

MODULE TESTED:

1. Sudoku (int size)
2. SetPossibleValues(values)
3. SetCellValue(x,y,letter)

Test ID	Test Scenario	Test Case	Pre-Condition	Test Steps (Method)	User Input	Actual Result	Additional Comments	Status		
TC_001	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of size (n²) 3. set value of an empty cell	valid size	integer size in range (1 to n²)	Sudoku (size)	size=3		Returns True	PASS		
		valid x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={1 to 9}			Returns True	
		valid y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=3	y=4	Returns True		value of x,y are in range (1 , size ²)	
		valid letter value	letter should be in value set		letter=5				letter value is from value set	
TC_002	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of size (n²) 3. set value of an empty cell	valid size	integer size in range (1 to n²)	Sudoku (size)	size=4		Returns True	Value of x is out of range (1 , size ²)	FAIL	
		invalid x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={1 to 16}				Returns True
		valid y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=19	y=14	Returns False			
		valid letter value	letter should be in value set		letter=9					
TC_003	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of size (n²) 3. set value of an empty cell	valid size	integer size in range (1 to n²)	Sudoku (size)	size=4		Returns True	Value of y is out of range (1 , size ²)	FAIL	
		valid x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={A to P}				Returns True
		invalid y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=4	y=23	Returns False			
		valid letter value	letter should be in value set		letter=K					
TC_004	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of size (n²) 3. set value of an empty cell	valid size	integer size in range (1 to n²)	Sudoku (size)	size=6		Returns True	letter is out of value set range (1 , 36)	FAIL	
		valid x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={1 to 36}				Returns True
		valid y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=4	y=23	Returns False			
		invalid letter value	letter should be in value set		letter=37					
TC_005	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of size (n²) 3. set value of an empty cell	valid size	integer size in range (1 to n²)	Sudoku (size)	size=3		Returns True	Value of x & y is out of range (1 , size ²)	FAIL	
		invalid x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={1 to 9}				Returns True
		invalid y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=14	y=12	Returns False			
		valid letter value	letter should be in value set		letter=6					
TC_006	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of size (n²) 3. set value of an empty cell	valid size	integer size in range (1 to n²)	Sudoku (size)	size=3		Returns True	x & y can't accept NULL values	FAIL	
		null x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={1 to 9}				Returns True
		null y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=NULL	y=NULL	Returns False			
		valid letter value	letter should be in value set		letter=6					
TC_007	1. n² x n² grid is generated by Sudoku(n) 2. generated value set of	valid size	integer size in range (1 to n²)	Sudoku (size)	size=3		Returns True	letter can't accept NULL values	FAIL	
		valid x value	integer x in range (1 to size²)	SetPossibleValues(values)		value={1 to 9}				Returns True
		valid y value	integer y in range (1 to size²)	SetCellValue(x,y,letter)	x=2	y=1	Returns False			

	size (n ²)	null letter value	letter should be in value set	SetCellValue(x,y,letter)	letter=NULL	returns false		
	3. set value of an empty cell							
TC_008	1. n ² x n ² grid is generated by Sudoku(n) 2. generated value set of size (n ²)	valid size	integer size in range (1 to n ²)	Sudoku (size)	size=3	Returns True	x & y ara passed correct values but not as integer but string which is not allowed	FAIL
		x =String value	integer x in range (1 to size ²)	SetPossibleValues(values)	value={1 to 9}	Returns True		
		y=String value	integer y in range (1 to size ²)	SetCellValue(x,y,letter)	x="2" y="1"	Returns False		
		valid letter value	letter should be in value set		letter=7			
	3. set value of an empty cell							
TC_009	1. n ² x n ² grid is generated by Sudoku(n) 2. generated value set of size (n ²)	valid size	integer size in range (1 to n ²)	Sudoku (size)	size=4	Returns True	this is a boundary case where x, y and letter are not within their respective ranges	FAIL
		invalid x value	integer x in range (1 to size ²)	SetPossibleValues(values)	value={A to P}	Returns True		
		invalid y value	integer y in range (1 to size ²)	SetCellValue(x,y,letter)	x=34 y=20	Returns False		
		invalid letter value	letter should be in value set		letter=Z			
	3. set value of an empty cell							