

unknown

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80 cord_individual_obj[indivial_i,:] = [16, 11, 81, 92.]
81 cord_individual_obj[indivial_i,:] = [17, 13, 112, 125.]
82 cord_individual_obj[indivial_i,:] = [18, 14, 101, 115.]
83 cord_individual_obj[indivial_i,:] = [19, 12, 147, 159.]
84 cord_individual_obj[indivial_i,:] = [20, 11, 83, 94.]
85 cord_individual_obj[indivial_i,:] = [21, 12, 140, 152.]
86 cord_individual_obj[indivial_i,:] = [22, 9, 102, 111.]
87 cord_individual_obj[indivial_i,:] = [23, 9, 125, 134.]
88 cord_individual_obj[indivial_i,:] = [24, 13, 153, 166.]
89
90 min(cord_individual_obj[:,3]) = 84.0
91 historl_G_best_iter[iter, 3] = 84.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0, 10, 142, 152.]
96 cord_individual_obj[indivial_i,:] = [ 1, 11, 141, 152.]
97 cord_individual_obj[indivial_i,:] = [ 2, 10, 114, 124.]
98 cord_individual_obj[indivial_i,:] = [ 3, 11, 113, 124.]
99 cord_individual_obj[indivial_i,:] = [ 4, 10, 155, 165.]
100 cord_individual_obj[indivial_i,:] = [ 5, 12, 83, 95.]
101 cord_individual_obj[indivial_i,:] = [ 6, 13, 129, 142.]
102 cord_individual_obj[indivial_i,:] = [ 7, 12, 72, 84.]
103 cord_individual_obj[indivial_i,:] = [ 8, 9, 106, 115.]
104 cord_individual_obj[indivial_i,:] = [ 9, 9, 135, 144.]
105 cord_individual_obj[indivial_i,:] = [ 10, 10, 174, 184.]
106 cord_individual_obj[indivial_i,:] = [ 11, 11, 114, 125.]
107 cord_individual_obj[indivial_i,:] = [ 12, 13, 224, 237.]
108 cord_individual_obj[indivial_i,:] = [ 13, 11, 142, 153.]
109 cord_individual_obj[indivial_i,:] = [ 14, 10, 121, 131.]
110 cord_individual_obj[indivial_i,:] = [ 15, 11, 119, 130.]
111 cord_individual_obj[indivial_i,:] = [ 16, 9, 200, 209.]
112 cord_individual_obj[indivial_i,:] = [ 17, 9, 151, 160.]
113 cord_individual_obj[indivial_i,:] = [ 18, 9, 143, 152.]
114 cord_individual_obj[indivial_i,:] = [ 19, 12, 147, 159.]
115 cord_individual_obj[indivial_i,:] = [ 20, 9, 128, 137.]
116 cord_individual_obj[indivial_i,:] = [ 21, 12, 135, 147.]
117 cord_individual_obj[indivial_i,:] = [ 22, 11, 147, 158.]
118 cord_individual_obj[indivial_i,:] = [ 23, 12, 110, 122.]
119 cord_individual_obj[indivial_i,:] = [ 24, 11, 147, 158.]
120
121 min(cord_individual_obj[:,3]) = 84.0
122 historl_G_best_iter[iter, 3] = 84.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0, 9, 123, 132.]
127 cord_individual_obj[indivial_i,:] = [ 1, 12, 96, 108.]
128 cord_individual_obj[indivial_i,:] = [ 2, 12, 111, 123.]
129 cord_individual_obj[indivial_i,:] = [ 3, 11, 143, 154.]
130 cord_individual_obj[indivial_i,:] = [ 4, 11, 124, 135.]
131 cord_individual_obj[indivial_i,:] = [ 5, 12, 118, 130.]
132 cord_individual_obj[indivial_i,:] = [ 6, 11, 96, 107.]
133 cord_individual_obj[indivial_i,:] = [ 7, 11, 135, 146.]
134 cord_individual_obj[indivial_i,:] = [ 8, 12, 122, 134.]
135 cord_individual_obj[indivial_i,:] = [ 9, 10, 139, 149.]
136 cord_individual_obj[indivial_i,:] = [ 10, 11, 136, 147.]
137 cord_individual_obj[indivial_i,:] = [ 11, 12, 156, 168.]
138 cord_individual_obj[indivial_i,:] = [ 12, 12, 72, 84.]
139 cord_individual_obj[indivial_i,:] = [ 13, 10, 75, 85.]
140 cord_individual_obj[indivial_i,:] = [ 14, 10, 190, 200.]
141 cord_individual_obj[indivial_i,:] = [ 15, 9, 137, 146.]
142 cord_individual_obj[indivial_i,:] = [ 16, 10, 158, 168.]
143 cord_individual_obj[indivial_i,:] = [ 17, 9, 140, 149.]
144 cord_individual_obj[indivial_i,:] = [ 18, 11, 192, 203.]
145 cord_individual_obj[indivial_i,:] = [ 19, 10, 139, 149.]
146 cord_individual_obj[indivial_i,:] = [ 20, 11, 94, 105.]
147 cord_individual_obj[indivial_i,:] = [ 21, 10, 135, 145.]
148 cord_individual_obj[indivial_i,:] = [ 22, 10, 134, 144.]
149 cord_individual_obj[indivial_i,:] = [ 23, 11, 174, 185.]
150 cord_individual_obj[indivial_i,:] = [ 24, 10, 149, 159.]
151
152 min(cord_individual_obj[:,3]) = 84.0
153 historl_G_best_iter[iter, 3] = 84.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0, 11, 129, 140.]
158 cord_individual_obj[indivial_i,:] = [ 1, 11, 243, 254.]
159 cord_individual_obj[indivial_i,:] = [ 2, 12, 122, 134.]
160 cord_individual_obj[indivial_i,:] = [ 3, 12, 131, 143.]
161 cord_individual_obj[indivial_i,:] = [ 4, 11, 117, 128.]
162 cord_individual_obj[indivial_i,:] = [ 5, 10, 185, 195.]
163 cord_individual_obj[indivial_i,:] = [ 6, 13, 155, 168.]

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164 cord_individual_obj[indivial_i, :] = [ 7. 11. 138. 149.]
165 cord_individual_obj[indivial_i, :] = [ 8. 12. 147. 159.]
166 cord_individual_obj[indivial_i, :] = [ 9. 11. 210. 221.]
167 cord_individual_obj[indivial_i, :] = [ 10. 12. 143. 155.]
168 cord_individual_obj[indivial_i, :] = [ 11. 12. 98. 110.]
169 cord_individual_obj[indivial_i, :] = [ 12. 11. 137. 148.]
170 cord_individual_obj[indivial_i, :] = [ 13. 12. 136. 148.]
171 cord_individual_obj[indivial_i, :] = [ 14. 10. 150. 160.]
172 cord_individual_obj[indivial_i, :] = [ 15. 11. 119. 130.]
173 cord_individual_obj[indivial_i, :] = [ 16. 12. 143. 155.]
174 cord_individual_obj[indivial_i, :] = [ 17. 11. 164. 175.]
175 cord_individual_obj[indivial_i, :] = [ 18. 12. 72. 84.]
176 cord_individual_obj[indivial_i, :] = [ 19. 10. 168. 178.]
177 cord_individual_obj[indivial_i, :] = [ 20. 13. 84. 97.]
178 cord_individual_obj[indivial_i, :] = [ 21. 12. 118. 130.]
179 cord_individual_obj[indivial_i, :] = [ 22. 10. 118. 128.]
180 cord_individual_obj[indivial_i, :] = [ 23. 11. 177. 188.]
181 cord_individual_obj[indivial_i, :] = [ 24. 10. 144. 154.]
182
183 min(cord_individual_obj[:, 3]) = 84.0
184 historl_G_best_iter[iter, 3] = 84.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i, :] = [ 0. 10. 144. 154.]
189 cord_individual_obj[indivial_i, :] = [ 1. 12. 72. 84.]
190 cord_individual_obj[indivial_i, :] = [ 2. 12. 145. 157.]
191 cord_individual_obj[indivial_i, :] = [ 3. 10. 119. 129.]
192 cord_individual_obj[indivial_i, :] = [ 4. 11. 118. 129.]
193 cord_individual_obj[indivial_i, :] = [ 5. 12. 156. 168.]
194 cord_individual_obj[indivial_i, :] = [ 6. 9. 136. 145.]
195 cord_individual_obj[indivial_i, :] = [ 7. 10. 141. 151.]
196 cord_individual_obj[indivial_i, :] = [ 8. 10. 165. 175.]
197 cord_individual_obj[indivial_i, :] = [ 9. 11. 157. 168.]
198 cord_individual_obj[indivial_i, :] = [ 10. 13. 183. 196.]
199 cord_individual_obj[indivial_i, :] = [ 11. 9. 91. 100.]
200 cord_individual_obj[indivial_i, :] = [ 12. 11. 172. 183.]
201 cord_individual_obj[indivial_i, :] = [ 13. 11. 96. 107.]
202 cord_individual_obj[indivial_i, :] = [ 14. 10. 145. 155.]
203 cord_individual_obj[indivial_i, :] = [ 15. 10. 181. 191.]
204 cord_individual_obj[indivial_i, :] = [ 16. 11. 77. 88.]
205 cord_individual_obj[indivial_i, :] = [ 17. 12. 148. 160.]
206 cord_individual_obj[indivial_i, :] = [ 18. 11. 141. 152.]
207 cord_individual_obj[indivial_i, :] = [ 19. 11. 137. 148.]
208 cord_individual_obj[indivial_i, :] = [ 20. 11. 108. 119.]
209 cord_individual_obj[indivial_i, :] = [ 21. 11. 111. 122.]
210 cord_individual_obj[indivial_i, :] = [ 22. 13. 111. 124.]
211 cord_individual_obj[indivial_i, :] = [ 23. 11. 131. 142.]
212 cord_individual_obj[indivial_i, :] = [ 24. 12. 149. 161.]
213
214 min(cord_individual_obj[:, 3]) = 84.0
215 historl_G_best_iter[iter, 3] = 84.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i, :] = [ 0. 12. 109. 121.]
220 cord_individual_obj[indivial_i, :] = [ 1. 12. 141. 153.]
221 cord_individual_obj[indivial_i, :] = [ 2. 11. 112. 123.]
222 cord_individual_obj[indivial_i, :] = [ 3. 12. 119. 131.]
223 cord_individual_obj[indivial_i, :] = [ 4. 11. 121. 132.]
224 cord_individual_obj[indivial_i, :] = [ 5. 10. 135. 145.]
225 cord_individual_obj[indivial_i, :] = [ 6. 10. 109. 119.]
226 cord_individual_obj[indivial_i, :] = [ 7. 10. 162. 172.]
227 cord_individual_obj[indivial_i, :] = [ 8. 11. 102. 113.]
228 cord_individual_obj[indivial_i, :] = [ 9. 9. 116. 125.]
229 cord_individual_obj[indivial_i, :] = [ 10. 12. 72. 84.]
230 cord_individual_obj[indivial_i, :] = [ 11. 10. 166. 176.]
231 cord_individual_obj[indivial_i, :] = [ 12. 10. 140. 150.]
232 cord_individual_obj[indivial_i, :] = [ 13. 11. 107. 118.]
233 cord_individual_obj[indivial_i, :] = [ 14. 11. 123. 134.]
234 cord_individual_obj[indivial_i, :] = [ 15. 8. 135. 143.]
235 cord_individual_obj[indivial_i, :] = [ 16. 11. 157. 168.]
236 cord_individual_obj[indivial_i, :] = [ 17. 10. 124. 134.]
237 cord_individual_obj[indivial_i, :] = [ 18. 10. 82. 92.]
238 cord_individual_obj[indivial_i, :] = [ 19. 10. 130. 140.]
239 cord_individual_obj[indivial_i, :] = [ 20. 9. 115. 124.]
240 cord_individual_obj[indivial_i, :] = [ 21. 11. 136. 147.]
241 cord_individual_obj[indivial_i, :] = [ 22. 11. 114. 125.]
242 cord_individual_obj[indivial_i, :] = [ 23. 11. 125. 136.]
243 cord_individual_obj[indivial_i, :] = [ 24. 9. 145. 154.]
244
245 min(cord_individual_obj[:, 3]) = 84.0
246 historl_G_best_iter[iter, 3] = 84.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 10. 118. 128.]
251 cord_individual_obj[indivial_i, :] = [ 1. 11. 158. 169.]
252 cord_individual_obj[indivial_i, :] = [ 2. 12. 103. 115.]
253 cord_individual_obj[indivial_i, :] = [ 3. 12. 182. 194.]
254 cord_individual_obj[indivial_i, :] = [ 4. 11. 112. 123.]
255 cord_individual_obj[indivial_i, :] = [ 5. 11. 151. 162.]
256 cord_individual_obj[indivial_i, :] = [ 6. 11. 123. 134.]
257 cord_individual_obj[indivial_i, :] = [ 7. 10. 165. 175.]
258 cord_individual_obj[indivial_i, :] = [ 8. 11. 92. 103.]
259 cord_individual_obj[indivial_i, :] = [ 9. 9. 133. 142.]
260 cord_individual_obj[indivial_i, :] = [ 10. 12. 138. 150.]
261 cord_individual_obj[indivial_i, :] = [ 11. 12. 72. 84.]
262 cord_individual_obj[indivial_i, :] = [ 12. 11. 158. 169.]
263 cord_individual_obj[indivial_i, :] = [ 13. 11. 118. 129.]
264 cord_individual_obj[indivial_i, :] = [ 14. 10. 122. 132.]
265 cord_individual_obj[indivial_i, :] = [ 15. 9. 113. 122.]
266 cord_individual_obj[indivial_i, :] = [ 16. 10. 150. 160.]
267 cord_individual_obj[indivial_i, :] = [ 17. 10. 153. 163.]
268 cord_individual_obj[indivial_i, :] = [ 18. 10. 174. 184.]
269 cord_individual_obj[indivial_i, :] = [ 19. 10. 149. 159.]
270 cord_individual_obj[indivial_i, :] = [ 20. 11. 137. 148.]
271 cord_individual_obj[indivial_i, :] = [ 21. 10. 175. 185.]
272 cord_individual_obj[indivial_i, :] = [ 22. 11. 129. 140.]
273 cord_individual_obj[indivial_i, :] = [ 23. 12. 123. 135.]
274 cord_individual_obj[indivial_i, :] = [ 24. 10. 123. 133.]
275

276 min(cord_individual_obj[:, 3]) = 84.0
277 historl_G_best_iter[iter, 3] = 84.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 11. 149. 160.]
282 cord_individual_obj[indivial_i, :] = [ 1. 9. 238. 247.]
283 cord_individual_obj[indivial_i, :] = [ 2. 11. 100. 111.]
284 cord_individual_obj[indivial_i, :] = [ 3. 12. 72. 84.]
285 cord_individual_obj[indivial_i, :] = [ 4. 11. 107. 118.]
286 cord_individual_obj[indivial_i, :] = [ 5. 10. 168. 178.]
287 cord_individual_obj[indivial_i, :] = [ 6. 13. 150. 163.]
288 cord_individual_obj[indivial_i, :] = [ 7. 12. 90. 102.]
289 cord_individual_obj[indivial_i, :] = [ 8. 12. 100. 112.]
290 cord_individual_obj[indivial_i, :] = [ 9. 11. 98. 109.]
291 cord_individual_obj[indivial_i, :] = [ 10. 12. 153. 165.]
292 cord_individual_obj[indivial_i, :] = [ 11. 12. 100. 112.]
293 cord_individual_obj[indivial_i, :] = [ 12. 12. 120. 132.]
294 cord_individual_obj[indivial_i, :] = [ 13. 10. 139. 149.]
295 cord_individual_obj[indivial_i, :] = [ 14. 9. 158. 167.]
296 cord_individual_obj[indivial_i, :] = [ 15. 10. 108. 118.]
297 cord_individual_obj[indivial_i, :] = [ 16. 11. 137. 148.]
298 cord_individual_obj[indivial_i, :] = [ 17. 11. 141. 152.]
299 cord_individual_obj[indivial_i, :] = [ 18. 10. 157. 167.]
300 cord_individual_obj[indivial_i, :] = [ 19. 11. 101. 112.]
301 cord_individual_obj[indivial_i, :] = [ 20. 11. 100. 111.]
302 cord_individual_obj[indivial_i, :] = [ 21. 11. 115. 126.]
303 cord_individual_obj[indivial_i, :] = [ 22. 11. 102. 113.]
304 cord_individual_obj[indivial_i, :] = [ 23. 12. 107. 119.]
305 cord_individual_obj[indivial_i, :] = [ 24. 10. 126. 136.]
306

307 min(cord_individual_obj[:, 3]) = 84.0
308 historl_G_best_iter[iter, 3] = 84.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 11. 118. 129.]
313 cord_individual_obj[indivial_i, :] = [ 1. 12. 72. 84.]
314 cord_individual_obj[indivial_i, :] = [ 2. 11. 101. 112.]
315 cord_individual_obj[indivial_i, :] = [ 3. 12. 119. 131.]
316 cord_individual_obj[indivial_i, :] = [ 4. 10. 149. 159.]
317 cord_individual_obj[indivial_i, :] = [ 5. 10. 127. 137.]
318 cord_individual_obj[indivial_i, :] = [ 6. 10. 116. 126.]
319 cord_individual_obj[indivial_i, :] = [ 7. 12. 131. 143.]
320 cord_individual_obj[indivial_i, :] = [ 8. 11. 153. 164.]
321 cord_individual_obj[indivial_i, :] = [ 9. 11. 139. 150.]
322 cord_individual_obj[indivial_i, :] = [ 10. 13. 107. 120.]
323 cord_individual_obj[indivial_i, :] = [ 11. 10. 138. 148.]
324 cord_individual_obj[indivial_i, :] = [ 12. 12. 129. 141.]
325 cord_individual_obj[indivial_i, :] = [ 13. 10. 124. 134.]
326 cord_individual_obj[indivial_i, :] = [ 14. 9. 194. 203.]
327 cord_individual_obj[indivial_i, :] = [ 15. 9. 142. 151.]
328 cord_individual_obj[indivial_i, :] = [ 16. 11. 118. 129.]
329 cord_individual_obj[indivial_i, :] = [ 17. 10. 161. 171.]
330 cord_individual_obj[indivial_i, :] = [ 18. 10. 94. 104.]
331 cord_individual_obj[indivial_i, :] = [ 19. 11. 123. 134.]

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332 cord_individual_obj[indivial_i, :] = [ 20. 11. 145. 156.]
333 cord_individual_obj[indivial_i, :] = [ 21. 11. 155. 166.]
334 cord_individual_obj[indivial_i, :] = [ 22. 10. 135. 145.]
335 cord_individual_obj[indivial_i, :] = [ 23. 12. 136. 148.]
336 cord_individual_obj[indivial_i, :] = [ 24. 9. 114. 123.]
337
338 min(cord_individual_obj[:, 3]) = 84.0
339 histol_G_best_iter[iter, 3] = 84.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 10. 212. 222.]
344 cord_individual_obj[indivial_i, :] = [ 1. 9. 160. 169.]
345 cord_individual_obj[indivial_i, :] = [ 2. 12. 170. 182.]
346 cord_individual_obj[indivial_i, :] = [ 3. 12. 113. 125.]
347 cord_individual_obj[indivial_i, :] = [ 4. 11. 172. 183.]
348 cord_individual_obj[indivial_i, :] = [ 5. 9. 126. 135.]
349 cord_individual_obj[indivial_i, :] = [ 6. 13. 111. 124.]
350 cord_individual_obj[indivial_i, :] = [ 7. 11. 131. 142.]
351 cord_individual_obj[indivial_i, :] = [ 8. 12. 103. 115.]
352 cord_individual_obj[indivial_i, :] = [ 9. 11. 130. 141.]
353 cord_individual_obj[indivial_i, :] = [ 10. 11. 141. 152.]
354 cord_individual_obj[indivial_i, :] = [ 11. 11. 129. 140.]
355 cord_individual_obj[indivial_i, :] = [ 12. 11. 134. 145.]
356 cord_individual_obj[indivial_i, :] = [ 13. 11. 136. 147.]
357 cord_individual_obj[indivial_i, :] = [ 14. 12. 72. 84.]
358 cord_individual_obj[indivial_i, :] = [ 15. 11. 128. 139.]
359 cord_individual_obj[indivial_i, :] = [ 16. 10. 93. 103.]
360 cord_individual_obj[indivial_i, :] = [ 17. 10. 108. 118.]
361 cord_individual_obj[indivial_i, :] = [ 18. 10. 124. 134.]
362 cord_individual_obj[indivial_i, :] = [ 19. 12. 92. 104.]
363 cord_individual_obj[indivial_i, :] = [ 20. 12. 123. 135.]
364 cord_individual_obj[indivial_i, :] = [ 21. 10. 136. 146.]
365 cord_individual_obj[indivial_i, :] = [ 22. 11. 132. 143.]
366 cord_individual_obj[indivial_i, :] = [ 23. 13. 106. 119.]
367 cord_individual_obj[indivial_i, :] = [ 24. 10. 96. 106.]
368
369 min(cord_individual_obj[:, 3]) = 84.0
370 histol_G_best_iter[iter, 3] = 84.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 12. 72. 84.]
375 cord_individual_obj[indivial_i, :] = [ 1. 10. 157. 167.]
376 cord_individual_obj[indivial_i, :] = [ 2. 11. 170. 181.]
377 cord_individual_obj[indivial_i, :] = [ 3. 13. 162. 175.]
378 cord_individual_obj[indivial_i, :] = [ 4. 13. 133. 146.]
379 cord_individual_obj[indivial_i, :] = [ 5. 9. 130. 139.]
380 cord_individual_obj[indivial_i, :] = [ 6. 10. 114. 124.]
381 cord_individual_obj[indivial_i, :] = [ 7. 13. 165. 178.]
382 cord_individual_obj[indivial_i, :] = [ 8. 12. 116. 128.]
383 cord_individual_obj[indivial_i, :] = [ 9. 13. 169. 182.]
384 cord_individual_obj[indivial_i, :] = [ 10. 12. 107. 119.]
385 cord_individual_obj[indivial_i, :] = [ 11. 11. 145. 156.]
386 cord_individual_obj[indivial_i, :] = [ 12. 10. 120. 130.]
387 cord_individual_obj[indivial_i, :] = [ 13. 10. 107. 117.]
388 cord_individual_obj[indivial_i, :] = [ 14. 10. 133. 143.]
389 cord_individual_obj[indivial_i, :] = [ 15. 8. 114. 122.]
390 cord_individual_obj[indivial_i, :] = [ 16. 11. 83. 94.]
391 cord_individual_obj[indivial_i, :] = [ 17. 11. 174. 185.]
392 cord_individual_obj[indivial_i, :] = [ 18. 8. 142. 150.]
393 cord_individual_obj[indivial_i, :] = [ 19. 12. 112. 124.]
394 cord_individual_obj[indivial_i, :] = [ 20. 10. 107. 117.]
395 cord_individual_obj[indivial_i, :] = [ 21. 10. 92. 102.]
396 cord_individual_obj[indivial_i, :] = [ 22. 11. 146. 157.]
397 cord_individual_obj[indivial_i, :] = [ 23. 10. 131. 141.]
398 cord_individual_obj[indivial_i, :] = [ 24. 11. 148. 159.]
399
400 min(cord_individual_obj[:, 3]) = 84.0
401 histol_G_best_iter[iter, 3] = 84.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 11. 173. 184.]
406 cord_individual_obj[indivial_i, :] = [ 1. 11. 191. 202.]
407 cord_individual_obj[indivial_i, :] = [ 2. 14. 135. 149.]
408 cord_individual_obj[indivial_i, :] = [ 3. 12. 121. 133.]
409 cord_individual_obj[indivial_i, :] = [ 4. 12. 122. 134.]
410 cord_individual_obj[indivial_i, :] = [ 5. 11. 121. 132.]
411 cord_individual_obj[indivial_i, :] = [ 6. 11. 101. 112.]
412 cord_individual_obj[indivial_i, :] = [ 7. 10. 111. 121.]
413 cord_individual_obj[indivial_i, :] = [ 8. 10. 128. 138.]
414 cord_individual_obj[indivial_i, :] = [ 9. 10. 126. 136.]
415 cord_individual_obj[indivial_i, :] = [ 10. 10. 132. 142.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 9. 195. 204.]
417 cord_individual_obj[indivial_i,:] = [ 12. 11. 193. 204.]
418 cord_individual_obj[indivial_i,:] = [ 13. 10. 105. 115.]
419 cord_individual_obj[indivial_i,:] = [ 14. 11. 146. 157.]
420 cord_individual_obj[indivial_i,:] = [ 15. 10. 153. 163.]
421 cord_individual_obj[indivial_i,:] = [ 16. 11. 122. 133.]
422 cord_individual_obj[indivial_i,:] = [ 17. 12. 72. 84.]
423 cord_individual_obj[indivial_i,:] = [ 18. 12. 108. 120.]
424 cord_individual_obj[indivial_i,:] = [ 19. 12. 162. 174.]
425 cord_individual_obj[indivial_i,:] = [ 20. 12. 126. 138.]
426 cord_individual_obj[indivial_i,:] = [ 21. 10. 164. 174.]
427 cord_individual_obj[indivial_i,:] = [ 22. 12. 154. 166.]
428 cord_individual_obj[indivial_i,:] = [ 23. 11. 153. 164.]
429 cord_individual_obj[indivial_i,:] = [ 24. 9. 96. 105.]
430
431 min(cord_individual_obj[:,3]) = 84.0
432 histol_G_best_iter[iter,3] = 84.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 9. 108. 117.]
437 cord_individual_obj[indivial_i,:] = [ 1. 10. 85. 95.]
438 cord_individual_obj[indivial_i,:] = [ 2. 12. 110. 122.]
439 cord_individual_obj[indivial_i,:] = [ 3. 13. 161. 174.]
440 cord_individual_obj[indivial_i,:] = [ 4. 13. 104. 117.]
441 cord_individual_obj[indivial_i,:] = [ 5. 12. 223. 235.]
442 cord_individual_obj[indivial_i,:] = [ 6. 12. 83. 95.]
443 cord_individual_obj[indivial_i,:] = [ 7. 9. 113. 122.]
444 cord_individual_obj[indivial_i,:] = [ 8. 12. 99. 111.]
445 cord_individual_obj[indivial_i,:] = [ 9. 13. 181. 194.]
446 cord_individual_obj[indivial_i,:] = [ 10. 12. 139. 151.]
447 cord_individual_obj[indivial_i,:] = [ 11. 12. 72. 84.]
448 cord_individual_obj[indivial_i,:] = [ 12. 10. 127. 137.]
449 cord_individual_obj[indivial_i,:] = [ 13. 9. 108. 117.]
450 cord_individual_obj[indivial_i,:] = [ 14. 12. 105. 117.]
451 cord_individual_obj[indivial_i,:] = [ 15. 11. 113. 124.]
452 cord_individual_obj[indivial_i,:] = [ 16. 11. 83. 94.]
453 cord_individual_obj[indivial_i,:] = [ 17. 12. 128. 140.]
454 cord_individual_obj[indivial_i,:] = [ 18. 11. 136. 147.]
455 cord_individual_obj[indivial_i,:] = [ 19. 11. 89. 100.]
456 cord_individual_obj[indivial_i,:] = [ 20. 12. 122. 134.]
457 cord_individual_obj[indivial_i,:] = [ 21. 10. 148. 158.]
458 cord_individual_obj[indivial_i,:] = [ 22. 10. 130. 140.]
459 cord_individual_obj[indivial_i,:] = [ 23. 11. 84. 95.]
460 cord_individual_obj[indivial_i,:] = [ 24. 13. 126. 139.]
461
462 min(cord_individual_obj[:,3]) = 84.0
463 histol_G_best_iter[iter,3] = 84.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 13. 152. 165.]
468 cord_individual_obj[indivial_i,:] = [ 1. 10. 142. 152.]
469 cord_individual_obj[indivial_i,:] = [ 2. 11. 107. 118.]
470 cord_individual_obj[indivial_i,:] = [ 3. 12. 126. 138.]
471 cord_individual_obj[indivial_i,:] = [ 4. 11. 238. 249.]
472 cord_individual_obj[indivial_i,:] = [ 5. 12. 72. 84.]
473 cord_individual_obj[indivial_i,:] = [ 6. 12. 117. 129.]
474 cord_individual_obj[indivial_i,:] = [ 7. 12. 93. 105.]
475 cord_individual_obj[indivial_i,:] = [ 8. 12. 137. 149.]
476 cord_individual_obj[indivial_i,:] = [ 9. 10. 167. 177.]
477 cord_individual_obj[indivial_i,:] = [ 10. 12. 127. 139.]
478 cord_individual_obj[indivial_i,:] = [ 11. 10. 116. 126.]
479 cord_individual_obj[indivial_i,:] = [ 12. 11. 120. 131.]
480 cord_individual_obj[indivial_i,:] = [ 13. 10. 112. 122.]
481 cord_individual_obj[indivial_i,:] = [ 14. 10. 181. 191.]
482 cord_individual_obj[indivial_i,:] = [ 15. 10. 128. 138.]
483 cord_individual_obj[indivial_i,:] = [ 16. 10. 137. 147.]
484 cord_individual_obj[indivial_i,:] = [ 17. 11. 111. 122.]
485 cord_individual_obj[indivial_i,:] = [ 18. 10. 142. 152.]
486 cord_individual_obj[indivial_i,:] = [ 19. 11. 163. 174.]
487 cord_individual_obj[indivial_i,:] = [ 20. 12. 128. 140.]
488 cord_individual_obj[indivial_i,:] = [ 21. 9. 143. 152.]
489 cord_individual_obj[indivial_i,:] = [ 22. 12. 158. 170.]
490 cord_individual_obj[indivial_i,:] = [ 23. 12. 137. 149.]
491 cord_individual_obj[indivial_i,:] = [ 24. 10. 148. 158.]
492
493 min(cord_individual_obj[:,3]) = 84.0
494 histol_G_best_iter[iter,3] = 84.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 9. 182. 191.]
499 cord_individual_obj[indivial_i,:] = [ 1. 10. 124. 134.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 11. 140. 151.]
501 cord_individual_obj[indivial_i,:] = [ 3. 13. 185. 198.]
502 cord_individual_obj[indivial_i,:] = [ 4. 12. 72. 84.]
503 cord_individual_obj[indivial_i,:] = [ 5. 12. 120. 132.]
504 cord_individual_obj[indivial_i,:] = [ 6. 11. 103. 114.]
505 cord_individual_obj[indivial_i,:] = [ 7. 12. 119. 131.]
506 cord_individual_obj[indivial_i,:] = [ 8. 11. 120. 131.]
507 cord_individual_obj[indivial_i,:] = [ 9. 11. 126. 137.]
508 cord_individual_obj[indivial_i,:] = [ 10. 12. 136. 148.]
509 cord_individual_obj[indivial_i,:] = [ 11. 10. 144. 154.]
510 cord_individual_obj[indivial_i,:] = [ 12. 11. 149. 160.]
511 cord_individual_obj[indivial_i,:] = [ 13. 11. 124. 135.]
512 cord_individual_obj[indivial_i,:] = [ 14. 11. 140. 151.]
513 cord_individual_obj[indivial_i,:] = [ 15. 9. 143. 152.]
514 cord_individual_obj[indivial_i,:] = [ 16. 9. 109. 118.]
515 cord_individual_obj[indivial_i,:] = [ 17. 10. 174. 184.]
516 cord_individual_obj[indivial_i,:] = [ 18. 11. 116. 127.]
517 cord_individual_obj[indivial_i,:] = [ 19. 10. 171. 181.]
518 cord_individual_obj[indivial_i,:] = [ 20. 12. 106. 118.]
519 cord_individual_obj[indivial_i,:] = [ 21. 12. 73. 85.]
520 cord_individual_obj[indivial_i,:] = [ 22. 13. 159. 172.]
521 cord_individual_obj[indivial_i,:] = [ 23. 12. 130. 142.]
522 cord_individual_obj[indivial_i,:] = [ 24. 10. 122. 132.]
523
524 min(cord_individual_obj[:, 3]) = 84.0
525 histol_G_best_iter[iter, 3] = 84.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 10. 135. 145.]
530 cord_individual_obj[indivial_i,:] = [ 1. 10. 147. 157.]
531 cord_individual_obj[indivial_i,:] = [ 2. 11. 116. 127.]
532 cord_individual_obj[indivial_i,:] = [ 3. 12. 72. 84.]
533 cord_individual_obj[indivial_i,:] = [ 4. 11. 121. 132.]
534 cord_individual_obj[indivial_i,:] = [ 5. 11. 144. 155.]
535 cord_individual_obj[indivial_i,:] = [ 6. 11. 123. 134.]
536 cord_individual_obj[indivial_i,:] = [ 7. 10. 133. 143.]
537 cord_individual_obj[indivial_i,:] = [ 8. 10. 117. 127.]
538 cord_individual_obj[indivial_i,:] = [ 9. 12. 154. 166.]
539 cord_individual_obj[indivial_i,:] = [ 10. 11. 134. 145.]
540 cord_individual_obj[indivial_i,:] = [ 11. 10. 140. 150.]
541 cord_individual_obj[indivial_i,:] = [ 12. 12. 127. 139.]
542 cord_individual_obj[indivial_i,:] = [ 13. 11. 137. 148.]
543 cord_individual_obj[indivial_i,:] = [ 14. 11. 137. 148.]
544 cord_individual_obj[indivial_i,:] = [ 15. 9. 120. 129.]
545 cord_individual_obj[indivial_i,:] = [ 16. 11. 152. 163.]
546 cord_individual_obj[indivial_i,:] = [ 17. 10. 136. 146.]
547 cord_individual_obj[indivial_i,:] = [ 18. 10. 175. 185.]
548 cord_individual_obj[indivial_i,:] = [ 19. 11. 128. 139.]
549 cord_individual_obj[indivial_i,:] = [ 20. 10. 119. 129.]
550 cord_individual_obj[indivial_i,:] = [ 21. 10. 113. 123.]
551 cord_individual_obj[indivial_i,:] = [ 22. 11. 102. 113.]
552 cord_individual_obj[indivial_i,:] = [ 23. 12. 118. 130.]
553 cord_individual_obj[indivial_i,:] = [ 24. 11. 113. 124.]
554
555 min(cord_individual_obj[:, 3]) = 84.0
556 histol_G_best_iter[iter, 3] = 84.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 12. 184. 196.]
561 cord_individual_obj[indivial_i,:] = [ 1. 10. 125. 135.]
562 cord_individual_obj[indivial_i,:] = [ 2. 13. 114. 127.]
563 cord_individual_obj[indivial_i,:] = [ 3. 12. 120. 132.]
564 cord_individual_obj[indivial_i,:] = [ 4. 12. 160. 172.]
565 cord_individual_obj[indivial_i,:] = [ 5. 12. 111. 123.]
566 cord_individual_obj[indivial_i,:] = [ 6. 12. 98. 110.]
567 cord_individual_obj[indivial_i,:] = [ 7. 12. 153. 165.]
568 cord_individual_obj[indivial_i,:] = [ 8. 11. 108. 119.]
569 cord_individual_obj[indivial_i,:] = [ 9. 11. 118. 129.]
570 cord_individual_obj[indivial_i,:] = [ 10. 11. 125. 136.]
571 cord_individual_obj[indivial_i,:] = [ 11. 9. 126. 135.]
572 cord_individual_obj[indivial_i,:] = [ 12. 9. 143. 152.]
573 cord_individual_obj[indivial_i,:] = [ 13. 12. 110. 122.]
574 cord_individual_obj[indivial_i,:] = [ 14. 10. 156. 166.]
575 cord_individual_obj[indivial_i,:] = [ 15. 9. 117. 126.]
576 cord_individual_obj[indivial_i,:] = [ 16. 9. 97. 106.]
577 cord_individual_obj[indivial_i,:] = [ 17. 10. 144. 154.]
578 cord_individual_obj[indivial_i,:] = [ 18. 12. 72. 84.]
579 cord_individual_obj[indivial_i,:] = [ 19. 9. 166. 175.]
580 cord_individual_obj[indivial_i,:] = [ 20. 11. 142. 153.]
581 cord_individual_obj[indivial_i,:] = [ 21. 12. 147. 159.]
582 cord_individual_obj[indivial_i,:] = [ 22. 12. 150. 162.]
583 cord_individual_obj[indivial_i,:] = [ 23. 14. 117. 131.]

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584     cord_individual_obj[indivial_i, :] = [ 24. 10. 122. 132.]
585
586     min(cord_individual_obj[:, 3]) = 84.0
587     historl_G_best_iter[iter, 3] = 84.0
588 Begin iteration:
589 iter = 18
590     cord_individual_obj[indivial_i, :] = [ 0. 12. 72. 84.]
591     cord_individual_obj[indivial_i, :] = [ 1. 13. 127. 140.]
592     cord_individual_obj[indivial_i, :] = [ 2. 12. 114. 126.]
593     cord_individual_obj[indivial_i, :] = [ 3. 11. 126. 137.]
594     cord_individual_obj[indivial_i, :] = [ 4. 11. 139. 150.]
595     cord_individual_obj[indivial_i, :] = [ 5. 10. 74. 84.]
596     cord_individual_obj[indivial_i, :] = [ 6. 12. 113. 125.]
597     cord_individual_obj[indivial_i, :] = [ 7. 10. 97. 107.]
598     cord_individual_obj[indivial_i, :] = [ 8. 9. 85. 94.]
599     cord_individual_obj[indivial_i, :] = [ 9. 11. 202. 213.]
600     cord_individual_obj[indivial_i, :] = [ 10. 13. 143. 156.]
601     cord_individual_obj[indivial_i, :] = [ 11. 13. 153. 166.]
602     cord_individual_obj[indivial_i, :] = [ 12. 11. 124. 135.]
603     cord_individual_obj[indivial_i, :] = [ 13. 12. 107. 119.]
604     cord_individual_obj[indivial_i, :] = [ 14. 11. 86. 97.]
605     cord_individual_obj[indivial_i, :] = [ 15. 10. 119. 129.]
606     cord_individual_obj[indivial_i, :] = [ 16. 13. 204. 217.]
607     cord_individual_obj[indivial_i, :] = [ 17. 11. 155. 166.]
608     cord_individual_obj[indivial_i, :] = [ 18. 11. 166. 177.]
609     cord_individual_obj[indivial_i, :] = [ 19. 11. 83. 94.]
610     cord_individual_obj[indivial_i, :] = [ 20. 13. 92. 105.]
611     cord_individual_obj[indivial_i, :] = [ 21. 9. 116. 125.]
612     cord_individual_obj[indivial_i, :] = [ 22. 11. 152. 163.]
613     cord_individual_obj[indivial_i, :] = [ 23. 11. 154. 165.]
614     cord_individual_obj[indivial_i, :] = [ 24. 8. 161. 169.]
615
616
617     min(cord_individual_obj[:, 3]) = 84.0
618     historl_G_best_iter[iter, 3] = 84.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 11. 157. 168.]
623     cord_individual_obj[indivial_i, :] = [ 1. 8. 136. 144.]
624     cord_individual_obj[indivial_i, :] = [ 2. 12. 150. 162.]
625     cord_individual_obj[indivial_i, :] = [ 3. 14. 172. 186.]
626     cord_individual_obj[indivial_i, :] = [ 4. 12. 165. 177.]
627     cord_individual_obj[indivial_i, :] = [ 5. 10. 150. 160.]
628     cord_individual_obj[indivial_i, :] = [ 6. 11. 95. 106.]
629     cord_individual_obj[indivial_i, :] = [ 7. 10. 175. 185.]
630     cord_individual_obj[indivial_i, :] = [ 8. 8. 149. 157.]
631     cord_individual_obj[indivial_i, :] = [ 9. 10. 110. 120.]
632     cord_individual_obj[indivial_i, :] = [ 10. 12. 120. 132.]
633     cord_individual_obj[indivial_i, :] = [ 11. 9. 133. 142.]
634     cord_individual_obj[indivial_i, :] = [ 12. 13. 147. 160.]
635     cord_individual_obj[indivial_i, :] = [ 13. 11. 78. 89.]
636     cord_individual_obj[indivial_i, :] = [ 14. 10. 80. 90.]
637     cord_individual_obj[indivial_i, :] = [ 15. 8. 147. 155.]
638     cord_individual_obj[indivial_i, :] = [ 16. 12. 72. 84.]
639     cord_individual_obj[indivial_i, :] = [ 17. 10. 148. 158.]
640     cord_individual_obj[indivial_i, :] = [ 18. 11. 162. 173.]
641     cord_individual_obj[indivial_i, :] = [ 19. 10. 139. 149.]
642     cord_individual_obj[indivial_i, :] = [ 20. 12. 115. 127.]
643     cord_individual_obj[indivial_i, :] = [ 21. 13. 147. 160.]
644     cord_individual_obj[indivial_i, :] = [ 22. 10. 146. 156.]
645     cord_individual_obj[indivial_i, :] = [ 23. 13. 99. 112.]
646     cord_individual_obj[indivial_i, :] = [ 24. 8. 121. 129.]
647
648     min(cord_individual_obj[:, 3]) = 84.0
649     historl_G_best_iter[iter, 3] = 84.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 10. 112. 122.]
654     cord_individual_obj[indivial_i, :] = [ 1. 11. 169. 180.]
655     cord_individual_obj[indivial_i, :] = [ 2. 11. 183. 194.]
656     cord_individual_obj[indivial_i, :] = [ 3. 12. 72. 84.]
657     cord_individual_obj[indivial_i, :] = [ 4. 11. 110. 121.]
658     cord_individual_obj[indivial_i, :] = [ 5. 13. 174. 187.]
659     cord_individual_obj[indivial_i, :] = [ 6. 12. 117. 129.]
660     cord_individual_obj[indivial_i, :] = [ 7. 11. 101. 112.]
661     cord_individual_obj[indivial_i, :] = [ 8. 10. 111. 121.]
662     cord_individual_obj[indivial_i, :] = [ 9. 11. 98. 109.]
663     cord_individual_obj[indivial_i, :] = [ 10. 12. 123. 135.]
664     cord_individual_obj[indivial_i, :] = [ 11. 11. 181. 192.]
665     cord_individual_obj[indivial_i, :] = [ 12. 11. 140. 151.]
666     cord_individual_obj[indivial_i, :] = [ 13. 9. 80. 89.]
667     cord_individual_obj[indivial_i, :] = [ 14. 13. 117. 130.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 10. 165. 175.]
669 cord_individual_obj[indivial_i,:] = [ 16. 11. 139. 150.]
670 cord_individual_obj[indivial_i,:] = [ 17. 11. 141. 152.]
671 cord_individual_obj[indivial_i,:] = [ 18. 9. 150. 159.]
672 cord_individual_obj[indivial_i,:] = [19. 10. 87. 97.]
673 cord_individual_obj[indivial_i,:] = [ 20. 11. 106. 117.]
674 cord_individual_obj[indivial_i,:] = [ 21. 9. 95. 104.]
675 cord_individual_obj[indivial_i,:] = [ 22. 10. 153. 163.]
676 cord_individual_obj[indivial_i,:] = [ 23. 12. 152. 164.]
677 cord_individual_obj[indivial_i,:] = [ 24. 9. 163. 172.]
678
679 min(cord_individual_obj[:,3]) = 84.0
680 historl_G_best_iter[iter,3] = 84.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 249.0
689 Proportion_of_area = 0.2305555555555555
690 BEST_CHROM =
691 berth: [23.5 11.5 16.5 10. 16. 22. 10.5 18. 23.5 3.5 17. 4.5 9.5 4.5
692 4.5 23.5 2.5]
693 time: [0. 5. 0. 9. 4. 1. 1. 7. 7. 9. 9. 2. 0. 7. 3. 4. 0.]
694 num_QC: [3. 3. 2. 4. 4. 3. 1. 5. 2. 2. 2. 3. 4. 2. 2. 2. 5.]
695 Objective function values and some other indicators:
696 Obj0 = 12.00      Obj1 = 72.00      Obj0 + Obj1 = 84.00
697 Total movement of crane: 4.00
698 Total waiting time in berth position: 68.00
699 Total index of q during berthing: 1097.00
700 Specific arrangement for each vessel:
701 V_id: 0          li: 9.0           xi: 23.5           bow of i: 19.0           tail of i: 28.0           gama_i0: 0.0           gama_i1: 0
702 .0              gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
703 load_i: 60.0     work load gap_i: 0
704 V_id: 1          li: 5.0           xi: 11.5           bow of i: 9.0           tail of i: 14.0           gama_i0: 5.0           gama_i1: 7
705 .0              gama_i1 + 1: 8.0   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: 16.5           bow of i: 14.0           tail of i: 19.0           gama_i0: 0.0           gama_i1: 3
708 .0              gama_i1 + 1: 4.0   gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 140.0           work
709 load_i: 140.0    work load gap_i: 0
710 V_id: 3          li: 6.0           xi: 10.0           bow of i: 7.0           tail of i: 13.0           gama_i0: 9.0           gama_i1: 1
711 10.0            gama_i1 + 1: 11.0  gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work
712 load_i: 160.0    work load gap_i: 0
713 V_id: 4          li: 4.0           xi: 16.0           bow of i: 14.0           tail of i: 18.0           gama_i0: 4.0           gama_i1: 5
714 .0              gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
715 load_i: 100.0    work load gap_i: 0
716 V_id: 5          li: 6.0           xi: 22.0           bow of i: 19.0           tail of i: 25.0           gama_i0: 1.0           gama_i1: 3
717 .0              gama_i1 + 1: 4.0   gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
718 load_i: 140.0    work load gap_i: 0
719 V_id: 6          li: 3.0           xi: 10.5           bow of i: 9.0           tail of i: 12.0           gama_i0: 1.0           gama_i1: 4
720 .0              gama_i1 + 1: 5.0   gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 80.0           work
721 load_i: 80.0     work load gap_i: 0
722 V_id: 7          li: 8.0           xi: 18.0           bow of i: 14.0           tail of i: 22.0           gama_i0: 7.0           gama_i1: 8
723 .0              gama_i1 + 1: 9.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
724 load_i: 120.0    work load gap_i: 0
725 V_id: 8          li: 3.0           xi: 23.5           bow of i: 22.0           tail of i: 25.0           gama_i0: 7.0           gama_i1: 1
726 10.0            gama_i1 + 1: 11.0  gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work
727 load_i: 160.0    work load gap_i: 0
728 V_id: 9          li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 9.0           gama_i1: 12.0
729 .0              gama_i1 + 1: 13.0  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: 8.0           xi: 17.0           bow of i: 13.0           tail of i: 21.0           gama_i0: 9.0           gama_i1: 1
732 .0              gama_i1 + 1: 13.0  gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work
733 load_i: 160.0    work load gap_i: 0
734 V_id: 11         li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 2.0           gama_i1: 2.0
735 .0              gama_i1 + 1: 3.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work load_i:
736 60.0            work load gap_i: 0
737 V_id: 12         li: 9.0           xi: 9.5            bow of i: 5.0           tail of i: 14.0           gama_i0: 0.0           gama_i1: 0
738 .0              gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 80.0           work
739 load_i: 80.0     work load gap_i: 0
740 V_id: 13         li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 7.0           gama_i1: 8.0
741 .0              gama_i1 + 1: 9.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work load_i:
742 60.0            work load gap_i: 0
743 V_id: 14         li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 3.0           gama_i1: 6.0
744 .0              gama_i1 + 1: 7.0   gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 140.0           work load_i:
745 load_i: 140.0    work load gap_i: 0
746 V_id: 15         li: 9.0           xi: 23.5           bow of i: 19.0           tail of i: 28.0           gama_i0: 4.0           gama_i1: 1
747 .0              gama_i1 + 1: 7.0   gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
748 load_i: 120.0    work load gap_i: 0
749 V_id: 16         li: 5.0           xi: 2.5            bow of i: 0.0           tail of i: 5.0           gama_i0: 0.0           gama_i1: 1.0
750 .0              gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
751 120.0            work load gap_i: 0

```

unknown

```
718  
719 Algorithm finished and the total CPU time: 463 s  
720 End  
721
```