

## Answer to the question NO. 1

### \* Sudoku Solver:

To solve the Sudoku solver, I am using simply Backtracking Algorithm.

Backtracking is simply reverting back to the previous step or solution as soon as we determine that our current solution cannot be continued into a complete one.

### Applied Algorithm:-

Start with an incomplete board:

- Find some empty space
- Attempt to place the digits 1-9 in that space.
- Check if that digit is valid in the current spot based on the current board.
- a. If the digit is valid,
  - recursively attempt to fill the board using step 1-3
- b. If it is not valid, reset the square you just filled and go back to the previous step.
- Once the board is full by the definition of this algorithm, we have found a solution.

\* In our coding, we use manually user input from keyboard.

Show the output with a 9\*9 grid view.