

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 13. 170. 183.]
81 cord_individual_obj[indivial_i,:] = [ 17. 11. 128. 139.]
82 cord_individual_obj[indivial_i,:] = [ 18. 13. 170. 183.]
83 cord_individual_obj[indivial_i,:] = [ 19. 9. 110. 119.]
84 cord_individual_obj[indivial_i,:] = [ 20. 11. 142. 153.]
85 cord_individual_obj[indivial_i,:] = [ 21. 12. 96. 108.]
86 cord_individual_obj[indivial_i,:] = [ 22. 11. 78. 89.]
87 cord_individual_obj[indivial_i,:] = [ 23. 9. 180. 189.]
88 cord_individual_obj[indivial_i,:] = [ 24. 10. 120. 130.]
89
90 min(cord_individual_obj[:,3]) = 89.0
91 historl_G_best_iter[iter, 3] = 89.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 12. 137. 149.]
96 cord_individual_obj[indivial_i,:] = [ 1. 11. 129. 140.]
97 cord_individual_obj[indivial_i,:] = [ 2. 10. 133. 143.]
98 cord_individual_obj[indivial_i,:] = [ 3. 11. 137. 148.]
99 cord_individual_obj[indivial_i,:] = [ 4. 13. 143. 156.]
100 cord_individual_obj[indivial_i,:] = [ 5. 8. 123. 131.]
101 cord_individual_obj[indivial_i,:] = [ 6. 13. 164. 177.]
102 cord_individual_obj[indivial_i,:] = [ 7. 11. 110. 121.]
103 cord_individual_obj[indivial_i,:] = [ 8. 11. 101. 112.]
104 cord_individual_obj[indivial_i,:] = [ 9. 12. 154. 166.]
105 cord_individual_obj[indivial_i,:] = [ 10. 11. 142. 153.]
106 cord_individual_obj[indivial_i,:] = [ 11. 12. 122. 134.]
107 cord_individual_obj[indivial_i,:] = [ 12. 9. 99. 108.]
108 cord_individual_obj[indivial_i,:] = [ 13. 10. 159. 169.]
109 cord_individual_obj[indivial_i,:] = [ 14. 9. 135. 144.]
110 cord_individual_obj[indivial_i,:] = [ 15. 11. 78. 89.]
111 cord_individual_obj[indivial_i,:] = [ 16. 14. 143. 157.]
112 cord_individual_obj[indivial_i,:] = [ 17. 11. 97. 108.]
113 cord_individual_obj[indivial_i,:] = [ 18. 12. 120. 132.]
114 cord_individual_obj[indivial_i,:] = [ 19. 12. 125. 137.]
115 cord_individual_obj[indivial_i,:] = [ 20. 12. 115. 127.]
116 cord_individual_obj[indivial_i,:] = [ 21. 10. 121. 131.]
117 cord_individual_obj[indivial_i,:] = [ 22. 11. 171. 182.]
118 cord_individual_obj[indivial_i,:] = [ 23. 11. 188. 199.]
119 cord_individual_obj[indivial_i,:] = [ 24. 10. 135. 145.]
120
121 min(cord_individual_obj[:,3]) = 89.0
122 historl_G_best_iter[iter, 3] = 89.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 10. 129. 139.]
127 cord_individual_obj[indivial_i,:] = [ 1. 10. 146. 156.]
128 cord_individual_obj[indivial_i,:] = [ 2. 10. 95. 105.]
129 cord_individual_obj[indivial_i,:] = [ 3. 11. 98. 109.]
130 cord_individual_obj[indivial_i,:] = [ 4. 13. 113. 126.]
131 cord_individual_obj[indivial_i,:] = [ 5. 9. 135. 144.]
132 cord_individual_obj[indivial_i,:] = [ 6. 8. 200. 208.]
133 cord_individual_obj[indivial_i,:] = [ 7. 11. 145. 156.]
134 cord_individual_obj[indivial_i,:] = [ 8. 11. 115. 126.]
135 cord_individual_obj[indivial_i,:] = [ 9. 11. 134. 145.]
136 cord_individual_obj[indivial_i,:] = [ 10. 13. 148. 161.]
137 cord_individual_obj[indivial_i,:] = [ 11. 9. 132. 141.]
138 cord_individual_obj[indivial_i,:] = [ 12. 11. 129. 140.]
139 cord_individual_obj[indivial_i,:] = [ 13. 10. 125. 135.]
140 cord_individual_obj[indivial_i,:] = [ 14. 10. 135. 145.]
141 cord_individual_obj[indivial_i,:] = [ 15. 10. 144. 154.]
142 cord_individual_obj[indivial_i,:] = [ 16. 11. 111. 122.]
143 cord_individual_obj[indivial_i,:] = [ 17. 10. 127. 137.]
144 cord_individual_obj[indivial_i,:] = [ 18. 10. 201. 211.]
145 cord_individual_obj[indivial_i,:] = [ 19. 12. 133. 145.]
146 cord_individual_obj[indivial_i,:] = [ 20. 11. 158. 169.]
147 cord_individual_obj[indivial_i,:] = [ 21. 9. 145. 154.]
148 cord_individual_obj[indivial_i,:] = [ 22. 12. 88. 100.]
149 cord_individual_obj[indivial_i,:] = [ 23. 11. 78. 89.]
150 cord_individual_obj[indivial_i,:] = [ 24. 11. 196. 207.]
151
152 min(cord_individual_obj[:,3]) = 89.0
153 historl_G_best_iter[iter, 3] = 89.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 12. 145. 157.]
158 cord_individual_obj[indivial_i,:] = [ 1. 12. 153. 165.]
159 cord_individual_obj[indivial_i,:] = [ 2. 11. 125. 136.]
160 cord_individual_obj[indivial_i,:] = [ 3. 12. 110. 122.]
161 cord_individual_obj[indivial_i,:] = [ 4. 10. 157. 167.]
162 cord_individual_obj[indivial_i,:] = [ 5. 10. 125. 135.]
163 cord_individual_obj[indivial_i,:] = [ 6. 11. 147. 158.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 11. 138. 149.]
165 cord_individual_obj[indivial_i,:] = [ 8. 9. 106. 115.]
166 cord_individual_obj[indivial_i,:] = [ 9. 10. 80. 90.]
167 cord_individual_obj[indivial_i,:] = [ 10. 11. 134. 145.]
168 cord_individual_obj[indivial_i,:] = [ 11. 10. 135. 145.]
169 cord_individual_obj[indivial_i,:] = [ 12. 12. 123. 135.]
170 cord_individual_obj[indivial_i,:] = [ 13. 11. 109. 120.]
171 cord_individual_obj[indivial_i,:] = [ 14. 9. 137. 146.]
172 cord_individual_obj[indivial_i,:] = [ 15. 10. 105. 115.]
173 cord_individual_obj[indivial_i,:] = [ 16. 12. 130. 142.]
174 cord_individual_obj[indivial_i,:] = [ 17. 10. 94. 104.]
175 cord_individual_obj[indivial_i,:] = [ 18. 11. 78. 89.]
176 cord_individual_obj[indivial_i,:] = [ 19. 10. 106. 116.]
177 cord_individual_obj[indivial_i,:] = [ 20. 11. 82. 93.]
178 cord_individual_obj[indivial_i,:] = [ 21. 10. 136. 146.]
179 cord_individual_obj[indivial_i,:] = [ 22. 12. 160. 172.]
180 cord_individual_obj[indivial_i,:] = [ 23. 10. 111. 121.]
181 cord_individual_obj[indivial_i,:] = [ 24. 8. 113. 121.]
182
183 min(cord_individual_obj[:,3]) = 89.0
184 historl_G_best_iter[iter,3] = 89.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 10. 93. 103.]
189 cord_individual_obj[indivial_i,:] = [ 1. 10. 148. 158.]
190 cord_individual_obj[indivial_i,:] = [ 2. 11. 177. 188.]
191 cord_individual_obj[indivial_i,:] = [ 3. 11. 147. 158.]
192 cord_individual_obj[indivial_i,:] = [ 4. 11. 102. 113.]
193 cord_individual_obj[indivial_i,:] = [ 5. 9. 180. 189.]
194 cord_individual_obj[indivial_i,:] = [ 6. 10. 167. 177.]
195 cord_individual_obj[indivial_i,:] = [ 7. 10. 119. 129.]
196 cord_individual_obj[indivial_i,:] = [ 8. 12. 115. 127.]
197 cord_individual_obj[indivial_i,:] = [ 9. 10. 128. 138.]
198 cord_individual_obj[indivial_i,:] = [ 10. 12. 95. 107.]
199 cord_individual_obj[indivial_i,:] = [ 11. 11. 109. 120.]
200 cord_individual_obj[indivial_i,:] = [ 12. 13. 161. 174.]
201 cord_individual_obj[indivial_i,:] = [ 13. 11. 107. 118.]
202 cord_individual_obj[indivial_i,:] = [ 14. 11. 118. 129.]
203 cord_individual_obj[indivial_i,:] = [ 15. 10. 99. 109.]
204 cord_individual_obj[indivial_i,:] = [ 16. 11. 120. 131.]
205 cord_individual_obj[indivial_i,:] = [ 17. 10. 98. 108.]
206 cord_individual_obj[indivial_i,:] = [ 18. 12. 162. 174.]
207 cord_individual_obj[indivial_i,:] = [ 19. 9. 96. 105.]
208 cord_individual_obj[indivial_i,:] = [ 20. 11. 72. 83.]
209 cord_individual_obj[indivial_i,:] = [ 21. 12. 128. 140.]
210 cord_individual_obj[indivial_i,:] = [ 22. 11. 78. 89.]
211 cord_individual_obj[indivial_i,:] = [ 23. 9. 169. 178.]
212 cord_individual_obj[indivial_i,:] = [ 24. 10. 148. 158.]
213
214 min(cord_individual_obj[:,3]) = 83.0
215 historl_G_best_iter[iter,3] = 83.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 9. 145. 154.]
220 cord_individual_obj[indivial_i,:] = [ 1. 12. 152. 164.]
221 cord_individual_obj[indivial_i,:] = [ 2. 9. 120. 129.]
222 cord_individual_obj[indivial_i,:] = [ 3. 12. 127. 139.]
223 cord_individual_obj[indivial_i,:] = [ 4. 13. 120. 133.]
224 cord_individual_obj[indivial_i,:] = [ 5. 11. 72. 83.]
225 cord_individual_obj[indivial_i,:] = [ 6. 11. 139. 150.]
226 cord_individual_obj[indivial_i,:] = [ 7. 12. 147. 159.]
227 cord_individual_obj[indivial_i,:] = [ 8. 10. 190. 200.]
228 cord_individual_obj[indivial_i,:] = [ 9. 11. 165. 176.]
229 cord_individual_obj[indivial_i,:] = [ 10. 12. 126. 138.]
230 cord_individual_obj[indivial_i,:] = [ 11. 10. 126. 136.]
231 cord_individual_obj[indivial_i,:] = [ 12. 9. 101. 110.]
232 cord_individual_obj[indivial_i,:] = [ 13. 14. 149. 163.]
233 cord_individual_obj[indivial_i,:] = [ 14. 11. 140. 151.]
234 cord_individual_obj[indivial_i,:] = [ 15. 9. 129. 138.]
235 cord_individual_obj[indivial_i,:] = [ 16. 9. 140. 149.]
236 cord_individual_obj[indivial_i,:] = [ 17. 9. 91. 100.]
237 cord_individual_obj[indivial_i,:] = [ 18. 11. 92. 103.]
238 cord_individual_obj[indivial_i,:] = [ 19. 10. 103. 113.]
239 cord_individual_obj[indivial_i,:] = [ 20. 11. 146. 157.]
240 cord_individual_obj[indivial_i,:] = [ 21. 10. 115. 125.]
241 cord_individual_obj[indivial_i,:] = [ 22. 11. 123. 134.]
242 cord_individual_obj[indivial_i,:] = [ 23. 11. 158. 169.]
243 cord_individual_obj[indivial_i,:] = [ 24. 11. 158. 169.]
244
245 min(cord_individual_obj[:,3]) = 83.0
246 historl_G_best_iter[iter,3] = 83.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 10. 156. 166.]
251 cord_individual_obj[indivial_i, :] = [ 1. 12. 173. 185.]
252 cord_individual_obj[indivial_i, :] = [ 2. 12. 169. 181.]
253 cord_individual_obj[indivial_i, :] = [ 3. 11. 108. 119.]
254 cord_individual_obj[indivial_i, :] = [ 4. 13. 182. 195.]
255 cord_individual_obj[indivial_i, :] = [ 5. 11. 107. 118.]
256 cord_individual_obj[indivial_i, :] = [ 6. 9. 197. 206.]
257 cord_individual_obj[indivial_i, :] = [ 7. 10. 273. 283.]
258 cord_individual_obj[indivial_i, :] = [ 8. 11. 72. 83.]
259 cord_individual_obj[indivial_i, :] = [ 9. 11. 123. 134.]
260 cord_individual_obj[indivial_i, :] = [ 10. 11. 140. 151.]
261 cord_individual_obj[indivial_i, :] = [ 11. 13. 143. 156.]
262 cord_individual_obj[indivial_i, :] = [ 12. 11. 146. 157.]
263 cord_individual_obj[indivial_i, :] = [ 13. 12. 180. 192.]
264 cord_individual_obj[indivial_i, :] = [ 14. 9. 208. 217.]
265 cord_individual_obj[indivial_i, :] = [ 15. 11. 126. 137.]
266 cord_individual_obj[indivial_i, :] = [ 16. 10. 109. 119.]
267 cord_individual_obj[indivial_i, :] = [ 17. 11. 153. 164.]
268 cord_individual_obj[indivial_i, :] = [ 18. 13. 133. 146.]
269 cord_individual_obj[indivial_i, :] = [ 19. 11. 168. 179.]
270 cord_individual_obj[indivial_i, :] = [ 20. 12. 106. 118.]
271 cord_individual_obj[indivial_i, :] = [ 21. 10. 177. 187.]
272 cord_individual_obj[indivial_i, :] = [ 22. 11. 170. 181.]
273 cord_individual_obj[indivial_i, :] = [ 23. 9. 135. 144.]
274 cord_individual_obj[indivial_i, :] = [ 24. 13. 122. 135.]
275

276 min(cord_individual_obj[:, 3]) = 83.0
277 historl_G_best_iter[iter, 3] = 83.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 9. 88. 97.]
282 cord_individual_obj[indivial_i, :] = [ 1. 11. 116. 127.]
283 cord_individual_obj[indivial_i, :] = [ 2. 10. 187. 197.]
284 cord_individual_obj[indivial_i, :] = [ 3. 11. 170. 181.]
285 cord_individual_obj[indivial_i, :] = [ 4. 12. 101. 113.]
286 cord_individual_obj[indivial_i, :] = [ 5. 12. 164. 176.]
287 cord_individual_obj[indivial_i, :] = [ 6. 12. 90. 102.]
288 cord_individual_obj[indivial_i, :] = [ 7. 11. 72. 83.]
289 cord_individual_obj[indivial_i, :] = [ 8. 11. 124. 135.]
290 cord_individual_obj[indivial_i, :] = [ 9. 10. 163. 173.]
291 cord_individual_obj[indivial_i, :] = [ 10. 10. 92. 102.]
292 cord_individual_obj[indivial_i, :] = [ 11. 10. 155. 165.]
293 cord_individual_obj[indivial_i, :] = [ 12. 10. 91. 101.]
294 cord_individual_obj[indivial_i, :] = [ 13. 13. 147. 160.]
295 cord_individual_obj[indivial_i, :] = [ 14. 9. 188. 197.]
296 cord_individual_obj[indivial_i, :] = [ 15. 10. 162. 172.]
297 cord_individual_obj[indivial_i, :] = [ 16. 9. 72. 81.]
298 cord_individual_obj[indivial_i, :] = [ 17. 9. 66. 75.]
299 cord_individual_obj[indivial_i, :] = [ 18. 11. 151. 162.]
300 cord_individual_obj[indivial_i, :] = [ 19. 10. 221. 231.]
301 cord_individual_obj[indivial_i, :] = [ 20. 12. 161. 173.]
302 cord_individual_obj[indivial_i, :] = [ 21. 10. 190. 200.]
303 cord_individual_obj[indivial_i, :] = [ 22. 12. 118. 130.]
304 cord_individual_obj[indivial_i, :] = [ 23. 11. 127. 138.]
305 cord_individual_obj[indivial_i, :] = [ 24. 10. 105. 115.]
306

307 min(cord_individual_obj[:, 3]) = 75.0
308 historl_G_best_iter[iter, 3] = 75.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 10. 119. 129.]
313 cord_individual_obj[indivial_i, :] = [ 1. 12. 160. 172.]
314 cord_individual_obj[indivial_i, :] = [ 2. 13. 165. 178.]
315 cord_individual_obj[indivial_i, :] = [ 3. 10. 157. 167.]
316 cord_individual_obj[indivial_i, :] = [ 4. 11. 91. 102.]
317 cord_individual_obj[indivial_i, :] = [ 5. 12. 136. 148.]
318 cord_individual_obj[indivial_i, :] = [ 6. 10. 184. 194.]
319 cord_individual_obj[indivial_i, :] = [ 7. 10. 154. 164.]
320 cord_individual_obj[indivial_i, :] = [ 8. 10. 147. 157.]
321 cord_individual_obj[indivial_i, :] = [ 9. 10. 147. 157.]
322 cord_individual_obj[indivial_i, :] = [ 10. 11. 154. 165.]
323 cord_individual_obj[indivial_i, :] = [ 11. 11. 105. 116.]
324 cord_individual_obj[indivial_i, :] = [ 12. 9. 149. 158.]
325 cord_individual_obj[indivial_i, :] = [ 13. 11. 160. 171.]
326 cord_individual_obj[indivial_i, :] = [ 14. 9. 144. 153.]
327 cord_individual_obj[indivial_i, :] = [ 15. 9. 175. 184.]
328 cord_individual_obj[indivial_i, :] = [ 16. 11. 102. 113.]
329 cord_individual_obj[indivial_i, :] = [ 17. 11. 155. 166.]
330 cord_individual_obj[indivial_i, :] = [ 18. 11. 108. 119.]
331 cord_individual_obj[indivial_i, :] = [ 19. 9. 66. 75.]

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unknown

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332     cord_individual_obj[indivial_i, :] = [ 20. 12. 102. 114.]  
333     cord_individual_obj[indivial_i, :] = [ 21. 12. 132. 144.]  
334     cord_individual_obj[indivial_i, :] = [ 22. 11. 127. 138.]  
335     cord_individual_obj[indivial_i, :] = [ 23. 10. 130. 140.]  
336     cord_individual_obj[indivial_i, :] = [ 24. 12. 234. 246.]  
337  
338 min(cord_individual_obj[:, 3]) = 75.0  
339 histol_G_best_iter[iter, 3] = 75.0  
340 Begin iteration:  
341  
342 iter = 10  
343     cord_individual_obj[indivial_i, :] = [ 0. 11. 172. 183.]  
344     cord_individual_obj[indivial_i, :] = [ 1. 13. 88. 101.]  
345     cord_individual_obj[indivial_i, :] = [ 2. 9. 107. 116.]  
346     cord_individual_obj[indivial_i, :] = [ 3. 9. 126. 135.]  
347     cord_individual_obj[indivial_i, :] = [ 4. 11. 166. 177.]  
348     cord_individual_obj[indivial_i, :] = [ 5. 10. 109. 119.]  
349     cord_individual_obj[indivial_i, :] = [ 6. 11. 83. 94.]  
350     cord_individual_obj[indivial_i, :] = [ 7. 12. 113. 125.]  
351     cord_individual_obj[indivial_i, :] = [ 8. 13. 150. 163.]  
352     cord_individual_obj[indivial_i, :] = [ 9. 8. 116. 124.]  
353     cord_individual_obj[indivial_i, :] = [ 10. 10. 161. 171.]  
354     cord_individual_obj[indivial_i, :] = [ 11. 10. 96. 106.]  
355     cord_individual_obj[indivial_i, :] = [ 12. 12. 144. 156.]  
356     cord_individual_obj[indivial_i, :] = [ 13. 13. 165. 178.]  
357     cord_individual_obj[indivial_i, :] = [ 14. 8. 220. 228.]  
358     cord_individual_obj[indivial_i, :] = [ 15. 10. 118. 128.]  
359     cord_individual_obj[indivial_i, :] = [ 16. 9. 88. 97.]  
360     cord_individual_obj[indivial_i, :] = [ 17. 12. 112. 124.]  
361     cord_individual_obj[indivial_i, :] = [ 18. 11. 115. 126.]  
362     cord_individual_obj[indivial_i, :] = [ 19. 13. 148. 161.]  
363     cord_individual_obj[indivial_i, :] = [ 20. 11. 133. 144.]  
364     cord_individual_obj[indivial_i, :] = [ 21. 11. 128. 139.]  
365     cord_individual_obj[indivial_i, :] = [ 22. 12. 186. 198.]  
366     cord_individual_obj[indivial_i, :] = [ 23. 9. 91. 100.]  
367     cord_individual_obj[indivial_i, :] = [ 24. 9. 66. 75.]  
368  
369 min(cord_individual_obj[:, 3]) = 75.0  
370 histol_G_best_iter[iter, 3] = 75.0  
371 Begin iteration:  
372  
373 iter = 11  
374     cord_individual_obj[indivial_i, :] = [ 0. 10. 99. 109.]  
375     cord_individual_obj[indivial_i, :] = [ 1. 11. 120. 131.]  
376     cord_individual_obj[indivial_i, :] = [ 2. 9. 110. 119.]  
377     cord_individual_obj[indivial_i, :] = [ 3. 8. 117. 125.]  
378     cord_individual_obj[indivial_i, :] = [ 4. 12. 108. 120.]  
379     cord_individual_obj[indivial_i, :] = [ 5. 10. 185. 195.]  
380     cord_individual_obj[indivial_i, :] = [ 6. 10. 112. 122.]  
381     cord_individual_obj[indivial_i, :] = [ 7. 12. 124. 136.]  
382     cord_individual_obj[indivial_i, :] = [ 8. 9. 148. 157.]  
383     cord_individual_obj[indivial_i, :] = [ 9. 9. 129. 138.]  
384     cord_individual_obj[indivial_i, :] = [ 10. 11. 118. 129.]  
385     cord_individual_obj[indivial_i, :] = [ 11. 10. 136. 146.]  
386     cord_individual_obj[indivial_i, :] = [ 12. 8. 141. 149.]  
387     cord_individual_obj[indivial_i, :] = [ 13. 11. 111. 122.]  
388     cord_individual_obj[indivial_i, :] = [ 14. 9. 66. 75.]  
389     cord_individual_obj[indivial_i, :] = [ 15. 9. 87. 96.]  
390     cord_individual_obj[indivial_i, :] = [ 16. 10. 81. 91.]  
391     cord_individual_obj[indivial_i, :] = [ 17. 11. 90. 101.]  
392     cord_individual_obj[indivial_i, :] = [ 18. 13. 126. 139.]  
393     cord_individual_obj[indivial_i, :] = [ 19. 12. 185. 197.]  
394     cord_individual_obj[indivial_i, :] = [ 20. 12. 149. 161.]  
395     cord_individual_obj[indivial_i, :] = [ 21. 10. 128. 138.]  
396     cord_individual_obj[indivial_i, :] = [ 22. 10. 113. 123.]  
397     cord_individual_obj[indivial_i, :] = [ 23. 11. 113. 124.]  
398     cord_individual_obj[indivial_i, :] = [ 24. 11. 154. 165.]  
399  
400 min(cord_individual_obj[:, 3]) = 75.0  
401 histol_G_best_iter[iter, 3] = 75.0  
402 Begin iteration:  
403  
404 iter = 12  
405     cord_individual_obj[indivial_i, :] = [ 0. 10. 114. 124.]  
406     cord_individual_obj[indivial_i, :] = [ 1. 12. 161. 173.]  
407     cord_individual_obj[indivial_i, :] = [ 2. 11. 124. 135.]  
408     cord_individual_obj[indivial_i, :] = [ 3. 11. 136. 147.]  
409     cord_individual_obj[indivial_i, :] = [ 4. 10. 162. 172.]  
410     cord_individual_obj[indivial_i, :] = [ 5. 9. 134. 143.]  
411     cord_individual_obj[indivial_i, :] = [ 6. 10. 134. 144.]  
412     cord_individual_obj[indivial_i, :] = [ 7. 11. 141. 152.]  
413     cord_individual_obj[indivial_i, :] = [ 8. 11. 160. 171.]  
414     cord_individual_obj[indivial_i, :] = [ 9. 11. 143. 154.]  
415     cord_individual_obj[indivial_i, :] = [ 10. 10. 177. 187.]
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416 cord_individual_obj[indivial_i,:] = [ 11. 10. 118. 128.]
417 cord_individual_obj[indivial_i,:] = [ 12. 10. 147. 157.]
418 cord_individual_obj[indivial_i,:] = [ 13. 10. 94. 104.]
419 cord_individual_obj[indivial_i,:] = [ 14. 12. 193. 205.]
420 cord_individual_obj[indivial_i,:] = [ 15. 11. 115. 126.]
421 cord_individual_obj[indivial_i,:] = [ 16. 10. 140. 150.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 123. 134.]
423 cord_individual_obj[indivial_i,:] = [ 18. 11. 126. 137.]
424 cord_individual_obj[indivial_i,:] = [ 19. 9. 66. 75.]
425 cord_individual_obj[indivial_i,:] = [ 20. 10. 148. 158.]
426 cord_individual_obj[indivial_i,:] = [ 21. 11. 92. 103.]
427 cord_individual_obj[indivial_i,:] = [ 22. 13. 121. 134.]
428 cord_individual_obj[indivial_i,:] = [ 23. 9. 103. 112.]
429 cord_individual_obj[indivial_i,:] = [ 24. 11. 101. 112.]
430
431 min(cord_individual_obj[:,3]) = 75.0
432 histol_G_best_iter[iter,3] = 75.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 10. 155. 165.]
437 cord_individual_obj[indivial_i,:] = [ 1. 12. 157. 169.]
438 cord_individual_obj[indivial_i,:] = [ 2. 13. 138. 151.]
439 cord_individual_obj[indivial_i,:] = [ 3. 11. 180. 191.]
440 cord_individual_obj[indivial_i,:] = [ 4. 13. 106. 119.]
441 cord_individual_obj[indivial_i,:] = [ 5. 10. 125. 135.]
442 cord_individual_obj[indivial_i,:] = [ 6. 10. 106. 116.]
443 cord_individual_obj[indivial_i,:] = [ 7. 12. 139. 151.]
444 cord_individual_obj[indivial_i,:] = [ 8. 11. 164. 175.]
445 cord_individual_obj[indivial_i,:] = [ 9. 10. 96. 106.]
446 cord_individual_obj[indivial_i,:] = [ 10. 11. 91. 102.]
447 cord_individual_obj[indivial_i,:] = [ 11. 10. 83. 93.]
448 cord_individual_obj[indivial_i,:] = [ 12. 11. 93. 104.]
449 cord_individual_obj[indivial_i,:] = [ 13. 13. 98. 111.]
450 cord_individual_obj[indivial_i,:] = [ 14. 9. 66. 75.]
451 cord_individual_obj[indivial_i,:] = [ 15. 11. 124. 135.]
452 cord_individual_obj[indivial_i,:] = [ 16. 9. 120. 129.]
453 cord_individual_obj[indivial_i,:] = [ 17. 10. 109. 119.]
454 cord_individual_obj[indivial_i,:] = [ 18. 11. 95. 106.]
455 cord_individual_obj[indivial_i,:] = [ 19. 13. 150. 163.]
456 cord_individual_obj[indivial_i,:] = [ 20. 10. 140. 150.]
457 cord_individual_obj[indivial_i,:] = [ 21. 10. 144. 154.]
458 cord_individual_obj[indivial_i,:] = [ 22. 9. 151. 160.]
459 cord_individual_obj[indivial_i,:] = [ 23. 11. 192. 203.]
460 cord_individual_obj[indivial_i,:] = [ 24. 10. 117. 127.]
461
462 min(cord_individual_obj[:,3]) = 75.0
463 histol_G_best_iter[iter,3] = 75.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 12. 117. 129.]
468 cord_individual_obj[indivial_i,:] = [ 1. 10. 135. 145.]
469 cord_individual_obj[indivial_i,:] = [ 2. 9. 148. 157.]
470 cord_individual_obj[indivial_i,:] = [ 3. 12. 121. 133.]
471 cord_individual_obj[indivial_i,:] = [ 4. 10. 115. 125.]
472 cord_individual_obj[indivial_i,:] = [ 5. 12. 161. 173.]
473 cord_individual_obj[indivial_i,:] = [ 6. 12. 126. 138.]
474 cord_individual_obj[indivial_i,:] = [ 7. 11. 89. 100.]
475 cord_individual_obj[indivial_i,:] = [ 8. 10. 136. 146.]
476 cord_individual_obj[indivial_i,:] = [ 9. 11. 174. 185.]
477 cord_individual_obj[indivial_i,:] = [ 10. 11. 92. 103.]
478 cord_individual_obj[indivial_i,:] = [ 11. 10. 130. 140.]
479 cord_individual_obj[indivial_i,:] = [ 12. 11. 117. 128.]
480 cord_individual_obj[indivial_i,:] = [ 13. 11. 150. 161.]
481 cord_individual_obj[indivial_i,:] = [ 14. 10. 173. 183.]
482 cord_individual_obj[indivial_i,:] = [ 15. 12. 136. 148.]
483 cord_individual_obj[indivial_i,:] = [ 16. 10. 129. 139.]
484 cord_individual_obj[indivial_i,:] = [ 17. 11. 138. 149.]
485 cord_individual_obj[indivial_i,:] = [ 18. 9. 173. 182.]
486 cord_individual_obj[indivial_i,:] = [ 19. 12. 126. 138.]
487 cord_individual_obj[indivial_i,:] = [ 20. 9. 152. 161.]
488 cord_individual_obj[indivial_i,:] = [ 21. 11. 115. 126.]
489 cord_individual_obj[indivial_i,:] = [ 22. 12. 176. 188.]
490 cord_individual_obj[indivial_i,:] = [ 23. 9. 66. 75.]
491 cord_individual_obj[indivial_i,:] = [ 24. 11. 161. 172.]
492
493 min(cord_individual_obj[:,3]) = 75.0
494 histol_G_best_iter[iter,3] = 75.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 10. 91. 101.]
499 cord_individual_obj[indivial_i,:] = [ 1. 9. 103. 112.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 10. 168. 178.]
501 cord_individual_obj[indivial_i, :] = [ 3. 12. 76. 88.]
502 cord_individual_obj[indivial_i, :] = [ 4. 12. 132. 144.]
503 cord_individual_obj[indivial_i, :] = [ 5. 11. 131. 142.]
504 cord_individual_obj[indivial_i, :] = [ 6. 13. 113. 126.]
505 cord_individual_obj[indivial_i, :] = [ 7. 10. 78. 88.]
506 cord_individual_obj[indivial_i, :] = [ 8. 11. 182. 193.]
507 cord_individual_obj[indivial_i, :] = [ 9. 9. 144. 153.]
508 cord_individual_obj[indivial_i, :] = [ 10. 9. 137. 146.]
509 cord_individual_obj[indivial_i, :] = [ 11. 10. 118. 128.]
510 cord_individual_obj[indivial_i, :] = [ 12. 13. 151. 164.]
511 cord_individual_obj[indivial_i, :] = [ 13. 10. 139. 149.]
512 cord_individual_obj[indivial_i, :] = [ 14. 10. 129. 139.]
513 cord_individual_obj[indivial_i, :] = [ 15. 9. 161. 170.]
514 cord_individual_obj[indivial_i, :] = [ 16. 11. 145. 156.]
515 cord_individual_obj[indivial_i, :] = [ 17. 10. 212. 222.]
516 cord_individual_obj[indivial_i, :] = [ 18. 10. 99. 109.]
517 cord_individual_obj[indivial_i, :] = [ 19. 12. 124. 136.]
518 cord_individual_obj[indivial_i, :] = [ 20. 11. 160. 171.]
519 cord_individual_obj[indivial_i, :] = [ 21. 9. 142. 151.]
520 cord_individual_obj[indivial_i, :] = [ 22. 9. 66. 75.]
521 cord_individual_obj[indivial_i, :] = [ 23. 11. 173. 184.]
522 cord_individual_obj[indivial_i, :] = [ 24. 12. 114. 126.]
523
524 min(cord_individual_obj[:, 3]) = 75.0
525 histol_G_best_iter[iter, 3] = 75.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 10. 115. 125.]
530 cord_individual_obj[indivial_i, :] = [ 1. 13. 121. 134.]
531 cord_individual_obj[indivial_i, :] = [ 2. 11. 139. 150.]
532 cord_individual_obj[indivial_i, :] = [ 3. 9. 158. 167.]
533 cord_individual_obj[indivial_i, :] = [ 4. 11. 102. 113.]
534 cord_individual_obj[indivial_i, :] = [ 5. 11. 157. 168.]
535 cord_individual_obj[indivial_i, :] = [ 6. 11. 164. 175.]
536 cord_individual_obj[indivial_i, :] = [ 7. 11. 127. 138.]
537 cord_individual_obj[indivial_i, :] = [ 8. 9. 116. 125.]
538 cord_individual_obj[indivial_i, :] = [ 9. 11. 113. 124.]
539 cord_individual_obj[indivial_i, :] = [ 10. 9. 136. 145.]
540 cord_individual_obj[indivial_i, :] = [ 11. 9. 74. 83.]
541 cord_individual_obj[indivial_i, :] = [ 12. 10. 98. 108.]
542 cord_individual_obj[indivial_i, :] = [ 13. 11. 144. 155.]
543 cord_individual_obj[indivial_i, :] = [ 14. 12. 148. 160.]
544 cord_individual_obj[indivial_i, :] = [ 15. 11. 107. 118.]
545 cord_individual_obj[indivial_i, :] = [ 16. 9. 113. 122.]
546 cord_individual_obj[indivial_i, :] = [ 17. 9. 66. 75.]
547 cord_individual_obj[indivial_i, :] = [ 18. 9. 85. 94.]
548 cord_individual_obj[indivial_i, :] = [ 19. 11. 120. 131.]
549 cord_individual_obj[indivial_i, :] = [ 20. 12. 127. 139.]
550 cord_individual_obj[indivial_i, :] = [ 21. 10. 146. 156.]
551 cord_individual_obj[indivial_i, :] = [ 22. 13. 127. 140.]
552 cord_individual_obj[indivial_i, :] = [ 23. 10. 69. 79.]
553 cord_individual_obj[indivial_i, :] = [ 24. 12. 170. 182.]
554
555 min(cord_individual_obj[:, 3]) = 75.0
556 histol_G_best_iter[iter, 3] = 75.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 13. 145. 158.]
561 cord_individual_obj[indivial_i, :] = [ 1. 11. 181. 192.]
562 cord_individual_obj[indivial_i, :] = [ 2. 11. 152. 163.]
563 cord_individual_obj[indivial_i, :] = [ 3. 11. 95. 106.]
564 cord_individual_obj[indivial_i, :] = [ 4. 12. 141. 153.]
565 cord_individual_obj[indivial_i, :] = [ 5. 11. 142. 153.]
566 cord_individual_obj[indivial_i, :] = [ 6. 11. 205. 216.]
567 cord_individual_obj[indivial_i, :] = [ 7. 12. 93. 105.]
568 cord_individual_obj[indivial_i, :] = [ 8. 11. 144. 155.]
569 cord_individual_obj[indivial_i, :] = [ 9. 10. 176. 186.]
570 cord_individual_obj[indivial_i, :] = [ 10. 11. 124. 135.]
571 cord_individual_obj[indivial_i, :] = [ 11. 9. 118. 127.]
572 cord_individual_obj[indivial_i, :] = [ 12. 10. 119. 129.]
573 cord_individual_obj[indivial_i, :] = [ 13. 13. 183. 196.]
574 cord_individual_obj[indivial_i, :] = [ 14. 14. 200. 214.]
575 cord_individual_obj[indivial_i, :] = [ 15. 11. 118. 129.]
576 cord_individual_obj[indivial_i, :] = [ 16. 9. 115. 124.]
577 cord_individual_obj[indivial_i, :] = [ 17. 11. 137. 148.]
578 cord_individual_obj[indivial_i, :] = [ 18. 9. 71. 80.]
579 cord_individual_obj[indivial_i, :] = [ 19. 11. 163. 174.]
580 cord_individual_obj[indivial_i, :] = [ 20. 9. 187. 196.]
581 cord_individual_obj[indivial_i, :] = [ 21. 11. 128. 139.]
582 cord_individual_obj[indivial_i, :] = [ 22. 13. 152. 165.]
583 cord_individual_obj[indivial_i, :] = [ 23. 9. 127. 136.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [24. 9. 66. 75.]  
585  
586     min(cord_individual_obj[:, 3]) = 75.0  
587     historl_G_best_iter[iter, 3] = 75.0  
588 Begin iteration:  
589  
590 iter = 18  
591     cord_individual_obj[indivial_i, :] = [ 0. 10. 129. 139.]  
592     cord_individual_obj[indivial_i, :] = [ 1. 11. 114. 125.]  
593     cord_individual_obj[indivial_i, :] = [ 2. 9. 153. 162.]  
594     cord_individual_obj[indivial_i, :] = [ 3. 10. 88. 98.]  
595     cord_individual_obj[indivial_i, :] = [ 4. 9. 131. 140.]  
596     cord_individual_obj[indivial_i, :] = [ 5. 11. 166. 177.]  
597     cord_individual_obj[indivial_i, :] = [ 6. 9. 66. 75.]  
598     cord_individual_obj[indivial_i, :] = [ 7. 9. 175. 184.]  
599     cord_individual_obj[indivial_i, :] = [ 8. 11. 112. 123.]  
600     cord_individual_obj[indivial_i, :] = [ 9. 9. 149. 158.]  
601     cord_individual_obj[indivial_i, :] = [10. 12. 116. 128.]  
602     cord_individual_obj[indivial_i, :] = [11. 11. 99. 110.]  
603     cord_individual_obj[indivial_i, :] = [12. 11. 124. 135.]  
604     cord_individual_obj[indivial_i, :] = [13. 9. 118. 127.]  
605     cord_individual_obj[indivial_i, :] = [14. 10. 110. 120.]  
606     cord_individual_obj[indivial_i, :] = [15. 11. 138. 149.]  
607     cord_individual_obj[indivial_i, :] = [16. 11. 134. 145.]  
608     cord_individual_obj[indivial_i, :] = [17. 11. 94. 105.]  
609     cord_individual_obj[indivial_i, :] = [18. 9. 143. 152.]  
610     cord_individual_obj[indivial_i, :] = [19. 13. 143. 156.]  
611     cord_individual_obj[indivial_i, :] = [20. 11. 96. 107.]  
612     cord_individual_obj[indivial_i, :] = [21. 10. 79. 89.]  
613     cord_individual_obj[indivial_i, :] = [22. 12. 142. 154.]  
614     cord_individual_obj[indivial_i, :] = [23. 10. 104. 114.]  
615     cord_individual_obj[indivial_i, :] = [24. 12. 157. 169.]  
616  
617     min(cord_individual_obj[:, 3]) = 75.0  
618     historl_G_best_iter[iter, 3] = 75.0  
619 Begin iteration:  
620  
621 iter = 19  
622     cord_individual_obj[indivial_i, :] = [ 0. 12. 164. 176.]  
623     cord_individual_obj[indivial_i, :] = [ 1. 11. 125. 136.]  
624     cord_individual_obj[indivial_i, :] = [ 2. 11. 132. 143.]  
625     cord_individual_obj[indivial_i, :] = [ 3. 10. 150. 160.]  
626     cord_individual_obj[indivial_i, :] = [ 4. 11. 78. 89.]  
627     cord_individual_obj[indivial_i, :] = [ 5. 11. 117. 128.]  
628     cord_individual_obj[indivial_i, :] = [ 6. 12. 123. 135.]  
629     cord_individual_obj[indivial_i, :] = [ 7. 9. 66. 75.]  
630     cord_individual_obj[indivial_i, :] = [ 8. 11. 106. 117.]  
631     cord_individual_obj[indivial_i, :] = [ 9. 11. 129. 140.]  
632     cord_individual_obj[indivial_i, :] = [10. 10. 150. 160.]  
633     cord_individual_obj[indivial_i, :] = [11. 10. 178. 188.]  
634     cord_individual_obj[indivial_i, :] = [12. 9. 108. 117.]  
635     cord_individual_obj[indivial_i, :] = [13. 12. 160. 172.]  
636     cord_individual_obj[indivial_i, :] = [14. 9. 146. 155.]  
637     cord_individual_obj[indivial_i, :] = [15. 10. 161. 171.]  
638     cord_individual_obj[indivial_i, :] = [16. 11. 83. 94.]  
639     cord_individual_obj[indivial_i, :] = [17. 11. 104. 115.]  
640     cord_individual_obj[indivial_i, :] = [18. 9. 134. 143.]  
641     cord_individual_obj[indivial_i, :] = [19. 13. 83. 96.]  
642     cord_individual_obj[indivial_i, :] = [20. 11. 152. 163.]  
643     cord_individual_obj[indivial_i, :] = [21. 9. 144. 153.]  
644     cord_individual_obj[indivial_i, :] = [22. 12. 129. 141.]  
645     cord_individual_obj[indivial_i, :] = [23. 10. 131. 141.]  
646     cord_individual_obj[indivial_i, :] = [24. 11. 124. 135.]  
647  
648     min(cord_individual_obj[:, 3]) = 75.0  
649     historl_G_best_iter[iter, 3] = 75.0  
650 Begin iteration:  
651  
652 iter = 20  
653     cord_individual_obj[indivial_i, :] = [ 0. 12. 90. 102.]  
654     cord_individual_obj[indivial_i, :] = [ 1. 10. 102. 112.]  
655     cord_individual_obj[indivial_i, :] = [ 2. 11. 147. 158.]  
656     cord_individual_obj[indivial_i, :] = [ 3. 12. 158. 170.]  
657     cord_individual_obj[indivial_i, :] = [ 4. 13. 185. 198.]  
658     cord_individual_obj[indivial_i, :] = [ 5. 9. 137. 146.]  
659     cord_individual_obj[indivial_i, :] = [ 6. 12. 77. 89.]  
660     cord_individual_obj[indivial_i, :] = [ 7. 11. 98. 109.]  
661     cord_individual_obj[indivial_i, :] = [ 8. 13. 142. 155.]  
662     cord_individual_obj[indivial_i, :] = [ 9. 10. 167. 177.]  
663     cord_individual_obj[indivial_i, :] = [10. 11. 115. 126.]  
664     cord_individual_obj[indivial_i, :] = [11. 9. 66. 75.]  
665     cord_individual_obj[indivial_i, :] = [12. 11. 123. 134.]  
666     cord_individual_obj[indivial_i, :] = [13. 15. 175. 190.]  
667     cord_individual_obj[indivial_i, :] = [14. 10. 102. 112.]
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668 cord_individual_obj[indivial_i,:] = [ 15. 10. 185. 195.]
669 cord_individual_obj[indivial_i,:] = [ 16. 10. 146. 156.]
670 cord_individual_obj[indivial_i,:] = [ 17. 11. 145. 156.]
671 cord_individual_obj[indivial_i,:] = [18. 12. 85. 97.]
672 cord_individual_obj[indivial_i,:] = [ 19. 12. 135. 147.]
673 cord_individual_obj[indivial_i,:] = [ 20. 14. 155. 169.]
674 cord_individual_obj[indivial_i,:] = [ 21. 9. 214. 223.]
675 cord_individual_obj[indivial_i,:] = [ 22. 9. 94. 103.]
676 cord_individual_obj[indivial_i,:] = [ 23. 9. 129. 138.]
677 cord_individual_obj[indivial_i,:] = [ 24. 11. 109. 120.]
678
679 min(cord_individual_obj[:,3]) = 75.0
680 historl_G_best_iter[iter,3] = 75.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 240.0
689 Proportion_of_area = 0.2222222222222222
690 BEST_CHROM =
691 berth: [25.5 24. 13.5 3.5 10.5 6.5 25. 6.5 9. 16.5 10. 17.5 5. 2.
692 1.5 17.5 16.5]
693 time: [6. 0. 7. 7. 4. 2. 3. 4. 7. 3. 0. 0. 0. 4. 0. 2. 5.]
694 num_QC: [3. 2. 3. 3. 3. 5. 3. 4. 2. 4. 4. 4. 2. 2. 2. 3. 6.]
695 Objective function values and some other indicators:
696 Obj0 = 9.00          Obj1 = 66.00        Obj0 + Obj1 = 75.00
697 Total movement of crane: 12.00
698 Total waiting time in berth position: 54.00
699 Total index of q during berthing: 1021.00
700 Specific arrangement for each vessel:
701 V_id: 0           li: 9.0           xi: 25.5           bow of i: 21.0           tail of i: 30.0           gama_i0: 6.0           gama_i1: 8
702 .0                 gama_i1 + 1: 9.0      gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
703 load_i: 140.0     work load gap_i: 0
704 V_id: 1           li: 4.0           xi: 24.0           bow of i: 22.0           tail of i: 26.0           gama_i0: 0.0           gama_i1: 2
705 .0                 gama_i1 + 1: 3.0      gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 100.0           work
706 load_i: 100.0     work load gap_i: 0
707 V_id: 2           li: 5.0           xi: 13.5           bow of i: 11.0           tail of i: 16.0           gama_i0: 7.0           gama_i1: 9
708 .0                 gama_i1 + 1: 10.0     gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
709 load_i: 140.0     work load gap_i: 0
710 V_id: 3           li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0            gama_i0: 7.0           gama_i1: 9.0
711 .0                 gama_i1 + 1: 10.0     gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
712 load_i: 140.0     work load gap_i: 0
713 V_id: 4           li: 3.0           xi: 10.5           bow of i: 9.0           tail of i: 12.0           gama_i0: 4.0           gama_i1: 6
714 .0                 gama_i1 + 1: 7.0      gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
715 load_i: 140.0     work load gap_i: 0
716 V_id: 5           li: 7.0           xi: 6.5            bow of i: 3.0           tail of i: 10.0           gama_i0: 2.0           gama_i1: 3.0
717 .0                 gama_i1 + 1: 4.0      gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work load_i:
718 load_i: 140.0     work load gap_i: 0
719 V_id: 6           li: 6.0           xi: 25.0           bow of i: 22.0           tail of i: 28.0           gama_i0: 3.0           gama_i1: 5
720 .0                 gama_i1 + 1: 6.0      gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
721 load_i: 140.0     work load gap_i: 0
722 V_id: 7           li: 5.0           xi: 6.5            bow of i: 4.0           tail of i: 9.0            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: 160.0           work load_i:
724 load_i: 160.0     work load gap_i: 0
725 V_id: 8           li: 4.0           xi: 9.0            bow of i: 7.0           tail of i: 11.0           gama_i0: 7.0           gama_i1: 9.0
726 .0                 gama_i1 + 1: 10.0     gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
727 load_i: 120.0     work load gap_i: 0
728 V_id: 9           li: 9.0           xi: 16.5           bow of i: 12.0           tail of i: 21.0           gama_i0: 3.0           gama_i1: 4
729 .0                 gama_i1 + 1: 5.0      gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
730 load_i: 120.0     work load gap_i: 0
731 V_id: 10          li: 6.0           xi: 10.0           bow of i: 7.0           tail of i: 13.0           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: 140.0           work
733 load_i: 140.0     work load gap_i: 0
734 V_id: 11          li: 9.0           xi: 17.5           bow of i: 13.0           tail of i: 22.0           gama_i0: 0.0           gama_i1: 1
735 .0                 gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
736 load_i: 120.0     work load gap_i: 0
737 V_id: 12          li: 4.0           xi: 5.0            bow of i: 3.0           tail of i: 7.0            gama_i0: 0.0           gama_i1: 1.0
738 .0                 gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work load_i:
739 load_i: 80.0       work load gap_i: 0
740 V_id: 13          li: 4.0           xi: 2.0            bow of i: 0.0           tail of i: 4.0            gama_i0: 4.0           gama_i1: 6.0
741 .0                 gama_i1 + 1: 7.0      gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work load_i:
742 load_i: 120.0     work load gap_i: 0
743 V_id: 14          li: 3.0           xi: 1.5            bow of i: 0.0           tail of i: 3.0            gama_i0: 0.0           gama_i1: 3.0
744 .0                 gama_i1 + 1: 4.0      gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work load_i:
745 load_i: 160.0     work load gap_i: 0
746 V_id: 15          li: 9.0           xi: 17.5           bow of i: 13.0           tail of i: 22.0           gama_i0: 2.0           gama_i1: 1
747 .0                 gama_i1 + 1: 3.0      gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
748 load_i: 60.0       work load gap_i: 0
749 V_id: 16          li: 9.0           xi: 16.5           bow of i: 12.0           tail of i: 21.0           gama_i0: 5.0           gama_i1: 1
750 .0                 gama_i1 + 1: 6.0      gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 80.0           work
751 load_i: 80.0       work load gap_i: 0

```

unknown

```
718  
719 Algorithm finished and the total CPU time: 437 s  
720 End  
721
```