

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 9. 128. 137.]
81 cord_individual_obj[indivial_i,:] = [ 17. 12. 139. 151.]
82 cord_individual_obj[indivial_i,:] = [ 18. 11. 91. 102.]
83 cord_individual_obj[indivial_i,:] = [ 19. 9. 118. 127.]
84 cord_individual_obj[indivial_i,:] = [20. 11. 79. 90.]
85 cord_individual_obj[indivial_i,:] = [ 21. 10. 173. 183.]
86 cord_individual_obj[indivial_i,:] = [22. 8. 86. 94.]
87 cord_individual_obj[indivial_i,:] = [ 23. 8. 165. 173.]
88 cord_individual_obj[indivial_i,:] = [ 24. 8. 99. 107.]
89
90 min(cord_individual_obj[:,3]) = 73.0
91 historl_G_best_iter[iter, 3] = 73.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 9. 116. 125.]
96 cord_individual_obj[indivial_i,:] = [ 1. 10. 63. 73.]
97 cord_individual_obj[indivial_i,:] = [ 2. 9. 82. 91.]
98 cord_individual_obj[indivial_i,:] = [ 3. 9. 111. 120.]
99 cord_individual_obj[indivial_i,:] = [ 4. 9. 106. 115.]
100 cord_individual_obj[indivial_i,:] = [ 5. 10. 115. 125.]
101 cord_individual_obj[indivial_i,:] = [ 6. 13. 147. 160.]
102 cord_individual_obj[indivial_i,:] = [ 7. 9. 72. 81.]
103 cord_individual_obj[indivial_i,:] = [ 8. 11. 107. 118.]
104 cord_individual_obj[indivial_i,:] = [ 9. 10. 169. 179.]
105 cord_individual_obj[indivial_i,:] = [ 10. 11. 128. 139.]
106 cord_individual_obj[indivial_i,:] = [11. 9. 90. 99.]
107 cord_individual_obj[indivial_i,:] = [ 12. 10. 103. 113.]
108 cord_individual_obj[indivial_i,:] = [ 13. 10. 142. 152.]
109 cord_individual_obj[indivial_i,:] = [ 14. 9. 154. 163.]
110 cord_individual_obj[indivial_i,:] = [ 15. 12. 93. 105.]
111 cord_individual_obj[indivial_i,:] = [ 16. 9. 121. 130.]
112 cord_individual_obj[indivial_i,:] = [ 17. 11. 109. 120.]
113 cord_individual_obj[indivial_i,:] = [ 18. 11. 117. 128.]
114 cord_individual_obj[indivial_i,:] = [ 19. 9. 112. 121.]
115 cord_individual_obj[indivial_i,:] = [20. 9. 90. 99.]
116 cord_individual_obj[indivial_i,:] = [ 21. 9. 118. 127.]
117 cord_individual_obj[indivial_i,:] = [ 22. 10. 120. 130.]
118 cord_individual_obj[indivial_i,:] = [ 23. 10. 104. 114.]
119 cord_individual_obj[indivial_i,:] = [ 24. 12. 130. 142.]
120
121 min(cord_individual_obj[:,3]) = 73.0
122 historl_G_best_iter[iter, 3] = 73.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 11. 163. 174.]
127 cord_individual_obj[indivial_i,:] = [ 1. 10. 110. 120.]
128 cord_individual_obj[indivial_i,:] = [ 2. 7. 121. 128.]
129 cord_individual_obj[indivial_i,:] = [ 3. 8. 160. 168.]
130 cord_individual_obj[indivial_i,:] = [ 4. 9. 141. 150.]
131 cord_individual_obj[indivial_i,:] = [ 5. 10. 167. 177.]
132 cord_individual_obj[indivial_i,:] = [ 6. 11. 114. 125.]
133 cord_individual_obj[indivial_i,:] = [ 7. 10. 124. 134.]
134 cord_individual_obj[indivial_i,:] = [ 8. 11. 111. 122.]
135 cord_individual_obj[indivial_i,:] = [ 9. 10. 63. 73.]
136 cord_individual_obj[indivial_i,:] = [ 10. 9. 123. 132.]
137 cord_individual_obj[indivial_i,:] = [ 11. 10. 112. 122.]
138 cord_individual_obj[indivial_i,:] = [ 12. 10. 130. 140.]
139 cord_individual_obj[indivial_i,:] = [ 13. 9. 108. 117.]
140 cord_individual_obj[indivial_i,:] = [ 14. 11. 114. 125.]
141 cord_individual_obj[indivial_i,:] = [ 15. 9. 115. 124.]
142 cord_individual_obj[indivial_i,:] = [ 16. 11. 135. 146.]
143 cord_individual_obj[indivial_i,:] = [ 17. 9. 125. 134.]
144 cord_individual_obj[indivial_i,:] = [18. 9. 87. 96.]
145 cord_individual_obj[indivial_i,:] = [ 19. 10. 157. 167.]
146 cord_individual_obj[indivial_i,:] = [20. 8. 91. 99.]
147 cord_individual_obj[indivial_i,:] = [ 21. 8. 172. 180.]
148 cord_individual_obj[indivial_i,:] = [ 22. 9. 98. 107.]
149 cord_individual_obj[indivial_i,:] = [ 23. 10. 96. 106.]
150 cord_individual_obj[indivial_i,:] = [ 24. 10. 118. 128.]
151
152 min(cord_individual_obj[:,3]) = 73.0
153 historl_G_best_iter[iter, 3] = 73.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 9. 110. 119.]
158 cord_individual_obj[indivial_i,:] = [ 1. 10. 200. 210.]
159 cord_individual_obj[indivial_i,:] = [ 2. 8. 134. 142.]
160 cord_individual_obj[indivial_i,:] = [ 3. 9. 151. 160.]
161 cord_individual_obj[indivial_i,:] = [ 4. 12. 134. 146.]
162 cord_individual_obj[indivial_i,:] = [ 5. 8. 126. 134.]
163 cord_individual_obj[indivial_i,:] = [ 6. 11. 120. 131.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 9. 135. 144.]
165 cord_individual_obj[indivial_i,:] = [ 8. 11. 186. 197.]
166 cord_individual_obj[indivial_i,:] = [ 9. 10. 189. 199.]
167 cord_individual_obj[indivial_i,:] = [ 10. 10. 126. 136.]
168 cord_individual_obj[indivial_i,:] = [ 11. 9. 105. 114.]
169 cord_individual_obj[indivial_i,:] = [ 12. 12. 149. 161.]
170 cord_individual_obj[indivial_i,:] = [ 13. 8. 133. 141.]
171 cord_individual_obj[indivial_i,:] = [ 14. 12. 142. 154.]
172 cord_individual_obj[indivial_i,:] = [ 15. 10. 85. 95.]
173 cord_individual_obj[indivial_i,:] = [ 16. 10. 107. 117.]
174 cord_individual_obj[indivial_i,:] = [ 17. 11. 101. 112.]
175 cord_individual_obj[indivial_i,:] = [ 18. 12. 146. 158.]
176 cord_individual_obj[indivial_i,:] = [ 19. 10. 134. 144.]
177 cord_individual_obj[indivial_i,:] = [ 20. 9. 96. 105.]
178 cord_individual_obj[indivial_i,:] = [ 21. 10. 63. 73.]
179 cord_individual_obj[indivial_i,:] = [ 22. 11. 146. 157.]
180 cord_individual_obj[indivial_i,:] = [ 23. 12. 179. 191.]
181 cord_individual_obj[indivial_i,:] = [ 24. 11. 127. 138.]
182
183 min(cord_individual_obj[:,3]) = 73.0
184 historl_G_best_iter[iter, 3] = 73.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 11. 101. 112.]
189 cord_individual_obj[indivial_i,:] = [ 1. 10. 63. 73.]
190 cord_individual_obj[indivial_i,:] = [ 2. 10. 140. 150.]
191 cord_individual_obj[indivial_i,:] = [ 3. 10. 99. 109.]
192 cord_individual_obj[indivial_i,:] = [ 4. 11. 160. 171.]
193 cord_individual_obj[indivial_i,:] = [ 5. 12. 132. 144.]
194 cord_individual_obj[indivial_i,:] = [ 6. 13. 139. 152.]
195 cord_individual_obj[indivial_i,:] = [ 7. 11. 106. 117.]
196 cord_individual_obj[indivial_i,:] = [ 8. 10. 125. 135.]
197 cord_individual_obj[indivial_i,:] = [ 9. 11. 117. 128.]
198 cord_individual_obj[indivial_i,:] = [ 10. 8. 129. 137.]
199 cord_individual_obj[indivial_i,:] = [ 11. 10. 125. 135.]
200 cord_individual_obj[indivial_i,:] = [ 12. 9. 139. 148.]
201 cord_individual_obj[indivial_i,:] = [ 13. 10. 129. 139.]
202 cord_individual_obj[indivial_i,:] = [ 14. 11. 138. 149.]
203 cord_individual_obj[indivial_i,:] = [ 15. 12. 130. 142.]
204 cord_individual_obj[indivial_i,:] = [ 16. 12. 107. 119.]
205 cord_individual_obj[indivial_i,:] = [ 17. 8. 105. 113.]
206 cord_individual_obj[indivial_i,:] = [ 18. 9. 177. 186.]
207 cord_individual_obj[indivial_i,:] = [ 19. 11. 108. 119.]
208 cord_individual_obj[indivial_i,:] = [ 20. 8. 130. 138.]
209 cord_individual_obj[indivial_i,:] = [ 21. 11. 93. 104.]
210 cord_individual_obj[indivial_i,:] = [ 22. 9. 118. 127.]
211 cord_individual_obj[indivial_i,:] = [ 23. 10. 204. 214.]
212 cord_individual_obj[indivial_i,:] = [ 24. 10. 105. 115.]
213
214 min(cord_individual_obj[:,3]) = 73.0
215 historl_G_best_iter[iter, 3] = 73.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 9. 128. 137.]
220 cord_individual_obj[indivial_i,:] = [ 1. 8. 151. 159.]
221 cord_individual_obj[indivial_i,:] = [ 2. 10. 124. 134.]
222 cord_individual_obj[indivial_i,:] = [ 3. 10. 124. 134.]
223 cord_individual_obj[indivial_i,:] = [ 4. 12. 119. 131.]
224 cord_individual_obj[indivial_i,:] = [ 5. 10. 151. 161.]
225 cord_individual_obj[indivial_i,:] = [ 6. 11. 115. 126.]
226 cord_individual_obj[indivial_i,:] = [ 7. 10. 139. 149.]
227 cord_individual_obj[indivial_i,:] = [ 8. 11. 122. 133.]
228 cord_individual_obj[indivial_i,:] = [ 9. 11. 158. 169.]
229 cord_individual_obj[indivial_i,:] = [ 10. 11. 129. 140.]
230 cord_individual_obj[indivial_i,:] = [ 11. 10. 126. 136.]
231 cord_individual_obj[indivial_i,:] = [ 12. 9. 131. 140.]
232 cord_individual_obj[indivial_i,:] = [ 13. 10. 135. 145.]
233 cord_individual_obj[indivial_i,:] = [ 14. 11. 169. 180.]
234 cord_individual_obj[indivial_i,:] = [ 15. 11. 108. 119.]
235 cord_individual_obj[indivial_i,:] = [ 16. 9. 112. 121.]
236 cord_individual_obj[indivial_i,:] = [ 17. 11. 113. 124.]
237 cord_individual_obj[indivial_i,:] = [ 18. 10. 136. 146.]
238 cord_individual_obj[indivial_i,:] = [ 19. 11. 118. 129.]
239 cord_individual_obj[indivial_i,:] = [ 20. 10. 155. 165.]
240 cord_individual_obj[indivial_i,:] = [ 21. 10. 99. 109.]
241 cord_individual_obj[indivial_i,:] = [ 22. 10. 127. 137.]
242 cord_individual_obj[indivial_i,:] = [ 23. 10. 63. 73.]
243 cord_individual_obj[indivial_i,:] = [ 24. 13. 151. 164.]
244
245 min(cord_individual_obj[:,3]) = 73.0
246 historl_G_best_iter[iter, 3] = 73.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 8. 165. 173.]
251 cord_individual_obj[indivial_i, :] = [ 1. 9. 151. 160.]
252 cord_individual_obj[indivial_i, :] = [ 2. 11. 106. 117.]
253 cord_individual_obj[indivial_i, :] = [ 3. 10. 86. 96.]
254 cord_individual_obj[indivial_i, :] = [ 4. 10. 152. 162.]
255 cord_individual_obj[indivial_i, :] = [ 5. 12. 130. 142.]
256 cord_individual_obj[indivial_i, :] = [ 6. 12. 131. 143.]
257 cord_individual_obj[indivial_i, :] = [ 7. 9. 120. 129.]
258 cord_individual_obj[indivial_i, :] = [ 8. 8. 118. 126.]
259 cord_individual_obj[indivial_i, :] = [ 9. 10. 103. 113.]
260 cord_individual_obj[indivial_i, :] = [ 10. 9. 174. 183.]
261 cord_individual_obj[indivial_i, :] = [ 11. 11. 109. 120.]
262 cord_individual_obj[indivial_i, :] = [ 12. 8. 113. 121.]
263 cord_individual_obj[indivial_i, :] = [ 13. 11. 139. 150.]
264 cord_individual_obj[indivial_i, :] = [ 14. 10. 63. 73.]
265 cord_individual_obj[indivial_i, :] = [ 15. 9. 105. 114.]
266 cord_individual_obj[indivial_i, :] = [ 16. 12. 114. 126.]
267 cord_individual_obj[indivial_i, :] = [ 17. 9. 121. 130.]
268 cord_individual_obj[indivial_i, :] = [ 18. 9. 92. 101.]
269 cord_individual_obj[indivial_i, :] = [ 19. 9. 120. 129.]
270 cord_individual_obj[indivial_i, :] = [ 20. 9. 131. 140.]
271 cord_individual_obj[indivial_i, :] = [ 21. 9. 170. 179.]
272 cord_individual_obj[indivial_i, :] = [ 22. 7. 121. 128.]
273 cord_individual_obj[indivial_i, :] = [ 23. 10. 75. 85.]
274 cord_individual_obj[indivial_i, :] = [ 24. 10. 236. 246.]
275

276 min(cord_individual_obj[:, 3]) = 73.0
277 historl_G_best_iter[iter, 3] = 73.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 8. 121. 129.]
282 cord_individual_obj[indivial_i, :] = [ 1. 10. 111. 121.]
283 cord_individual_obj[indivial_i, :] = [ 2. 9. 80. 89.]
284 cord_individual_obj[indivial_i, :] = [ 3. 8. 133. 141.]
285 cord_individual_obj[indivial_i, :] = [ 4. 11. 124. 135.]
286 cord_individual_obj[indivial_i, :] = [ 5. 10. 90. 100.]
287 cord_individual_obj[indivial_i, :] = [ 6. 12. 141. 153.]
288 cord_individual_obj[indivial_i, :] = [ 7. 9. 103. 112.]
289 cord_individual_obj[indivial_i, :] = [ 8. 11. 123. 134.]
290 cord_individual_obj[indivial_i, :] = [ 9. 13. 168. 181.]
291 cord_individual_obj[indivial_i, :] = [ 10. 9. 168. 177.]
292 cord_individual_obj[indivial_i, :] = [ 11. 10. 111. 121.]
293 cord_individual_obj[indivial_i, :] = [ 12. 9. 139. 148.]
294 cord_individual_obj[indivial_i, :] = [ 13. 8. 128. 136.]
295 cord_individual_obj[indivial_i, :] = [ 14. 13. 124. 137.]
296 cord_individual_obj[indivial_i, :] = [ 15. 10. 132. 142.]
297 cord_individual_obj[indivial_i, :] = [ 16. 11. 140. 151.]
298 cord_individual_obj[indivial_i, :] = [ 17. 11. 127. 138.]
299 cord_individual_obj[indivial_i, :] = [ 18. 11. 146. 157.]
300 cord_individual_obj[indivial_i, :] = [ 19. 10. 107. 117.]
301 cord_individual_obj[indivial_i, :] = [ 20. 9. 89. 98.]
302 cord_individual_obj[indivial_i, :] = [ 21. 9. 90. 99.]
303 cord_individual_obj[indivial_i, :] = [ 22. 11. 92. 103.]
304 cord_individual_obj[indivial_i, :] = [ 23. 9. 136. 145.]
305 cord_individual_obj[indivial_i, :] = [ 24. 10. 63. 73.]
306

307 min(cord_individual_obj[:, 3]) = 73.0
308 historl_G_best_iter[iter, 3] = 73.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 8. 194. 202.]
313 cord_individual_obj[indivial_i, :] = [ 1. 9. 142. 151.]
314 cord_individual_obj[indivial_i, :] = [ 2. 8. 109. 117.]
315 cord_individual_obj[indivial_i, :] = [ 3. 12. 144. 156.]
316 cord_individual_obj[indivial_i, :] = [ 4. 10. 105. 115.]
317 cord_individual_obj[indivial_i, :] = [ 5. 11. 123. 134.]
318 cord_individual_obj[indivial_i, :] = [ 6. 9. 150. 159.]
319 cord_individual_obj[indivial_i, :] = [ 7. 10. 133. 143.]
320 cord_individual_obj[indivial_i, :] = [ 8. 9. 109. 118.]
321 cord_individual_obj[indivial_i, :] = [ 9. 10. 63. 73.]
322 cord_individual_obj[indivial_i, :] = [ 10. 8. 160. 168.]
323 cord_individual_obj[indivial_i, :] = [ 11. 8. 157. 165.]
324 cord_individual_obj[indivial_i, :] = [ 12. 10. 86. 96.]
325 cord_individual_obj[indivial_i, :] = [ 13. 9. 135. 144.]
326 cord_individual_obj[indivial_i, :] = [ 14. 9. 126. 135.]
327 cord_individual_obj[indivial_i, :] = [ 15. 9. 124. 133.]
328 cord_individual_obj[indivial_i, :] = [ 16. 10. 133. 143.]
329 cord_individual_obj[indivial_i, :] = [ 17. 9. 149. 158.]
330 cord_individual_obj[indivial_i, :] = [ 18. 9. 164. 173.]
331 cord_individual_obj[indivial_i, :] = [ 19. 9. 151. 160.]

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unknown

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332     cord_individual_obj[indivial_i,:] = [ 20.  9. 168. 177.]  
333     cord_individual_obj[indivial_i,:] = [ 21.  9. 194. 203.]  
334     cord_individual_obj[indivial_i,:] = [ 22.  8. 92. 100.]  
335     cord_individual_obj[indivial_i,:] = [ 23.  9. 108. 117.]  
336     cord_individual_obj[indivial_i,:] = [ 24.  9. 82. 91.]  
337  
338 min(cord_individual_obj[:,3]) = 73.0  
339 histol_G_best_iter[iter,3] = 73.0  
340 Begin iteration:  
341  
342 iter = 10  
343     cord_individual_obj[indivial_i,:] = [ 0. 10. 137. 147.]  
344     cord_individual_obj[indivial_i,:] = [ 1. 10. 116. 126.]  
345     cord_individual_obj[indivial_i,:] = [ 2. 9. 109. 118.]  
346     cord_individual_obj[indivial_i,:] = [ 3. 10. 122. 132.]  
347     cord_individual_obj[indivial_i,:] = [ 4. 11. 119. 130.]  
348     cord_individual_obj[indivial_i,:] = [ 5. 8. 139. 147.]  
349     cord_individual_obj[indivial_i,:] = [ 6. 10. 95. 105.]  
350     cord_individual_obj[indivial_i,:] = [ 7. 8. 87. 95.]  
351     cord_individual_obj[indivial_i,:] = [ 8. 11. 119. 130.]  
352     cord_individual_obj[indivial_i,:] = [ 9. 10. 163. 173.]  
353     cord_individual_obj[indivial_i,:] = [ 10. 9. 95. 104.]  
354     cord_individual_obj[indivial_i,:] = [ 11. 9. 142. 151.]  
355     cord_individual_obj[indivial_i,:] = [ 12. 11. 174. 185.]  
356     cord_individual_obj[indivial_i,:] = [ 13. 10. 121. 131.]  
357     cord_individual_obj[indivial_i,:] = [ 14. 13. 139. 152.]  
358     cord_individual_obj[indivial_i,:] = [ 15. 10. 153. 163.]  
359     cord_individual_obj[indivial_i,:] = [ 16. 10. 118. 128.]  
360     cord_individual_obj[indivial_i,:] = [ 17. 10. 107. 117.]  
361     cord_individual_obj[indivial_i,:] = [ 18. 13. 168. 181.]  
362     cord_individual_obj[indivial_i,:] = [ 19. 9. 179. 188.]  
363     cord_individual_obj[indivial_i,:] = [ 20. 10. 119. 129.]  
364     cord_individual_obj[indivial_i,:] = [ 21. 10. 63. 73.]  
365     cord_individual_obj[indivial_i,:] = [ 22. 9. 167. 176.]  
366     cord_individual_obj[indivial_i,:] = [ 23. 8. 184. 192.]  
367     cord_individual_obj[indivial_i,:] = [ 24. 9. 194. 203.]  
368  
369 min(cord_individual_obj[:,3]) = 73.0  
370 histol_G_best_iter[iter,3] = 73.0  
371 Begin iteration:  
372  
373 iter = 11  
374     cord_individual_obj[indivial_i,:] = [ 0. 10. 98. 108.]  
375     cord_individual_obj[indivial_i,:] = [ 1. 8. 165. 173.]  
376     cord_individual_obj[indivial_i,:] = [ 2. 9. 101. 110.]  
377     cord_individual_obj[indivial_i,:] = [ 3. 10. 105. 115.]  
378     cord_individual_obj[indivial_i,:] = [ 4. 12. 120. 132.]  
379     cord_individual_obj[indivial_i,:] = [ 5. 11. 138. 149.]  
380     cord_individual_obj[indivial_i,:] = [ 6. 12. 119. 131.]  
381     cord_individual_obj[indivial_i,:] = [ 7. 9. 105. 114.]  
382     cord_individual_obj[indivial_i,:] = [ 8. 11. 175. 186.]  
383     cord_individual_obj[indivial_i,:] = [ 9. 10. 150. 160.]  
384     cord_individual_obj[indivial_i,:] = [ 10. 10. 88. 98.]  
385     cord_individual_obj[indivial_i,:] = [ 11. 10. 101. 111.]  
386     cord_individual_obj[indivial_i,:] = [ 12. 12. 134. 146.]  
387     cord_individual_obj[indivial_i,:] = [ 13. 10. 122. 132.]  
388     cord_individual_obj[indivial_i,:] = [ 14. 10. 133. 143.]  
389     cord_individual_obj[indivial_i,:] = [ 15. 11. 112. 123.]  
390     cord_individual_obj[indivial_i,:] = [ 16. 10. 88. 98.]  
391     cord_individual_obj[indivial_i,:] = [ 17. 11. 85. 96.]  
392     cord_individual_obj[indivial_i,:] = [ 18. 10. 143. 153.]  
393     cord_individual_obj[indivial_i,:] = [ 19. 10. 139. 149.]  
394     cord_individual_obj[indivial_i,:] = [ 20. 11. 160. 171.]  
395     cord_individual_obj[indivial_i,:] = [ 21. 11. 93. 104.]  
396     cord_individual_obj[indivial_i,:] = [ 22. 10. 76. 86.]  
397     cord_individual_obj[indivial_i,:] = [ 23. 10. 192. 202.]  
398     cord_individual_obj[indivial_i,:] = [ 24. 10. 63. 73.]  
399  
400 min(cord_individual_obj[:,3]) = 73.0  
401 histol_G_best_iter[iter,3] = 73.0  
402 Begin iteration:  
403  
404 iter = 12  
405     cord_individual_obj[indivial_i,:] = [ 0. 7. 189. 196.]  
406     cord_individual_obj[indivial_i,:] = [ 1. 10. 145. 155.]  
407     cord_individual_obj[indivial_i,:] = [ 2. 9. 158. 167.]  
408     cord_individual_obj[indivial_i,:] = [ 3. 9. 96. 105.]  
409     cord_individual_obj[indivial_i,:] = [ 4. 10. 123. 133.]  
410     cord_individual_obj[indivial_i,:] = [ 5. 9. 123. 132.]  
411     cord_individual_obj[indivial_i,:] = [ 6. 9. 95. 104.]  
412     cord_individual_obj[indivial_i,:] = [ 7. 10. 163. 173.]  
413     cord_individual_obj[indivial_i,:] = [ 8. 10. 95. 105.]  
414     cord_individual_obj[indivial_i,:] = [ 9. 9. 142. 151.]  
415     cord_individual_obj[indivial_i,:] = [ 10. 10. 117. 127.]
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416 cord_individual_obj[indivial_i,:] = [ 11. 11. 98. 109.]
417 cord_individual_obj[indivial_i,:] = [ 12. 12. 134. 146.]
418 cord_individual_obj[indivial_i,:] = [ 13. 8. 160. 168.]
419 cord_individual_obj[indivial_i,:] = [ 14. 12. 130. 142.]
420 cord_individual_obj[indivial_i,:] = [ 15. 8. 101. 109.]
421 cord_individual_obj[indivial_i,:] = [ 16. 9. 150. 159.]
422 cord_individual_obj[indivial_i,:] = [ 17. 10. 77. 87.]
423 cord_individual_obj[indivial_i,:] = [ 18. 11. 125. 136.]
424 cord_individual_obj[indivial_i,:] = [ 19. 9. 108. 117.]
425 cord_individual_obj[indivial_i,:] = [ 20. 8. 128. 136.]
426 cord_individual_obj[indivial_i,:] = [ 21. 9. 110. 119.]
427 cord_individual_obj[indivial_i,:] = [ 22. 9. 94. 103.]
428 cord_individual_obj[indivial_i,:] = [ 23. 10. 63. 73.]
429 cord_individual_obj[indivial_i,:] = [ 24. 9. 77. 86.]
430
431 min(cord_individual_obj[:,3]) = 73.0
432 histol_G_best_iter[iter,3] = 73.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 10. 63. 73.]
437 cord_individual_obj[indivial_i,:] = [ 1. 9. 122. 131.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 115. 124.]
439 cord_individual_obj[indivial_i,:] = [ 3. 9. 142. 151.]
440 cord_individual_obj[indivial_i,:] = [ 4. 9. 158. 167.]
441 cord_individual_obj[indivial_i,:] = [ 5. 11. 120. 131.]
442 cord_individual_obj[indivial_i,:] = [ 6. 10. 135. 145.]
443 cord_individual_obj[indivial_i,:] = [ 7. 11. 123. 134.]
444 cord_individual_obj[indivial_i,:] = [ 8. 11. 131. 142.]
445 cord_individual_obj[indivial_i,:] = [ 9. 9. 154. 163.]
446 cord_individual_obj[indivial_i,:] = [ 10. 8. 172. 180.]
447 cord_individual_obj[indivial_i,:] = [ 11. 8. 119. 127.]
448 cord_individual_obj[indivial_i,:] = [ 12. 11. 145. 156.]
449 cord_individual_obj[indivial_i,:] = [ 13. 10. 116. 126.]
450 cord_individual_obj[indivial_i,:] = [ 14. 10. 176. 186.]
451 cord_individual_obj[indivial_i,:] = [ 15. 9. 130. 139.]
452 cord_individual_obj[indivial_i,:] = [ 16. 13. 151. 164.]
453 cord_individual_obj[indivial_i,:] = [ 17. 9. 136. 145.]
454 cord_individual_obj[indivial_i,:] = [ 18. 9. 172. 181.]
455 cord_individual_obj[indivial_i,:] = [ 19. 8. 101. 109.]
456 cord_individual_obj[indivial_i,:] = [ 20. 8. 103. 111.]
457 cord_individual_obj[indivial_i,:] = [ 21. 10. 113. 123.]
458 cord_individual_obj[indivial_i,:] = [ 22. 11. 105. 116.]
459 cord_individual_obj[indivial_i,:] = [ 23. 9. 105. 114.]
460 cord_individual_obj[indivial_i,:] = [ 24. 10. 103. 113.]
461
462 min(cord_individual_obj[:,3]) = 73.0
463 histol_G_best_iter[iter,3] = 73.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 9. 134. 143.]
468 cord_individual_obj[indivial_i,:] = [ 1. 10. 160. 170.]
469 cord_individual_obj[indivial_i,:] = [ 2. 11. 106. 117.]
470 cord_individual_obj[indivial_i,:] = [ 3. 10. 97. 107.]
471 cord_individual_obj[indivial_i,:] = [ 4. 11. 106. 117.]
472 cord_individual_obj[indivial_i,:] = [ 5. 9. 157. 166.]
473 cord_individual_obj[indivial_i,:] = [ 6. 12. 117. 129.]
474 cord_individual_obj[indivial_i,:] = [ 7. 9. 93. 102.]
475 cord_individual_obj[indivial_i,:] = [ 8. 13. 105. 118.]
476 cord_individual_obj[indivial_i,:] = [ 9. 11. 146. 157.]
477 cord_individual_obj[indivial_i,:] = [ 10. 12. 151. 163.]
478 cord_individual_obj[indivial_i,:] = [ 11. 9. 80. 89.]
479 cord_individual_obj[indivial_i,:] = [ 12. 10. 100. 110.]
480 cord_individual_obj[indivial_i,:] = [ 13. 9. 111. 120.]
481 cord_individual_obj[indivial_i,:] = [ 14. 10. 63. 73.]
482 cord_individual_obj[indivial_i,:] = [ 15. 11. 112. 123.]
483 cord_individual_obj[indivial_i,:] = [ 16. 11. 108. 119.]
484 cord_individual_obj[indivial_i,:] = [ 17. 11. 83. 94.]
485 cord_individual_obj[indivial_i,:] = [ 18. 10. 81. 91.]
486 cord_individual_obj[indivial_i,:] = [ 19. 9. 144. 153.]
487 cord_individual_obj[indivial_i,:] = [ 20. 11. 114. 125.]
488 cord_individual_obj[indivial_i,:] = [ 21. 10. 147. 157.]
489 cord_individual_obj[indivial_i,:] = [ 22. 9. 91. 100.]
490 cord_individual_obj[indivial_i,:] = [ 23. 8. 100. 108.]
491 cord_individual_obj[indivial_i,:] = [ 24. 11. 122. 133.]
492
493 min(cord_individual_obj[:,3]) = 73.0
494 histol_G_best_iter[iter,3] = 73.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 12. 135. 147.]
499 cord_individual_obj[indivial_i,:] = [ 1. 10. 63. 73.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 10. 93. 103.]
501 cord_individual_obj[indivial_i, :] = [ 3. 9. 145. 154.]
502 cord_individual_obj[indivial_i, :] = [ 4. 12. 139. 151.]
503 cord_individual_obj[indivial_i, :] = [ 5. 11. 110. 121.]
504 cord_individual_obj[indivial_i, :] = [ 6. 12. 140. 152.]
505 cord_individual_obj[indivial_i, :] = [ 7. 10. 90. 100.]
506 cord_individual_obj[indivial_i, :] = [ 8. 11. 110. 121.]
507 cord_individual_obj[indivial_i, :] = [ 9. 11. 135. 146.]
508 cord_individual_obj[indivial_i, :] = [ 10. 9. 96. 105.]
509 cord_individual_obj[indivial_i, :] = [ 11. 12. 159. 171.]
510 cord_individual_obj[indivial_i, :] = [ 12. 10. 119. 129.]
511 cord_individual_obj[indivial_i, :] = [ 13. 8. 131. 139.]
512 cord_individual_obj[indivial_i, :] = [ 14. 12. 169. 181.]
513 cord_individual_obj[indivial_i, :] = [ 15. 11. 134. 145.]
514 cord_individual_obj[indivial_i, :] = [ 16. 11. 184. 195.]
515 cord_individual_obj[indivial_i, :] = [ 17. 9. 110. 119.]
516 cord_individual_obj[indivial_i, :] = [ 18. 11. 88. 99.]
517 cord_individual_obj[indivial_i, :] = [ 19. 8. 141. 149.]
518 cord_individual_obj[indivial_i, :] = [ 20. 10. 120. 130.]
519 cord_individual_obj[indivial_i, :] = [ 21. 9. 149. 158.]
520 cord_individual_obj[indivial_i, :] = [ 22. 9. 120. 129.]
521 cord_individual_obj[indivial_i, :] = [ 23. 11. 200. 211.]
522 cord_individual_obj[indivial_i, :] = [ 24. 9. 92. 101.]
523
524 min(cord_individual_obj[:, 3]) = 73.0
525 histol_G_best_iter[iter, 3] = 73.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 9. 79. 88.]
530 cord_individual_obj[indivial_i, :] = [ 1. 10. 162. 172.]
531 cord_individual_obj[indivial_i, :] = [ 2. 11. 172. 183.]
532 cord_individual_obj[indivial_i, :] = [ 3. 11. 161. 172.]
533 cord_individual_obj[indivial_i, :] = [ 4. 12. 107. 119.]
534 cord_individual_obj[indivial_i, :] = [ 5. 9. 114. 123.]
535 cord_individual_obj[indivial_i, :] = [ 6. 9. 103. 112.]
536 cord_individual_obj[indivial_i, :] = [ 7. 8. 146. 154.]
537 cord_individual_obj[indivial_i, :] = [ 8. 10. 84. 94.]
538 cord_individual_obj[indivial_i, :] = [ 9. 10. 119. 129.]
539 cord_individual_obj[indivial_i, :] = [ 10. 10. 122. 132.]
540 cord_individual_obj[indivial_i, :] = [ 11. 12. 139. 151.]
541 cord_individual_obj[indivial_i, :] = [ 12. 9. 107. 116.]
542 cord_individual_obj[indivial_i, :] = [ 13. 10. 92. 102.]
543 cord_individual_obj[indivial_i, :] = [ 14. 10. 147. 157.]
544 cord_individual_obj[indivial_i, :] = [ 15. 11. 120. 131.]
545 cord_individual_obj[indivial_i, :] = [ 16. 10. 188. 198.]
546 cord_individual_obj[indivial_i, :] = [ 17. 11. 151. 162.]
547 cord_individual_obj[indivial_i, :] = [ 18. 9. 99. 108.]
548 cord_individual_obj[indivial_i, :] = [ 19. 9. 132. 141.]
549 cord_individual_obj[indivial_i, :] = [ 20. 9. 151. 160.]
550 cord_individual_obj[indivial_i, :] = [ 21. 10. 128. 138.]
551 cord_individual_obj[indivial_i, :] = [ 22. 9. 125. 134.]
552 cord_individual_obj[indivial_i, :] = [ 23. 10. 63. 73.]
553 cord_individual_obj[indivial_i, :] = [ 24. 11. 124. 135.]
554
555 min(cord_individual_obj[:, 3]) = 73.0
556 histol_G_best_iter[iter, 3] = 73.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 9. 114. 123.]
561 cord_individual_obj[indivial_i, :] = [ 1. 9. 174. 183.]
562 cord_individual_obj[indivial_i, :] = [ 2. 11. 179. 190.]
563 cord_individual_obj[indivial_i, :] = [ 3. 8. 152. 160.]
564 cord_individual_obj[indivial_i, :] = [ 4. 10. 112. 122.]
565 cord_individual_obj[indivial_i, :] = [ 5. 10. 133. 143.]
566 cord_individual_obj[indivial_i, :] = [ 6. 11. 108. 119.]
567 cord_individual_obj[indivial_i, :] = [ 7. 9. 97. 106.]
568 cord_individual_obj[indivial_i, :] = [ 8. 11. 88. 99.]
569 cord_individual_obj[indivial_i, :] = [ 9. 10. 134. 144.]
570 cord_individual_obj[indivial_i, :] = [ 10. 9. 93. 102.]
571 cord_individual_obj[indivial_i, :] = [ 11. 10. 92. 102.]
572 cord_individual_obj[indivial_i, :] = [ 12. 10. 179. 189.]
573 cord_individual_obj[indivial_i, :] = [ 13. 9. 122. 131.]
574 cord_individual_obj[indivial_i, :] = [ 14. 10. 82. 92.]
575 cord_individual_obj[indivial_i, :] = [ 15. 9. 137. 146.]
576 cord_individual_obj[indivial_i, :] = [ 16. 10. 63. 73.]
577 cord_individual_obj[indivial_i, :] = [ 17. 10. 99. 109.]
578 cord_individual_obj[indivial_i, :] = [ 18. 10. 153. 163.]
579 cord_individual_obj[indivial_i, :] = [ 19. 9. 126. 135.]
580 cord_individual_obj[indivial_i, :] = [ 20. 9. 108. 117.]
581 cord_individual_obj[indivial_i, :] = [ 21. 9. 148. 157.]
582 cord_individual_obj[indivial_i, :] = [ 22. 9. 101. 110.]
583 cord_individual_obj[indivial_i, :] = [ 23. 10. 99. 109.]

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584     cord_individual_obj[indivial_i, :] = [ 24.  9. 130. 139.]
585
586     min(cord_individual_obj[:, 3]) = 73.0
587     historl_G_best_iter[iter, 3] = 73.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 10. 132. 142.]
592     cord_individual_obj[indivial_i, :] = [ 1. 10. 132. 142.]
593     cord_individual_obj[indivial_i, :] = [ 2. 10. 63. 73.]
594     cord_individual_obj[indivial_i, :] = [ 3. 9. 88. 97.]
595     cord_individual_obj[indivial_i, :] = [ 4. 10. 118. 128.]
596     cord_individual_obj[indivial_i, :] = [ 5. 10. 101. 111.]
597     cord_individual_obj[indivial_i, :] = [ 6. 11. 106. 117.]
598     cord_individual_obj[indivial_i, :] = [ 7. 10. 89. 99.]
599     cord_individual_obj[indivial_i, :] = [ 8. 12. 173. 185.]
600     cord_individual_obj[indivial_i, :] = [ 9. 12. 129. 141.]
601     cord_individual_obj[indivial_i, :] = [ 10. 10. 158. 168.]
602     cord_individual_obj[indivial_i, :] = [ 11. 10. 88. 98.]
603     cord_individual_obj[indivial_i, :] = [ 12. 10. 115. 125.]
604     cord_individual_obj[indivial_i, :] = [ 13. 12. 110. 122.]
605     cord_individual_obj[indivial_i, :] = [ 14. 11. 115. 126.]
606     cord_individual_obj[indivial_i, :] = [ 15. 10. 102. 112.]
607     cord_individual_obj[indivial_i, :] = [ 16. 10. 126. 136.]
608     cord_individual_obj[indivial_i, :] = [ 17. 12. 111. 123.]
609     cord_individual_obj[indivial_i, :] = [ 18. 9. 134. 143.]
610     cord_individual_obj[indivial_i, :] = [ 19. 11. 112. 123.]
611     cord_individual_obj[indivial_i, :] = [ 20. 10. 96. 106.]
612     cord_individual_obj[indivial_i, :] = [ 21. 9. 128. 137.]
613     cord_individual_obj[indivial_i, :] = [ 22. 8. 92. 100.]
614     cord_individual_obj[indivial_i, :] = [ 23. 10. 107. 117.]
615     cord_individual_obj[indivial_i, :] = [ 24. 12. 138. 150.]
616
617     min(cord_individual_obj[:, 3]) = 73.0
618     historl_G_best_iter[iter, 3] = 73.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 9. 151. 160.]
623     cord_individual_obj[indivial_i, :] = [ 1. 9. 168. 177.]
624     cord_individual_obj[indivial_i, :] = [ 2. 10. 111. 121.]
625     cord_individual_obj[indivial_i, :] = [ 3. 9. 104. 113.]
626     cord_individual_obj[indivial_i, :] = [ 4. 13. 92. 105.]
627     cord_individual_obj[indivial_i, :] = [ 5. 10. 124. 134.]
628     cord_individual_obj[indivial_i, :] = [ 6. 10. 119. 129.]
629     cord_individual_obj[indivial_i, :] = [ 7. 9. 129. 138.]
630     cord_individual_obj[indivial_i, :] = [ 8. 10. 63. 73.]
631     cord_individual_obj[indivial_i, :] = [ 9. 10. 104. 114.]
632     cord_individual_obj[indivial_i, :] = [ 10. 9. 110. 119.]
633     cord_individual_obj[indivial_i, :] = [ 11. 11. 95. 106.]
634     cord_individual_obj[indivial_i, :] = [ 12. 9. 157. 166.]
635     cord_individual_obj[indivial_i, :] = [ 13. 9. 99. 108.]
636     cord_individual_obj[indivial_i, :] = [ 14. 10. 151. 161.]
637     cord_individual_obj[indivial_i, :] = [ 15. 10. 119. 129.]
638     cord_individual_obj[indivial_i, :] = [ 16. 10. 147. 157.]
639     cord_individual_obj[indivial_i, :] = [ 17. 10. 105. 115.]
640     cord_individual_obj[indivial_i, :] = [ 18. 10. 106. 116.]
641     cord_individual_obj[indivial_i, :] = [ 19. 7. 139. 146.]
642     cord_individual_obj[indivial_i, :] = [ 20. 8. 163. 171.]
643     cord_individual_obj[indivial_i, :] = [ 21. 9. 173. 182.]
644     cord_individual_obj[indivial_i, :] = [ 22. 11. 122. 133.]
645     cord_individual_obj[indivial_i, :] = [ 23. 10. 248. 258.]
646     cord_individual_obj[indivial_i, :] = [ 24. 10. 156. 166.]
647
648     min(cord_individual_obj[:, 3]) = 73.0
649     historl_G_best_iter[iter, 3] = 73.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 10. 107. 117.]
654     cord_individual_obj[indivial_i, :] = [ 1. 10. 71. 81.]
655     cord_individual_obj[indivial_i, :] = [ 2. 10. 114. 124.]
656     cord_individual_obj[indivial_i, :] = [ 3. 11. 160. 171.]
657     cord_individual_obj[indivial_i, :] = [ 4. 11. 175. 186.]
658     cord_individual_obj[indivial_i, :] = [ 5. 10. 100. 110.]
659     cord_individual_obj[indivial_i, :] = [ 6. 10. 112. 122.]
660     cord_individual_obj[indivial_i, :] = [ 7. 10. 121. 131.]
661     cord_individual_obj[indivial_i, :] = [ 8. 10. 111. 121.]
662     cord_individual_obj[indivial_i, :] = [ 9. 9. 135. 144.]
663     cord_individual_obj[indivial_i, :] = [ 10. 10. 95. 105.]
664     cord_individual_obj[indivial_i, :] = [ 11. 10. 152. 162.]
665     cord_individual_obj[indivial_i, :] = [ 12. 10. 116. 126.]
666     cord_individual_obj[indivial_i, :] = [ 13. 10. 136. 146.]
667     cord_individual_obj[indivial_i, :] = [ 14. 11. 126. 137.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 9. 141. 150.]
669 cord_individual_obj[indivial_i,:] = [ 16. 11. 143. 154.]
670 cord_individual_obj[indivial_i,:] = [ 17. 9. 128. 137.]
671 cord_individual_obj[indivial_i,:] = [ 18. 10. 108. 118.]
672 cord_individual_obj[indivial_i,:] = [ 19. 10. 116. 126.]
673 cord_individual_obj[indivial_i,:] = [ 20. 9. 132. 141.]
674 cord_individual_obj[indivial_i,:] = [ 21. 11. 164. 175.]
675 cord_individual_obj[indivial_i,:] = [22. 10. 89. 99.]
676 cord_individual_obj[indivial_i,:] = [23. 10. 63. 73.]
677 cord_individual_obj[indivial_i,:] = [ 24. 9. 173. 182.]
678
679 min(cord_individual_obj[:, 3]) = 73.0
680 historl_G_best_iter[iter, 3] = 73.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 225.0
689 Proportion_of_area = 0.2083333333333334
690 BEST_CHROM =
691 berth: [23. 9. 1.5 16.5 23. 23.5 4.5 8.5 14. 15. 8.5 3.5 3.5 14.
692 14.5 8.5 21. 24.]
693 time: [4. 0. 0. 0. 6. 0. 4. 7. 3. 6. 4. 6. 9. 2. 2. 8. 2.]
694 num_QC: [3. 2. 3. 3. 2. 4. 2. 2. 3. 2. 2. 2. 3. 4. 4. 4. 2.]
695 Objective function values and some other indicators:
696 Obj0 = 10.00      Obj1 = 63.00      Obj0 + Obj1 = 73.00
697 Total movement of crane: 0.00
698 Total waiting time in berth position: 63.00
699 Total index of q during berthing: 996.00
700 Specific arrangement for each vessel:
701 V_id: 0          li: 8.0           xi: 23.0           bow of i: 19.0           tail of i: 27.0           gama_i0: 4.0           gama_i1: 5
702 .0              gama_i1 + 1: 6.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
703 load_i: 80.0     work load gap_i: 0
704 V_id: 1          li: 6.0           xi: 9.0            bow of i: 6.0           tail of i: 12.0           gama_i0: 0.0           gama_i1: 1.0
705 .0              gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work load_i:
706 load_i: 60.0     work load gap_i: 0
707 V_id: 2          li: 3.0           xi: 1.5            bow of i: 0.0           tail of i: 3.0           gama_i0: 0.0           gama_i1: 1.0
708 .0              gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
709 load_i: 120.0    work load gap_i: 0
710 V_id: 3          li: 9.0           xi: 16.5           bow of i: 12.0           tail of i: 21.0           gama_i0: 0.0           gama_i1: 1
711 .0              gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
712 load_i: 100.0   work load gap_i: 0
713 V_id: 4          li: 4.0           xi: 23.0           bow of i: 21.0           tail of i: 25.0           gama_i0: 0.0           gama_i1: 1
714 .0              gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
715 load_i: 80.0     work load gap_i: 0
716 V_id: 5          li: 9.0           xi: 23.5           bow of i: 19.0           tail of i: 28.0           gama_i0: 6.0           gama_i1: 7
717 .0              gama_i1 + 1: 8.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work
718 load_i: 160.0   work load gap_i: 0
719 V_id: 6          li: 3.0           xi: 4.5            bow of i: 3.0           tail of i: 6.0           gama_i0: 0.0           gama_i1: 3.0
720 .0              gama_i1 + 1: 4.0       gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work load_i:
721 load_i: 160.0   work load gap_i: 0
722 V_id: 7          li: 3.0           xi: 8.5            bow of i: 7.0           tail of i: 10.0           gama_i0: 4.0           gama_i1: 5.0
723 .0              gama_i1 + 1: 6.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work load_i:
724 load_i: 60.0     work load gap_i: 0
725 V_id: 8          li: 8.0           xi: 14.0           bow of i: 10.0           tail of i: 18.0           gama_i0: 7.0           gama_i1: 8
726 .0              gama_i1 + 1: 9.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
727 load_i: 100.0   work load gap_i: 0
728 V_id: 9          li: 8.0           xi: 15.0           bow of i: 11.0           tail of i: 19.0           gama_i0: 3.0           gama_i1: 6
729 .0              gama_i1 + 1: 7.0       gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work
730 load_i: 160.0   work load gap_i: 0
731 V_id: 10         li: 3.0           xi: 8.5            bow of i: 7.0           tail of i: 10.0           gama_i0: 6.0           gama_i1: 9
732 .0              gama_i1 + 1: 10.0      gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 140.0           work
733 load_i: 140.0   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: 4.0           gama_i1: 5.0
735 .0              gama_i1 + 1: 6.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work load_i:
736 load_i: 60.0     work load gap_i: 0
737 V_id: 12         li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 6.0           gama_i1: 8.0
738 .0              gama_i1 + 1: 9.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work load_i:
739 load_i: 120.0   work load gap_i: 0
740 V_id: 13         li: 8.0           xi: 14.0           bow of i: 10.0           tail of i: 18.0           gama_i0: 9.0           gama_i1: 1
741 : 10.0           gama_i1 + 1: 11.0      gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
742 load_i: 100.0   work load gap_i: 0
743 V_id: 14         li: 7.0           xi: 14.5           bow of i: 11.0           tail of i: 18.0           gama_i0: 2.0           gama_i1: 2
744 : 2.0            gama_i1 + 1: 3.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 80.0           work
745 load_i: 80.0     work load gap_i: 0
746 V_id: 15         li: 5.0           xi: 8.5            bow of i: 6.0           tail of i: 11.0           gama_i0: 2.0           gama_i1: 3
747 .0              gama_i1 + 1: 4.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
748 load_i: 120.0   work load gap_i: 0
749 V_id: 16         li: 6.0           xi: 21.0           bow of i: 18.0           tail of i: 24.0           gama_i0: 8.0           gama_i1: 1
750 : 9.0            gama_i1 + 1: 10.0      gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
751 load_i: 120.0   work load gap_i: 0

```

unknown

718	V_id: 17	li: 6.0	xi: 24.0	bow of i: 21.0	tail of i: 27.0	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: 60.0	work
719	load_i: 60.0	work load gap_i: 0					
720	Algorithm finished and the total CPU time: 489 s						
721	End						
722							