Lab Report…

**Abstract:**

**Keywords**

\* Test inputs include the InputFile2.txt, InputFile3.txt, and InputFile4.txt, supplied by Professor Mark Floryan in the assignment download.

**A\* Algorithm**

Explain basic usage of A\* and definition.

**Certainty Case Implementation.**

* Consistent performance in the test cases

**Tables**

Table: Certainty Case A\* Performance (MyRobot)

|  |  |  |
| --- | --- | --- |
| Test input | # of Pings | # of Moves |
| InputFile2.txt | 17 | 7 |
| InputFile3.txt | 83 | 13 |
| InputFile4.txt | 170 | 38 |

**\*\***The number of pings and moves remained constant for 10+ consecutive runs.

**Uncertainty Case Implementation.**

1. **Experiments**

**Tables**

Uncertainty Case A\* Performance (MyRobot)

Test input: Inputfile2.txt

|  |  |  |
| --- | --- | --- |
| Trial # | # of Pings | # of Moves |
| 1 | 5 | 5 |
| 2 | 17 | 7 |
| 3 | 170 | 38 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| AVG |  |  |
| STDEV |  |  |

Test input: Inputfile3.txt

|  |  |  |
| --- | --- | --- |
| Trial # | # of Pings | # of Moves |
| 1 | 5 | 5 |
| 2 | 17 | 7 |
| 3 | 170 | 38 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| AVG |  |  |
| STDEV |  |  |

Test input: Inputfile4.txt

|  |  |  |
| --- | --- | --- |
| Trial # | # of Pings | # of Moves |
| 1 | 5 | 5 |
| 2 | 17 | 7 |
| 3 | 170 | 38 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| AVG |  |  |
| STDEV |  |  |

Uncertainty Case A\* Performance (UncertainRobot)

Test input: Inputfile2.txt

|  |  |  |
| --- | --- | --- |
| Trial # | # of Pings | # of Moves |
| 1 | 5 | 5 |
| 2 | 17 | 7 |
| 3 | 170 | 38 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| AVG |  |  |
| STDEV |  |  |

Test input: Inputfile3.txt

|  |  |  |
| --- | --- | --- |
| Trial # | # of Pings | # of Moves |
| 1 | 5 | 5 |
| 2 | 17 | 7 |
| 3 | 170 | 38 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| AVG |  |  |
| STDEV |  |  |

Test input: Inputfile4.txt

|  |  |  |
| --- | --- | --- |
| Trial # | # of Pings | # of Moves |
| 1 | 5 | 5 |
| 2 | 17 | 7 |
| 3 | 170 | 38 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| AVG |  |  |
| STDEV |  |  |

**3.2 Graph**

**Conclusion**