|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | DFS | | BFS | | Coloring (greedy ) | | |
| input file | input size  vertices/  edges | runtime  (s) | memory (MB) | runtime  (s) | memory (MB) | Number of colors | runtime  (s) | memory (MB) |
| n4 | 4/5 | 0 | 13 | 0 | 13 | 3 | 0 | 13 |
| n10 | 10/21 | 0 | 13 | 0 | 13 | 4 | 0 | 13 |
| n100 | 100/290 | 0 | 13 | 0 | 13 | 4 | 0 | 13 |
| n1000 | 1000/2989 | 0.003 | 14 | 0.003 | 13 | 6 | 0.01 | 15 |
| n10000 | 10000/29990 | 0.034 | 22 | 0.035 | 25 | 6 | 0.21 | 110 |

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根據程式碼分析，greedy coloring algorithm大約複雜度為O(V+VlgV)