

C++ LAUNCHPAD



Lecture-10

Recursion - III

- Advanced Problems on Recursion and Backtracking

Utkarsh Nath

Permutations of a String

Merge Sort !

Print all subsequence

N-Queen Problem

	0	1	2	3	4	5	6	7
0				♔				
1							♔	
2			♔					
3								♔
4		♔						
5					♔			
6	♔							
7						♔		

Sudoku Solver

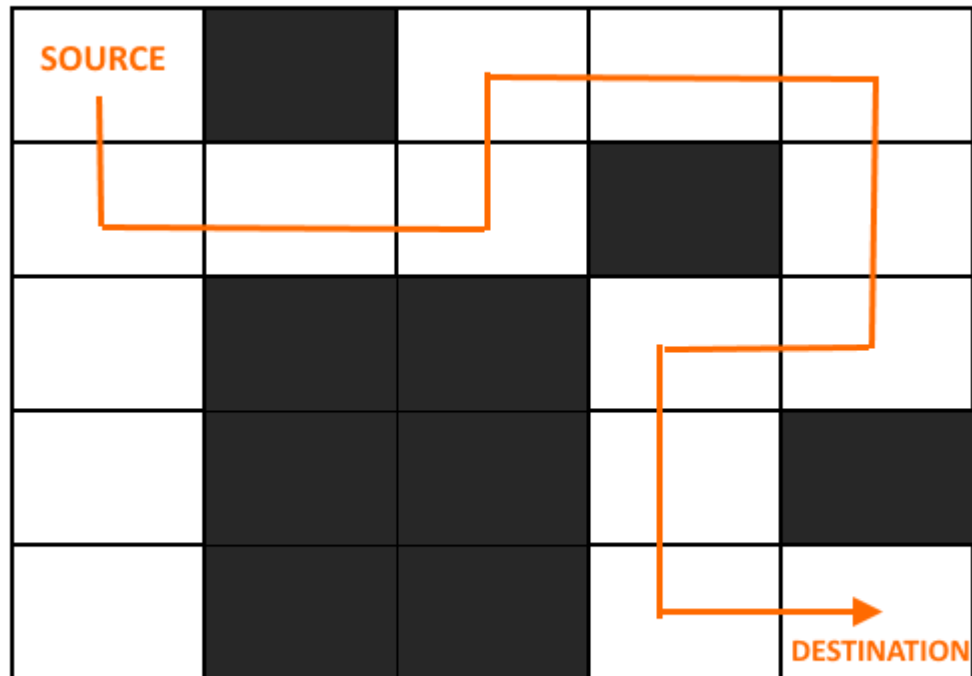
Create a Sudoku Solver and Checker

7	8		4			1	2	
6				7	5			9
			6		1		7	8
		7		4		2	6	
		1		5		9	3	
9		4		6				5
	7		3				1	2
1	2				7	4		
	4	9	2		6			7

Sample Input

```
int mat[9][9] =  
    {{5,3,0,0,7,0,0,0,0},  
     {6,0,0,1,9,5,0,0,0},  
     {0,9,8,0,0,0,0,6,0},  
     {8,0,0,0,6,0,0,0,3},  
     {4,0,0,8,0,3,0,0,1},  
     {7,0,0,0,2,0,0,0,6},  
     {0,6,0,0,0,0,2,8,0},  
     {0,0,0,4,1,9,0,0,5},  
     {0,0,0,0,8,0,0,7,9}};
```

Rat in a Maze



Unique Permutations