

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 8. 145. 153.]
81 cord_individual_obj[indivial_i,:] = [ 17. 10. 153. 163.]
82 cord_individual_obj[indivial_i,:] = [ 18. 7. 176. 183.]
83 cord_individual_obj[indivial_i,:] = [ 19. 10. 126. 136.]
84 cord_individual_obj[indivial_i,:] = [ 20. 7. 88. 95.]
85 cord_individual_obj[indivial_i,:] = [ 21. 8. 150. 158.]
86 cord_individual_obj[indivial_i,:] = [ 22. 7. 166. 173.]
87 cord_individual_obj[indivial_i,:] = [ 23. 9. 112. 121.]
88 cord_individual_obj[indivial_i,:] = [ 24. 10. 65. 75.]
89
90 min(cord_individual_obj[:,3]) = 62.0
91 historl_G_best_iter[iter, 3] = 62.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 7. 64. 71.]
96 cord_individual_obj[indivial_i,:] = [ 1. 7. 67. 74.]
97 cord_individual_obj[indivial_i,:] = [ 2. 7. 151. 158.]
98 cord_individual_obj[indivial_i,:] = [ 3. 8. 59. 67.]
99 cord_individual_obj[indivial_i,:] = [ 4. 7. 93. 100.]
100 cord_individual_obj[indivial_i,:] = [ 5. 10. 75. 85.]
101 cord_individual_obj[indivial_i,:] = [ 6. 10. 97. 107.]
102 cord_individual_obj[indivial_i,:] = [ 7. 9. 61. 70.]
103 cord_individual_obj[indivial_i,:] = [ 8. 10. 110. 120.]
104 cord_individual_obj[indivial_i,:] = [ 9. 8. 67. 75.]
105 cord_individual_obj[indivial_i,:] = [ 10. 7. 147. 154.]
106 cord_individual_obj[indivial_i,:] = [ 11. 10. 92. 102.]
107 cord_individual_obj[indivial_i,:] = [ 12. 9. 62. 71.]
108 cord_individual_obj[indivial_i,:] = [ 13. 8. 118. 126.]
109 cord_individual_obj[indivial_i,:] = [ 14. 8. 95. 103.]
110 cord_individual_obj[indivial_i,:] = [ 15. 8. 101. 109.]
111 cord_individual_obj[indivial_i,:] = [ 16. 7. 135. 142.]
112 cord_individual_obj[indivial_i,:] = [ 17. 7. 79. 86.]
113 cord_individual_obj[indivial_i,:] = [ 18. 8. 54. 62.]
114 cord_individual_obj[indivial_i,:] = [ 19. 9. 102. 111.]
115 cord_individual_obj[indivial_i,:] = [ 20. 9. 101. 110.]
116 cord_individual_obj[indivial_i,:] = [ 21. 8. 187. 195.]
117 cord_individual_obj[indivial_i,:] = [ 22. 8. 71. 79.]
118 cord_individual_obj[indivial_i,:] = [ 23. 8. 67. 75.]
119 cord_individual_obj[indivial_i,:] = [ 24. 9. 127. 136.]
120
121 min(cord_individual_obj[:,3]) = 62.0
122 historl_G_best_iter[iter, 3] = 62.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 6. 80. 86.]
127 cord_individual_obj[indivial_i,:] = [ 1. 8. 79. 87.]
128 cord_individual_obj[indivial_i,:] = [ 2. 8. 176. 184.]
129 cord_individual_obj[indivial_i,:] = [ 3. 9. 110. 119.]
130 cord_individual_obj[indivial_i,:] = [ 4. 6. 56. 62.]
131 cord_individual_obj[indivial_i,:] = [ 5. 9. 108. 117.]
132 cord_individual_obj[indivial_i,:] = [ 6. 8. 44. 52.]
133 cord_individual_obj[indivial_i,:] = [ 7. 8. 41. 49.]
134 cord_individual_obj[indivial_i,:] = [ 8. 9. 85. 94.]
135 cord_individual_obj[indivial_i,:] = [ 9. 7. 77. 84.]
136 cord_individual_obj[indivial_i,:] = [ 10. 5. 114. 119.]
137 cord_individual_obj[indivial_i,:] = [ 11. 9. 76. 85.]
138 cord_individual_obj[indivial_i,:] = [ 12. 10. 101. 111.]
139 cord_individual_obj[indivial_i,:] = [ 13. 8. 125. 133.]
140 cord_individual_obj[indivial_i,:] = [ 14. 9. 148. 157.]
141 cord_individual_obj[indivial_i,:] = [ 15. 9. 109. 118.]
142 cord_individual_obj[indivial_i,:] = [ 16. 8. 81. 89.]
143 cord_individual_obj[indivial_i,:] = [ 17. 7. 113. 120.]
144 cord_individual_obj[indivial_i,:] = [ 18. 8. 71. 79.]
145 cord_individual_obj[indivial_i,:] = [ 19. 9. 61. 70.]
146 cord_individual_obj[indivial_i,:] = [ 20. 8. 82. 90.]
147 cord_individual_obj[indivial_i,:] = [ 21. 8. 54. 62.]
148 cord_individual_obj[indivial_i,:] = [ 22. 8. 122. 130.]
149 cord_individual_obj[indivial_i,:] = [ 23. 7. 72. 79.]
150 cord_individual_obj[indivial_i,:] = [ 24. 9. 157. 166.]
151
152 min(cord_individual_obj[:,3]) = 49.0
153 historl_G_best_iter[iter, 3] = 49.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 8. 130. 138.]
158 cord_individual_obj[indivial_i,:] = [ 1. 8. 149. 157.]
159 cord_individual_obj[indivial_i,:] = [ 2. 8. 41. 49.]
160 cord_individual_obj[indivial_i,:] = [ 3. 9. 77. 86.]
161 cord_individual_obj[indivial_i,:] = [ 4. 7. 99. 106.]
162 cord_individual_obj[indivial_i,:] = [ 5. 8. 94. 102.]
163 cord_individual_obj[indivial_i,:] = [ 6. 8. 90. 98.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 8. 122. 130.]
165 cord_individual_obj[indivial_i,:] = [ 8. 9. 85. 94.]
166 cord_individual_obj[indivial_i,:] = [ 9. 7. 107. 114.]
167 cord_individual_obj[indivial_i,:] = [10. 7. 105. 112.]
168 cord_individual_obj[indivial_i,:] = [11. 9. 52. 61.]
169 cord_individual_obj[indivial_i,:] = [12. 10. 106. 116.]
170 cord_individual_obj[indivial_i,:] = [13. 8. 84. 92.]
171 cord_individual_obj[indivial_i,:] = [14. 9. 94. 103.]
172 cord_individual_obj[indivial_i,:] = [15. 7. 143. 150.]
173 cord_individual_obj[indivial_i,:] = [16. 9. 171. 180.]
174 cord_individual_obj[indivial_i,:] = [17. 8. 105. 113.]
175 cord_individual_obj[indivial_i,:] = [18. 9. 118. 127.]
176 cord_individual_obj[indivial_i,:] = [19. 9. 82. 91.]
177 cord_individual_obj[indivial_i,:] = [20. 8. 60. 68.]
178 cord_individual_obj[indivial_i,:] = [21. 7. 96. 103.]
179 cord_individual_obj[indivial_i,:] = [22. 8. 80. 88.]
180 cord_individual_obj[indivial_i,:] = [23. 7. 70. 77.]
181 cord_individual_obj[indivial_i,:] = [24. 9. 94. 103.]
182
183 min(cord_individual_obj[:,3]) = 49.0
184 historl_G_best_iter[iter,3] = 49.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 8. 144. 152.]
189 cord_individual_obj[indivial_i,:] = [ 1. 7. 125. 132.]
190 cord_individual_obj[indivial_i,:] = [ 2. 7. 71. 78.]
191 cord_individual_obj[indivial_i,:] = [ 3. 10. 109. 119.]
192 cord_individual_obj[indivial_i,:] = [ 4. 8. 104. 112.]
193 cord_individual_obj[indivial_i,:] = [ 5. 8. 107. 115.]
194 cord_individual_obj[indivial_i,:] = [ 6. 7. 90. 97.]
195 cord_individual_obj[indivial_i,:] = [ 7. 8. 106. 114.]
196 cord_individual_obj[indivial_i,:] = [ 8. 10. 91. 101.]
197 cord_individual_obj[indivial_i,:] = [ 9. 8. 78. 86.]
198 cord_individual_obj[indivial_i,:] = [10. 7. 200. 207.]
199 cord_individual_obj[indivial_i,:] = [11. 7. 79. 86.]
200 cord_individual_obj[indivial_i,:] = [12. 9. 142. 151.]
201 cord_individual_obj[indivial_i,:] = [13. 7. 75. 82.]
202 cord_individual_obj[indivial_i,:] = [14. 9. 56. 65.]
203 cord_individual_obj[indivial_i,:] = [15. 8. 100. 108.]
204 cord_individual_obj[indivial_i,:] = [16. 8. 41. 49.]
205 cord_individual_obj[indivial_i,:] = [17. 9. 89. 98.]
206 cord_individual_obj[indivial_i,:] = [18. 9. 60. 69.]
207 cord_individual_obj[indivial_i,:] = [19. 9. 78. 87.]
208 cord_individual_obj[indivial_i,:] = [20. 11. 99. 110.]
209 cord_individual_obj[indivial_i,:] = [21. 8. 111. 119.]
210 cord_individual_obj[indivial_i,:] = [22. 7. 86. 93.]
211 cord_individual_obj[indivial_i,:] = [23. 6. 122. 128.]
212 cord_individual_obj[indivial_i,:] = [24. 10. 77. 87.]
213
214 min(cord_individual_obj[:,3]) = 49.0
215 historl_G_best_iter[iter,3] = 49.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 8. 110. 118.]
220 cord_individual_obj[indivial_i,:] = [ 1. 8. 163. 171.]
221 cord_individual_obj[indivial_i,:] = [ 2. 8. 80. 88.]
222 cord_individual_obj[indivial_i,:] = [ 3. 8. 134. 142.]
223 cord_individual_obj[indivial_i,:] = [ 4. 7. 100. 107.]
224 cord_individual_obj[indivial_i,:] = [ 5. 7. 117. 124.]
225 cord_individual_obj[indivial_i,:] = [ 6. 8. 154. 162.]
226 cord_individual_obj[indivial_i,:] = [ 7. 9. 80. 89.]
227 cord_individual_obj[indivial_i,:] = [ 8. 8. 53. 61.]
228 cord_individual_obj[indivial_i,:] = [ 9. 8. 88. 96.]
229 cord_individual_obj[indivial_i,:] = [10. 8. 41. 49.]
230 cord_individual_obj[indivial_i,:] = [11. 7. 103. 110.]
231 cord_individual_obj[indivial_i,:] = [12. 8. 79. 87.]
232 cord_individual_obj[indivial_i,:] = [13. 7. 104. 111.]
233 cord_individual_obj[indivial_i,:] = [14. 9. 139. 148.]
234 cord_individual_obj[indivial_i,:] = [15. 8. 155. 163.]
235 cord_individual_obj[indivial_i,:] = [16. 9. 143. 152.]
236 cord_individual_obj[indivial_i,:] = [17. 9. 145. 154.]
237 cord_individual_obj[indivial_i,:] = [18. 8. 76. 84.]
238 cord_individual_obj[indivial_i,:] = [19. 9. 117. 126.]
239 cord_individual_obj[indivial_i,:] = [20. 9. 75. 84.]
240 cord_individual_obj[indivial_i,:] = [21. 9. 71. 80.]
241 cord_individual_obj[indivial_i,:] = [22. 8. 97. 105.]
242 cord_individual_obj[indivial_i,:] = [23. 7. 69. 76.]
243 cord_individual_obj[indivial_i,:] = [24. 8. 110. 118.]
244
245 min(cord_individual_obj[:,3]) = 49.0
246 historl_G_best_iter[iter,3] = 49.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  9. 96. 105.]
251 cord_individual_obj[indivial_i, :] = [ 1.  8. 41. 49.]
252 cord_individual_obj[indivial_i, :] = [ 2.  8. 80. 88.]
253 cord_individual_obj[indivial_i, :] = [ 3.  8. 80. 88.]
254 cord_individual_obj[indivial_i, :] = [ 4.  6. 93. 99.]
255 cord_individual_obj[indivial_i, :] = [ 5.  7. 86. 93.]
256 cord_individual_obj[indivial_i, :] = [ 6.  9. 57. 66.]
257 cord_individual_obj[indivial_i, :] = [ 7.  8. 103. 111.]
258 cord_individual_obj[indivial_i, :] = [ 8. 10. 46. 56.]
259 cord_individual_obj[indivial_i, :] = [ 9.  7. 115. 122.]
260 cord_individual_obj[indivial_i, :] = [10.  7. 105. 112.]
261 cord_individual_obj[indivial_i, :] = [11.  9. 142. 151.]
262 cord_individual_obj[indivial_i, :] = [12. 10. 103. 113.]
263 cord_individual_obj[indivial_i, :] = [13.  8. 74. 82.]
264 cord_individual_obj[indivial_i, :] = [14.  8. 94. 102.]
265 cord_individual_obj[indivial_i, :] = [15.  8. 138. 146.]
266 cord_individual_obj[indivial_i, :] = [16.  7. 107. 114.]
267 cord_individual_obj[indivial_i, :] = [17.  7. 76. 83.]
268 cord_individual_obj[indivial_i, :] = [18.  9. 140. 149.]
269 cord_individual_obj[indivial_i, :] = [19. 10. 72. 82.]
270 cord_individual_obj[indivial_i, :] = [20.  8. 63. 71.]
271 cord_individual_obj[indivial_i, :] = [21.  8. 75. 83.]
272 cord_individual_obj[indivial_i, :] = [22.  7. 88. 95.]
273 cord_individual_obj[indivial_i, :] = [23.  8. 76. 84.]
274 cord_individual_obj[indivial_i, :] = [24.  8. 125. 133.]
275

276 min(cord_individual_obj[:, 3]) = 49.0
277 historl_G_best_iter[iter, 3] = 49.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0.  8. 101. 109.]
282 cord_individual_obj[indivial_i, :] = [ 1.  8. 120. 128.]
283 cord_individual_obj[indivial_i, :] = [ 2.  8. 118. 126.]
284 cord_individual_obj[indivial_i, :] = [ 3.  7. 87. 94.]
285 cord_individual_obj[indivial_i, :] = [ 4.  6. 116. 122.]
286 cord_individual_obj[indivial_i, :] = [ 5.  8. 126. 134.]
287 cord_individual_obj[indivial_i, :] = [ 6.  8. 81. 89.]
288 cord_individual_obj[indivial_i, :] = [ 7.  7. 111. 118.]
289 cord_individual_obj[indivial_i, :] = [ 8.  9. 93. 102.]
290 cord_individual_obj[indivial_i, :] = [ 9.  7. 107. 114.]
291 cord_individual_obj[indivial_i, :] = [10.  7. 135. 142.]
292 cord_individual_obj[indivial_i, :] = [11.  8. 41. 49.]
293 cord_individual_obj[indivial_i, :] = [12.  9. 103. 112.]
294 cord_individual_obj[indivial_i, :] = [13.  9. 81. 90.]
295 cord_individual_obj[indivial_i, :] = [14.  8. 86. 94.]
296 cord_individual_obj[indivial_i, :] = [15.  6. 158. 164.]
297 cord_individual_obj[indivial_i, :] = [16.  8. 103. 111.]
298 cord_individual_obj[indivial_i, :] = [17.  9. 75. 84.]
299 cord_individual_obj[indivial_i, :] = [18.  8. 92. 100.]
300 cord_individual_obj[indivial_i, :] = [19.  9. 85. 94.]
301 cord_individual_obj[indivial_i, :] = [20.  8. 98. 106.]
302 cord_individual_obj[indivial_i, :] = [21.  7. 129. 136.]
303 cord_individual_obj[indivial_i, :] = [22.  7. 75. 82.]
304 cord_individual_obj[indivial_i, :] = [23.  8. 99. 107.]
305 cord_individual_obj[indivial_i, :] = [24.  8. 69. 77.]
306

307 min(cord_individual_obj[:, 3]) = 49.0
308 historl_G_best_iter[iter, 3] = 49.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0.  7. 143. 150.]
313 cord_individual_obj[indivial_i, :] = [ 1.  7. 122. 129.]
314 cord_individual_obj[indivial_i, :] = [ 2.  9. 84. 93.]
315 cord_individual_obj[indivial_i, :] = [ 3.  9. 127. 136.]
316 cord_individual_obj[indivial_i, :] = [ 4.  8. 80. 88.]
317 cord_individual_obj[indivial_i, :] = [ 5.  9. 102. 111.]
318 cord_individual_obj[indivial_i, :] = [ 6.  6. 104. 110.]
319 cord_individual_obj[indivial_i, :] = [ 7.  9. 76. 85.]
320 cord_individual_obj[indivial_i, :] = [ 8.  7. 79. 86.]
321 cord_individual_obj[indivial_i, :] = [ 9.  7. 86. 93.]
322 cord_individual_obj[indivial_i, :] = [10.  8. 100. 108.]
323 cord_individual_obj[indivial_i, :] = [11.  9. 88. 97.]
324 cord_individual_obj[indivial_i, :] = [12.  9. 173. 182.]
325 cord_individual_obj[indivial_i, :] = [13.  7. 111. 118.]
326 cord_individual_obj[indivial_i, :] = [14.  9. 83. 92.]
327 cord_individual_obj[indivial_i, :] = [15.  8. 41. 49.]
328 cord_individual_obj[indivial_i, :] = [16.  8. 161. 169.]
329 cord_individual_obj[indivial_i, :] = [17.  7. 140. 147.]
330 cord_individual_obj[indivial_i, :] = [18.  8. 88. 96.]
331 cord_individual_obj[indivial_i, :] = [19.  9. 78. 87.]

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332 cord_individual_obj[indivial_i,:] = [20. 9. 87. 96.]
333 cord_individual_obj[indivial_i,:] = [21. 7. 65. 72.]
334 cord_individual_obj[indivial_i,:] = [22. 8. 132. 140.]
335 cord_individual_obj[indivial_i,:] = [23. 8. 129. 137.]
336 cord_individual_obj[indivial_i,:] = [24. 8. 103. 111.]
337
338 min(cord_individual_obj[:,3]) = 49.0
339 histol_G_best_iter[iter,3] = 49.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i,:] = [ 0. 8. 109. 117.]
344 cord_individual_obj[indivial_i,:] = [ 1. 7. 76. 83.]
345 cord_individual_obj[indivial_i,:] = [ 2. 7. 71. 78.]
346 cord_individual_obj[indivial_i,:] = [ 3. 10. 85. 95.]
347 cord_individual_obj[indivial_i,:] = [ 4. 6. 115. 121.]
348 cord_individual_obj[indivial_i,:] = [ 5. 7. 90. 97.]
349 cord_individual_obj[indivial_i,:] = [ 6. 10. 55. 65.]
350 cord_individual_obj[indivial_i,:] = [ 7. 8. 111. 119.]
351 cord_individual_obj[indivial_i,:] = [ 8. 6. 100. 106.]
352 cord_individual_obj[indivial_i,:] = [ 9. 7. 99. 106.]
353 cord_individual_obj[indivial_i,:] = [10. 7. 151. 158.]
354 cord_individual_obj[indivial_i,:] = [11. 10. 102. 112.]
355 cord_individual_obj[indivial_i,:] = [12. 8. 41. 49.]
356 cord_individual_obj[indivial_i,:] = [13. 9. 79. 88.]
357 cord_individual_obj[indivial_i,:] = [14. 9. 94. 103.]
358 cord_individual_obj[indivial_i,:] = [15. 6. 131. 137.]
359 cord_individual_obj[indivial_i,:] = [16. 8. 101. 109.]
360 cord_individual_obj[indivial_i,:] = [17. 8. 133. 141.]
361 cord_individual_obj[indivial_i,:] = [18. 9. 142. 151.]
362 cord_individual_obj[indivial_i,:] = [19. 8. 85. 93.]
363 cord_individual_obj[indivial_i,:] = [20. 8. 94. 102.]
364 cord_individual_obj[indivial_i,:] = [21. 9. 101. 110.]
365 cord_individual_obj[indivial_i,:] = [22. 8. 70. 78.]
366 cord_individual_obj[indivial_i,:] = [23. 8. 64. 72.]
367 cord_individual_obj[indivial_i,:] = [24. 9. 113. 122.]
368
369 min(cord_individual_obj[:,3]) = 49.0
370 histol_G_best_iter[iter,3] = 49.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i,:] = [ 0. 8. 125. 133.]
375 cord_individual_obj[indivial_i,:] = [ 1. 8. 126. 134.]
376 cord_individual_obj[indivial_i,:] = [ 2. 8. 113. 121.]
377 cord_individual_obj[indivial_i,:] = [ 3. 11. 84. 95.]
378 cord_individual_obj[indivial_i,:] = [ 4. 6. 85. 91.]
379 cord_individual_obj[indivial_i,:] = [ 5. 8. 117. 125.]
380 cord_individual_obj[indivial_i,:] = [ 6. 8. 85. 93.]
381 cord_individual_obj[indivial_i,:] = [ 7. 9. 77. 86.]
382 cord_individual_obj[indivial_i,:] = [ 8. 9. 71. 80.]
383 cord_individual_obj[indivial_i,:] = [ 9. 7. 78. 85.]
384 cord_individual_obj[indivial_i,:] = [10. 8. 41. 49.]
385 cord_individual_obj[indivial_i,:] = [11. 9. 77. 86.]
386 cord_individual_obj[indivial_i,:] = [12. 10. 106. 116.]
387 cord_individual_obj[indivial_i,:] = [13. 8. 80. 88.]
388 cord_individual_obj[indivial_i,:] = [14. 8. 94. 102.]
389 cord_individual_obj[indivial_i,:] = [15. 7. 143. 150.]
390 cord_individual_obj[indivial_i,:] = [16. 9. 136. 145.]
391 cord_individual_obj[indivial_i,:] = [17. 8. 127. 135.]
392 cord_individual_obj[indivial_i,:] = [18. 9. 119. 128.]
393 cord_individual_obj[indivial_i,:] = [19. 9. 72. 81.]
394 cord_individual_obj[indivial_i,:] = [20. 10. 75. 85.]
395 cord_individual_obj[indivial_i,:] = [21. 9. 119. 128.]
396 cord_individual_obj[indivial_i,:] = [22. 8. 88. 96.]
397 cord_individual_obj[indivial_i,:] = [23. 7. 115. 122.]
398 cord_individual_obj[indivial_i,:] = [24. 8. 96. 104.]
399
400 min(cord_individual_obj[:,3]) = 49.0
401 histol_G_best_iter[iter,3] = 49.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i,:] = [ 0. 7. 120. 127.]
406 cord_individual_obj[indivial_i,:] = [ 1. 8. 99. 107.]
407 cord_individual_obj[indivial_i,:] = [ 2. 8. 80. 88.]
408 cord_individual_obj[indivial_i,:] = [ 3. 9. 77. 86.]
409 cord_individual_obj[indivial_i,:] = [ 4. 6. 109. 115.]
410 cord_individual_obj[indivial_i,:] = [ 5. 6. 90. 96.]
411 cord_individual_obj[indivial_i,:] = [ 6. 8. 106. 114.]
412 cord_individual_obj[indivial_i,:] = [ 7. 7. 85. 92.]
413 cord_individual_obj[indivial_i,:] = [ 8. 9. 87. 96.]
414 cord_individual_obj[indivial_i,:] = [ 9. 7. 112. 119.]
415 cord_individual_obj[indivial_i,:] = [10. 7. 105. 112.]

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416 cord_individual_obj[indivial_i,:] = [11. 9. 67. 76.]
417 cord_individual_obj[indivial_i,:] = [12. 12. 120. 132.]
418 cord_individual_obj[indivial_i,:] = [13. 7. 74. 81.]
419 cord_individual_obj[indivial_i,:] = [14. 7. 120. 127.]
420 cord_individual_obj[indivial_i,:] = [15. 8. 41. 49.]
421 cord_individual_obj[indivial_i,:] = [16. 10. 131. 141.]
422 cord_individual_obj[indivial_i,:] = [17. 8. 117. 125.]
423 cord_individual_obj[indivial_i,:] = [18. 8. 135. 143.]
424 cord_individual_obj[indivial_i,:] = [19. 10. 67. 77.]
425 cord_individual_obj[indivial_i,:] = [20. 9. 65. 74.]
426 cord_individual_obj[indivial_i,:] = [21. 7. 88. 95.]
427 cord_individual_obj[indivial_i,:] = [22. 7. 116. 123.]
428 cord_individual_obj[indivial_i,:] = [23. 7. 94. 101.]
429 cord_individual_obj[indivial_i,:] = [24. 9. 97. 106.]
430
431 min(cord_individual_obj[:,3]) = 49.0
432 histol_G_best_iter[iter,3] = 49.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 8. 174. 182.]
437 cord_individual_obj[indivial_i,:] = [ 1. 7. 114. 121.]
438 cord_individual_obj[indivial_i,:] = [ 2. 8. 89. 97.]
439 cord_individual_obj[indivial_i,:] = [ 3. 9. 83. 92.]
440 cord_individual_obj[indivial_i,:] = [ 4. 7. 97. 104.]
441 cord_individual_obj[indivial_i,:] = [ 5. 8. 112. 120.]
442 cord_individual_obj[indivial_i,:] = [ 6. 7. 111. 118.]
443 cord_individual_obj[indivial_i,:] = [ 7. 8. 75. 83.]
444 cord_individual_obj[indivial_i,:] = [ 8. 10. 54. 64.]
445 cord_individual_obj[indivial_i,:] = [ 9. 8. 107. 115.]
446 cord_individual_obj[indivial_i,:] = [10. 7. 101. 108.]
447 cord_individual_obj[indivial_i,:] = [11. 10. 81. 91.]
448 cord_individual_obj[indivial_i,:] = [12. 10. 141. 151.]
449 cord_individual_obj[indivial_i,:] = [13. 7. 94. 101.]
450 cord_individual_obj[indivial_i,:] = [14. 8. 99. 107.]
451 cord_individual_obj[indivial_i,:] = [15. 6. 175. 181.]
452 cord_individual_obj[indivial_i,:] = [16. 8. 105. 113.]
453 cord_individual_obj[indivial_i,:] = [17. 7. 100. 107.]
454 cord_individual_obj[indivial_i,:] = [18. 8. 41. 49.]
455 cord_individual_obj[indivial_i,:] = [19. 10. 73. 83.]
456 cord_individual_obj[indivial_i,:] = [20. 9. 87. 96.]
457 cord_individual_obj[indivial_i,:] = [21. 8. 117. 125.]
458 cord_individual_obj[indivial_i,:] = [22. 8. 93. 101.]
459 cord_individual_obj[indivial_i,:] = [23. 8. 84. 92.]
460 cord_individual_obj[indivial_i,:] = [24. 8. 119. 127.]
461
462 min(cord_individual_obj[:,3]) = 49.0
463 histol_G_best_iter[iter,3] = 49.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 8. 41. 49.]
468 cord_individual_obj[indivial_i,:] = [ 1. 8. 132. 140.]
469 cord_individual_obj[indivial_i,:] = [ 2. 8. 80. 88.]
470 cord_individual_obj[indivial_i,:] = [ 3. 11. 117. 128.]
471 cord_individual_obj[indivial_i,:] = [ 4. 6. 109. 115.]
472 cord_individual_obj[indivial_i,:] = [ 5. 6. 91. 97.]
473 cord_individual_obj[indivial_i,:] = [ 6. 7. 104. 111.]
474 cord_individual_obj[indivial_i,:] = [ 7. 8. 78. 86.]
475 cord_individual_obj[indivial_i,:] = [ 8. 9. 99. 108.]
476 cord_individual_obj[indivial_i,:] = [ 9. 7. 125. 132.]
477 cord_individual_obj[indivial_i,:] = [10. 7. 100. 107.]
478 cord_individual_obj[indivial_i,:] = [11. 8. 73. 81.]
479 cord_individual_obj[indivial_i,:] = [12. 9. 166. 175.]
480 cord_individual_obj[indivial_i,:] = [13. 8. 110. 118.]
481 cord_individual_obj[indivial_i,:] = [14. 7. 89. 96.]
482 cord_individual_obj[indivial_i,:] = [15. 7. 136. 143.]
483 cord_individual_obj[indivial_i,:] = [16. 8. 148. 156.]
484 cord_individual_obj[indivial_i,:] = [17. 6. 75. 81.]
485 cord_individual_obj[indivial_i,:] = [18. 8. 109. 117.]
486 cord_individual_obj[indivial_i,:] = [19. 8. 86. 94.]
487 cord_individual_obj[indivial_i,:] = [20. 9. 98. 107.]
488 cord_individual_obj[indivial_i,:] = [21. 8. 112. 120.]
489 cord_individual_obj[indivial_i,:] = [22. 7. 128. 135.]
490 cord_individual_obj[indivial_i,:] = [23. 6. 111. 117.]
491 cord_individual_obj[indivial_i,:] = [24. 9. 128. 137.]
492
493 min(cord_individual_obj[:,3]) = 49.0
494 histol_G_best_iter[iter,3] = 49.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 8. 120. 128.]
499 cord_individual_obj[indivial_i,:] = [ 1. 7. 90. 97.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 9. 114. 123.]
501 cord_individual_obj[indivial_i,:] = [ 3. 8. 109. 117.]
502 cord_individual_obj[indivial_i,:] = [ 4. 8. 86. 94.]
503 cord_individual_obj[indivial_i,:] = [ 5. 7. 99. 106.]
504 cord_individual_obj[indivial_i,:] = [ 6. 10. 108. 118.]
505 cord_individual_obj[indivial_i,:] = [ 7. 8. 85. 93.]
506 cord_individual_obj[indivial_i,:] = [ 8. 7. 66. 73.]
507 cord_individual_obj[indivial_i,:] = [ 9. 7. 136. 143.]
508 cord_individual_obj[indivial_i,:] = [ 10. 8. 93. 101.]
509 cord_individual_obj[indivial_i,:] = [ 11. 7. 94. 101.]
510 cord_individual_obj[indivial_i,:] = [ 12. 8. 41. 49.]
511 cord_individual_obj[indivial_i,:] = [ 13. 6. 138. 144.]
512 cord_individual_obj[indivial_i,:] = [ 14. 7. 109. 116.]
513 cord_individual_obj[indivial_i,:] = [ 15. 8. 109. 117.]
514 cord_individual_obj[indivial_i,:] = [ 16. 9. 79. 88.]
515 cord_individual_obj[indivial_i,:] = [ 17. 8. 71. 79.]
516 cord_individual_obj[indivial_i,:] = [ 18. 8. 74. 82.]
517 cord_individual_obj[indivial_i,:] = [ 19. 11. 104. 115.]
518 cord_individual_obj[indivial_i,:] = [ 20. 9. 164. 173.]
519 cord_individual_obj[indivial_i,:] = [ 21. 8. 44. 52.]
520 cord_individual_obj[indivial_i,:] = [ 22. 7. 102. 109.]
521 cord_individual_obj[indivial_i,:] = [ 23. 6. 180. 186.]
522 cord_individual_obj[indivial_i,:] = [ 24. 7. 66. 73.]
523
524 min(cord_individual_obj[:, 3]) = 49.0
525 histol_G_best_iter[iter, 3] = 49.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 8. 152. 160.]
530 cord_individual_obj[indivial_i,:] = [ 1. 8. 123. 131.]
531 cord_individual_obj[indivial_i,:] = [ 2. 7. 81. 88.]
532 cord_individual_obj[indivial_i,:] = [ 3. 8. 60. 68.]
533 cord_individual_obj[indivial_i,:] = [ 4. 7. 101. 108.]
534 cord_individual_obj[indivial_i,:] = [ 5. 9. 79. 88.]
535 cord_individual_obj[indivial_i,:] = [ 6. 9. 85. 94.]
536 cord_individual_obj[indivial_i,:] = [ 7. 7. 121. 128.]
537 cord_individual_obj[indivial_i,:] = [ 8. 9. 78. 87.]
538 cord_individual_obj[indivial_i,:] = [ 9. 7. 121. 128.]
539 cord_individual_obj[indivial_i,:] = [ 10. 7. 129. 136.]
540 cord_individual_obj[indivial_i,:] = [ 11. 11. 102. 113.]
541 cord_individual_obj[indivial_i,:] = [ 12. 10. 110. 120.]
542 cord_individual_obj[indivial_i,:] = [ 13. 8. 92. 100.]
543 cord_individual_obj[indivial_i,:] = [ 14. 9. 105. 114.]
544 cord_individual_obj[indivial_i,:] = [ 15. 6. 156. 162.]
545 cord_individual_obj[indivial_i,:] = [ 16. 8. 163. 171.]
546 cord_individual_obj[indivial_i,:] = [ 17. 7. 122. 129.]
547 cord_individual_obj[indivial_i,:] = [ 18. 10. 122. 132.]
548 cord_individual_obj[indivial_i,:] = [ 19. 9. 95. 104.]
549 cord_individual_obj[indivial_i,:] = [ 20. 9. 65. 74.]
550 cord_individual_obj[indivial_i,:] = [ 21. 7. 104. 111.]
551 cord_individual_obj[indivial_i,:] = [ 22. 8. 85. 93.]
552 cord_individual_obj[indivial_i,:] = [ 23. 8. 41. 49.]
553 cord_individual_obj[indivial_i,:] = [ 24. 8. 94. 102.]
554
555 min(cord_individual_obj[:, 3]) = 49.0
556 histol_G_best_iter[iter, 3] = 49.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 8. 138. 146.]
561 cord_individual_obj[indivial_i,:] = [ 1. 7. 133. 140.]
562 cord_individual_obj[indivial_i,:] = [ 2. 7. 89. 96.]
563 cord_individual_obj[indivial_i,:] = [ 3. 8. 70. 78.]
564 cord_individual_obj[indivial_i,:] = [ 4. 7. 109. 116.]
565 cord_individual_obj[indivial_i,:] = [ 5. 7. 117. 124.]
566 cord_individual_obj[indivial_i,:] = [ 6. 7. 94. 101.]
567 cord_individual_obj[indivial_i,:] = [ 7. 7. 79. 86.]
568 cord_individual_obj[indivial_i,:] = [ 8. 10. 45. 55.]
569 cord_individual_obj[indivial_i,:] = [ 9. 7. 112. 119.]
570 cord_individual_obj[indivial_i,:] = [ 10. 7. 92. 99.]
571 cord_individual_obj[indivial_i,:] = [ 11. 9. 64. 73.]
572 cord_individual_obj[indivial_i,:] = [ 12. 9. 138. 147.]
573 cord_individual_obj[indivial_i,:] = [ 13. 8. 80. 88.]
574 cord_individual_obj[indivial_i,:] = [ 14. 8. 108. 116.]
575 cord_individual_obj[indivial_i,:] = [ 15. 7. 132. 139.]
576 cord_individual_obj[indivial_i,:] = [ 16. 8. 41. 49.]
577 cord_individual_obj[indivial_i,:] = [ 17. 7. 116. 123.]
578 cord_individual_obj[indivial_i,:] = [ 18. 8. 144. 152.]
579 cord_individual_obj[indivial_i,:] = [ 19. 9. 84. 93.]
580 cord_individual_obj[indivial_i,:] = [ 20. 9. 83. 92.]
581 cord_individual_obj[indivial_i,:] = [ 21. 6. 122. 128.]
582 cord_individual_obj[indivial_i,:] = [ 22. 9. 106. 115.]
583 cord_individual_obj[indivial_i,:] = [ 23. 8. 118. 126.]

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584     cord_individual_obj[indivial_i, :] = [ 24.  9. 123. 132.]
585
586     min(cord_individual_obj[:, 3]) = 49.0
587     historl_G_best_iter[iter, 3] = 49.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0.  8. 96. 104.]
592     cord_individual_obj[indivial_i, :] = [ 1.  9. 81. 90.]
593     cord_individual_obj[indivial_i, :] = [ 2.  8. 90. 98.]
594     cord_individual_obj[indivial_i, :] = [ 3.  7. 62. 69.]
595     cord_individual_obj[indivial_i, :] = [ 4.  9. 61. 70.]
596     cord_individual_obj[indivial_i, :] = [ 5.  7. 90. 97.]
597     cord_individual_obj[indivial_i, :] = [ 6.  9. 109. 118.]
598     cord_individual_obj[indivial_i, :] = [ 7.  8. 97. 105.]
599     cord_individual_obj[indivial_i, :] = [ 8.  6. 120. 126.]
600     cord_individual_obj[indivial_i, :] = [ 9.  8. 97. 105.]
601     cord_individual_obj[indivial_i, :] = [10.  8. 138. 146.]
602     cord_individual_obj[indivial_i, :] = [11.  7. 83. 90.]
603     cord_individual_obj[indivial_i, :] = [12.  7. 149. 156.]
604     cord_individual_obj[indivial_i, :] = [13.  7. 85. 92.]
605     cord_individual_obj[indivial_i, :] = [14.  9. 128. 137.]
606     cord_individual_obj[indivial_i, :] = [15.  8. 82. 90.]
607     cord_individual_obj[indivial_i, :] = [16.  9. 141. 150.]
608     cord_individual_obj[indivial_i, :] = [17.  8. 71. 79.]
609     cord_individual_obj[indivial_i, :] = [18.  8. 41. 49.]
610     cord_individual_obj[indivial_i, :] = [19.  9. 69. 78.]
611     cord_individual_obj[indivial_i, :] = [20. 10. 65. 75.]
612     cord_individual_obj[indivial_i, :] = [21. 11. 96. 107.]
613     cord_individual_obj[indivial_i, :] = [22.  7. 118. 125.]
614     cord_individual_obj[indivial_i, :] = [23.  6. 100. 106.]
615     cord_individual_obj[indivial_i, :] = [24. 10. 98. 108.]
616
617     min(cord_individual_obj[:, 3]) = 49.0
618     historl_G_best_iter[iter, 3] = 49.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0.  7. 120. 127.]
623     cord_individual_obj[indivial_i, :] = [ 1.  7. 107. 114.]
624     cord_individual_obj[indivial_i, :] = [ 2.  7. 68. 75.]
625     cord_individual_obj[indivial_i, :] = [ 3. 12. 85. 97.]
626     cord_individual_obj[indivial_i, :] = [ 4.  7. 101. 108.]
627     cord_individual_obj[indivial_i, :] = [ 5.  7. 124. 131.]
628     cord_individual_obj[indivial_i, :] = [ 6.  7. 90. 97.]
629     cord_individual_obj[indivial_i, :] = [ 7.  8. 90. 98.]
630     cord_individual_obj[indivial_i, :] = [ 8.  9. 53. 62.]
631     cord_individual_obj[indivial_i, :] = [ 9.  6. 127. 133.]
632     cord_individual_obj[indivial_i, :] = [10.  7. 105. 112.]
633     cord_individual_obj[indivial_i, :] = [11.  9. 83. 92.]
634     cord_individual_obj[indivial_i, :] = [12.  8. 41. 49.]
635     cord_individual_obj[indivial_i, :] = [13.  8. 77. 85.]
636     cord_individual_obj[indivial_i, :] = [14.  8. 90. 98.]
637     cord_individual_obj[indivial_i, :] = [15.  7. 143. 150.]
638     cord_individual_obj[indivial_i, :] = [16.  7. 159. 166.]
639     cord_individual_obj[indivial_i, :] = [17.  8. 74. 82.]
640     cord_individual_obj[indivial_i, :] = [18.  9. 118. 127.]
641     cord_individual_obj[indivial_i, :] = [19.  9. 66. 75.]
642     cord_individual_obj[indivial_i, :] = [20.  9. 88. 97.]
643     cord_individual_obj[indivial_i, :] = [21.  7. 74. 81.]
644     cord_individual_obj[indivial_i, :] = [22.  9. 88. 97.]
645     cord_individual_obj[indivial_i, :] = [23.  8. 116. 124.]
646     cord_individual_obj[indivial_i, :] = [24.  8. 95. 103.]
647
648     min(cord_individual_obj[:, 3]) = 49.0
649     historl_G_best_iter[iter, 3] = 49.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0.  7. 87. 94.]
654     cord_individual_obj[indivial_i, :] = [ 1.  8. 112. 120.]
655     cord_individual_obj[indivial_i, :] = [ 2.  8. 84. 92.]
656     cord_individual_obj[indivial_i, :] = [ 3. 10. 69. 79.]
657     cord_individual_obj[indivial_i, :] = [ 4.  7. 103. 110.]
658     cord_individual_obj[indivial_i, :] = [ 5.  8. 90. 98.]
659     cord_individual_obj[indivial_i, :] = [ 6.  8. 101. 109.]
660     cord_individual_obj[indivial_i, :] = [ 7. 10. 110. 120.]
661     cord_individual_obj[indivial_i, :] = [ 8.  8. 94. 102.]
662     cord_individual_obj[indivial_i, :] = [ 9.  8. 83. 91.]
663     cord_individual_obj[indivial_i, :] = [10.  7. 84. 91.]
664     cord_individual_obj[indivial_i, :] = [11.  7. 75. 82.]
665     cord_individual_obj[indivial_i, :] = [12. 10. 110. 120.]
666     cord_individual_obj[indivial_i, :] = [13.  7. 72. 79.]
667     cord_individual_obj[indivial_i, :] = [14.  9. 99. 108.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 7. 137. 144.]
669 cord_individual_obj[indivial_i,:] = [16. 8. 41. 49.]
670 cord_individual_obj[indivial_i,:] = [17. 7. 73. 80.]
671 cord_individual_obj[indivial_i,:] = [18. 8. 114. 122.]
672 cord_individual_obj[indivial_i,:] = [19. 10. 77. 87.]
673 cord_individual_obj[indivial_i,:] = [20. 10. 132. 142.]
674 cord_individual_obj[indivial_i,:] = [21. 9. 88. 97.]
675 cord_individual_obj[indivial_i,:] = [22. 7. 82. 89.]
676 cord_individual_obj[indivial_i,:] = [23. 6. 114. 120.]
677 cord_individual_obj[indivial_i,:] = [24. 8. 90. 98.]
678
679 min(cord_individual_obj[:, 3]) = 49.0
680 historl_G_best_iter[iter, 3] = 49.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 189.0
689 Proportion_of_area = 0.175
690 BEST_CHROM =
691 berth: [12. 23.5 6.5 6.5 1.5 15. 2. 13.5 23.5 2. 7. 3.5 18. 23.5
692 24. 17.5]
693 time: [3. 2. 2. 4. 0. 0. 2. 1. 0. 4. 0. 6. 2. 5. 6. 4.]
694 num_QC: [4. 3. 3. 3. 3. 5. 2. 4. 3. 3. 2. 4. 4. 4. 3. 2.]
695 Objective function values and some other indicators:
696 Obj0 = 8.00          Obj1 = 41.00          Obj0 + Obj1 = 49.00
697 Total movement of crane: 0.00
698 Total waiting time in berth position: 41.00
699 Total index of q during berthing: 881.00
700 Specific arrangement for each vessel:
701 V_id: 0      li: 6.0           xi: 12.0           bow of i: 9.0           tail of i: 15.0           gama_i0: 3.0           gama_i1: 4
702 .0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
703 load_i: 120.0           work load gap_i: 0
704 V_id: 1      li: 7.0           xi: 23.5           bow of i: 20.0           tail of i: 27.0           gama_i0: 2.0           gama_i1: 4
705 .0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 160.0           work
706 load_i: 160.0           work load gap_i: 0
707 V_id: 2      li: 5.0           xi: 6.5            bow of i: 4.0           tail of i: 9.0           gama_i0: 2.0           gama_i1: 3.0
708 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work load_i:
709 80.0           work load gap_i: 0
710 V_id: 3      li: 5.0           xi: 6.5            bow of i: 4.0           tail of i: 9.0           gama_i0: 4.0           gama_i1: 4.0
711 .0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work load_i:
712 60.0           work load gap_i: 0
713 V_id: 4      li: 3.0           xi: 1.5            bow of i: 0.0           tail of i: 3.0           gama_i0: 0.0           gama_i1: 1.0
714 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
715 120.0           work load gap_i: 0
716 V_id: 5      li: 8.0           xi: 15.0           bow of i: 11.0           tail of i: 19.0           gama_i0: 0.0           gama_i1: 0
717 .0          gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 100.0           work
718 load_i: 100.0           work load gap_i: 0
719 V_id: 6      li: 4.0           xi: 2.0            bow of i: 0.0           tail of i: 4.0           gama_i0: 2.0           gama_i1: 3.0
720 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work load_i:
721 80.0           work load gap_i: 0
722 V_id: 7      li: 5.0           xi: 13.5           bow of i: 11.0           tail of i: 16.0           gama_i0: 1.0           gama_i1: 2
723 .0          gama_i1 + 1: 3.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
724 load_i: 140.0           work load gap_i: 0
725 V_id: 8      li: 9.0           xi: 23.5           bow of i: 19.0           tail of i: 28.0           gama_i0: 0.0           gama_i1: 1
726 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
727 load_i: 80.0           work load gap_i: 0
728 V_id: 9      li: 4.0           xi: 2.0            bow of i: 0.0           tail of i: 4.0           gama_i0: 4.0           gama_i1: 5.0
729 .0          gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work load_i:
730 80.0           work load gap_i: 0
731 V_id: 10     li: 8.0           xi: 7.0            bow of i: 3.0           tail of i: 11.0           gama_i0: 0.0           gama_i1: 1
732 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
733 load_i: 80.0           work load gap_i: 0
734 V_id: 11     li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 6.0           gama_i1: 7.0
735 .0          gama_i1 + 1: 8.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
736 120.0           work load gap_i: 0
737 V_id: 12     li: 4.0           xi: 18.0           bow of i: 16.0           tail of i: 20.0           gama_i0: 2.0           gama_i1:
738 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
739 load_i: 100.0           work load gap_i: 0
740 V_id: 13     li: 7.0           xi: 23.5           bow of i: 20.0           tail of i: 27.0           gama_i0: 5.0           gama_i1:
741 .0          gama_i1 + 1: 6.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
742 load_i: 60.0           work load gap_i: 0
743 V_id: 14     li: 8.0           xi: 24.0           bow of i: 20.0           tail of i: 28.0           gama_i0: 6.0           gama_i1:
744 .0          gama_i1 + 1: 9.0   gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
745 load_i: 140.0           work load gap_i: 0
746 V_id: 15     li: 5.0           xi: 17.5           bow of i: 15.0           tail of i: 20.0           gama_i0: 4.0           gama_i1:
747 .0          gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
748 load_i: 80.0           work load gap_i: 0
749
750 Algorithm finished and the total CPU time: 499 s
751 End

```