Artificial Intelligence
Fall 2020
Lab-6

The objective of this lab is to: Genetic Algorithm

Course & Lab Instructor: *Dr. Mian Mubashir*

Instructions

Don't share your code with anyone until evaluation.

Plagiarism will result in penalties.

Your code must run without errors.

Your code must produce a generalized solution which can solve problem of any size.

The evaluation will be based on viva. Failure to explain your own code will result in penalties.

You are required to submit a single zip file BCSF20M001.zip. Failed to follow naming format will result in no grade.

Problem Statement

A software artifact is required which can solve the 8 queen problem using Genetic Algorithm. The initial population of 8 states must be generated randomly. The program must print results on standard output. The output must contain all the intermediate populations explored by the solution; each line in the output must be a single population (all 8 states).

Your code must have the following functions

- Initial Random population generator
- Fitness Function
- Random Parent Selector
- Crossover (child generator)
- Mutation
- Genetic Algorithm