

Assignment1

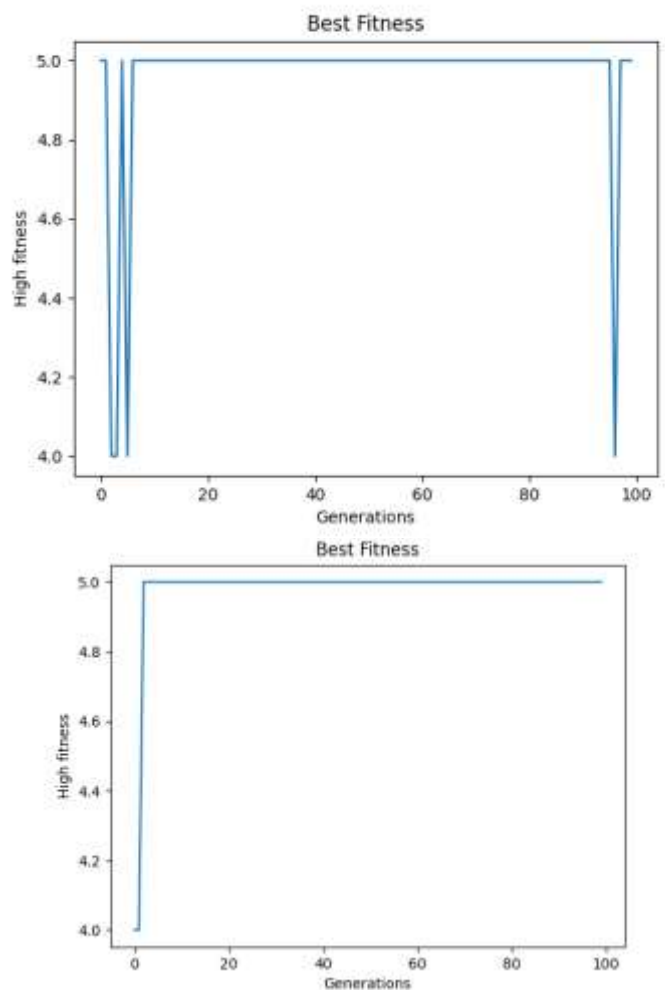
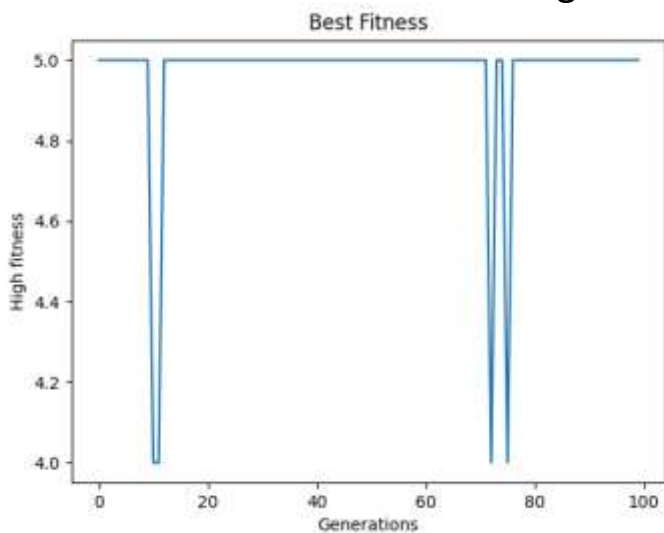
Steps:

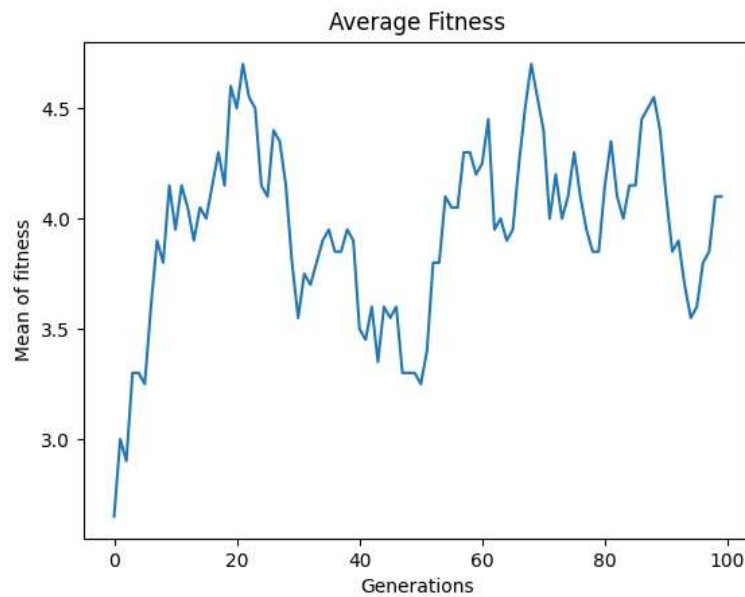
1. Generate random 2D array 20*5.
2. Evaluate the fitness.
3. Choose two parents for a new population by Roulette Wheel selection.
4. Do crossover to get new generation.
5. Mutation for children.
6. Store them in new 2D array for new population.
7. When we use elitism, we store the best two individual fitness in the new generation.

Without elitism:

-In best fitness, we can notice that low fitness individual may come from high one and maybe not.

-best fitness located in range 4-5.

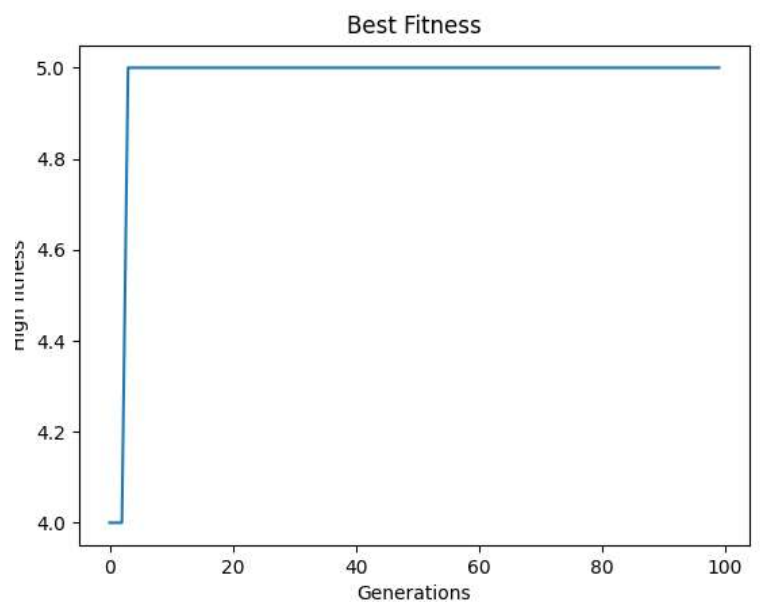
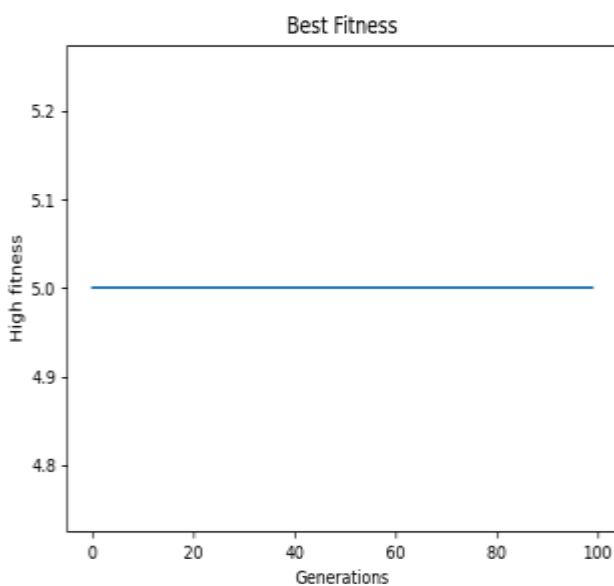




With elitism:

-In best fitness over all generation, I noticed that when one generation has individual with fitness 5, all generation after it would has this optimal chromosome.

-best fitness located in range 4-5 and it might be 5 for all generations.



- It is easy to get your optimal individual over all generations.
- In average fitness, we can notice that we can get generation with low fitness after generation with higher fitness.
- With comparing with the first case, you can see that average is higher with elitism.

