

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 9. 125. 134.]
81 cord_individual_obj[indivial_i,:] = [ 17. 11. 140. 151.]
82 cord_individual_obj[indivial_i,:] = [ 18. 14. 87. 101.]
83 cord_individual_obj[indivial_i,:] = [ 19. 13. 118. 131.]
84 cord_individual_obj[indivial_i,:] = [ 20. 11. 118. 129.]
85 cord_individual_obj[indivial_i,:] = [ 21. 10. 106. 116.]
86 cord_individual_obj[indivial_i,:] = [ 22. 12. 103. 115.]
87 cord_individual_obj[indivial_i,:] = [ 23. 11. 145. 156.]
88 cord_individual_obj[indivial_i,:] = [ 24. 10. 137. 147.]
89
90 min(cord_individual_obj[:,3]) = 83.0
91 historl_G_best_iter[iter,3] = 83.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 9. 91. 100.]
96 cord_individual_obj[indivial_i,:] = [ 1. 10. 106. 116.]
97 cord_individual_obj[indivial_i,:] = [ 2. 11. 101. 112.]
98 cord_individual_obj[indivial_i,:] = [ 3. 11. 72. 83.]
99 cord_individual_obj[indivial_i,:] = [ 4. 11. 104. 115.]
100 cord_individual_obj[indivial_i,:] = [ 5. 11. 133. 144.]
101 cord_individual_obj[indivial_i,:] = [ 6. 11. 89. 100.]
102 cord_individual_obj[indivial_i,:] = [ 7. 10. 181. 191.]
103 cord_individual_obj[indivial_i,:] = [ 8. 11. 121. 132.]
104 cord_individual_obj[indivial_i,:] = [ 9. 10. 106. 116.]
105 cord_individual_obj[indivial_i,:] = [ 10. 11. 125. 136.]
106 cord_individual_obj[indivial_i,:] = [ 11. 9. 121. 130.]
107 cord_individual_obj[indivial_i,:] = [ 12. 9. 131. 140.]
108 cord_individual_obj[indivial_i,:] = [ 13. 9. 144. 153.]
109 cord_individual_obj[indivial_i,:] = [ 14. 11. 159. 170.]
110 cord_individual_obj[indivial_i,:] = [ 15. 10. 128. 138.]
111 cord_individual_obj[indivial_i,:] = [ 16. 9. 98. 107.]
112 cord_individual_obj[indivial_i,:] = [ 17. 9. 87. 96.]
113 cord_individual_obj[indivial_i,:] = [ 18. 11. 86. 97.]
114 cord_individual_obj[indivial_i,:] = [ 19. 10. 119. 129.]
115 cord_individual_obj[indivial_i,:] = [ 20. 11. 126. 137.]
116 cord_individual_obj[indivial_i,:] = [ 21. 11. 127. 138.]
117 cord_individual_obj[indivial_i,:] = [ 22. 9. 99. 108.]
118 cord_individual_obj[indivial_i,:] = [ 23. 11. 110. 121.]
119 cord_individual_obj[indivial_i,:] = [ 24. 10. 135. 145.]
120
121 min(cord_individual_obj[:,3]) = 83.0
122 historl_G_best_iter[iter,3] = 83.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 9. 98. 107.]
127 cord_individual_obj[indivial_i,:] = [ 1. 9. 124. 133.]
128 cord_individual_obj[indivial_i,:] = [ 2. 13. 118. 131.]
129 cord_individual_obj[indivial_i,:] = [ 3. 11. 127. 138.]
130 cord_individual_obj[indivial_i,:] = [ 4. 10. 76. 86.]
131 cord_individual_obj[indivial_i,:] = [ 5. 10. 122. 132.]
132 cord_individual_obj[indivial_i,:] = [ 6. 11. 101. 112.]
133 cord_individual_obj[indivial_i,:] = [ 7. 11. 72. 83.]
134 cord_individual_obj[indivial_i,:] = [ 8. 10. 129. 139.]
135 cord_individual_obj[indivial_i,:] = [ 9. 12. 114. 126.]
136 cord_individual_obj[indivial_i,:] = [ 10. 9. 135. 144.]
137 cord_individual_obj[indivial_i,:] = [ 11. 11. 124. 135.]
138 cord_individual_obj[indivial_i,:] = [ 12. 11. 143. 154.]
139 cord_individual_obj[indivial_i,:] = [ 13. 9. 127. 136.]
140 cord_individual_obj[indivial_i,:] = [ 14. 12. 119. 131.]
141 cord_individual_obj[indivial_i,:] = [ 15. 13. 130. 143.]
142 cord_individual_obj[indivial_i,:] = [ 16. 11. 131. 142.]
143 cord_individual_obj[indivial_i,:] = [ 17. 10. 163. 173.]
144 cord_individual_obj[indivial_i,:] = [ 18. 10. 133. 143.]
145 cord_individual_obj[indivial_i,:] = [ 19. 11. 133. 144.]
146 cord_individual_obj[indivial_i,:] = [ 20. 10. 137. 147.]
147 cord_individual_obj[indivial_i,:] = [ 21. 11. 147. 158.]
148 cord_individual_obj[indivial_i,:] = [ 22. 13. 119. 132.]
149 cord_individual_obj[indivial_i,:] = [ 23. 10. 145. 155.]
150 cord_individual_obj[indivial_i,:] = [ 24. 11. 122. 133.]
151
152 min(cord_individual_obj[:,3]) = 83.0
153 historl_G_best_iter[iter,3] = 83.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 9. 137. 146.]
158 cord_individual_obj[indivial_i,:] = [ 1. 11. 76. 87.]
159 cord_individual_obj[indivial_i,:] = [ 2. 12. 141. 153.]
160 cord_individual_obj[indivial_i,:] = [ 3. 9. 150. 159.]
161 cord_individual_obj[indivial_i,:] = [ 4. 10. 111. 121.]
162 cord_individual_obj[indivial_i,:] = [ 5. 15. 87. 102.]
163 cord_individual_obj[indivial_i,:] = [ 6. 12. 101. 113.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 10. 160. 170.]
165 cord_individual_obj[indivial_i,:] = [ 8. 11. 92. 103.]
166 cord_individual_obj[indivial_i,:] = [ 9. 13. 144. 157.]
167 cord_individual_obj[indivial_i,:] = [ 10. 10. 129. 139.]
168 cord_individual_obj[indivial_i,:] = [ 11. 10. 107. 117.]
169 cord_individual_obj[indivial_i,:] = [ 12. 11. 121. 132.]
170 cord_individual_obj[indivial_i,:] = [ 13. 12. 127. 139.]
171 cord_individual_obj[indivial_i,:] = [ 14. 11. 151. 162.]
172 cord_individual_obj[indivial_i,:] = [ 15. 11. 132. 143.]
173 cord_individual_obj[indivial_i,:] = [ 16. 11. 101. 112.]
174 cord_individual_obj[indivial_i,:] = [ 17. 11. 72. 83.]
175 cord_individual_obj[indivial_i,:] = [ 18. 11. 111. 122.]
176 cord_individual_obj[indivial_i,:] = [ 19. 11. 147. 158.]
177 cord_individual_obj[indivial_i,:] = [ 20. 9. 133. 142.]
178 cord_individual_obj[indivial_i,:] = [ 21. 11. 162. 173.]
179 cord_individual_obj[indivial_i,:] = [ 22. 12. 95. 107.]
180 cord_individual_obj[indivial_i,:] = [ 23. 11. 188. 199.]
181 cord_individual_obj[indivial_i,:] = [ 24. 10. 88. 98.]
182
183 min(cord_individual_obj[:,3]) = 83.0
184 historl_G_best_iter[iter,3] = 83.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 12. 113. 125.]
189 cord_individual_obj[indivial_i,:] = [ 1. 10. 119. 129.]
190 cord_individual_obj[indivial_i,:] = [ 2. 10. 162. 172.]
191 cord_individual_obj[indivial_i,:] = [ 3. 11. 179. 190.]
192 cord_individual_obj[indivial_i,:] = [ 4. 11. 105. 116.]
193 cord_individual_obj[indivial_i,:] = [ 5. 11. 154. 165.]
194 cord_individual_obj[indivial_i,:] = [ 6. 10. 91. 101.]
195 cord_individual_obj[indivial_i,:] = [ 7. 11. 93. 104.]
196 cord_individual_obj[indivial_i,:] = [ 8. 13. 136. 149.]
197 cord_individual_obj[indivial_i,:] = [ 9. 11. 103. 114.]
198 cord_individual_obj[indivial_i,:] = [ 10. 11. 134. 145.]
199 cord_individual_obj[indivial_i,:] = [ 11. 10. 110. 120.]
200 cord_individual_obj[indivial_i,:] = [ 12. 10. 130. 140.]
201 cord_individual_obj[indivial_i,:] = [ 13. 9. 200. 209.]
202 cord_individual_obj[indivial_i,:] = [ 14. 9. 115. 124.]
203 cord_individual_obj[indivial_i,:] = [ 15. 9. 115. 124.]
204 cord_individual_obj[indivial_i,:] = [ 16. 9. 118. 127.]
205 cord_individual_obj[indivial_i,:] = [ 17. 9. 159. 168.]
206 cord_individual_obj[indivial_i,:] = [ 18. 10. 112. 122.]
207 cord_individual_obj[indivial_i,:] = [ 19. 10. 112. 122.]
208 cord_individual_obj[indivial_i,:] = [ 20. 11. 126. 137.]
209 cord_individual_obj[indivial_i,:] = [ 21. 11. 119. 130.]
210 cord_individual_obj[indivial_i,:] = [ 22. 11. 98. 109.]
211 cord_individual_obj[indivial_i,:] = [ 23. 11. 72. 83.]
212 cord_individual_obj[indivial_i,:] = [ 24. 10. 106. 116.]
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. 10. 141. 151.]
220 cord_individual_obj[indivial_i,:] = [ 1. 9. 137. 146.]
221 cord_individual_obj[indivial_i,:] = [ 2. 9. 143. 152.]
222 cord_individual_obj[indivial_i,:] = [ 3. 11. 176. 187.]
223 cord_individual_obj[indivial_i,:] = [ 4. 12. 98. 110.]
224 cord_individual_obj[indivial_i,:] = [ 5. 11. 147. 158.]
225 cord_individual_obj[indivial_i,:] = [ 6. 10. 117. 127.]
226 cord_individual_obj[indivial_i,:] = [ 7. 12. 157. 169.]
227 cord_individual_obj[indivial_i,:] = [ 8. 10. 110. 120.]
228 cord_individual_obj[indivial_i,:] = [ 9. 9. 113. 122.]
229 cord_individual_obj[indivial_i,:] = [ 10. 10. 93. 103.]
230 cord_individual_obj[indivial_i,:] = [ 11. 10. 106. 116.]
231 cord_individual_obj[indivial_i,:] = [ 12. 10. 112. 122.]
232 cord_individual_obj[indivial_i,:] = [ 13. 11. 72. 83.]
233 cord_individual_obj[indivial_i,:] = [ 14. 10. 117. 127.]
234 cord_individual_obj[indivial_i,:] = [ 15. 8. 89. 97.]
235 cord_individual_obj[indivial_i,:] = [ 16. 10. 160. 170.]
236 cord_individual_obj[indivial_i,:] = [ 17. 11. 129. 140.]
237 cord_individual_obj[indivial_i,:] = [ 18. 11. 80. 91.]
238 cord_individual_obj[indivial_i,:] = [ 19. 10. 124. 134.]
239 cord_individual_obj[indivial_i,:] = [ 20. 9. 116. 125.]
240 cord_individual_obj[indivial_i,:] = [ 21. 8. 156. 164.]
241 cord_individual_obj[indivial_i,:] = [ 22. 9. 121. 130.]
242 cord_individual_obj[indivial_i,:] = [ 23. 10. 108. 118.]
243 cord_individual_obj[indivial_i,:] = [ 24. 11. 103. 114.]
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. 167. 177.]
251 cord_individual_obj[indivial_i, :] = [ 1. 11. 120. 131.]
252 cord_individual_obj[indivial_i, :] = [ 2. 10. 109. 119.]
253 cord_individual_obj[indivial_i, :] = [ 3. 11. 72. 83.]
254 cord_individual_obj[indivial_i, :] = [ 4. 11. 125. 136.]
255 cord_individual_obj[indivial_i, :] = [ 5. 11. 111. 122.]
256 cord_individual_obj[indivial_i, :] = [ 6. 11. 87. 98.]
257 cord_individual_obj[indivial_i, :] = [ 7. 11. 125. 136.]
258 cord_individual_obj[indivial_i, :] = [ 8. 11. 106. 117.]
259 cord_individual_obj[indivial_i, :] = [ 9. 11. 105. 116.]
260 cord_individual_obj[indivial_i, :] = [10. 10. 88. 98.]
261 cord_individual_obj[indivial_i, :] = [11. 9. 126. 135.]
262 cord_individual_obj[indivial_i, :] = [12. 10. 103. 113.]
263 cord_individual_obj[indivial_i, :] = [13. 8. 126. 134.]
264 cord_individual_obj[indivial_i, :] = [14. 10. 101. 111.]
265 cord_individual_obj[indivial_i, :] = [15. 10. 126. 136.]
266 cord_individual_obj[indivial_i, :] = [16. 9. 99. 108.]
267 cord_individual_obj[indivial_i, :] = [17. 11. 157. 168.]
268 cord_individual_obj[indivial_i, :] = [18. 10. 101. 111.]
269 cord_individual_obj[indivial_i, :] = [19. 11. 137. 148.]
270 cord_individual_obj[indivial_i, :] = [20. 10. 118. 128.]
271 cord_individual_obj[indivial_i, :] = [21. 11. 129. 140.]
272 cord_individual_obj[indivial_i, :] = [22. 10. 108. 118.]
273 cord_individual_obj[indivial_i, :] = [23. 10. 92. 102.]
274 cord_individual_obj[indivial_i, :] = [24. 10. 133. 143.]
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. 11. 72. 83.]
282 cord_individual_obj[indivial_i, :] = [ 1. 11. 115. 126.]
283 cord_individual_obj[indivial_i, :] = [ 2. 12. 88. 100.]
284 cord_individual_obj[indivial_i, :] = [ 3. 10. 74. 84.]
285 cord_individual_obj[indivial_i, :] = [ 4. 11. 123. 134.]
286 cord_individual_obj[indivial_i, :] = [ 5. 12. 98. 110.]
287 cord_individual_obj[indivial_i, :] = [ 6. 10. 95. 105.]
288 cord_individual_obj[indivial_i, :] = [ 7. 9. 95. 104.]
289 cord_individual_obj[indivial_i, :] = [ 8. 9. 180. 189.]
290 cord_individual_obj[indivial_i, :] = [ 9. 11. 97. 108.]
291 cord_individual_obj[indivial_i, :] = [10. 10. 120. 130.]
292 cord_individual_obj[indivial_i, :] = [11. 10. 140. 150.]
293 cord_individual_obj[indivial_i, :] = [12. 10. 109. 119.]
294 cord_individual_obj[indivial_i, :] = [13. 8. 111. 119.]
295 cord_individual_obj[indivial_i, :] = [14. 11. 82. 93.]
296 cord_individual_obj[indivial_i, :] = [15. 11. 103. 114.]
297 cord_individual_obj[indivial_i, :] = [16. 10. 82. 92.]
298 cord_individual_obj[indivial_i, :] = [17. 8. 118. 126.]
299 cord_individual_obj[indivial_i, :] = [18. 10. 98. 108.]
300 cord_individual_obj[indivial_i, :] = [19. 10. 122. 132.]
301 cord_individual_obj[indivial_i, :] = [20. 11. 130. 141.]
302 cord_individual_obj[indivial_i, :] = [21. 10. 116. 126.]
303 cord_individual_obj[indivial_i, :] = [22. 10. 147. 157.]
304 cord_individual_obj[indivial_i, :] = [23. 9. 104. 113.]
305 cord_individual_obj[indivial_i, :] = [24. 12. 149. 161.]
306

307 min(cord_individual_obj[:, 3]) = 83.0
308 historl_G_best_iter[iter, 3] = 83.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 10. 177. 187.]
313 cord_individual_obj[indivial_i, :] = [ 1. 10. 146. 156.]
314 cord_individual_obj[indivial_i, :] = [ 2. 10. 100. 110.]
315 cord_individual_obj[indivial_i, :] = [ 3. 11. 145. 156.]
316 cord_individual_obj[indivial_i, :] = [ 4. 12. 135. 147.]
317 cord_individual_obj[indivial_i, :] = [ 5. 10. 114. 124.]
318 cord_individual_obj[indivial_i, :] = [ 6. 15. 89. 104.]
319 cord_individual_obj[indivial_i, :] = [ 7. 10. 201. 211.]
320 cord_individual_obj[indivial_i, :] = [ 8. 11. 72. 83.]
321 cord_individual_obj[indivial_i, :] = [ 9. 10. 111. 121.]
322 cord_individual_obj[indivial_i, :] = [10. 11. 127. 138.]
323 cord_individual_obj[indivial_i, :] = [11. 10. 160. 170.]
324 cord_individual_obj[indivial_i, :] = [12. 9. 138. 147.]
325 cord_individual_obj[indivial_i, :] = [13. 9. 94. 103.]
326 cord_individual_obj[indivial_i, :] = [14. 13. 147. 160.]
327 cord_individual_obj[indivial_i, :] = [15. 9. 151. 160.]
328 cord_individual_obj[indivial_i, :] = [16. 11. 138. 149.]
329 cord_individual_obj[indivial_i, :] = [17. 12. 139. 151.]
330 cord_individual_obj[indivial_i, :] = [18. 11. 152. 163.]
331 cord_individual_obj[indivial_i, :] = [19. 11. 118. 129.]

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332 cord_individual_obj[indivial_i, :] = [20, 10, 89, 99.]
333 cord_individual_obj[indivial_i, :] = [21, 11, 108, 119.]
334 cord_individual_obj[indivial_i, :] = [22, 10, 176, 186.]
335 cord_individual_obj[indivial_i, :] = [23, 12, 127, 139.]
336 cord_individual_obj[indivial_i, :] = [24, 12, 99, 111.]
337
338 min(cord_individual_obj[:, 3]) = 83.0
339 histol_G_best_iter[iter, 3] = 83.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [0, 11, 132, 143.]
344 cord_individual_obj[indivial_i, :] = [1, 10, 94, 104.]
345 cord_individual_obj[indivial_i, :] = [2, 12, 137, 149.]
346 cord_individual_obj[indivial_i, :] = [3, 11, 112, 123.]
347 cord_individual_obj[indivial_i, :] = [4, 10, 112, 122.]
348 cord_individual_obj[indivial_i, :] = [5, 11, 133, 144.]
349 cord_individual_obj[indivial_i, :] = [6, 10, 91, 101.]
350 cord_individual_obj[indivial_i, :] = [7, 11, 72, 83.]
351 cord_individual_obj[indivial_i, :] = [8, 10, 100, 110.]
352 cord_individual_obj[indivial_i, :] = [9, 11, 139, 150.]
353 cord_individual_obj[indivial_i, :] = [10, 10, 168, 178.]
354 cord_individual_obj[indivial_i, :] = [11, 11, 101, 112.]
355 cord_individual_obj[indivial_i, :] = [12, 9, 174, 183.]
356 cord_individual_obj[indivial_i, :] = [13, 8, 120, 128.]
357 cord_individual_obj[indivial_i, :] = [14, 11, 83, 94.]
358 cord_individual_obj[indivial_i, :] = [15, 10, 135, 145.]
359 cord_individual_obj[indivial_i, :] = [16, 10, 107, 117.]
360 cord_individual_obj[indivial_i, :] = [17, 10, 127, 137.]
361 cord_individual_obj[indivial_i, :] = [18, 11, 102, 113.]
362 cord_individual_obj[indivial_i, :] = [19, 13, 123, 136.]
363 cord_individual_obj[indivial_i, :] = [20, 10, 79, 89.]
364 cord_individual_obj[indivial_i, :] = [21, 11, 128, 139.]
365 cord_individual_obj[indivial_i, :] = [22, 12, 114, 126.]
366 cord_individual_obj[indivial_i, :] = [23, 10, 98, 108.]
367 cord_individual_obj[indivial_i, :] = [24, 12, 91, 103.]
368
369 min(cord_individual_obj[:, 3]) = 83.0
370 histol_G_best_iter[iter, 3] = 83.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [0, 9, 94, 103.]
375 cord_individual_obj[indivial_i, :] = [1, 10, 146, 156.]
376 cord_individual_obj[indivial_i, :] = [2, 9, 144, 153.]
377 cord_individual_obj[indivial_i, :] = [3, 10, 109, 119.]
378 cord_individual_obj[indivial_i, :] = [4, 11, 119, 130.]
379 cord_individual_obj[indivial_i, :] = [5, 11, 140, 151.]
380 cord_individual_obj[indivial_i, :] = [6, 11, 86, 97.]
381 cord_individual_obj[indivial_i, :] = [7, 12, 154, 166.]
382 cord_individual_obj[indivial_i, :] = [8, 9, 173, 182.]
383 cord_individual_obj[indivial_i, :] = [9, 10, 97, 107.]
384 cord_individual_obj[indivial_i, :] = [10, 9, 80, 89.]
385 cord_individual_obj[indivial_i, :] = [11, 10, 93, 103.]
386 cord_individual_obj[indivial_i, :] = [12, 11, 72, 83.]
387 cord_individual_obj[indivial_i, :] = [13, 8, 124, 132.]
388 cord_individual_obj[indivial_i, :] = [14, 10, 149, 159.]
389 cord_individual_obj[indivial_i, :] = [15, 10, 102, 112.]
390 cord_individual_obj[indivial_i, :] = [16, 10, 80, 90.]
391 cord_individual_obj[indivial_i, :] = [17, 10, 142, 152.]
392 cord_individual_obj[indivial_i, :] = [18, 10, 118, 128.]
393 cord_individual_obj[indivial_i, :] = [19, 9, 87, 96.]
394 cord_individual_obj[indivial_i, :] = [20, 10, 138, 148.]
395 cord_individual_obj[indivial_i, :] = [21, 10, 150, 160.]
396 cord_individual_obj[indivial_i, :] = [22, 11, 93, 104.]
397 cord_individual_obj[indivial_i, :] = [23, 9, 109, 118.]
398 cord_individual_obj[indivial_i, :] = [24, 10, 114, 124.]
399
400 min(cord_individual_obj[:, 3]) = 83.0
401 histol_G_best_iter[iter, 3] = 83.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [0, 11, 109, 120.]
406 cord_individual_obj[indivial_i, :] = [1, 8, 90, 98.]
407 cord_individual_obj[indivial_i, :] = [2, 10, 145, 155.]
408 cord_individual_obj[indivial_i, :] = [3, 9, 149, 158.]
409 cord_individual_obj[indivial_i, :] = [4, 9, 84, 93.]
410 cord_individual_obj[indivial_i, :] = [5, 11, 104, 115.]
411 cord_individual_obj[indivial_i, :] = [6, 13, 137, 150.]
412 cord_individual_obj[indivial_i, :] = [7, 11, 91, 102.]
413 cord_individual_obj[indivial_i, :] = [8, 11, 72, 83.]
414 cord_individual_obj[indivial_i, :] = [9, 11, 146, 157.]
415 cord_individual_obj[indivial_i, :] = [10, 12, 182, 194.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 12. 168. 180.]
417 cord_individual_obj[indivial_i,:] = [12. 9. 78. 87.]
418 cord_individual_obj[indivial_i,:] = [13. 10. 69. 79.]
419 cord_individual_obj[indivial_i,:] = [ 14. 12. 134. 146.]
420 cord_individual_obj[indivial_i,:] = [ 15. 11. 102. 113.]
421 cord_individual_obj[indivial_i,:] = [ 16. 11. 120. 131.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 108. 119.]
423 cord_individual_obj[indivial_i,:] = [ 18. 12. 96. 108.]
424 cord_individual_obj[indivial_i,:] = [ 19. 13. 103. 116.]
425 cord_individual_obj[indivial_i,:] = [ 20. 12. 120. 132.]
426 cord_individual_obj[indivial_i,:] = [ 21. 13. 178. 191.]
427 cord_individual_obj[indivial_i,:] = [ 22. 11. 151. 162.]
428 cord_individual_obj[indivial_i,:] = [ 23. 10. 127. 137.]
429 cord_individual_obj[indivial_i,:] = [ 24. 11. 135. 146.]
430
431 min(cord_individual_obj[:,3]) = 79.0
432 histol_G_best_iter[iter,3] = 79.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 10. 88. 98.]
437 cord_individual_obj[indivial_i,:] = [ 1. 10. 91. 101.]
438 cord_individual_obj[indivial_i,:] = [ 2. 10. 100. 110.]
439 cord_individual_obj[indivial_i,:] = [ 3. 11. 126. 137.]
440 cord_individual_obj[indivial_i,:] = [ 4. 10. 169. 179.]
441 cord_individual_obj[indivial_i,:] = [ 5. 12. 143. 155.]
442 cord_individual_obj[indivial_i,:] = [ 6. 13. 91. 104.]
443 cord_individual_obj[indivial_i,:] = [ 7. 12. 131. 143.]
444 cord_individual_obj[indivial_i,:] = [ 8. 11. 184. 195.]
445 cord_individual_obj[indivial_i,:] = [ 9. 12. 130. 142.]
446 cord_individual_obj[indivial_i,:] = [10. 10. 69. 79.]
447 cord_individual_obj[indivial_i,:] = [11. 11. 205. 216.]
448 cord_individual_obj[indivial_i,:] = [12. 11. 68. 79.]
449 cord_individual_obj[indivial_i,:] = [13. 11. 99. 110.]
450 cord_individual_obj[indivial_i,:] = [14. 12. 109. 121.]
451 cord_individual_obj[indivial_i,:] = [15. 10. 124. 134.]
452 cord_individual_obj[indivial_i,:] = [16. 12. 134. 146.]
453 cord_individual_obj[indivial_i,:] = [17. 10. 111. 121.]
454 cord_individual_obj[indivial_i,:] = [18. 14. 163. 177.]
455 cord_individual_obj[indivial_i,:] = [19. 12. 147. 159.]
456 cord_individual_obj[indivial_i,:] = [20. 10. 105. 115.]
457 cord_individual_obj[indivial_i,:] = [21. 9. 126. 135.]
458 cord_individual_obj[indivial_i,:] = [22. 14. 96. 110.]
459 cord_individual_obj[indivial_i,:] = [23. 9. 138. 147.]
460 cord_individual_obj[indivial_i,:] = [24. 12. 209. 221.]
461
462 min(cord_individual_obj[:,3]) = 79.0
463 histol_G_best_iter[iter,3] = 79.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 10. 167. 177.]
468 cord_individual_obj[indivial_i,:] = [ 1. 10. 108. 118.]
469 cord_individual_obj[indivial_i,:] = [ 2. 9. 103. 112.]
470 cord_individual_obj[indivial_i,:] = [ 3. 11. 136. 147.]
471 cord_individual_obj[indivial_i,:] = [ 4. 11. 108. 119.]
472 cord_individual_obj[indivial_i,:] = [ 5. 12. 120. 132.]
473 cord_individual_obj[indivial_i,:] = [ 6. 11. 118. 129.]
474 cord_individual_obj[indivial_i,:] = [ 7. 12. 91. 103.]
475 cord_individual_obj[indivial_i,:] = [ 8. 11. 95. 106.]
476 cord_individual_obj[indivial_i,:] = [ 9. 8. 94. 102.]
477 cord_individual_obj[indivial_i,:] = [10. 10. 108. 118.]
478 cord_individual_obj[indivial_i,:] = [11. 10. 172. 182.]
479 cord_individual_obj[indivial_i,:] = [12. 10. 125. 135.]
480 cord_individual_obj[indivial_i,:] = [13. 11. 87. 98.]
481 cord_individual_obj[indivial_i,:] = [14. 12. 153. 165.]
482 cord_individual_obj[indivial_i,:] = [15. 10. 105. 115.]
483 cord_individual_obj[indivial_i,:] = [16. 10. 102. 112.]
484 cord_individual_obj[indivial_i,:] = [17. 10. 183. 193.]
485 cord_individual_obj[indivial_i,:] = [18. 10. 93. 103.]
486 cord_individual_obj[indivial_i,:] = [19. 9. 91. 100.]
487 cord_individual_obj[indivial_i,:] = [20. 10. 114. 124.]
488 cord_individual_obj[indivial_i,:] = [21. 10. 156. 166.]
489 cord_individual_obj[indivial_i,:] = [22. 9. 159. 168.]
490 cord_individual_obj[indivial_i,:] = [23. 10. 85. 95.]
491 cord_individual_obj[indivial_i,:] = [24. 10. 69. 79.]
492
493 min(cord_individual_obj[:,3]) = 79.0
494 histol_G_best_iter[iter,3] = 79.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 11. 149. 160.]
499 cord_individual_obj[indivial_i,:] = [ 1. 11. 106. 117.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 10. 90. 100.]
501 cord_individual_obj[indivial_i, :] = [ 3. 10. 128. 138.]
502 cord_individual_obj[indivial_i, :] = [ 4. 10. 91. 101.]
503 cord_individual_obj[indivial_i, :] = [ 5. 11. 95. 106.]
504 cord_individual_obj[indivial_i, :] = [ 6. 13. 88. 101.]
505 cord_individual_obj[indivial_i, :] = [ 7. 10. 115. 125.]
506 cord_individual_obj[indivial_i, :] = [ 8. 11. 116. 127.]
507 cord_individual_obj[indivial_i, :] = [ 9. 12. 130. 142.]
508 cord_individual_obj[indivial_i, :] = [ 10. 11. 112. 123.]
509 cord_individual_obj[indivial_i, :] = [ 11. 9. 83. 92.]
510 cord_individual_obj[indivial_i, :] = [ 12. 11. 142. 153.]
511 cord_individual_obj[indivial_i, :] = [ 13. 10. 110. 120.]
512 cord_individual_obj[indivial_i, :] = [ 14. 10. 114. 124.]
513 cord_individual_obj[indivial_i, :] = [ 15. 9. 105. 114.]
514 cord_individual_obj[indivial_i, :] = [ 16. 11. 126. 137.]
515 cord_individual_obj[indivial_i, :] = [ 17. 10. 69. 79.]
516 cord_individual_obj[indivial_i, :] = [ 18. 11. 85. 96.]
517 cord_individual_obj[indivial_i, :] = [ 19. 9. 88. 97.]
518 cord_individual_obj[indivial_i, :] = [ 20. 11. 111. 122.]
519 cord_individual_obj[indivial_i, :] = [ 21. 11. 118. 129.]
520 cord_individual_obj[indivial_i, :] = [ 22. 10. 114. 124.]
521 cord_individual_obj[indivial_i, :] = [ 23. 10. 72. 82.]
522 cord_individual_obj[indivial_i, :] = [ 24. 12. 132. 144.]
523
524 min(cord_individual_obj[:, 3]) = 79.0
525 histol_G_best_iter[iter, 3] = 79.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 10. 69. 79.]
530 cord_individual_obj[indivial_i, :] = [ 1. 10. 105. 115.]
531 cord_individual_obj[indivial_i, :] = [ 2. 12. 110. 122.]
532 cord_individual_obj[indivial_i, :] = [ 3. 9. 108. 117.]
533 cord_individual_obj[indivial_i, :] = [ 4. 11. 92. 103.]
534 cord_individual_obj[indivial_i, :] = [ 5. 12. 88. 100.]
535 cord_individual_obj[indivial_i, :] = [ 6. 14. 88. 102.]
536 cord_individual_obj[indivial_i, :] = [ 7. 13. 129. 142.]
537 cord_individual_obj[indivial_i, :] = [ 8. 11. 104. 115.]
538 cord_individual_obj[indivial_i, :] = [ 9. 11. 133. 144.]
539 cord_individual_obj[indivial_i, :] = [ 10. 11. 119. 130.]
540 cord_individual_obj[indivial_i, :] = [ 11. 9. 82. 91.]
541 cord_individual_obj[indivial_i, :] = [ 12. 11. 96. 107.]
542 cord_individual_obj[indivial_i, :] = [ 13. 11. 97. 108.]
543 cord_individual_obj[indivial_i, :] = [ 14. 10. 128. 138.]
544 cord_individual_obj[indivial_i, :] = [ 15. 10. 99. 109.]
545 cord_individual_obj[indivial_i, :] = [ 16. 12. 151. 163.]
546 cord_individual_obj[indivial_i, :] = [ 17. 10. 129. 139.]
547 cord_individual_obj[indivial_i, :] = [ 18. 12. 94. 106.]
548 cord_individual_obj[indivial_i, :] = [ 19. 11. 95. 106.]
549 cord_individual_obj[indivial_i, :] = [ 20. 12. 96. 108.]
550 cord_individual_obj[indivial_i, :] = [ 21. 12. 119. 131.]
551 cord_individual_obj[indivial_i, :] = [ 22. 11. 108. 119.]
552 cord_individual_obj[indivial_i, :] = [ 23. 10. 71. 81.]
553 cord_individual_obj[indivial_i, :] = [ 24. 15. 134. 149.]
554
555 min(cord_individual_obj[:, 3]) = 79.0
556 histol_G_best_iter[iter, 3] = 79.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 11. 114. 125.]
561 cord_individual_obj[indivial_i, :] = [ 1. 11. 129. 140.]
562 cord_individual_obj[indivial_i, :] = [ 2. 10. 108. 118.]
563 cord_individual_obj[indivial_i, :] = [ 3. 11. 130. 141.]
564 cord_individual_obj[indivial_i, :] = [ 4. 11. 125. 136.]
565 cord_individual_obj[indivial_i, :] = [ 5. 12. 86. 98.]
566 cord_individual_obj[indivial_i, :] = [ 6. 13. 94. 107.]
567 cord_individual_obj[indivial_i, :] = [ 7. 11. 121. 132.]
568 cord_individual_obj[indivial_i, :] = [ 8. 10. 112. 122.]
569 cord_individual_obj[indivial_i, :] = [ 9. 11. 118. 129.]
570 cord_individual_obj[indivial_i, :] = [ 10. 11. 112. 123.]
571 cord_individual_obj[indivial_i, :] = [ 11. 10. 113. 123.]
572 cord_individual_obj[indivial_i, :] = [ 12. 11. 108. 119.]
573 cord_individual_obj[indivial_i, :] = [ 13. 10. 127. 137.]
574 cord_individual_obj[indivial_i, :] = [ 14. 12. 118. 130.]
575 cord_individual_obj[indivial_i, :] = [ 15. 11. 118. 129.]
576 cord_individual_obj[indivial_i, :] = [ 16. 10. 69. 79.]
577 cord_individual_obj[indivial_i, :] = [ 17. 10. 130. 140.]
578 cord_individual_obj[indivial_i, :] = [ 18. 11. 133. 144.]
579 cord_individual_obj[indivial_i, :] = [ 19. 10. 112. 122.]
580 cord_individual_obj[indivial_i, :] = [ 20. 9. 116. 125.]
581 cord_individual_obj[indivial_i, :] = [ 21. 9. 100. 109.]
582 cord_individual_obj[indivial_i, :] = [ 22. 11. 137. 148.]
583 cord_individual_obj[indivial_i, :] = [ 23. 11. 91. 102.]

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584     cord_individual_obj[indivial_i, :] = [ 24.  9. 133. 142.]
585
586     min(cord_individual_obj[:, 3]) = 79.0
587     historl_G_best_iter[iter, 3] = 79.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 11. 124. 135.]
592     cord_individual_obj[indivial_i, :] = [ 1. 11. 126. 137.]
593     cord_individual_obj[indivial_i, :] = [ 2. 11. 89. 100.]
594     cord_individual_obj[indivial_i, :] = [ 3. 11. 87. 98.]
595     cord_individual_obj[indivial_i, :] = [ 4. 10. 155. 165.]
596     cord_individual_obj[indivial_i, :] = [ 5. 11. 134. 145.]
597     cord_individual_obj[indivial_i, :] = [ 6. 13. 96. 109.]
598     cord_individual_obj[indivial_i, :] = [ 7. 13. 118. 131.]
599     cord_individual_obj[indivial_i, :] = [ 8. 11. 138. 149.]
600     cord_individual_obj[indivial_i, :] = [ 9. 11. 139. 150.]
601     cord_individual_obj[indivial_i, :] = [ 10. 10. 103. 113.]
602     cord_individual_obj[indivial_i, :] = [ 11. 9. 143. 152.]
603     cord_individual_obj[indivial_i, :] = [ 12. 11. 125. 136.]
604     cord_individual_obj[indivial_i, :] = [ 13. 10. 114. 124.]
605     cord_individual_obj[indivial_i, :] = [ 14. 10. 184. 194.]
606     cord_individual_obj[indivial_i, :] = [ 15. 11. 152. 163.]
607     cord_individual_obj[indivial_i, :] = [ 16. 10. 148. 158.]
608     cord_individual_obj[indivial_i, :] = [ 17. 11. 99. 110.]
609     cord_individual_obj[indivial_i, :] = [ 18. 11. 103. 114.]
610     cord_individual_obj[indivial_i, :] = [ 19. 13. 117. 130.]
611     cord_individual_obj[indivial_i, :] = [ 20. 9. 127. 136.]
612     cord_individual_obj[indivial_i, :] = [ 21. 12. 128. 140.]
613     cord_individual_obj[indivial_i, :] = [ 22. 10. 69. 79.]
614     cord_individual_obj[indivial_i, :] = [ 23. 10. 79. 89.]
615     cord_individual_obj[indivial_i, :] = [ 24. 13. 97. 110.]
616
617     min(cord_individual_obj[:, 3]) = 79.0
618     historl_G_best_iter[iter, 3] = 79.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 11. 90. 101.]
623     cord_individual_obj[indivial_i, :] = [ 1. 11. 87. 98.]
624     cord_individual_obj[indivial_i, :] = [ 2. 10. 85. 95.]
625     cord_individual_obj[indivial_i, :] = [ 3. 10. 103. 113.]
626     cord_individual_obj[indivial_i, :] = [ 4. 10. 114. 124.]
627     cord_individual_obj[indivial_i, :] = [ 5. 11. 102. 113.]
628     cord_individual_obj[indivial_i, :] = [ 6. 11. 79. 90.]
629     cord_individual_obj[indivial_i, :] = [ 7. 11. 86. 97.]
630     cord_individual_obj[indivial_i, :] = [ 8. 9. 111. 120.]
631     cord_individual_obj[indivial_i, :] = [ 9. 11. 107. 118.]
632     cord_individual_obj[indivial_i, :] = [ 10. 11. 83. 94.]
633     cord_individual_obj[indivial_i, :] = [ 11. 11. 171. 182.]
634     cord_individual_obj[indivial_i, :] = [ 12. 11. 87. 98.]
635     cord_individual_obj[indivial_i, :] = [ 13. 10. 79. 89.]
636     cord_individual_obj[indivial_i, :] = [ 14. 10. 69. 79.]
637     cord_individual_obj[indivial_i, :] = [ 15. 10. 106. 116.]
638     cord_individual_obj[indivial_i, :] = [ 16. 11. 110. 121.]
639     cord_individual_obj[indivial_i, :] = [ 17. 9. 104. 113.]
640     cord_individual_obj[indivial_i, :] = [ 18. 13. 101. 114.]
641     cord_individual_obj[indivial_i, :] = [ 19. 10. 110. 120.]
642     cord_individual_obj[indivial_i, :] = [ 20. 9. 111. 120.]
643     cord_individual_obj[indivial_i, :] = [ 21. 10. 117. 127.]
644     cord_individual_obj[indivial_i, :] = [ 22. 13. 115. 128.]
645     cord_individual_obj[indivial_i, :] = [ 23. 10. 91. 101.]
646     cord_individual_obj[indivial_i, :] = [ 24. 11. 146. 157.]
647
648     min(cord_individual_obj[:, 3]) = 79.0
649     historl_G_best_iter[iter, 3] = 79.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 10. 138. 148.]
654     cord_individual_obj[indivial_i, :] = [ 1. 9. 117. 126.]
655     cord_individual_obj[indivial_i, :] = [ 2. 9. 97. 106.]
656     cord_individual_obj[indivial_i, :] = [ 3. 11. 135. 146.]
657     cord_individual_obj[indivial_i, :] = [ 4. 9. 112. 121.]
658     cord_individual_obj[indivial_i, :] = [ 5. 13. 162. 175.]
659     cord_individual_obj[indivial_i, :] = [ 6. 11. 93. 104.]
660     cord_individual_obj[indivial_i, :] = [ 7. 14. 153. 167.]
661     cord_individual_obj[indivial_i, :] = [ 8. 10. 84. 94.]
662     cord_individual_obj[indivial_i, :] = [ 9. 11. 148. 159.]
663     cord_individual_obj[indivial_i, :] = [ 10. 12. 195. 207.]
664     cord_individual_obj[indivial_i, :] = [ 11. 10. 69. 79.]
665     cord_individual_obj[indivial_i, :] = [ 12. 11. 156. 167.]
666     cord_individual_obj[indivial_i, :] = [ 13. 8. 111. 119.]
667     cord_individual_obj[indivial_i, :] = [ 14. 13. 111. 124.]

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668 cord_individual_obj[indivial_i,:] = [15. 8. 84. 92.]
669 cord_individual_obj[indivial_i,:] = [16. 12. 151. 163.]
670 cord_individual_obj[indivial_i,:] = [17. 11. 112. 123.]
671 cord_individual_obj[indivial_i,:] = [18. 10. 124. 134.]
672 cord_individual_obj[indivial_i,:] = [19. 13. 131. 144.]
673 cord_individual_obj[indivial_i,:] = [20. 11. 130. 141.]
674 cord_individual_obj[indivial_i,:] = [21. 10. 122. 132.]
675 cord_individual_obj[indivial_i,:] = [22. 9. 82. 91.]
676 cord_individual_obj[indivial_i,:] = [23. 10. 115. 125.]
677 cord_individual_obj[indivial_i,:] = [24. 10. 108. 118.]
678
679 min(cord_individual_obj[:,3]) = 79.0
680 historl_G_best_iter[iter,3] = 79.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 265.0
689 Proportion_of_area = 0.24537037037037038
690 BEST_CHROM =
691 berth: [23.5 4.5 22. 4.5 12.5 4.5 11.5 23.5 3. 22.5 15.5 19. 12.5 9.5
692 9. 17.5 3.]
693 time: [4. 4. 0. 0. 8. 4. 6. 6. 3. 2. 6. 5. 7. 2. 0. 2.]
694 num_QC: [5. 5. 3. 3. 3. 2. 3. 3. 3. 4. 4. 4. 4. 4. 3. 4.]
695 Objective function values and some other indicators:
696 Obj0 = 10.00      Obj1 = 69.00      Obj0 + Obj1 = 79.00
697 Total movement of crane: 10.00
698 Total waiting time in berth position: 59.00
699 Total index of q during berthing: 1090.00
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: 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: 120.0           work
703 load_i: 120.0   work load gap_i: 0
704 V_id: 1          li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 4.0           gama_i1: 5.0
705 .0              gama_i1 + 1: 6.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
706 load_i: 120.0   work load gap_i: 0
707 V_id: 2          li: 6.0            xi: 22.0           bow of i: 19.0           tail of i: 25.0           gama_i0: 0.0           gama_i1: 2
708 .0              gama_i1 + 1: 3.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 160.0           work
709 load_i: 160.0   work load gap_i: 0
710 V_id: 3          li: 9.0            xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 0.0           gama_i1: 1.0
711 .0              gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
712 load_i: 120.0   work load gap_i: 0
713 V_id: 4          li: 7.0            xi: 12.5           bow of i: 9.0           tail of i: 16.0           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: 100.0           work
715 load_i: 100.0   work load gap_i: 0
716 V_id: 5          li: 9.0            xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 8.0           gama_i1: 10.0
717 .0              gama_i1 + 1: 11.0      gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
718 load_i: 120.0   work load gap_i: 0
719 V_id: 6          li: 5.0            xi: 11.5           bow of i: 9.0           tail of i: 14.0           gama_i0: 4.0           gama_i1: 4
720 .0              gama_i1 + 1: 5.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
721 load_i: 60.0    work load gap_i: 0
722 V_id: 7          li: 3.0            xi: 23.5           bow of i: 22.0           tail of i: 25.0           gama_i0: 6.0           gama_i1: 9
723 .0              gama_i1 + 1: 10.0      gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work
724 load_i: 160.0   work load gap_i: 0
725 V_id: 8          li: 6.0            xi: 3.0            bow of i: 0.0           tail of i: 6.0           gama_i0: 6.0           gama_i1: 7.0
726 .0              gama_i1 + 1: 8.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work load_i:
727 load_i: 120.0   work load gap_i: 0
728 V_id: 9          li: 7.0            xi: 22.5           bow of i: 19.0           tail of i: 26.0           gama_i0: 3.0           gama_i1: 3
729 .0              gama_i1 + 1: 4.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
730 load_i: 60.0    work load gap_i: 0
731 V_id: 10         li: 7.0            xi: 15.5           bow of i: 12.0           tail of i: 19.0           gama_i0: 2.0           gama_i1: 1
732 .0              gama_i1 + 1: 4.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work
733 load_i: 160.0   work load gap_i: 0
734 V_id: 11         li: 6.0            xi: 19.0           bow of i: 16.0           tail of i: 22.0           gama_i0: 6.0           gama_i1: 6
735 .0              gama_i1 + 1: 8.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work
736 load_i: 160.0   work load gap_i: 0
737 V_id: 12         li: 7.0            xi: 12.5           bow of i: 9.0           tail of i: 16.0           gama_i0: 5.0           gama_i1: 5
738 .0              gama_i1 + 1: 7.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work
739 load_i: 160.0   work load gap_i: 0
740 V_id: 13         li: 7.0            xi: 9.5            bow of i: 6.0           tail of i: 13.0           gama_i0: 7.0           gama_i1: 7
741 .0              gama_i1 + 1: 8.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 80.0           work
742 load_i: 80.0    work load gap_i: 0
743 V_id: 14         li: 6.0            xi: 9.0            bow of i: 6.0           tail of i: 12.0           gama_i0: 2.0           gama_i1: 3
744 .0              gama_i1 + 1: 4.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
745 load_i: 140.0   work load gap_i: 0
746 V_id: 15         li: 3.0            xi: 17.5           bow of i: 16.0           tail of i: 19.0           gama_i0: 0.0           gama_i1: 1
747 .0              gama_i1 + 1: 1.0       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: 6.0            xi: 3.0            bow of i: 0.0           tail of i: 6.0           gama_i0: 2.0           gama_i1: 3.0
750 .0              gama_i1 + 1: 4.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work load_i:
751 load_i: 160.0   work load gap_i: 0

```

unknown

```
718  
719 Algorithm finished and the total CPU time: 458 s  
720 End  
721
```