

N - Queen Problem

Programming Assignment 3 (Report)

Shubham Agrawal 13674

Vikas Jain 13788

Specification of machine on which code is run: computers in CS Lab 111.

Value of n	No. of valid configuration	Time taken for recursive algorithm	Time taken for iterative algorithm
2	0	NA	NA
3	0	NA	NA
4	2	0.000 s	0.000 s
5	10	0.000 s	0.000 s
6	4	0.000 s	0.000 s
7	40	0.000 s	0.000 s
8	92	0.000 s	0.000 s
9	352	0.012 s	0.008 s
10	724	0.040 s	0.024 s
11	2680	0.148 s	0.124 s
12	14200	0.788 s	0.668 s
13	73712	4.696 s	4.028 s
14	365596	30.146s	25.850 s
15	2279184	3 min 22.749s	2 min 56.959 s
16	-	> 5 min	> 5 min

Iterative Algorithm is faster as compared to Recursive Algorithm

Reason: In Recursive algorithm, each function call requires the allocation of new stack frame in memory for function space which slows down the process.