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Instructions to run the code.

1. Extract the folder “Project1\_utsav” to any of your folders.
2. “Project1\_utsav” contains following files
3. Main Code
4. code.m
5. Pre-defined functions
6. findzero.m
7. moveleft.m
8. moveright.m
9. moveup.m
10. movedown.m
11. Information files
12. README
13. codeinfo
14. Output files (Nodes and NodeInfo)
15. output
16. Open MATLAB
17. Locate the folder named “Project1\_utsav” in MATLAB by providing the path of the folder “Project\_utsav”.
18. Now open the source code named code.m.
19. When the code.m script is run, it will ask for the initial condition of the 3X3 puzzle in the matrix form. After providing the initial condition of the puzzle in matrix form hit enter.
20. It will start generating the nodes. The program will terminate when it generates 100000 nodes. It will take long time to generate 100000 nodes. I have ran the code and generated 72680 node. Which are stored in “output” file.
21. When the program gets terminated, you can access to the any of the nodes by typing Nodes(:,:,N) in the command window. Here the N shows the number of the node.
22. The information about any of the nodes can be accessed by running NodeInfo(:,:,N) code in command window. Here the N shows the number of the node. It will give [Node#, Parent node#, 0] as output.

Note – The code is explained in a different word file named “codeinfo”.