EE4483: Artificial Intelligence and Data Mining
Individual project (II)

Due Date: 4PM, 07 November 2016

1. Implement a search algorithm to solve the 8-puzzle problem in Fig. 4.6. (**10 points**)
    a. The program should be able to solve the 8-puzzle problem with arbitrary input. A visual interface is not necessary but the program should output each step when solving the puzzle.
    b. Explain what heuristic measure and search strategy you use.
    c. Discuss the complexity and memory cost of your search algorithm.
    d. Explain in the worst case, how many steps your program need to complete the search.

Notes:

- This CA contributes to 10 of 100 for the final marks. This is individual project so you need to work on the projects independently and plagiarism will be penalized.
- Matlab is preferred to implement your algorithm, because it is easy for me to test your code. But any other program languages will also be acceptable, e.g. C, C++, Java.
- Source code should be included in the report.
- Email the source codes (<3M) of to me (Email: junsong.yuan@gmail.com) by 4PM Nov. 07, 2016. Make sure the code can be compiled and executed. The title of the email should be: LASTNAME-FIRSTNAME- EE4483-project2
- Submit your hard copy project report (upto 15 pages) to Mrs Choo Guay Kheem, at S1-B1a-02 before the due date. (Email: EPCHOO@ntu.edu.sg; Phone: 6790 5872; submission hour: 8.30am to 11.30am or 1.30pm to 4.00pm) Late submission will have a penalty of 3 points (in total 10 points) per day!