Homework 11

1.

START  
Generate the initial population  
Compute fitness  
REPEAT  
 Selection  
 Crossover  
 Mutation  
 Compute fitness  
UNTIL population has converged  
STOP

1.3 Result:

Generation: 0 Fittest: 4

Generation: 1 Fittest: 4

Generation: 2 Fittest: 4

Generation: 3 Fittest: 3

Generation: 4 Fittest: 3

Generation: 5 Fittest: 3

Generation: 6 Fittest: 3

Generation: 7 Fittest: 3

Generation: 8 Fittest: 3

Generation: 9 Fittest: 3

Generation: 10 Fittest: 3

Generation: 11 Fittest: 3

Generation: 12 Fittest: 5

Solution found in generation 12

Fitness: 5

Genes: 11111

The result shows that after 12 generations which possibly experienced selection, crossover, mutation at each time, the initial population finally change to 11111 and could not do any change again.

2.