

## MODULE TESTED :

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

Test ID	Test Scenario	Test Case	Pre Condition	Test Steps (Method)	User Input	Actual Result	Additional Comments	Status
TC_01	1. $n^2 \times n^2$ grid is made by Sudoku(n) 2. generated value set of size ( $n^2$ ) 3. set value of empty cell 4. Call Solve() to solve sudoku 5. Call toPrintString()	valid size	integer size in range (1 to $n^2$ )	Sudoku (size)	size=3	Return True	Size can be any positive value	PASS
		valid values String	No. of unique character = $size^2$	SetPossibleValues (values)	value= {a to i}	Return True	no .of values are ( $size^2$ )	
		valid x,y value	integer x,y in range (1 to $size^2$ )	SetCellValue (x,y,letter)	x=3,y=4 letter= f	Return True	x,y, letter are validated	
		valid letter value	letter should be in value set	Solve()	No i/p	Return True	sudoku will be solved	
		valid emptyCellLetter	emptyCellLetter is of char data type	toPrintString()	X' or 'O'	Return True	Return multi line Strings	
TC_02	1. $n^2 \times n^2$ grid is made by Sudoku(n) 2.Call toPrintString() 3. set value of empty cell 4. Call Solve() to solve sudoku	valid size	integer size in range (1 to $n^2$ )	Sudoku (size)	size=3	Return True	Size can be any positive value	FAIL
		valid emptyCellLetter	emptyCellLetter is of char data type	toPrintString()	X' or 'O'	Return False	This method retun false its called before executing setpossiblevalues()	
TC_03	2.Call toPrintString() 3. set value of empty cell 4. Call Solve() to solve sudoku	valid emptyCellLetter	emptyCellLetter is of char data type	toPrintString()	X' or 'O'	Return False	This method retun false its called before executing Sudoku()	FAIL
		valid size	integer size in range (1 to $n^2$ )	Sudoku (size)	size=3	Return False	Size can be any positive value	

**NOTE:**

1. Here, another case of TC\_01 is that Solve() method returns False and still it will run toString() and print the Sudoku.
2. Similar to TC\_02, its possible that toString() will be called after successfully executing SetPossiblevalues, also after SetCellValues() and still it will return False as the correct order of calling this method is (Sudoku -> SetPossibleValues->SetCellValues -> Solve -> toString )