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1 C:\Users\yusuf\anaconda3\python.exe "C:\Users\yusuf\Desktop\
  Computational Logistics\main\src\ga_30shops\
  tdvrp_genetic_algorithm_30shops.py"
2 100%|██████████| 12/12 [00:00<00:00, 214.86it/s]
3 Generating random population with size: 10000
4 Generating random population with size: 10000
5 Generating random population with size: 10000
6 Generating random population with size: 10000
7 Generating random population with size: 10000
8 Generating random population with size: 10000
9 Generating random population with size: 10000
10 Generating random population with size: 10000
11 Generating random population with size: 10000
12 Generating random population with size: 10000
13 Generating random population with size: 10000
14 Generating random population with size: 10000
15 100%|██████████| 12/12 [00:00<00:00, 325.18it/s]
16 Thread: 1 and Current Average: 78.36471135437826
17 -----
18 Thread: 2 and Current Average: 77.26660272567548
19 -----
20 Thread: 3 and Current Average: 84.17318872695284
21 -----
22 Thread: 4 and Current Average: 80.37762185332755
23 -----
24 Thread: 5 and Current Average: 71.86118773772225
25 -----
26 Thread: 6 and Current Average: 79.87108486138148
27 -----
28 Thread: 7 and Current Average: 76.35379168630571
29 -----
30 Thread: 8 and Current Average: 74.50739238281355
31 -----
32 Thread: 9 and Current Average: 74.8303126042737
33 -----
34 Thread: 10 and Current Average: 70.45819993960875
35 -----
36 Thread: 11 and Current Average: 77.5401720994659
37 -----
38 Thread: 12 and Current Average: 80.54061947603792
39 -----
40 *****
41 *****
42 *****
43 Number of Iterations Done: 1
44 *****
45 *****
46 *****
47 100%|██████████| 12/12 [00:00<00:00, 668.46it/s]
48 Thread: 1 and Current Average: 73.13026822299507
49 -----
50 Thread: 2 and Current Average: 79.64938901789228
51 -----

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52 Thread: 3 and Current Average: 75.23568054139189
53 -----
54 Thread: 4 and Current Average: 81.95921255911526
55 -----
56 Thread: 5 and Current Average: 75.99392778855398
57 -----
58 Thread: 6 and Current Average: 74.84017737913722
59 -----
60 Thread: 7 and Current Average: 77.12929685789041
61 -----
62 Thread: 8 and Current Average: 66.53233660754083
63 -----
64 Thread: 9 and Current Average: 75.76375025207666
65 -----
66 Thread: 10 and Current Average: 75.21002530692293
67 -----
68 Thread: 11 and Current Average: 73.14260977408344
69 -----
70 Thread: 12 and Current Average: 81.8635373331996
71 -----
72 *****
73 *****
74 *****
75 Number of Iterations Done: 2
76 *****
77 *****
78 *****
79 100%|██████████| 12/12 [00:00<00:00, 707.78it/s]
80 Thread: 1 and Current Average: 68.0370662316878
81 -----
82 Thread: 2 and Current Average: 80.12762282415278
83 -----
84 Thread: 3 and Current Average: 71.9777687852506
85 -----
86 Thread: 4 and Current Average: 73.77658734021713
87 -----
88 Thread: 5 and Current Average: 78.28647805622052
89 -----
90 Thread: 6 and Current Average: 78.51754307889304
91 -----
92 Thread: 7 and Current Average: 74.53363037003851
93 -----
94 Thread: 8 and Current Average: 68.53214042749575
95 -----
96 Thread: 9 and Current Average: 79.2205290812025
97 -----
98 Thread: 10 and Current Average: 71.68223293829581
99 -----
100 Thread: 11 and Current Average: 74.00156458545652
101 -----
102 Thread: 12 and Current Average: 77.8210210218427
103 -----
104 100%|██████████| 12/12 [00:00<00:00, 1001.35it/s]

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105 *****
106 *****
107 *****
108 Number of Iterations Done: 3
109 *****
110 *****
111 *****
112 Thread: 1 and Current Average: 61.26755177528047
113 -----
114 Thread: 2 and Current Average: 80.58462180621505
115 -----
116 Thread: 3 and Current Average: 73.71665197106715
117 -----
118 Thread: 4 and Current Average: 70.13203376761818
119 -----
120 Thread: 5 and Current Average: 80.44715646248383
121 -----
122 Thread: 6 and Current Average: 67.86801270358019
123 -----
124 Thread: 7 and Current Average: 72.7798617103062
125 -----
126 Thread: 8 and Current Average: 70.51904999320026
127 -----
128 Thread: 9 and Current Average: 73.02422206364707
129 -----
130 Thread: 10 and Current Average: 72.9344139739844
131 -----
132 Thread: 11 and Current Average: 71.73671211399329
133 -----
134 Thread: 12 and Current Average: 78.38185365712079
135 -----
136 100%|██████████| 12/12 [00:00<00:00, 1336.97it/s]
137 *****
138 *****
139 *****
140 Number of Iterations Done: 4
141 *****
142 *****
143 *****
144 Thread: 1 and Current Average: 59.33320207434578
145 -----
146 Thread: 2 and Current Average: 76.75514612531305
147 -----
148 Thread: 3 and Current Average: 69.27053232097094
149 -----
150 Thread: 4 and Current Average: 62.22699804429754
151 -----
152 Thread: 5 and Current Average: 80.84922684536885
153 -----
154 Thread: 6 and Current Average: 64.65055755133169
155 -----
156 Thread: 7 and Current Average: 71.38509776810862
157 -----

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158 Thread: 8 and Current Average: 77.0486411573681
159 -----
160 Thread: 9 and Current Average: 74.30032444058747
161 -----
162 Thread: 10 and Current Average: 69.86230900467652
163 -----
164 Thread: 11 and Current Average: 72.86830338373277
165 -----
166 Thread: 12 and Current Average: 66.36456654448747
167 -----
168 *****
169 *****
170 *****
171 Number of Iterations Done: 5
172 *****
173 *****
174 *****
175 100%|██████████| 12/12 [00:00<00:00, 2406.95it/s]
176 Thread: 1 and Current Average: 57.8712978064833
177 -----
178 Thread: 2 and Current Average: 77.08864569252084
179 -----
180 Thread: 3 and Current Average: 65.33897484588584
181 -----
182 Thread: 4 and Current Average: 73.15410537488786
183 -----
184 Thread: 5 and Current Average: 82.13584586471761
185 -----
186 Thread: 6 and Current Average: 63.4806925210895
187 -----
188 Thread: 7 and Current Average: 76.50639649896443
189 -----
190 Thread: 8 and Current Average: 68.91345307334537
191 -----
192 Thread: 9 and Current Average: 79.3070920339325
193 -----
194 Thread: 10 and Current Average: 71.10263246005186
195 -----
196 Thread: 11 and Current Average: 74.3499163276869
197 -----
198 Thread: 12 and Current Average: 77.20266729517874
199 -----
200 *****
201 *****
202 *****
203 Number of Iterations Done: 6
204 *****
205 *****
206 *****
207 100%|██████████| 12/12 [00:00<00:00, 2422.35it/s]
208 Thread: 1 and Current Average: 53.97959411692203
209 -----
210 Thread: 2 and Current Average: 65.01986760346003

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211 -----
212 Thread: 3 and Current Average: 62.70668565178741
213 -----
214 Thread: 4 and Current Average: 73.8237741172858
215 -----
216 Thread: 5 and Current Average: 83.12655275551191
217 -----
218 Thread: 6 and Current Average: 73.13207743579385
219 -----
220 Thread: 7 and Current Average: 74.95046511845635
221 -----
222 Thread: 8 and Current Average: 75.98977622086522
223 -----
224 Thread: 9 and Current Average: 77.01775776390024
225 -----
226 Thread: 10 and Current Average: 66.53891664534073
227 -----
228 Thread: 11 and Current Average: 68.6284189894633
229 -----
230 Thread: 12 and Current Average: 77.66811112962385
231 -----
232 100%|██████████| 12/12 [00:00<00:00, 12026.68it/s]
233 *****
234 *****
235 *****
236 Number of Iterations Done: 7
237 *****
238 *****
239 *****
240 Thread: 1 and Current Average: 51.32146466597982
241 -----
242 Thread: 2 and Current Average: 75.92579036380792
243 -----
244 Thread: 3 and Current Average: 75.16539664560456
245 -----
246 Thread: 4 and Current Average: 62.47821662545985
247 -----
248 Thread: 5 and Current Average: 67.66050756741656
249 -----
250 Thread: 6 and Current Average: 68.39057039195126
251 -----
252 Thread: 7 and Current Average: 76.25640790050059
253 -----
254 Thread: 8 and Current Average: 64.38648952745527
255 -----
256 Thread: 9 and Current Average: 70.29829909218475
257 -----
258 Thread: 10 and Current Average: 68.719533788056
259 -----
260 Thread: 11 and Current Average: 61.459299280113186
261 -----
262 Thread: 12 and Current Average: 65.12229199924597
263 -----

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264 100%|██████████| 12/12 [00:00<00:00, 12032.43it/s]
265 *****
266 *****
267 *****
268 Number of Iterations Done: 8
269 *****
270 *****
271 *****
272 Thread: 1 and Current Average: 50.6696693930798
273 -----
274 Thread: 2 and Current Average: 68.52171099961517
275 -----
276 Thread: 3 and Current Average: 78.68713246071975
277 -----
278 Thread: 4 and Current Average: 65.54238997355571
279 -----
280 Thread: 5 and Current Average: 72.35570586705586
281 -----
282 Thread: 6 and Current Average: 66.04846961740785
283 -----
284 Thread: 7 and Current Average: 76.90902015245985
285 -----
286 Thread: 8 and Current Average: 74.2779180489822
287 -----
288 Thread: 9 and Current Average: 73.36892690710624
289 -----
290 Thread: 10 and Current Average: 70.37874223700197
291 -----
292 Thread: 11 and Current Average: 72.56514081223247
293 -----
294 Thread: 12 and Current Average: 64.64694266219801
295 -----
296 100%|██████████| 12/12 [00:00<00:00, 12020.93it/s]
297 *****
298 *****
299 *****
300 Number of Iterations Done: 9
301 *****
302 *****
303 *****
304 Thread: 1 and Current Average: 62.2688085054907
305 -----
306 Thread: 2 and Current Average: 66.89121916154792
307 -----
308 Thread: 3 and Current Average: 75.75599611906301
309 -----
310 Thread: 4 and Current Average: 64.40534997473695
311 -----
312 Thread: 5 and Current Average: 66.64199604723379
313 -----
314 Thread: 6 and Current Average: 63.60982120058463
315 -----
316 Thread: 7 and Current Average: 75.20028061090541

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317 -----
318 Thread: 8 and Current Average: 79.1588049971527
319 -----
320 Thread: 9 and Current Average: 71.44713376164096
321 -----
322 Thread: 10 and Current Average: 72.20789923428738
323 -----
324 Thread: 11 and Current Average: 67.48496713471648
325 -----
326 Thread: 12 and Current Average: 76.16097199792536
327 -----
328 *****
329 *****
330 *****
331 Number of Iterations Done: 10
332 *****
333 *****
334 *****
335 BEST RESULT BELOW:
336 [46.22871496639979, [0, 17, 18, 20, 21, 19, 22, 16, 3, 30, 29, 0, 26
    , 15, 7, 5, 4, 6, 9, 11, 25, 1, 24, 23, 8, 10, 12, 13, 14, 27, 28, 2
    , 0]]
337 Time: 0:01:28.203174
338 1
339
340 Process finished with exit code 0
341
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