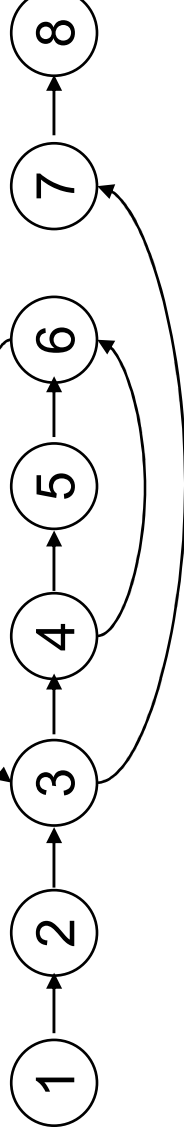


# Structural Testing Example

---

```
float homeworkAverage(float[] scores)
1 { float min = 99999;
2   float total = 0;
3   for (int i=0; i<scores.length; i++)
4     {
5       if (scores[i] < min)
6         min = scores[i];
7       total += scores[i];
8     }
9   total = total - min;
10  return total / (scores.length - 1);
11 }
```



# Testing Matrix

---

Input (Specific values)	Basis _____ Equivalence partitions	Expected Output	Notes from execution

# Testing Matrix - homeworkAverage 1

---

Input (Specific values)	Basis					Expected Output	Notes from execution
	0	1	2 - 4	5 and up	Array length (black box)		
()	x					0.0	
(87.3)		x				87.3	
(90, 95, 85)			x			92.5	
(80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91)				x		86.0	

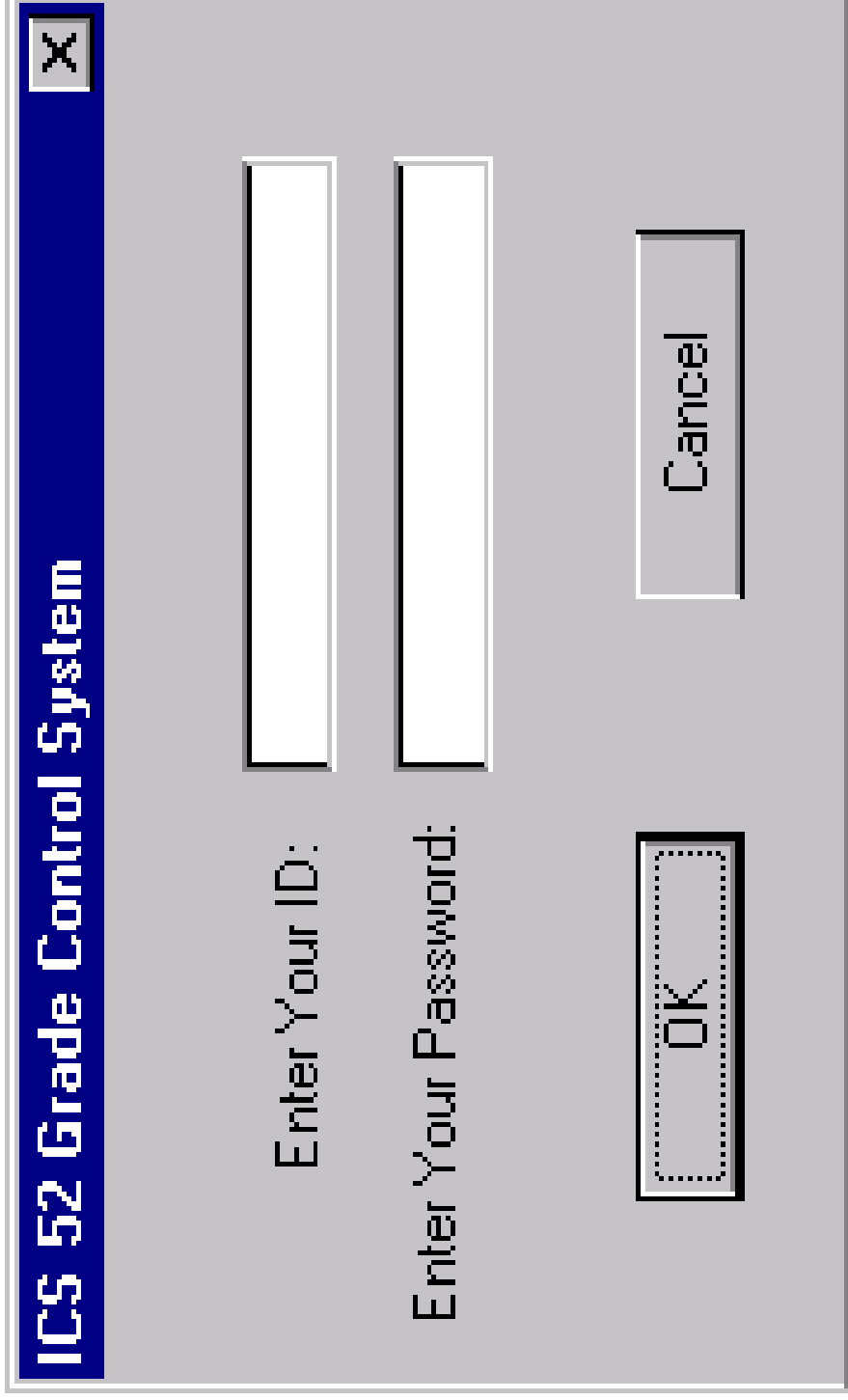
# Testing Matrix - homeworkAverage 2

---

Input (Specific values)	Basis <u>Position of minimum (black box)</u>			Expected Output	Notes from execution
	First	Middle	Last		
(80,87,88,89)	x			88.0	
(87,88,80,89)		x		88.0	
(99, 98, 0, 97, 96)		x		97.5	
(87,88,89,80)			x	88.0	

# Security Dialog Example

---



# Testing Matrix - Security Dialog 1

---

Input (Specific values)	Basis <u>Choice of Button (black box)</u>		Expected Output	Notes from execution
	OK button	Cancel button		
Press OK	x		see Security Dialog #2	
Enter ID, press Cancel		x	Text boxes are cleared, dialog remains	
Don't enter ID, press Cancel		x	Same	

# Testing Matrix - Security Dialog 2

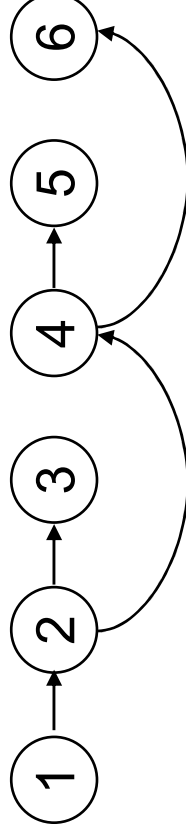
---

Input (Specific values)	Basis <u>Correctness of Input, with OK</u>			Expected Output	Notes from execution
	Valid ID, Correct PW	Valid ID, Incorrect PW	Inv. ID		
TEST1, 77775555	x			Proceed to Main screen	
TEST1, 7777555		x		Audible beep, dialog remains	
TES1, 77775555			x	Same	

# Another Structural Testing Example

---

```
// In a linked list class
Node getSecondElement ()
{
    1 Node head = getHead();
    2   if (head == null)
    3     return null;
    4   if (head.next == null)
    5     return null;
    6   return head.next.node;
}
```



# Testing Matrix - getSecondElement (White)

---

Input (Specific values)	Basis	Node (white box)	Expected Output	Notes from execution				
	1	2	3	4	5	6		
null list	x	x	x				null	
(A → null)	x	x		x	x		null	
(A → B → null)	x	x		x		x	B	
(A → B → C → null)	x	x		x		x	B	