Abstract

In this paper the research work has done comparative analysis of one of the famous NP hard problem: NQueen using traditional Backtraking and Genetic Algorithm(GA). The research work has implemented the solution of the NQueen problem using backtracking and using GA. Both the methods of solving NQueen problem are entirely different. The first one is general method and takes time in days, months and years as N increases. In this paper the time taken by the two methods for a given value of N are compared. The work has restricted values of N upto 50 only as beyond this it is extremely difficult to get the solution of the problem using backtracking method. Both the implementation have been carried out in MATLAB using Pentium Core 2 Duo T6600 Core 2.2 GHz processor on Windows 8 with 4GB RAM. Because of the random nature of GA instead of time taken in obtaining all possible solutions for a given value of N, the time taken in obtaining say count number of solutions was first determined using GA, then time taken in same number of solutions that is count using backtracking was noted. Results are then presented in tabular manner.

References
Performance Analysis of N-Queen Problem using Backtracking and Genetic Algorithm Techniques

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