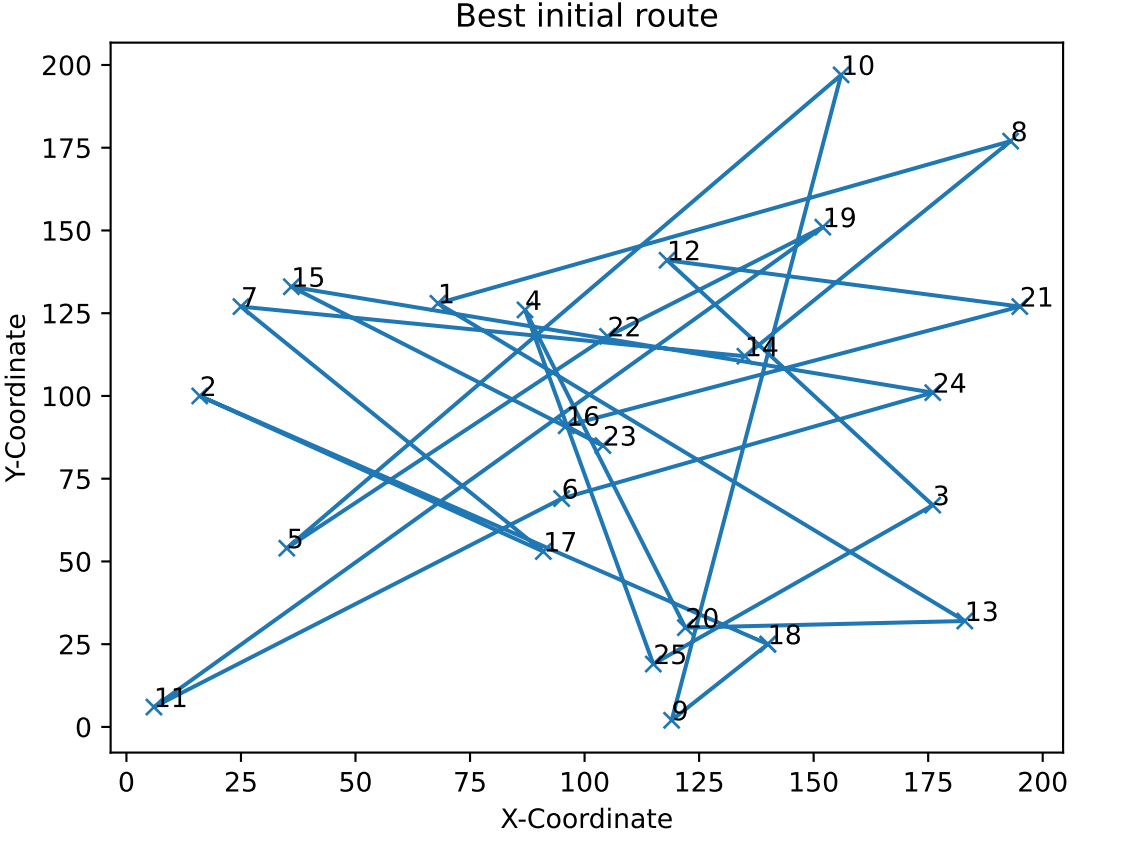
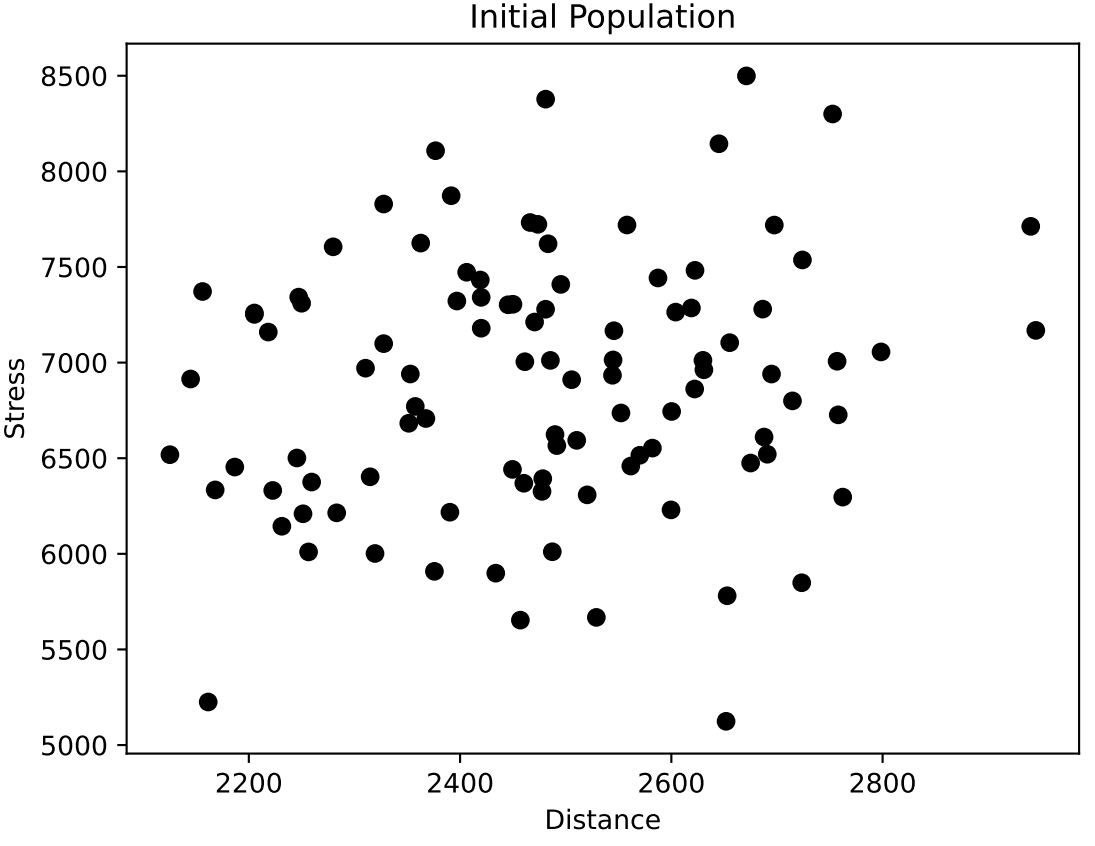
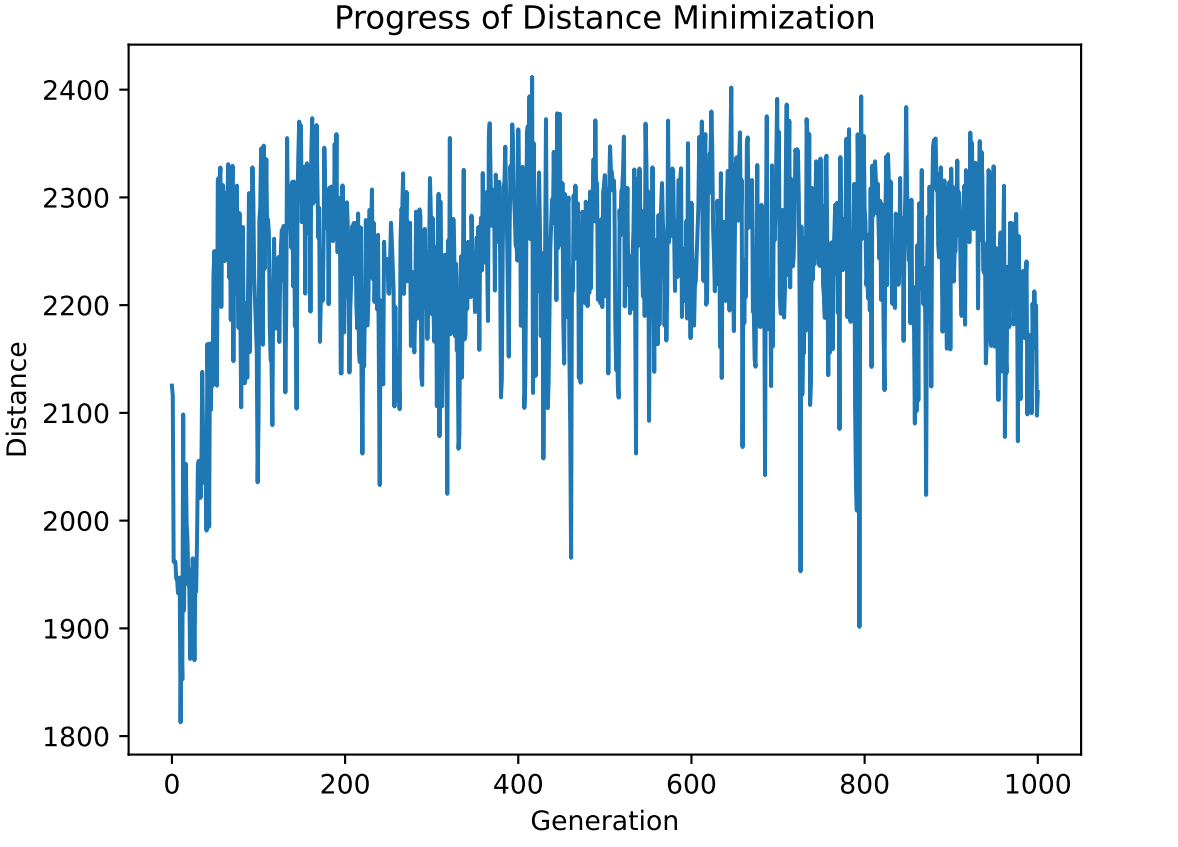
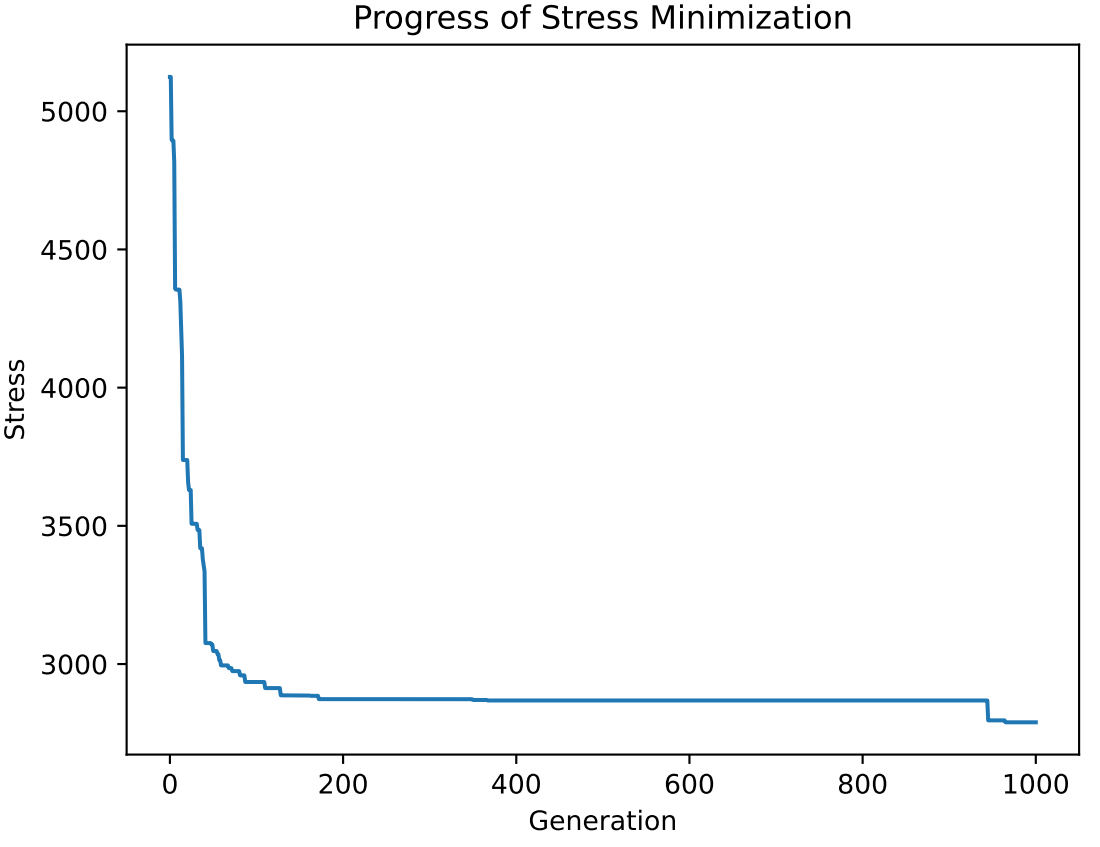
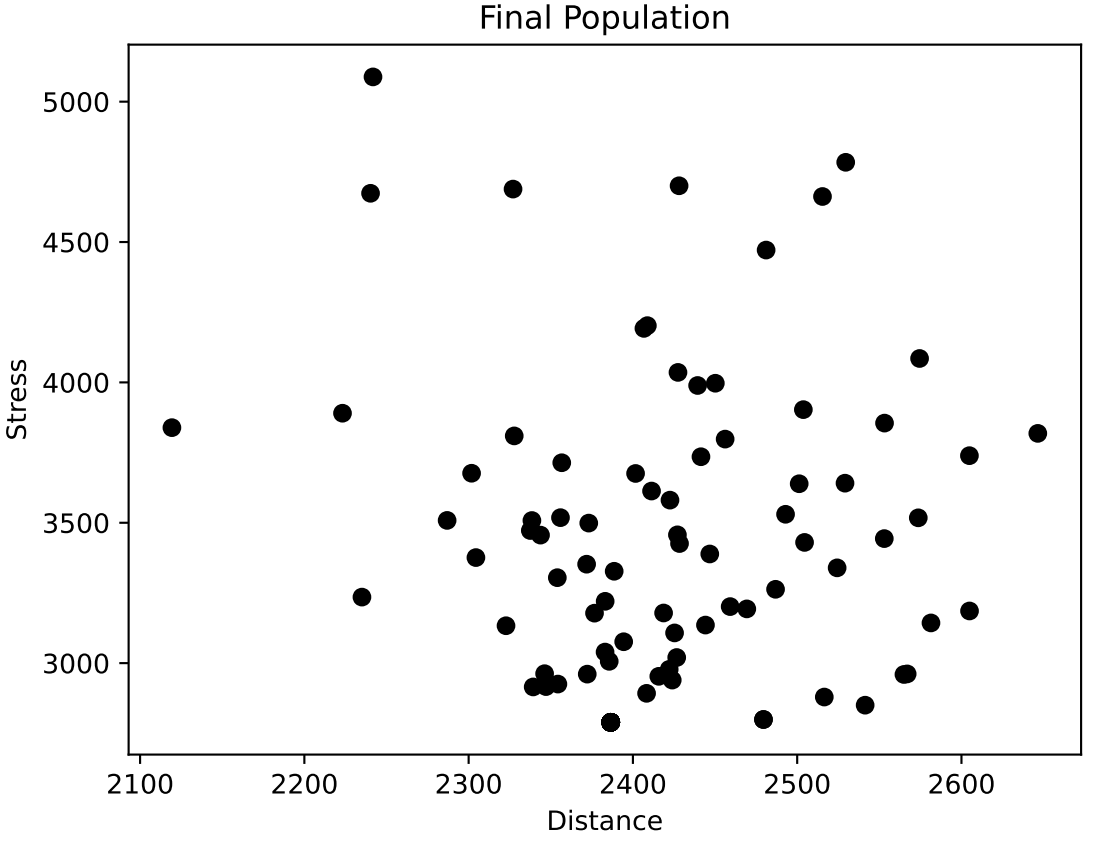

Best initial route
Y-Coordinate
X-Coordinate
0
25
50
75
100
125
150
175
200
10
8
19
12
15
1
4
21
7
22
14
24
2
16
23
6
3
5
17
13
20
18
25
11
9


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

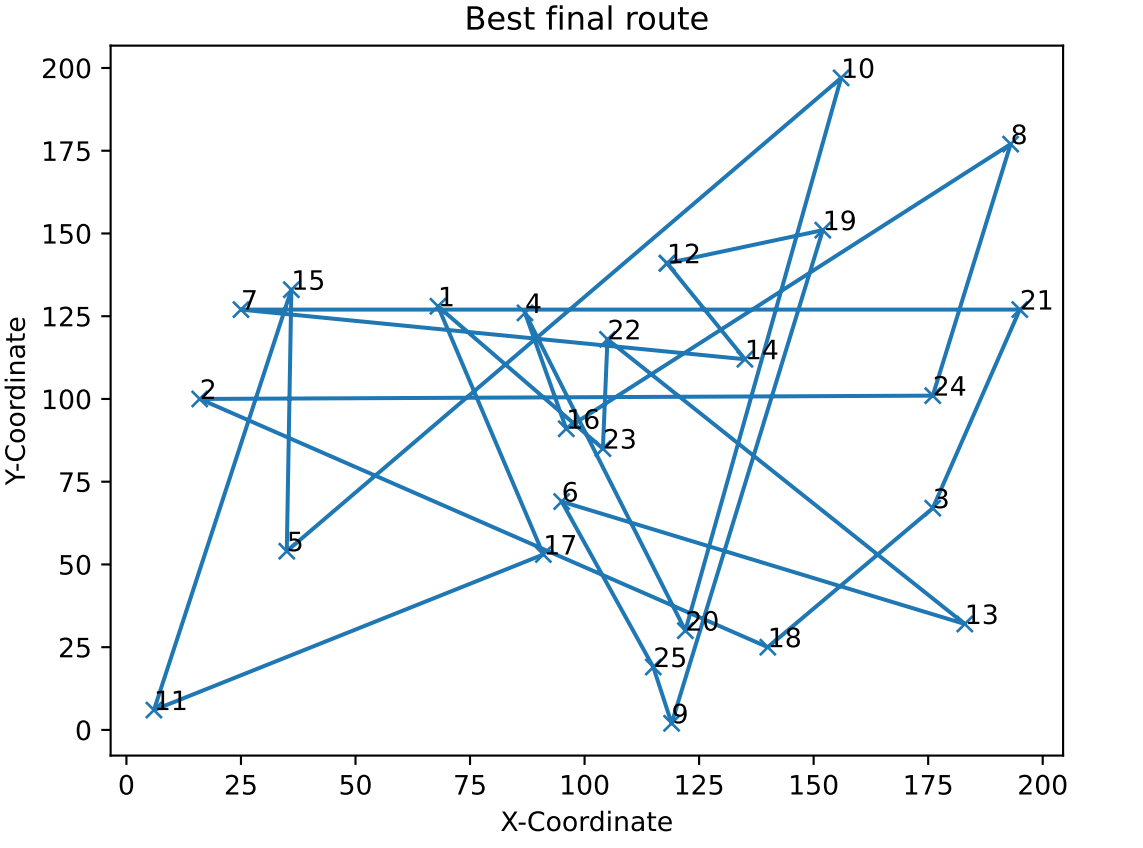

Progress of Distance Minimization
Distance
Generation
2400
2300
2200
2100
2000
1900
1800
0
200
400
600
800
1000


Progress of Stress Minimization
Stress
5000
4500
4000
3500
3000
0
200
400
600
800
1000
Generation

Initial distance : 2651.8146985801595
Initial stress:  5124.2
Initial objective: 5124.2
Final objective: 2789.2000000000003
Final distance : 2386.4940474375235
Final stress:  2789.2000000000003


Final Population
Stress
Distance
5000
4500
4000
3500
3000
2100
2200
2300
2400
2500
2600

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


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
13
20
18
25
11
9