>	<99, 100>	(object = {2, 4, 6, 8, 10})
		All DU paths	<99, 100>	<99, 100>	(object = {2, 4, 6, 8, 10})
		PredicatedListTest.testGet	<ul style="list-style-type: none">	Criterion	index
All-def	<110, 111>			<110, 111>	(index = 0)
All-use	<110, 111>			<110, 111>	(index = 0)
All-P-user-some-C-uses	<110, 111>			<110, 111>	(index = 0)

	<table><tr><td>All-C-user-some-P-uses</td><td><110, 111></td><td><110, 111></td><td>(index = 0)</td></tr><tr><td>All DU paths</td><td><110, 111></td><td><110, 111></td><td>(index = 0)</td></tr></table>	All-C-user-some-P-uses	<110, 111>	<110, 111>	(index = 0)	All DU paths	<110, 111>	<110, 111>	(index = 0)																
All-C-user-some-P-uses	<110, 111>	<110, 111>	(index = 0)																						
All DU paths	<110, 111>	<110, 111>	(index = 0)																						
PredicatedListTest.testIndexOf	<ul style="list-style-type: none"><table><tr><td>Criterion</td><td>object</td><td>Program Paths</td><td>Test Inputs</td></tr><tr><td>All-def</td><td><115, 116></td><td><115, 116></td><td>(object = 2)</td></tr><tr><td>All-use</td><td><115, 116></td><td><115, 116></td><td>(object = 2)</td></tr><tr><td>All-P-user-some-C-uses</td><td><115, 116></td><td><115, 116></td><td>(object = 2)</td></tr><tr><td>All-C-user-some-P-uses</td><td><115, 116></td><td><115, 116></td><td>(object = 2)</td></tr><tr><td>All DU paths</td><td><115, 116></td><td><115, 116></td><td>(object = 2)</td></tr></table>	Criterion	object	Program Paths	Test Inputs	All-def	<115, 116>	<115, 116>	(object = 2)	All-use	<115, 116>	<115, 116>	(object = 2)	All-P-user-some-C-uses	<115, 116>	<115, 116>	(object = 2)	All-C-user-some-P-uses	<115, 116>	<115, 116>	(object = 2)	All DU paths	<115, 116>	<115, 116>	(object = 2)
Criterion	object	Program Paths	Test Inputs																						
All-def	<115, 116>	<115, 116>	(object = 2)																						
All-use	<115, 116>	<115, 116>	(object = 2)																						
All-P-user-some-C-uses	<115, 116>	<115, 116>	(object = 2)																						
All-C-user-some-P-uses	<115, 116>	<115, 116>	(object = 2)																						
All DU paths	<115, 116>	<115, 116>	(object = 2)																						
PredicatedListTest.testsetLastIndexOf	<ul style="list-style-type: none"><table><tr><td>Criterion</td><td>object</td><td>Program Paths</td><td>Test Inputs</td></tr><tr><td>All-def</td><td><120, 121></td><td><120, 121></td><td>(object = 2)</td></tr><tr><td>All-use</td><td><120, 121></td><td><120, 121></td><td>(object = 2)</td></tr><tr><td>All-P-user-some-C-uses</td><td><120, 121></td><td><120, 121></td><td>(object = 2)</td></tr><tr><td>All-C-user-some-P-uses</td><td><120, 121></td><td><120, 121></td><td>(object = 2)</td></tr><tr><td>All DU paths</td><td><120, 121></td><td><120, 121></td><td>(object = 2)</td></tr></table>	Criterion	object	Program Paths	Test Inputs	All-def	<120, 121>	<120, 121>	(object = 2)	All-use	<120, 121>	<120, 121>	(object = 2)	All-P-user-some-C-uses	<120, 121>	<120, 121>	(object = 2)	All-C-user-some-P-uses	<120, 121>	<120, 121>	(object = 2)	All DU paths	<120, 121>	<120, 121>	(object = 2)
Criterion	object	Program Paths	Test Inputs																						
All-def	<120, 121>	<120, 121>	(object = 2)																						
All-use	<120, 121>	<120, 121>	(object = 2)																						
All-P-user-some-C-uses	<120, 121>	<120, 121>	(object = 2)																						
All-C-user-some-P-uses	<120, 121>	<120, 121>	(object = 2)																						
All DU paths	<120, 121>	<120, 121>	(object = 2)																						
PredicatedListTest.testRemove	<ul style="list-style-type: none"><table><tr><td>Criterion</td><td>index</td><td>Program Paths</td><td>Test Inputs</td></tr><tr><td>All-def</td><td><125, 126></td><td><125, 126></td><td>(object = 2)</td></tr><tr><td>All-use</td><td><125, 126></td><td><125, 126></td><td>(object = 2)</td></tr></table>	Criterion	index	Program Paths	Test Inputs	All-def	<125, 126>	<125, 126>	(object = 2)	All-use	<125, 126>	<125, 126>	(object = 2)												
Criterion	index	Program Paths	Test Inputs																						
All-def	<125, 126>	<125, 126>	(object = 2)																						
All-use	<125, 126>	<125, 126>	(object = 2)																						

	<table><tr><td>All-P-user-some-C-uses</td><td><125, 126></td><td><125, 126></td><td>(object = 2)</td></tr><tr><td>All-C-user-some-P-uses</td><td><125, 126></td><td><125, 126></td><td>(object = 2)</td></tr><tr><td>All DU paths</td><td><125, 126></td><td><125, 126></td><td>(object = 2)</td></tr></table>	All-P-user-some-C-uses	<125, 126>	<125, 126>	(object = 2)	All-C-user-some-P-uses	<125, 126>	<125, 126>	(object = 2)	All DU paths	<125, 126>	<125, 126>	(object = 2)																		
All-P-user-some-C-uses	<125, 126>	<125, 126>	(object = 2)																												
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All DU paths	<125, 126>	<125, 126>	(object = 2)																												
PredicatedListTest.testAdd	<ul style="list-style-type: none"><table><tr><td>Criterion</td><td>index</td><td>object</td><td>Program Paths</td><td>Test Inputs</td></tr><tr><td>All-def</td><td><131, 133></td><td><131, 132></td><td><131, 132, 133></td><td>(object = 2)</td></tr><tr><td>All-use</td><td><131, 133></td><td><131, 132> <131, 132, 133></td><td><131, 132, 133></td><td>(object = 2)</td></tr><tr><td>All-P-user-some-C-uses</td><td><131, 133></td><td><131, 132></td><td><131, 132, 133></td><td>(object = 2)</td></tr><tr><td>All-C-user-some-P-uses</td><td><131, 133></td><td><131, 132> <131, 132, 133></td><td><131, 132, 133></td><td>(object = 2)</td></tr><tr><td>All DU paths</td><td><131, 133></td><td><131, 132> <131, 132, 133></td><td><131, 132, 133></td><td>(object = 2)</td></tr></table>	Criterion	index	object	Program Paths	Test Inputs	All-def	<131, 133>	<131, 132>	<131, 132, 133>	(object = 2)	All-use	<131, 133>	<131, 132> <131, 132, 133>	<131, 132, 133>	(object = 2)	All-P-user-some-C-uses	<131, 133>	<131, 132>	<131, 132, 133>	(object = 2)	All-C-user-some-P-uses	<131, 133>	<131, 132> <131, 132, 133>	<131, 132, 133>	(object = 2)	All DU paths	<131, 133>	<131, 132> <131, 132, 133>	<131, 132, 133>	(object = 2)
Criterion	index	object	Program Paths	Test Inputs																											
All-def	<131, 133>	<131, 132>	<131, 132, 133>	(object = 2)																											
All-use	<131, 133>	<131, 132> <131, 132, 133>	<131, 132, 133>	(object = 2)																											
All-P-user-some-C-uses	<131, 133>	<131, 132>	<131, 132, 133>	(object = 2)																											
All-C-user-some-P-uses	<131, 133>	<131, 132> <131, 132, 133>	<131, 132, 133>	(object = 2)																											
All DU paths	<131, 133>	<131, 132> <131, 132, 133>	<131, 132, 133>	(object = 2)																											
PredicatedListTest.testAddAll	<ul style="list-style-type: none"><table><tr><td>Criterion</td><td>index</td><td>coll</td><td>Program Paths</td><td>Test Inputs</td></tr><tr><td>All-def</td><td><137, {138, 139}*, 138, 141></td><td><137, 138></td><td><137, {138, 139}*, 138, 141></td><td>(coll = {12, 14, 16})</td></tr><tr><td>All-use</td><td><137, {138, 139}*,</td><td><137, {138, 139}*,</td><td><137, {138, 139}*,</td><td>(coll = {12, 14, 16})</td></tr></table>	Criterion	index	coll	Program Paths	Test Inputs	All-def	<137, {138, 139}*, 138, 141>	<137, 138>	<137, {138, 139}*, 138, 141>	(coll = {12, 14, 16})	All-use	<137, {138, 139}*,	<137, {138, 139}*,	<137, {138, 139}*,	(coll = {12, 14, 16})															
Criterion	index	coll	Program Paths	Test Inputs																											
All-def	<137, {138, 139}*, 138, 141>	<137, 138>	<137, {138, 139}*, 138, 141>	(coll = {12, 14, 16})																											
All-use	<137, {138, 139}*,	<137, {138, 139}*,	<137, {138, 139}*,	(coll = {12, 14, 16})																											

		138, 141>	138> <137, {138, 139}* 138, 139> <137, {138, 139}* 138, 139, 141>	138, 141>	
	All-P-uses -some-C-uses	<137, {138, 139}* 138, 141>	<137, {138, 139}* 138>	<137, {138, 139}* 138, 141>	(coll = {12, 14, 16})
	All-C-user- some-P-uses	<137, {138, 139}* 138, 141>	<137, {138, 139}* 138> <137, {138, 139}* 138, 139> <137, {138, 139}* 138, 139, 141>	<137, {138, 139}* 138, 141>	(coll = {12, 14, 16})
	All DU paths	<137, {138, 139}* 138, 141>	<137, {138, 139}* 138> <137, {138, 139}* 138, 139> <137, {138, 139}* 138, 139, 141>	<137, {138, 139}* 138, 141>	(coll = {12, 14, 16})
PredicatedListTest .testListIterator	•	Criterion		Program Paths	

	<table><tr><td>All-def</td><td></td><td></td></tr><tr><td>All-use</td><td></td><td></td></tr><tr><td>All-P-user-some-C-uses</td><td></td><td></td></tr><tr><td>All-C-user-some-P-uses</td><td></td><td></td></tr><tr><td>All DU paths</td><td></td><td></td></tr></table>	All-def			All-use			All-P-user-some-C-uses			All-C-user-some-P-uses			All DU paths																	
All-def																															
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PredicatedListTest.testSet	<ul style="list-style-type: none"><table><tr><td>Criterion</td><td>index</td><td>object</td><td>Program Paths</td><td>Test Inputs</td></tr><tr><td>All-def</td><td><155, 156, 157></td><td><155, 156></td><td><155, 156, 157></td><td>(index = 0, object = 0)</td></tr><tr><td>All-use</td><td><155, 156, 157></td><td><155, 156> <155, 156, 157></td><td><155, 156, 157></td><td>(index = 0, object = 0)</td></tr><tr><td>All-P-user-some-C-uses</td><td><155, 156, 157></td><td><155, 156></td><td><155, 156, 157></td><td>(index = 0, object = 0)</td></tr><tr><td>All-C-user-some-P-uses</td><td><155, 156, 157></td><td><155, 156> <155, 156, 157></td><td><155, 156, 157></td><td>(index = 0, object = 0)</td></tr><tr><td>All DU paths</td><td><155, 156, 157></td><td><155, 156> <155, 156, 157></td><td><155, 156, 157></td><td>(index = 0, object = 0)</td></tr></table>	Criterion	index	object	Program Paths	Test Inputs	All-def	<155, 156, 157>	<155, 156>	<155, 156, 157>	(index = 0, object = 0)	All-use	<155, 156, 157>	<155, 156> <155, 156, 157>	<155, 156, 157>	(index = 0, object = 0)	All-P-user-some-C-uses	<155, 156, 157>	<155, 156>	<155, 156, 157>	(index = 0, object = 0)	All-C-user-some-P-uses	<155, 156, 157>	<155, 156> <155, 156, 157>	<155, 156, 157>	(index = 0, object = 0)	All DU paths	<155, 156, 157>	<155, 156> <155, 156, 157>	<155, 156, 157>	(index = 0, object = 0)
Criterion	index	object	Program Paths	Test Inputs																											
All-def	<155, 156, 157>	<155, 156>	<155, 156, 157>	(index = 0, object = 0)																											
All-use	<155, 156, 157>	<155, 156> <155, 156, 157>	<155, 156, 157>	(index = 0, object = 0)																											
All-P-user-some-C-uses	<155, 156, 157>	<155, 156>	<155, 156, 157>	(index = 0, object = 0)																											
All-C-user-some-P-uses	<155, 156, 157>	<155, 156> <155, 156, 157>	<155, 156, 157>	(index = 0, object = 0)																											
All DU paths	<155, 156, 157>	<155, 156> <155, 156, 157>	<155, 156, 157>	(index = 0, object = 0)																											