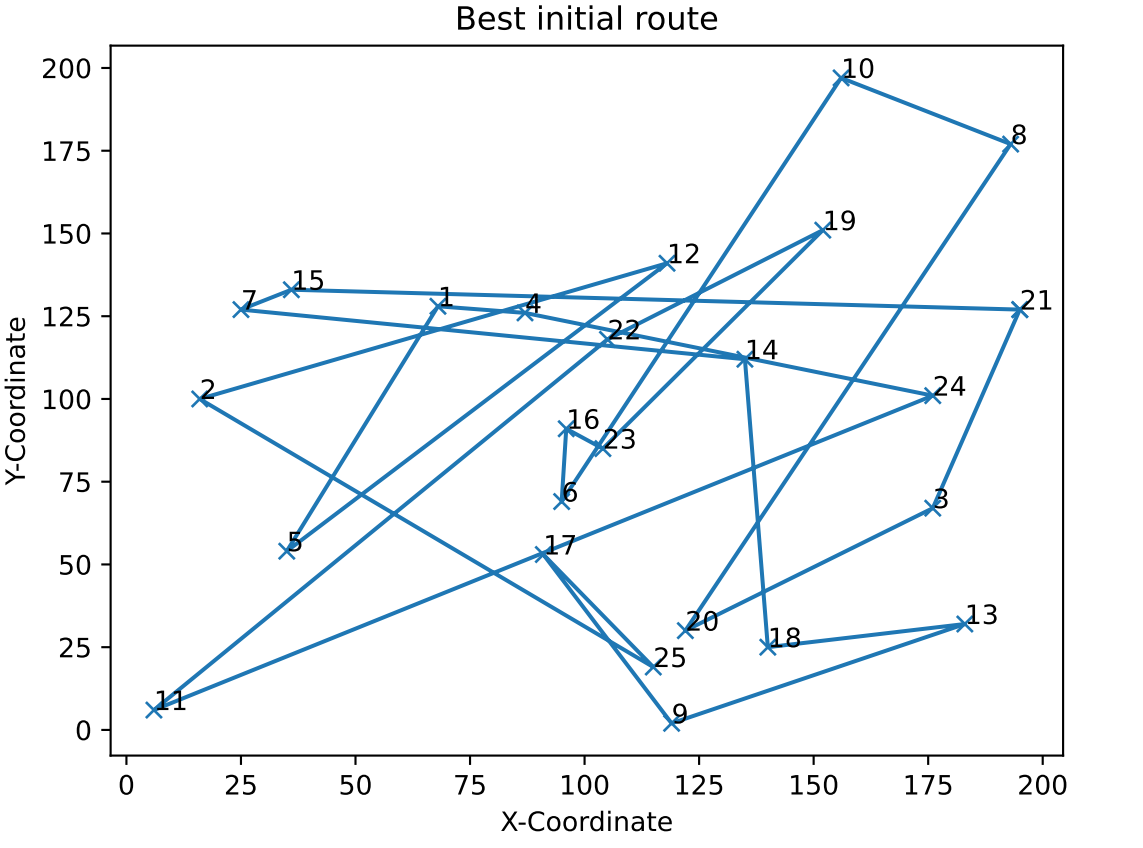
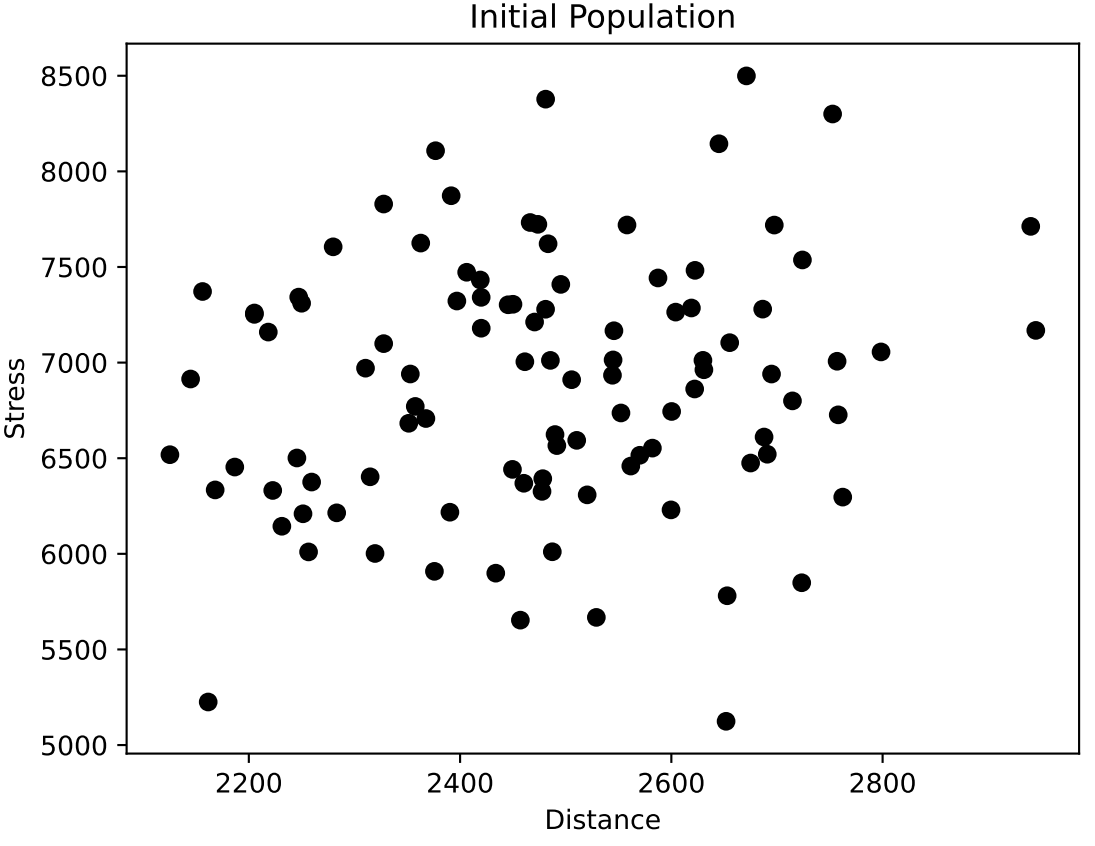
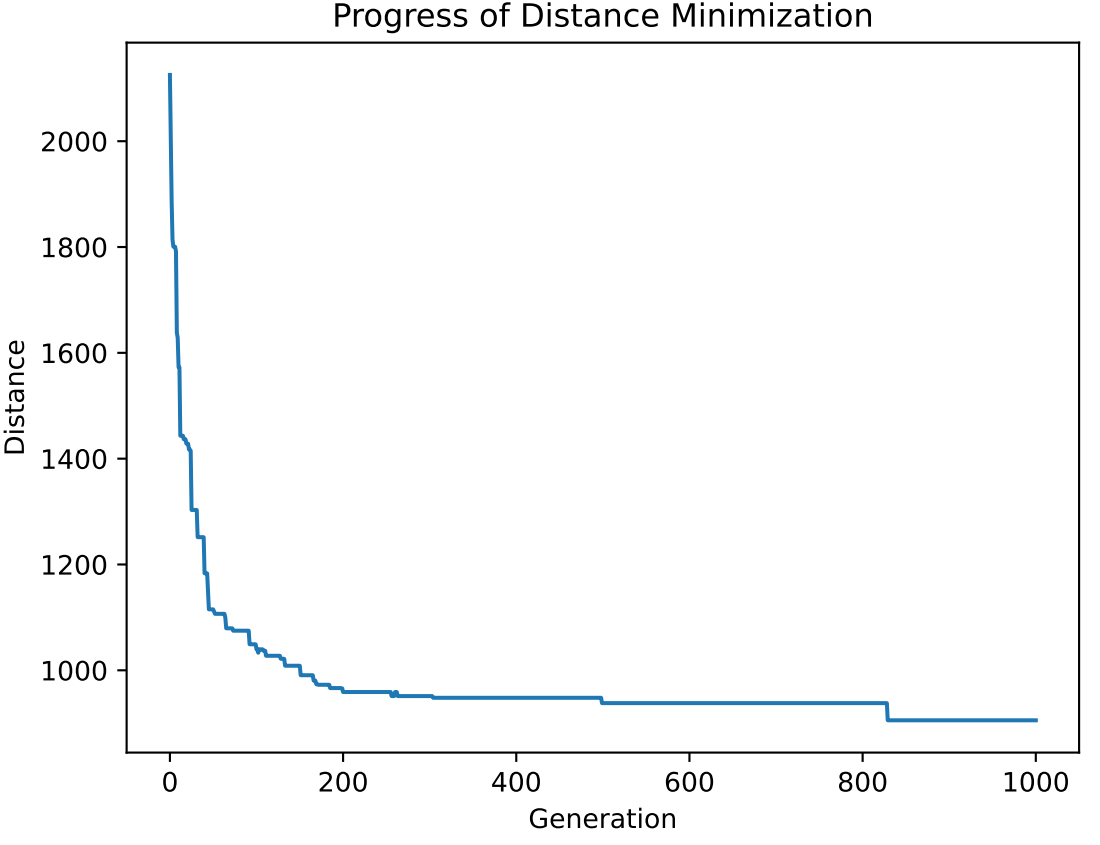
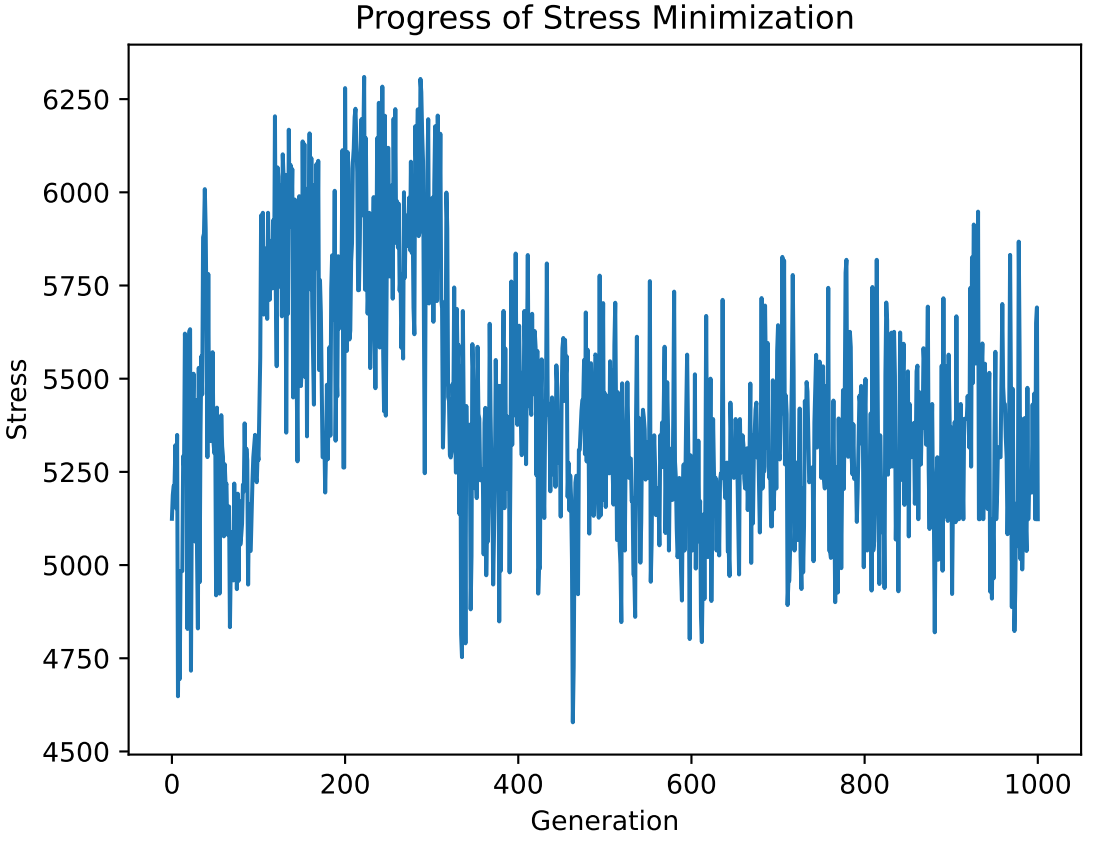
[1, 2, 3, 4, 5,
6, 7, 8, 9, 10,
11, 12, 13, 14, 15,
16, 17, 18, 19, 20,
21, 22, 23, 24, 25]

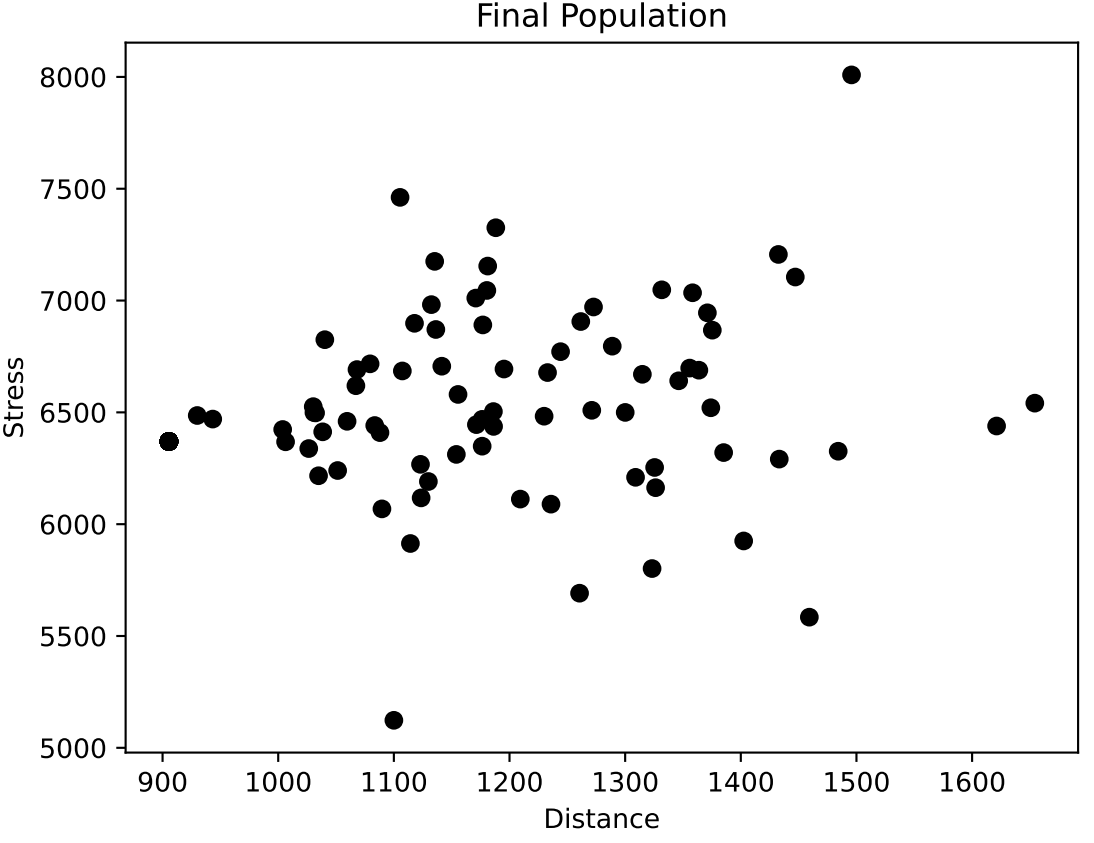

Best initial route
Y-Coordinate
X-Coordinate
0
25
50
75
100
125
150
175
200
10
8
19
12
15
7
1
4
21
22
14
24
2
16
23
6
3
5
17
20
13
18
25
11
9


Initial Population
Stress
Distance
8500
8000
7500
7000
6500
6000
5500
5000
2200
2400
2600
2800

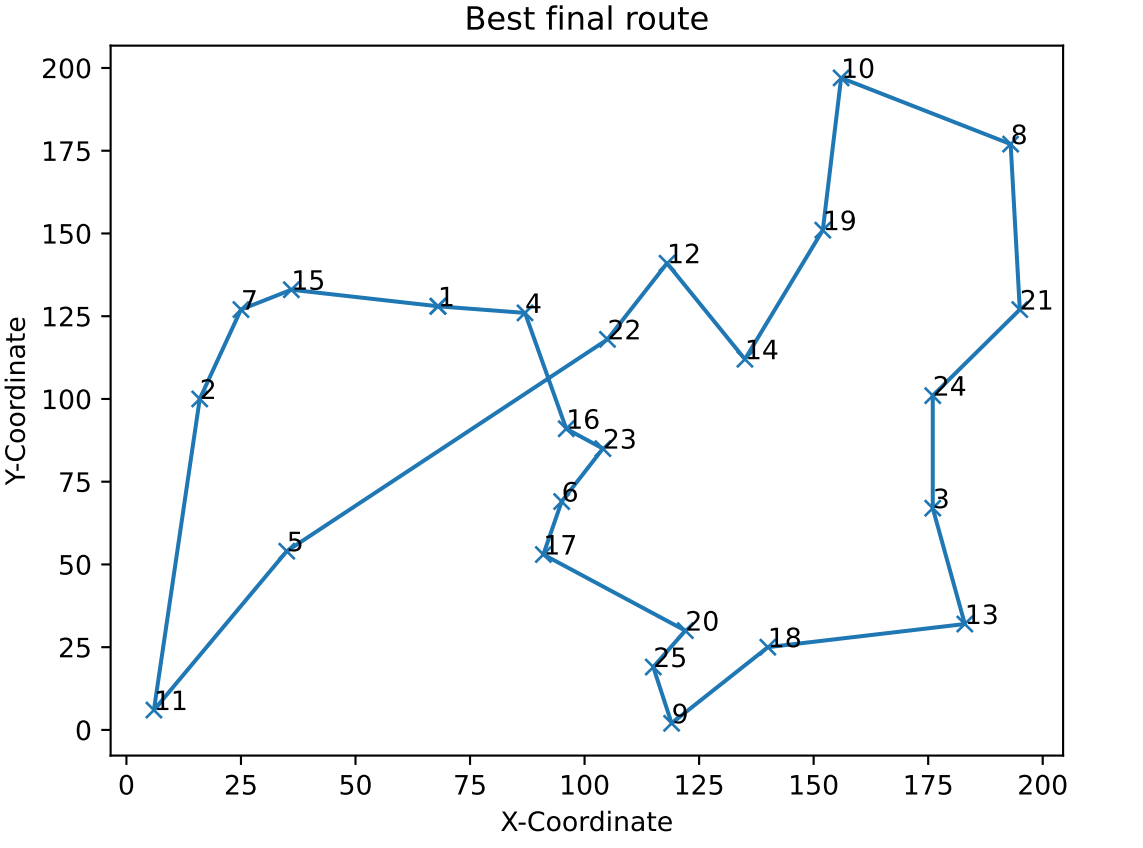

Progress of Distance Minimization
Distance
2000
1800
1600
1400
1200
1000
0
200
400
600
800
1000
Generation


Progress of Stress Minimization
Stress
Generation
6250
6000
5750
5500
5250
5000
4750
4500
0
200
400
600
800
1000

Initial distance : 2125.2945513508903
Initial stress: 6518.4
Initial objective: 2125.2945513508903
Final objective: 905.4922396913732
Final distance : 905.4922396913732
Final stress: 6369.8


Final Population
Stress
Distance
8000
7500
7000
6500
6000
5500
5000
900
1000
1100
1200
1300
1400
1500
1600

[1, 15, 7, 2, 11,
5, 22, 12, 14, 19,
10, 8, 21, 24, 3,
13, 18, 9, 25, 20,
17, 6, 23, 16, 4]


Best final route
Y-Coordinate
X-Coordinate
0
25
50
75
100
125
150
175
200
10
8
19
12
15
7
1
4
21
22
14
2
24
16
23
6
3
5
17
20
13
18
25
11
9