

unknown

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80 cord_individual_obj[indivial_i,:] = [16. 9. 89. 98.]
81 cord_individual_obj[indivial_i,:] = [17. 8. 71. 79.]
82 cord_individual_obj[indivial_i,:] = [18. 8. 133. 141.]
83 cord_individual_obj[indivial_i,:] = [19. 12. 123. 135.]
84 cord_individual_obj[indivial_i,:] = [20. 7. 100. 107.]
85 cord_individual_obj[indivial_i,:] = [21. 8. 119. 127.]
86 cord_individual_obj[indivial_i,:] = [22. 8. 148. 156.]
87 cord_individual_obj[indivial_i,:] = [23. 9. 101. 110.]
88 cord_individual_obj[indivial_i,:] = [24. 10. 114. 124.]
89
90 min(cord_individual_obj[:,3]) = 79.0
91 historl_G_best_iter[iter, 3] = 79.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 8. 167. 175.]
96 cord_individual_obj[indivial_i,:] = [ 1. 9. 91. 100.]
97 cord_individual_obj[indivial_i,:] = [ 2. 7. 107. 114.]
98 cord_individual_obj[indivial_i,:] = [ 3. 9. 172. 181.]
99 cord_individual_obj[indivial_i,:] = [ 4. 10. 137. 147.]
100 cord_individual_obj[indivial_i,:] = [ 5. 8. 71. 79.]
101 cord_individual_obj[indivial_i,:] = [ 6. 8. 89. 97.]
102 cord_individual_obj[indivial_i,:] = [ 7. 9. 145. 154.]
103 cord_individual_obj[indivial_i,:] = [ 8. 9. 96. 105.]
104 cord_individual_obj[indivial_i,:] = [ 9. 12. 116. 128.]
105 cord_individual_obj[indivial_i,:] = [10. 7. 121. 128.]
106 cord_individual_obj[indivial_i,:] = [11. 8. 118. 126.]
107 cord_individual_obj[indivial_i,:] = [12. 8. 59. 67.]
108 cord_individual_obj[indivial_i,:] = [13. 9. 80. 89.]
109 cord_individual_obj[indivial_i,:] = [14. 11. 109. 120.]
110 cord_individual_obj[indivial_i,:] = [15. 8. 103. 111.]
111 cord_individual_obj[indivial_i,:] = [16. 8. 87. 95.]
112 cord_individual_obj[indivial_i,:] = [17. 11. 92. 103.]
113 cord_individual_obj[indivial_i,:] = [18. 6. 112. 118.]
114 cord_individual_obj[indivial_i,:] = [19. 11. 143. 154.]
115 cord_individual_obj[indivial_i,:] = [20. 9. 131. 140.]
116 cord_individual_obj[indivial_i,:] = [21. 9. 189. 198.]
117 cord_individual_obj[indivial_i,:] = [22. 11. 75. 86.]
118 cord_individual_obj[indivial_i,:] = [23. 7. 110. 117.]
119 cord_individual_obj[indivial_i,:] = [24. 7. 107. 114.]
120
121 min(cord_individual_obj[:,3]) = 67.0
122 historl_G_best_iter[iter, 3] = 67.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 10. 151. 161.]
127 cord_individual_obj[indivial_i,:] = [ 1. 7. 109. 116.]
128 cord_individual_obj[indivial_i,:] = [ 2. 9. 61. 70.]
129 cord_individual_obj[indivial_i,:] = [ 3. 11. 67. 78.]
130 cord_individual_obj[indivial_i,:] = [ 4. 10. 86. 96.]
131 cord_individual_obj[indivial_i,:] = [ 5. 10. 138. 148.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 56. 65.]
133 cord_individual_obj[indivial_i,:] = [ 7. 8. 65. 73.]
134 cord_individual_obj[indivial_i,:] = [ 8. 9. 123. 132.]
135 cord_individual_obj[indivial_i,:] = [ 9. 8. 95. 103.]
136 cord_individual_obj[indivial_i,:] = [10. 9. 73. 82.]
137 cord_individual_obj[indivial_i,:] = [11. 8. 148. 156.]
138 cord_individual_obj[indivial_i,:] = [12. 9. 134. 143.]
139 cord_individual_obj[indivial_i,:] = [13. 7. 69. 76.]
140 cord_individual_obj[indivial_i,:] = [14. 10. 83. 93.]
141 cord_individual_obj[indivial_i,:] = [15. 8. 129. 137.]
142 cord_individual_obj[indivial_i,:] = [16. 10. 72. 82.]
143 cord_individual_obj[indivial_i,:] = [17. 8. 126. 134.]
144 cord_individual_obj[indivial_i,:] = [18. 9. 98. 107.]
145 cord_individual_obj[indivial_i,:] = [19. 8. 83. 91.]
146 cord_individual_obj[indivial_i,:] = [20. 9. 95. 104.]
147 cord_individual_obj[indivial_i,:] = [21. 8. 59. 67.]
148 cord_individual_obj[indivial_i,:] = [22. 8. 69. 77.]
149 cord_individual_obj[indivial_i,:] = [23. 9. 162. 171.]
150 cord_individual_obj[indivial_i,:] = [24. 9. 66. 75.]
151
152 min(cord_individual_obj[:,3]) = 65.0
153 historl_G_best_iter[iter, 3] = 65.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 9. 126. 135.]
158 cord_individual_obj[indivial_i,:] = [ 1. 7. 100. 107.]
159 cord_individual_obj[indivial_i,:] = [ 2. 8. 78. 86.]
160 cord_individual_obj[indivial_i,:] = [ 3. 11. 61. 72.]
161 cord_individual_obj[indivial_i,:] = [ 4. 7. 115. 122.]
162 cord_individual_obj[indivial_i,:] = [ 5. 8. 111. 119.]
163 cord_individual_obj[indivial_i,:] = [ 6. 9. 81. 90.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 8. 121. 129.]
165 cord_individual_obj[indivial_i,:] = [ 8. 8. 92. 100.]
166 cord_individual_obj[indivial_i,:] = [ 9. 9. 116. 125.]
167 cord_individual_obj[indivial_i,:] = [ 10. 8. 99. 107.]
168 cord_individual_obj[indivial_i,:] = [ 11. 10. 99. 109.]
169 cord_individual_obj[indivial_i,:] = [12. 8. 72. 80.]
170 cord_individual_obj[indivial_i,:] = [13. 9. 93. 102.]
171 cord_individual_obj[indivial_i,:] = [14. 8. 133. 141.]
172 cord_individual_obj[indivial_i,:] = [15. 7. 73. 80.]
173 cord_individual_obj[indivial_i,:] = [16. 12. 143. 155.]
174 cord_individual_obj[indivial_i,:] = [17. 8. 108. 116.]
175 cord_individual_obj[indivial_i,:] = [18. 9. 118. 127.]
176 cord_individual_obj[indivial_i,:] = [19. 8. 105. 113.]
177 cord_individual_obj[indivial_i,:] = [20. 8. 44. 52.]
178 cord_individual_obj[indivial_i,:] = [21. 9. 96. 105.]
179 cord_individual_obj[indivial_i,:] = [22. 10. 59. 69.]
180 cord_individual_obj[indivial_i,:] = [23. 9. 56. 65.]
181 cord_individual_obj[indivial_i,:] = [24. 10. 104. 114.]
182
183 min(cord_individual_obj[:,3]) = 52.0
184 historl_G_best_iter[iter,3] = 52.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 8. 89. 97.]
189 cord_individual_obj[indivial_i,:] = [ 1. 8. 121. 129.]
190 cord_individual_obj[indivial_i,:] = [ 2. 9. 112. 121.]
191 cord_individual_obj[indivial_i,:] = [ 3. 10. 104. 114.]
192 cord_individual_obj[indivial_i,:] = [ 4. 8. 72. 80.]
193 cord_individual_obj[indivial_i,:] = [ 5. 11. 117. 128.]
194 cord_individual_obj[indivial_i,:] = [ 6. 8. 56. 64.]
195 cord_individual_obj[indivial_i,:] = [ 7. 9. 91. 100.]
196 cord_individual_obj[indivial_i,:] = [ 8. 8. 133. 141.]
197 cord_individual_obj[indivial_i,:] = [ 9. 10. 98. 108.]
198 cord_individual_obj[indivial_i,:] = [10. 8. 61. 69.]
199 cord_individual_obj[indivial_i,:] = [11. 9. 79. 88.]
200 cord_individual_obj[indivial_i,:] = [12. 8. 72. 80.]
201 cord_individual_obj[indivial_i,:] = [13. 10. 60. 70.]
202 cord_individual_obj[indivial_i,:] = [14. 9. 125. 134.]
203 cord_individual_obj[indivial_i,:] = [15. 7. 71. 78.]
204 cord_individual_obj[indivial_i,:] = [16. 8. 44. 52.]
205 cord_individual_obj[indivial_i,:] = [17. 9. 77. 86.]
206 cord_individual_obj[indivial_i,:] = [18. 8. 96. 104.]
207 cord_individual_obj[indivial_i,:] = [19. 8. 99. 107.]
208 cord_individual_obj[indivial_i,:] = [20. 8. 121. 129.]
209 cord_individual_obj[indivial_i,:] = [21. 10. 76. 86.]
210 cord_individual_obj[indivial_i,:] = [22. 8. 129. 137.]
211 cord_individual_obj[indivial_i,:] = [23. 8. 103. 111.]
212 cord_individual_obj[indivial_i,:] = [24. 9. 135. 144.]
213
214 min(cord_individual_obj[:,3]) = 52.0
215 historl_G_best_iter[iter,3] = 52.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 10. 152. 162.]
220 cord_individual_obj[indivial_i,:] = [ 1. 9. 78. 87.]
221 cord_individual_obj[indivial_i,:] = [ 2. 9. 93. 102.]
222 cord_individual_obj[indivial_i,:] = [ 3. 10. 52. 62.]
223 cord_individual_obj[indivial_i,:] = [ 4. 8. 87. 95.]
224 cord_individual_obj[indivial_i,:] = [ 5. 9. 77. 86.]
225 cord_individual_obj[indivial_i,:] = [ 6. 8. 86. 94.]
226 cord_individual_obj[indivial_i,:] = [ 7. 10. 118. 128.]
227 cord_individual_obj[indivial_i,:] = [ 8. 8. 126. 134.]
228 cord_individual_obj[indivial_i,:] = [ 9. 8. 93. 101.]
229 cord_individual_obj[indivial_i,:] = [10. 10. 80. 90.]
230 cord_individual_obj[indivial_i,:] = [11. 9. 59. 68.]
231 cord_individual_obj[indivial_i,:] = [12. 11. 104. 115.]
232 cord_individual_obj[indivial_i,:] = [13. 10. 71. 81.]
233 cord_individual_obj[indivial_i,:] = [14. 10. 124. 134.]
234 cord_individual_obj[indivial_i,:] = [15. 10. 117. 127.]
235 cord_individual_obj[indivial_i,:] = [16. 9. 86. 95.]
236 cord_individual_obj[indivial_i,:] = [17. 8. 127. 135.]
237 cord_individual_obj[indivial_i,:] = [18. 7. 123. 130.]
238 cord_individual_obj[indivial_i,:] = [19. 13. 87. 100.]
239 cord_individual_obj[indivial_i,:] = [20. 10. 159. 169.]
240 cord_individual_obj[indivial_i,:] = [21. 8. 136. 144.]
241 cord_individual_obj[indivial_i,:] = [22. 8. 97. 105.]
242 cord_individual_obj[indivial_i,:] = [23. 8. 67. 75.]
243 cord_individual_obj[indivial_i,:] = [24. 8. 44. 52.]
244
245 min(cord_individual_obj[:,3]) = 52.0
246 historl_G_best_iter[iter,3] = 52.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 11. 86. 97.]
251 cord_individual_obj[indivial_i, :] = [ 1. 9. 132. 141.]
252 cord_individual_obj[indivial_i, :] = [ 2. 9. 127. 136.]
253 cord_individual_obj[indivial_i, :] = [ 3. 10. 70. 80.]
254 cord_individual_obj[indivial_i, :] = [ 4. 7. 77. 84.]
255 cord_individual_obj[indivial_i, :] = [ 5. 11. 84. 95.]
256 cord_individual_obj[indivial_i, :] = [ 6. 10. 99. 109.]
257 cord_individual_obj[indivial_i, :] = [ 7. 11. 180. 191.]
258 cord_individual_obj[indivial_i, :] = [ 8. 9. 86. 95.]
259 cord_individual_obj[indivial_i, :] = [ 9. 8. 99. 107.]
260 cord_individual_obj[indivial_i, :] = [ 10. 8. 116. 124.]
261 cord_individual_obj[indivial_i, :] = [ 11. 8. 97. 105.]
262 cord_individual_obj[indivial_i, :] = [ 12. 10. 90. 100.]
263 cord_individual_obj[indivial_i, :] = [ 13. 9. 119. 128.]
264 cord_individual_obj[indivial_i, :] = [ 14. 13. 133. 146.]
265 cord_individual_obj[indivial_i, :] = [ 15. 11. 64. 75.]
266 cord_individual_obj[indivial_i, :] = [ 16. 8. 88. 96.]
267 cord_individual_obj[indivial_i, :] = [ 17. 11. 123. 134.]
268 cord_individual_obj[indivial_i, :] = [ 18. 8. 77. 85.]
269 cord_individual_obj[indivial_i, :] = [ 19. 8. 110. 118.]
270 cord_individual_obj[indivial_i, :] = [ 20. 8. 44. 52.]
271 cord_individual_obj[indivial_i, :] = [ 21. 9. 86. 95.]
272 cord_individual_obj[indivial_i, :] = [ 22. 10. 127. 137.]
273 cord_individual_obj[indivial_i, :] = [ 23. 9. 149. 158.]
274 cord_individual_obj[indivial_i, :] = [ 24. 9. 137. 146.]
275

276 min(cord_individual_obj[:, 3]) = 52.0
277 historl_G_best_iter[iter, 3] = 52.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 9. 144. 153.]
282 cord_individual_obj[indivial_i, :] = [ 1. 11. 73. 84.]
283 cord_individual_obj[indivial_i, :] = [ 2. 10. 70. 80.]
284 cord_individual_obj[indivial_i, :] = [ 3. 8. 92. 100.]
285 cord_individual_obj[indivial_i, :] = [ 4. 7. 65. 72.]
286 cord_individual_obj[indivial_i, :] = [ 5. 9. 67. 76.]
287 cord_individual_obj[indivial_i, :] = [ 6. 8. 70. 78.]
288 cord_individual_obj[indivial_i, :] = [ 7. 8. 44. 52.]
289 cord_individual_obj[indivial_i, :] = [ 8. 7. 119. 126.]
290 cord_individual_obj[indivial_i, :] = [ 9. 10. 121. 131.]
291 cord_individual_obj[indivial_i, :] = [ 10. 8. 63. 71.]
292 cord_individual_obj[indivial_i, :] = [ 11. 9. 116. 125.]
293 cord_individual_obj[indivial_i, :] = [ 12. 11. 92. 103.]
294 cord_individual_obj[indivial_i, :] = [ 13. 10. 74. 84.]
295 cord_individual_obj[indivial_i, :] = [ 14. 9. 67. 76.]
296 cord_individual_obj[indivial_i, :] = [ 15. 9. 122. 131.]
297 cord_individual_obj[indivial_i, :] = [ 16. 10. 103. 113.]
298 cord_individual_obj[indivial_i, :] = [ 17. 10. 75. 85.]
299 cord_individual_obj[indivial_i, :] = [ 18. 8. 130. 138.]
300 cord_individual_obj[indivial_i, :] = [ 19. 9. 122. 131.]
301 cord_individual_obj[indivial_i, :] = [ 20. 7. 161. 168.]
302 cord_individual_obj[indivial_i, :] = [ 21. 8. 102. 110.]
303 cord_individual_obj[indivial_i, :] = [ 22. 10. 98. 108.]
304 cord_individual_obj[indivial_i, :] = [ 23. 8. 119. 127.]
305 cord_individual_obj[indivial_i, :] = [ 24. 9. 106. 115.]
306

307 min(cord_individual_obj[:, 3]) = 52.0
308 historl_G_best_iter[iter, 3] = 52.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 9. 79. 88.]
313 cord_individual_obj[indivial_i, :] = [ 1. 9. 97. 106.]
314 cord_individual_obj[indivial_i, :] = [ 2. 9. 114. 123.]
315 cord_individual_obj[indivial_i, :] = [ 3. 10. 72. 82.]
316 cord_individual_obj[indivial_i, :] = [ 4. 9. 136. 145.]
317 cord_individual_obj[indivial_i, :] = [ 5. 9. 99. 108.]
318 cord_individual_obj[indivial_i, :] = [ 6. 10. 109. 119.]
319 cord_individual_obj[indivial_i, :] = [ 7. 9. 93. 102.]
320 cord_individual_obj[indivial_i, :] = [ 8. 10. 46. 56.]
321 cord_individual_obj[indivial_i, :] = [ 9. 9. 93. 102.]
322 cord_individual_obj[indivial_i, :] = [ 10. 8. 70. 78.]
323 cord_individual_obj[indivial_i, :] = [ 11. 10. 99. 109.]
324 cord_individual_obj[indivial_i, :] = [ 12. 9. 102. 111.]
325 cord_individual_obj[indivial_i, :] = [ 13. 9. 66. 75.]
326 cord_individual_obj[indivial_i, :] = [ 14. 10. 51. 61.]
327 cord_individual_obj[indivial_i, :] = [ 15. 9. 83. 92.]
328 cord_individual_obj[indivial_i, :] = [ 16. 8. 125. 133.]
329 cord_individual_obj[indivial_i, :] = [ 17. 9. 80. 89.]
330 cord_individual_obj[indivial_i, :] = [ 18. 7. 98. 105.]
331 cord_individual_obj[indivial_i, :] = [ 19. 9. 119. 128.]

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332 cord_individual_obj[indivial_i,:] = [20. 8.44.52.]
333 cord_individual_obj[indivial_i,:] = [21. 9.130.139.]
334 cord_individual_obj[indivial_i,:] = [22. 8.129.137.]
335 cord_individual_obj[indivial_i,:] = [23. 9.154.163.]
336 cord_individual_obj[indivial_i,:] = [24. 9.155.164.]
337
338 min(cord_individual_obj[:,3]) = 52.0
339 histol_G_best_iter[iter,3] = 52.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i,:] = [ 0. 9.129.138.]
344 cord_individual_obj[indivial_i,:] = [ 1. 9.66.75.]
345 cord_individual_obj[indivial_i,:] = [ 2. 10.104.114.]
346 cord_individual_obj[indivial_i,:] = [ 3. 10.103.113.]
347 cord_individual_obj[indivial_i,:] = [ 4. 7.102.109.]
348 cord_individual_obj[indivial_i,:] = [ 5. 10.135.145.]
349 cord_individual_obj[indivial_i,:] = [ 6. 8.115.123.]
350 cord_individual_obj[indivial_i,:] = [ 7. 9.109.118.]
351 cord_individual_obj[indivial_i,:] = [ 8. 7.149.156.]
352 cord_individual_obj[indivial_i,:] = [ 9. 9.107.116.]
353 cord_individual_obj[indivial_i,:] = [10. 8.60.68.]
354 cord_individual_obj[indivial_i,:] = [11. 9.88.97.]
355 cord_individual_obj[indivial_i,:] = [12. 9.77.86.]
356 cord_individual_obj[indivial_i,:] = [13. 10.130.140.]
357 cord_individual_obj[indivial_i,:] = [14. 9.74.83.]
358 cord_individual_obj[indivial_i,:] = [15. 9.60.69.]
359 cord_individual_obj[indivial_i,:] = [16. 8.142.150.]
360 cord_individual_obj[indivial_i,:] = [17. 10.94.104.]
361 cord_individual_obj[indivial_i,:] = [18. 10.121.131.]
362 cord_individual_obj[indivial_i,:] = [19. 8.131.139.]
363 cord_individual_obj[indivial_i,:] = [20. 8.121.129.]
364 cord_individual_obj[indivial_i,:] = [21. 9.153.162.]
365 cord_individual_obj[indivial_i,:] = [22. 8.129.137.]
366 cord_individual_obj[indivial_i,:] = [23. 7.127.134.]
367 cord_individual_obj[indivial_i,:] = [24. 8.44.52.]
368
369 min(cord_individual_obj[:,3]) = 52.0
370 histol_G_best_iter[iter,3] = 52.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i,:] = [ 0. 9.86.95.]
375 cord_individual_obj[indivial_i,:] = [ 1. 8.172.180.]
376 cord_individual_obj[indivial_i,:] = [ 2. 9.69.78.]
377 cord_individual_obj[indivial_i,:] = [ 3. 9.123.132.]
378 cord_individual_obj[indivial_i,:] = [ 4. 8.112.120.]
379 cord_individual_obj[indivial_i,:] = [ 5. 9.67.76.]
380 cord_individual_obj[indivial_i,:] = [ 6. 9.123.132.]
381 cord_individual_obj[indivial_i,:] = [ 7. 9.65.74.]
382 cord_individual_obj[indivial_i,:] = [ 8. 8.138.146.]
383 cord_individual_obj[indivial_i,:] = [ 9. 9.64.73.]
384 cord_individual_obj[indivial_i,:] = [10. 8.90.98.]
385 cord_individual_obj[indivial_i,:] = [11. 7.122.129.]
386 cord_individual_obj[indivial_i,:] = [12. 9.70.79.]
387 cord_individual_obj[indivial_i,:] = [13. 9.132.141.]
388 cord_individual_obj[indivial_i,:] = [14. 9.112.121.]
389 cord_individual_obj[indivial_i,:] = [15. 10.72.82.]
390 cord_individual_obj[indivial_i,:] = [16. 7.87.94.]
391 cord_individual_obj[indivial_i,:] = [17. 10.170.180.]
392 cord_individual_obj[indivial_i,:] = [18. 8.116.124.]
393 cord_individual_obj[indivial_i,:] = [19. 9.105.114.]
394 cord_individual_obj[indivial_i,:] = [20. 9.106.115.]
395 cord_individual_obj[indivial_i,:] = [21. 8.44.52.]
396 cord_individual_obj[indivial_i,:] = [22. 9.62.71.]
397 cord_individual_obj[indivial_i,:] = [23. 10.184.194.]
398 cord_individual_obj[indivial_i,:] = [24. 9.137.146.]
399
400 min(cord_individual_obj[:,3]) = 52.0
401 histol_G_best_iter[iter,3] = 52.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i,:] = [ 0. 9.129.138.]
406 cord_individual_obj[indivial_i,:] = [ 1. 8.64.72.]
407 cord_individual_obj[indivial_i,:] = [ 2. 9.111.120.]
408 cord_individual_obj[indivial_i,:] = [ 3. 9.101.110.]
409 cord_individual_obj[indivial_i,:] = [ 4. 8.182.190.]
410 cord_individual_obj[indivial_i,:] = [ 5. 10.73.83.]
411 cord_individual_obj[indivial_i,:] = [ 6. 10.81.91.]
412 cord_individual_obj[indivial_i,:] = [ 7. 9.105.114.]
413 cord_individual_obj[indivial_i,:] = [ 8. 7.144.151.]
414 cord_individual_obj[indivial_i,:] = [ 9. 8.179.187.]
415 cord_individual_obj[indivial_i,:] = [10. 9.89.98.]

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```

416 cord_individual_obj[indivial_i,:] = [11. 9. 73. 82.]
417 cord_individual_obj[indivial_i,:] = [12. 8. 115. 123.]
418 cord_individual_obj[indivial_i,:] = [13. 10. 69. 79.]
419 cord_individual_obj[indivial_i,:] = [14. 9. 94. 103.]
420 cord_individual_obj[indivial_i,:] = [15. 9. 67. 76.]
421 cord_individual_obj[indivial_i,:] = [16. 7. 121. 128.]
422 cord_individual_obj[indivial_i,:] = [17. 9. 86. 95.]
423 cord_individual_obj[indivial_i,:] = [18. 9. 97. 106.]
424 cord_individual_obj[indivial_i,:] = [19. 7. 103. 110.]
425 cord_individual_obj[indivial_i,:] = [20. 8. 114. 122.]
426 cord_individual_obj[indivial_i,:] = [21. 8. 74. 82.]
427 cord_individual_obj[indivial_i,:] = [22. 8. 132. 140.]
428 cord_individual_obj[indivial_i,:] = [23. 8. 44. 52.]
429 cord_individual_obj[indivial_i,:] = [24. 10. 136. 146.]
430
431 min(cord_individual_obj[:,3]) = 52.0
432 histol_G_best_iter[iter,3] = 52.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 9. 117. 126.]
437 cord_individual_obj[indivial_i,:] = [ 1. 8. 94. 102.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 90. 99.]
439 cord_individual_obj[indivial_i,:] = [ 3. 10. 103. 113.]
440 cord_individual_obj[indivial_i,:] = [ 4. 8. 44. 52.]
441 cord_individual_obj[indivial_i,:] = [ 5. 10. 150. 160.]
442 cord_individual_obj[indivial_i,:] = [ 6. 9. 80. 89.]
443 cord_individual_obj[indivial_i,:] = [ 7. 9. 84. 93.]
444 cord_individual_obj[indivial_i,:] = [ 8. 9. 130. 139.]
445 cord_individual_obj[indivial_i,:] = [ 9. 8. 101. 109.]
446 cord_individual_obj[indivial_i,:] = [10. 9. 103. 112.]
447 cord_individual_obj[indivial_i,:] = [11. 9. 128. 137.]
448 cord_individual_obj[indivial_i,:] = [12. 10. 92. 102.]
449 cord_individual_obj[indivial_i,:] = [13. 11. 74. 85.]
450 cord_individual_obj[indivial_i,:] = [14. 9. 109. 118.]
451 cord_individual_obj[indivial_i,:] = [15. 8. 111. 119.]
452 cord_individual_obj[indivial_i,:] = [16. 9. 142. 151.]
453 cord_individual_obj[indivial_i,:] = [17. 8. 83. 91.]
454 cord_individual_obj[indivial_i,:] = [18. 8. 94. 102.]
455 cord_individual_obj[indivial_i,:] = [19. 7. 107. 114.]
456 cord_individual_obj[indivial_i,:] = [20. 10. 156. 166.]
457 cord_individual_obj[indivial_i,:] = [21. 8. 133. 141.]
458 cord_individual_obj[indivial_i,:] = [22. 9. 67. 76.]
459 cord_individual_obj[indivial_i,:] = [23. 8. 86. 94.]
460 cord_individual_obj[indivial_i,:] = [24. 8. 139. 147.]
461
462 min(cord_individual_obj[:,3]) = 52.0
463 histol_G_best_iter[iter,3] = 52.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 8. 129. 137.]
468 cord_individual_obj[indivial_i,:] = [ 1. 8. 86. 94.]
469 cord_individual_obj[indivial_i,:] = [ 2. 9. 148. 157.]
470 cord_individual_obj[indivial_i,:] = [ 3. 8. 83. 91.]
471 cord_individual_obj[indivial_i,:] = [ 4. 7. 159. 166.]
472 cord_individual_obj[indivial_i,:] = [ 5. 9. 90. 99.]
473 cord_individual_obj[indivial_i,:] = [ 6. 8. 142. 150.]
474 cord_individual_obj[indivial_i,:] = [ 7. 9. 91. 100.]
475 cord_individual_obj[indivial_i,:] = [ 8. 8. 75. 83.]
476 cord_individual_obj[indivial_i,:] = [ 9. 8. 147. 155.]
477 cord_individual_obj[indivial_i,:] = [10. 8. 94. 102.]
478 cord_individual_obj[indivial_i,:] = [11. 10. 113. 123.]
479 cord_individual_obj[indivial_i,:] = [12. 10. 128. 138.]
480 cord_individual_obj[indivial_i,:] = [13. 8. 58. 66.]
481 cord_individual_obj[indivial_i,:] = [14. 8. 102. 110.]
482 cord_individual_obj[indivial_i,:] = [15. 10. 200. 210.]
483 cord_individual_obj[indivial_i,:] = [16. 9. 71. 80.]
484 cord_individual_obj[indivial_i,:] = [17. 9. 114. 123.]
485 cord_individual_obj[indivial_i,:] = [18. 9. 93. 102.]
486 cord_individual_obj[indivial_i,:] = [19. 7. 134. 141.]
487 cord_individual_obj[indivial_i,:] = [20. 8. 44. 52.]
488 cord_individual_obj[indivial_i,:] = [21. 9. 95. 104.]
489 cord_individual_obj[indivial_i,:] = [22. 10. 110. 120.]
490 cord_individual_obj[indivial_i,:] = [23. 8. 138. 146.]
491 cord_individual_obj[indivial_i,:] = [24. 8. 130. 138.]
492
493 min(cord_individual_obj[:,3]) = 52.0
494 histol_G_best_iter[iter,3] = 52.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 10. 88. 98.]
499 cord_individual_obj[indivial_i,:] = [ 1. 9. 148. 157.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 7. 45. 52.]
501 cord_individual_obj[indivial_i, :] = [ 3. 10. 111. 121.]
502 cord_individual_obj[indivial_i, :] = [ 4. 9. 110. 119.]
503 cord_individual_obj[indivial_i, :] = [ 5. 8. 106. 114.]
504 cord_individual_obj[indivial_i, :] = [ 6. 10. 126. 136.]
505 cord_individual_obj[indivial_i, :] = [ 7. 11. 126. 137.]
506 cord_individual_obj[indivial_i, :] = [ 8. 8. 194. 202.]
507 cord_individual_obj[indivial_i, :] = [ 9. 11. 165. 176.]
508 cord_individual_obj[indivial_i, :] = [ 10. 7. 102. 109.]
509 cord_individual_obj[indivial_i, :] = [ 11. 11. 142. 153.]
510 cord_individual_obj[indivial_i, :] = [ 12. 9. 124. 133.]
511 cord_individual_obj[indivial_i, :] = [ 13. 10. 128. 138.]
512 cord_individual_obj[indivial_i, :] = [ 14. 10. 100. 110.]
513 cord_individual_obj[indivial_i, :] = [ 15. 8. 44. 52.]
514 cord_individual_obj[indivial_i, :] = [ 16. 9. 146. 155.]
515 cord_individual_obj[indivial_i, :] = [ 17. 8. 71. 79.]
516 cord_individual_obj[indivial_i, :] = [ 18. 7. 118. 125.]
517 cord_individual_obj[indivial_i, :] = [ 19. 10. 161. 171.]
518 cord_individual_obj[indivial_i, :] = [ 20. 11. 209. 220.]
519 cord_individual_obj[indivial_i, :] = [ 21. 9. 167. 176.]
520 cord_individual_obj[indivial_i, :] = [ 22. 9. 126. 135.]
521 cord_individual_obj[indivial_i, :] = [ 23. 7. 39. 46.]
522 cord_individual_obj[indivial_i, :] = [ 24. 8. 135. 143.]
523
524 min(cord_individual_obj[:, 3]) = 46.0
525 histol_G_best_iter[iter, 3] = 46.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 8. 158. 166.]
530 cord_individual_obj[indivial_i, :] = [ 1. 9. 100. 109.]
531 cord_individual_obj[indivial_i, :] = [ 2. 9. 89. 98.]
532 cord_individual_obj[indivial_i, :] = [ 3. 10. 55. 65.]
533 cord_individual_obj[indivial_i, :] = [ 4. 11. 133. 144.]
534 cord_individual_obj[indivial_i, :] = [ 5. 8. 92. 100.]
535 cord_individual_obj[indivial_i, :] = [ 6. 8. 72. 80.]
536 cord_individual_obj[indivial_i, :] = [ 7. 9. 129. 138.]
537 cord_individual_obj[indivial_i, :] = [ 8. 9. 111. 120.]
538 cord_individual_obj[indivial_i, :] = [ 9. 9. 91. 100.]
539 cord_individual_obj[indivial_i, :] = [ 10. 7. 82. 89.]
540 cord_individual_obj[indivial_i, :] = [ 11. 10. 126. 136.]
541 cord_individual_obj[indivial_i, :] = [ 12. 9. 90. 99.]
542 cord_individual_obj[indivial_i, :] = [ 13. 9. 119. 128.]
543 cord_individual_obj[indivial_i, :] = [ 14. 10. 106. 116.]
544 cord_individual_obj[indivial_i, :] = [ 15. 8. 157. 165.]
545 cord_individual_obj[indivial_i, :] = [ 16. 8. 106. 114.]
546 cord_individual_obj[indivial_i, :] = [ 17. 7. 112. 119.]
547 cord_individual_obj[indivial_i, :] = [ 18. 8. 109. 117.]
548 cord_individual_obj[indivial_i, :] = [ 19. 8. 73. 81.]
549 cord_individual_obj[indivial_i, :] = [ 20. 7. 39. 46.]
550 cord_individual_obj[indivial_i, :] = [ 21. 9. 83. 92.]
551 cord_individual_obj[indivial_i, :] = [ 22. 9. 142. 151.]
552 cord_individual_obj[indivial_i, :] = [ 23. 10. 168. 178.]
553 cord_individual_obj[indivial_i, :] = [ 24. 8. 103. 111.]
554
555 min(cord_individual_obj[:, 3]) = 46.0
556 histol_G_best_iter[iter, 3] = 46.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 9. 165. 174.]
561 cord_individual_obj[indivial_i, :] = [ 1. 8. 153. 161.]
562 cord_individual_obj[indivial_i, :] = [ 2. 9. 93. 102.]
563 cord_individual_obj[indivial_i, :] = [ 3. 8. 94. 102.]
564 cord_individual_obj[indivial_i, :] = [ 4. 9. 78. 87.]
565 cord_individual_obj[indivial_i, :] = [ 5. 9. 144. 153.]
566 cord_individual_obj[indivial_i, :] = [ 6. 8. 127. 135.]
567 cord_individual_obj[indivial_i, :] = [ 7. 10. 120. 130.]
568 cord_individual_obj[indivial_i, :] = [ 8. 10. 74. 84.]
569 cord_individual_obj[indivial_i, :] = [ 9. 10. 136. 146.]
570 cord_individual_obj[indivial_i, :] = [ 10. 9. 113. 122.]
571 cord_individual_obj[indivial_i, :] = [ 11. 8. 61. 69.]
572 cord_individual_obj[indivial_i, :] = [ 12. 9. 89. 98.]
573 cord_individual_obj[indivial_i, :] = [ 13. 9. 95. 104.]
574 cord_individual_obj[indivial_i, :] = [ 14. 10. 124. 134.]
575 cord_individual_obj[indivial_i, :] = [ 15. 10. 96. 106.]
576 cord_individual_obj[indivial_i, :] = [ 16. 8. 131. 139.]
577 cord_individual_obj[indivial_i, :] = [ 17. 10. 80. 90.]
578 cord_individual_obj[indivial_i, :] = [ 18. 9. 123. 132.]
579 cord_individual_obj[indivial_i, :] = [ 19. 8. 154. 162.]
580 cord_individual_obj[indivial_i, :] = [ 20. 9. 101. 110.]
581 cord_individual_obj[indivial_i, :] = [ 21. 8. 123. 131.]
582 cord_individual_obj[indivial_i, :] = [ 22. 10. 104. 114.]
583 cord_individual_obj[indivial_i, :] = [ 23. 7. 39. 46.]

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584     cord_individual_obj[indivial_i, :] = [ 24.  9. 108. 117.]
585
586     min(cord_individual_obj[:, 3]) = 46.0
587     historl_G_best_iter[iter, 3] = 46.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0.  7. 39. 46.]
592     cord_individual_obj[indivial_i, :] = [ 1.  8. 75. 83.]
593     cord_individual_obj[indivial_i, :] = [ 2.  8. 97. 105.]
594     cord_individual_obj[indivial_i, :] = [ 3.  10. 92. 102.]
595     cord_individual_obj[indivial_i, :] = [ 4.  8. 170. 178.]
596     cord_individual_obj[indivial_i, :] = [ 5.  7. 62. 69.]
597     cord_individual_obj[indivial_i, :] = [ 6.  6. 158. 164.]
598     cord_individual_obj[indivial_i, :] = [ 7.  8. 86. 94.]
599     cord_individual_obj[indivial_i, :] = [ 8.  10. 149. 159.]
600     cord_individual_obj[indivial_i, :] = [ 9.  10. 112. 122.]
601     cord_individual_obj[indivial_i, :] = [ 10. 7. 115. 122.]
602     cord_individual_obj[indivial_i, :] = [ 11. 10. 120. 130.]
603     cord_individual_obj[indivial_i, :] = [ 12. 11. 69. 80.]
604     cord_individual_obj[indivial_i, :] = [ 13. 10. 90. 100.]
605     cord_individual_obj[indivial_i, :] = [ 14. 9. 110. 119.]
606     cord_individual_obj[indivial_i, :] = [ 15. 9. 87. 96.]
607     cord_individual_obj[indivial_i, :] = [ 16. 8. 67. 75.]
608     cord_individual_obj[indivial_i, :] = [ 17. 6. 118. 124.]
609     cord_individual_obj[indivial_i, :] = [ 18. 9. 116. 125.]
610     cord_individual_obj[indivial_i, :] = [ 19. 8. 120. 128.]
611     cord_individual_obj[indivial_i, :] = [ 20. 9. 168. 177.]
612     cord_individual_obj[indivial_i, :] = [ 21. 8. 106. 114.]
613     cord_individual_obj[indivial_i, :] = [ 22. 8. 110. 118.]
614     cord_individual_obj[indivial_i, :] = [ 23. 9. 84. 93.]
615     cord_individual_obj[indivial_i, :] = [ 24. 9. 109. 118.]
616
617     min(cord_individual_obj[:, 3]) = 46.0
618     historl_G_best_iter[iter, 3] = 46.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0.  7. 158. 165.]
623     cord_individual_obj[indivial_i, :] = [ 1.  8. 73. 81.]
624     cord_individual_obj[indivial_i, :] = [ 2.  8. 127. 135.]
625     cord_individual_obj[indivial_i, :] = [ 3.  9. 68. 77.]
626     cord_individual_obj[indivial_i, :] = [ 4.  7. 39. 46.]
627     cord_individual_obj[indivial_i, :] = [ 5.  8. 112. 120.]
628     cord_individual_obj[indivial_i, :] = [ 6.  8. 83. 91.]
629     cord_individual_obj[indivial_i, :] = [ 7.  9. 70. 79.]
630     cord_individual_obj[indivial_i, :] = [ 8.  9. 134. 143.]
631     cord_individual_obj[indivial_i, :] = [ 9.  10. 165. 175.]
632     cord_individual_obj[indivial_i, :] = [ 10. 8. 108. 116.]
633     cord_individual_obj[indivial_i, :] = [ 11. 8. 138. 146.]
634     cord_individual_obj[indivial_i, :] = [ 12. 10. 92. 102.]
635     cord_individual_obj[indivial_i, :] = [ 13. 9. 116. 125.]
636     cord_individual_obj[indivial_i, :] = [ 14. 11. 71. 82.]
637     cord_individual_obj[indivial_i, :] = [ 15. 8. 136. 144.]
638     cord_individual_obj[indivial_i, :] = [ 16. 8. 88. 96.]
639     cord_individual_obj[indivial_i, :] = [ 17. 9. 129. 138.]
640     cord_individual_obj[indivial_i, :] = [ 18. 9. 97. 106.]
641     cord_individual_obj[indivial_i, :] = [ 19. 7. 75. 82.]
642     cord_individual_obj[indivial_i, :] = [ 20. 9. 88. 97.]
643     cord_individual_obj[indivial_i, :] = [ 21. 10. 124. 134.]
644     cord_individual_obj[indivial_i, :] = [ 22. 9. 124. 133.]
645     cord_individual_obj[indivial_i, :] = [ 23. 7. 127. 134.]
646     cord_individual_obj[indivial_i, :] = [ 24. 7. 92. 99.]
647
648     min(cord_individual_obj[:, 3]) = 46.0
649     historl_G_best_iter[iter, 3] = 46.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0.  8. 95. 103.]
654     cord_individual_obj[indivial_i, :] = [ 1.  9. 83. 92.]
655     cord_individual_obj[indivial_i, :] = [ 2.  8. 101. 109.]
656     cord_individual_obj[indivial_i, :] = [ 3.  9. 168. 177.]
657     cord_individual_obj[indivial_i, :] = [ 4.  10. 102. 112.]
658     cord_individual_obj[indivial_i, :] = [ 5. 11. 74. 85.]
659     cord_individual_obj[indivial_i, :] = [ 6. 10. 96. 106.]
660     cord_individual_obj[indivial_i, :] = [ 7. 9. 104. 113.]
661     cord_individual_obj[indivial_i, :] = [ 8. 9. 78. 87.]
662     cord_individual_obj[indivial_i, :] = [ 9. 7. 39. 46.]
663     cord_individual_obj[indivial_i, :] = [ 10. 8. 105. 113.]
664     cord_individual_obj[indivial_i, :] = [ 11. 11. 134. 145.]
665     cord_individual_obj[indivial_i, :] = [ 12. 12. 101. 113.]
666     cord_individual_obj[indivial_i, :] = [ 13. 9. 66. 75.]
667     cord_individual_obj[indivial_i, :] = [ 14. 10. 101. 111.]

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668 cord_individual_obj[indivial_i,:] = [15. 9. 90. 99.]
669 cord_individual_obj[indivial_i,:] = [16. 8. 120. 128.]
670 cord_individual_obj[indivial_i,:] = [17. 8. 149. 157.]
671 cord_individual_obj[indivial_i,:] = [18. 8. 142. 150.]
672 cord_individual_obj[indivial_i,:] = [19. 8. 120. 128.]
673 cord_individual_obj[indivial_i,:] = [20. 8. 103. 111.]
674 cord_individual_obj[indivial_i,:] = [21. 8. 105. 113.]
675 cord_individual_obj[indivial_i,:] = [22. 10. 99. 109.]
676 cord_individual_obj[indivial_i,:] = [23. 8. 134. 142.]
677 cord_individual_obj[indivial_i,:] = [24. 10. 142. 152.]
678
679 min(cord_individual_obj[:,3]) = 46.0
680 historl_G_best_iter[iter,3] = 46.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 190.0
689 Proportion_of_area = 0.17592592592592593
690 BEST_CHROM =
691 berth: [2. 25. 7. 7.5 25.5 13.5 12. 14.5 3.5 3. 8.5 1.5 17.5 19.
692 8. 14.]
693 time: [0. 3. 0. 2. 0. 4. 2. 4. 6. 4. 2. 0. 1. 6. 5.]
694 num_QC: [3. 2. 4. 4. 2. 4. 4. 5. 4. 2. 3. 3. 5. 4. 3. 3.]
695 Objective function values and some other indicators:
696 Obj0 = 7.00          Obj1 = 39.00          Obj0 + Obj1 = 46.00
697 Total movement of crane: 0.00
698 Total waiting time in berth position: 39.00
699 Total index of q during berthing: 828.00
700 Specific arrangement for each vessel:
701 V_id: 0      li: 4.0      xi: 2.0      bow of i: 0.0      tail of i: 4.0      gama_i0: 0.0      gama_i1: 1.0
    .           gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 120.0      work load_i:
120.0      work load gap_i: 0
702 V_id: 1      li: 8.0      xi: 25.0      bow of i: 21.0      tail of i: 29.0      gama_i0: 3.0      gama_i1: 6
    .           gama_i1 + 1: 7.0      gama_i1 - gama_i0: 3.0      duration_time_i: 4.0      demand_i: 140.0      work
load_i: 140.0      work load gap_i: 0
703 V_id: 2      li: 6.0      xi: 7.0      bow of i: 4.0      tail of i: 10.0      gama_i0: 0.0      gama_i1: 1.0
    .           gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 120.0      work load_i:
120.0      work load gap_i: 0
704 V_id: 3      li: 9.0      xi: 7.5      bow of i: 3.0      tail of i: 12.0      gama_i0: 2.0      gama_i1: 3.0
    .           gama_i1 + 1: 4.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 160.0      work load_i:
160.0      work load gap_i: 0
705 V_id: 4      li: 9.0      xi: 25.5      bow of i: 21.0      tail of i: 30.0      gama_i0: 0.0      gama_i1: 2
    .           gama_i1 + 1: 3.0      gama_i1 - gama_i0: 2.0      duration_time_i: 3.0      demand_i: 100.0      work
load_i: 100.0      work load gap_i: 0
706 V_id: 5      li: 7.0      xi: 13.5      bow of i: 10.0      tail of i: 17.0      gama_i0: 4.0      gama_i1: 4
    .           gama_i1 + 1: 5.0      gama_i1 - gama_i0: 0.0      duration_time_i: 1.0      demand_i: 60.0      work
load_i: 60.0      work load gap_i: 0
707 V_id: 6      li: 4.0      xi: 12.0      bow of i: 10.0      tail of i: 14.0      gama_i0: 0.0      gama_i1: 1
    .           gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 120.0      work
load_i: 120.0      work load gap_i: 0
708 V_id: 7      li: 5.0      xi: 14.5      bow of i: 12.0      tail of i: 17.0      gama_i0: 2.0      gama_i1: 2
    .           gama_i1 + 1: 3.0      gama_i1 - gama_i0: 0.0      duration_time_i: 1.0      demand_i: 100.0      work
load_i: 100.0      work load gap_i: 0
709 V_id: 8      li: 7.0      xi: 3.5      bow of i: 0.0      tail of i: 7.0      gama_i0: 4.0      gama_i1: 5.0
    .           gama_i1 + 1: 6.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 160.0      work load_i:
160.0      work load gap_i: 0
710 V_id: 9      li: 6.0      xi: 3.0      bow of i: 0.0      tail of i: 6.0      gama_i0: 6.0      gama_i1: 7.0
    .           gama_i1 + 1: 8.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 60.0      work load_i:
60.0      work load gap_i: 0
711 V_id: 10     li: 3.0      xi: 8.5      bow of i: 7.0      tail of i: 10.0      gama_i0: 4.0      gama_i1: 5
    .           gama_i1 + 1: 6.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 80.0      work
load_i: 80.0      work load gap_i: 0
712 V_id: 11     li: 3.0      xi: 1.5      bow of i: 0.0      tail of i: 3.0      gama_i0: 2.0      gama_i1: 3.0
    .           gama_i1 + 1: 4.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 100.0      work load_i:
100.0      work load gap_i: 0
713 V_id: 12     li: 7.0      xi: 17.5      bow of i: 14.0      tail of i: 21.0      gama_i0: 0.0      gama_i1
    : 0.0       gama_i1 + 1: 1.0      gama_i1 - gama_i0: 0.0      duration_time_i: 1.0      demand_i: 60.0      work
load_i: 60.0      work load gap_i: 0
714 V_id: 13     li: 4.0      xi: 19.0      bow of i: 17.0      tail of i: 21.0      gama_i0: 1.0      gama_i1
    : 2.0       gama_i1 + 1: 3.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 160.0      work
load_i: 160.0      work load gap_i: 0
715 V_id: 14     li: 4.0      xi: 8.0      bow of i: 6.0      tail of i: 10.0      gama_i0: 6.0      gama_i1: 6
    : 0.0       gama_i1 + 1: 7.0      gama_i1 - gama_i0: 0.0      duration_time_i: 1.0      demand_i: 60.0      work
load_i: 60.0      work load gap_i: 0
716 V_id: 15     li: 8.0      xi: 14.0      bow of i: 10.0      tail of i: 18.0      gama_i0: 5.0      gama_i1
    : 6.0       gama_i1 + 1: 7.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 120.0      work
load_i: 120.0      work load gap_i: 0
717
718 Algorithm finished and the total CPU time: 472 s
719 End

```