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