**Sudoku Final AI Report**

**Team number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Member #1 (name/id)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Member #2 (name/id)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**I. Minimal AI**

**I.A. Briefly describe your Minimal AI algorithm. What did you do that was fun, clever, or creative?**

**I.B Describe your Minimal AI algorithm's performance:**

E.g. Generate around 60 boards of different difficulties and run your Minimal AI algorithm. Then provide a few words and a table like the following:

|  |  |  |  |
| --- | --- | --- | --- |
| Board Size | Sample Size (n) | Boards Solved | Average # of backtracks |
| 9x9 (easy) |  |  |  |
| 12x12 (intermediate) |  |  |  |
| 16x16 (hard) |  |  |  |
| 25x25 (Expert) |  |  |  |
| Total Summary |  |  |  |

**II. Final AI**

**II.A. How did integrating advanced techniques (LCV, MRV, MAD, or NOR) into the Final AI change its solving strategy compared to Minimal AI?**

**II.B. Which of the advanced heuristics (LCV, MRV, MAD, or NOR) had the most significant impact on the performance, and why do you think that was?**

**II.C Describe your Final AI algorithm's performance:**

E.g. Use the same generated 60 boards from earlier and run your Final AI algorithm. Compare your results with Minimal AI performance, then provide a few words and a table like the following:

|  |  |  |  |
| --- | --- | --- | --- |
| Board Size | Sample Size (n) | Boards Solved | Average # of backtracks |
| 9x9 (easy) |  |  |  |
| 12x12 (intermediate) |  |  |  |
| 16x16 (hard) |  |  |  |
| 25x25 (Expert) |  |  |  |
| Total Summary |  |  |  |

**III. Has this project altered your interest or perspective towards artificial intelligence? If so, how?**

**III. In about 1/4 page of text or less, provide suggestions for improving this project (*this section does NOT count as past of your two-page total limit.*)**