# 实验报告模板

华南理工大学

《课程名称》课程实验报告

实验题目：6. To solve the 8-puzzle with Four Strategies of Tree Search Algorithm(Additional problem)

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| **实验概述** |
| 【Purposes and requirements】  【lab environment】  OS：Windows 10 |
| **实验内容** |
| 【experiment procedure】  1st Experimental step:  In this experiment we solved the 8-puzzle problem using branch and bound method.  The search for an answer node can often be speeded by using an “intelligent” ranking function, also called an approximate cost function to avoid searching in sub-trees that do not contain an answer node. It is similar to the backtracking technique but uses BFS-like search.  There are basically three types of nodes involved in Branch and Bound  1. Live node is a node that has been generated but whose children have not yet been generated.  2. E-node is a live node whose children are currently being explored. In other words, an E-node is a node currently being expanded.  3. Dead node is a generated node that is not to be expanded or explored any further. All children of a dead node have already been expanded.  2nd Experimental data:  3rd The main process of the experiment:  Below diagram shows the path followed by the above algorithm to reach final configuration from the given initial configuration of 8-Puzzle. Note that only nodes having the least value of cost function are expanded. |
| **小结** |
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| **指导教师评语及成绩** |
| 评语：  成绩：           指导教师签名：                                                 批阅日期： |