

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 8. 113. 121.]
81 cord_individual_obj[indivial_i,:] = [ 17. 6. 138. 144.]
82 cord_individual_obj[indivial_i,:] = [ 18. 7. 95. 102.]
83 cord_individual_obj[indivial_i,:] = [ 19. 8. 186. 194.]
84 cord_individual_obj[indivial_i,:] = [ 20. 7. 137. 144.]
85 cord_individual_obj[indivial_i,:] = [ 21. 8. 154. 162.]
86 cord_individual_obj[indivial_i,:] = [ 22. 5. 113. 118.]
87 cord_individual_obj[indivial_i,:] = [ 23. 8. 131. 139.]
88 cord_individual_obj[indivial_i,:] = [ 24. 8. 122. 130.]
89
90 min(cord_individual_obj[:,3]) = 71.0
91 historl_G_best_iter[iter, 3] = 71.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 6. 144. 150.]
96 cord_individual_obj[indivial_i,:] = [ 1. 8. 122. 130.]
97 cord_individual_obj[indivial_i,:] = [ 2. 7. 119. 126.]
98 cord_individual_obj[indivial_i,:] = [ 3. 8. 150. 158.]
99 cord_individual_obj[indivial_i,:] = [ 4. 6. 107. 113.]
100 cord_individual_obj[indivial_i,:] = [ 5. 8. 132. 140.]
101 cord_individual_obj[indivial_i,:] = [ 6. 7. 150. 157.]
102 cord_individual_obj[indivial_i,:] = [ 7. 7. 112. 119.]
103 cord_individual_obj[indivial_i,:] = [ 8. 7. 110. 117.]
104 cord_individual_obj[indivial_i,:] = [ 9. 6. 145. 151.]
105 cord_individual_obj[indivial_i,:] = [ 10. 7. 184. 191.]
106 cord_individual_obj[indivial_i,:] = [ 11. 7. 170. 177.]
107 cord_individual_obj[indivial_i,:] = [ 12. 6. 95. 101.]
108 cord_individual_obj[indivial_i,:] = [ 13. 6. 161. 167.]
109 cord_individual_obj[indivial_i,:] = [ 14. 6. 147. 153.]
110 cord_individual_obj[indivial_i,:] = [ 15. 8. 146. 154.]
111 cord_individual_obj[indivial_i,:] = [ 16. 7. 121. 128.]
112 cord_individual_obj[indivial_i,:] = [ 17. 10. 163. 173.]
113 cord_individual_obj[indivial_i,:] = [ 18. 8. 132. 140.]
114 cord_individual_obj[indivial_i,:] = [ 19. 6. 65. 71.]
115 cord_individual_obj[indivial_i,:] = [ 20. 7. 118. 125.]
116 cord_individual_obj[indivial_i,:] = [ 21. 8. 98. 106.]
117 cord_individual_obj[indivial_i,:] = [ 22. 6. 134. 140.]
118 cord_individual_obj[indivial_i,:] = [ 23. 9. 98. 107.]
119 cord_individual_obj[indivial_i,:] = [ 24. 6. 180. 186.]
120
121 min(cord_individual_obj[:,3]) = 71.0
122 historl_G_best_iter[iter, 3] = 71.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 8. 154. 162.]
127 cord_individual_obj[indivial_i,:] = [ 1. 7. 178. 185.]
128 cord_individual_obj[indivial_i,:] = [ 2. 8. 140. 148.]
129 cord_individual_obj[indivial_i,:] = [ 3. 9. 145. 154.]
130 cord_individual_obj[indivial_i,:] = [ 4. 10. 136. 146.]
131 cord_individual_obj[indivial_i,:] = [ 5. 8. 158. 166.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 143. 152.]
133 cord_individual_obj[indivial_i,:] = [ 7. 7. 191. 198.]
134 cord_individual_obj[indivial_i,:] = [ 8. 8. 115. 123.]
135 cord_individual_obj[indivial_i,:] = [ 9. 6. 107. 113.]
136 cord_individual_obj[indivial_i,:] = [ 10. 6. 65. 71.]
137 cord_individual_obj[indivial_i,:] = [ 11. 6. 156. 162.]
138 cord_individual_obj[indivial_i,:] = [ 12. 9. 103. 112.]
139 cord_individual_obj[indivial_i,:] = [ 13. 8. 170. 178.]
140 cord_individual_obj[indivial_i,:] = [ 14. 6. 112. 118.]
141 cord_individual_obj[indivial_i,:] = [ 15. 8. 123. 131.]
142 cord_individual_obj[indivial_i,:] = [ 16. 9. 155. 164.]
143 cord_individual_obj[indivial_i,:] = [ 17. 9. 145. 154.]
144 cord_individual_obj[indivial_i,:] = [ 18. 9. 129. 138.]
145 cord_individual_obj[indivial_i,:] = [ 19. 8. 150. 158.]
146 cord_individual_obj[indivial_i,:] = [ 20. 7. 121. 128.]
147 cord_individual_obj[indivial_i,:] = [ 21. 7. 139. 146.]
148 cord_individual_obj[indivial_i,:] = [ 22. 9. 120. 129.]
149 cord_individual_obj[indivial_i,:] = [ 23. 8. 124. 132.]
150 cord_individual_obj[indivial_i,:] = [ 24. 6. 132. 138.]
151
152 min(cord_individual_obj[:,3]) = 71.0
153 historl_G_best_iter[iter, 3] = 71.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 7. 134. 141.]
158 cord_individual_obj[indivial_i,:] = [ 1. 7. 165. 172.]
159 cord_individual_obj[indivial_i,:] = [ 2. 10. 216. 226.]
160 cord_individual_obj[indivial_i,:] = [ 3. 7. 111. 118.]
161 cord_individual_obj[indivial_i,:] = [ 4. 7. 126. 133.]
162 cord_individual_obj[indivial_i,:] = [ 5. 9. 109. 118.]
163 cord_individual_obj[indivial_i,:] = [ 6. 8. 199. 207.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 6. 65. 71.]
165 cord_individual_obj[indivial_i,:] = [ 8. 9. 101. 110.]
166 cord_individual_obj[indivial_i,:] = [ 9. 7. 164. 171.]
167 cord_individual_obj[indivial_i,:] = [10. 7. 82. 89.]
168 cord_individual_obj[indivial_i,:] = [11. 7. 209. 216.]
169 cord_individual_obj[indivial_i,:] = [12. 7. 106. 113.]
170 cord_individual_obj[indivial_i,:] = [13. 8. 147. 155.]
171 cord_individual_obj[indivial_i,:] = [14. 9. 110. 119.]
172 cord_individual_obj[indivial_i,:] = [15. 8. 103. 111.]
173 cord_individual_obj[indivial_i,:] = [16. 6. 153. 159.]
174 cord_individual_obj[indivial_i,:] = [17. 8. 75. 83.]
175 cord_individual_obj[indivial_i,:] = [18. 9. 154. 163.]
176 cord_individual_obj[indivial_i,:] = [19. 7. 107. 114.]
177 cord_individual_obj[indivial_i,:] = [20. 8. 133. 141.]
178 cord_individual_obj[indivial_i,:] = [21. 7. 108. 115.]
179 cord_individual_obj[indivial_i,:] = [22. 7. 140. 147.]
180 cord_individual_obj[indivial_i,:] = [23. 7. 108. 115.]
181 cord_individual_obj[indivial_i,:] = [24. 6. 118. 124.]
182
183 min(cord_individual_obj[:,3]) = 71.0
184 historl_G_best_iter[iter,3] = 71.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 8. 177. 185.]
189 cord_individual_obj[indivial_i,:] = [ 1. 7. 205. 212.]
190 cord_individual_obj[indivial_i,:] = [ 2. 6. 65. 71.]
191 cord_individual_obj[indivial_i,:] = [ 3. 7. 204. 211.]
192 cord_individual_obj[indivial_i,:] = [ 4. 9. 111. 120.]
193 cord_individual_obj[indivial_i,:] = [ 5. 7. 116. 123.]
194 cord_individual_obj[indivial_i,:] = [ 6. 7. 62. 69.]
195 cord_individual_obj[indivial_i,:] = [ 7. 6. 121. 127.]
196 cord_individual_obj[indivial_i,:] = [ 8. 8. 139. 147.]
197 cord_individual_obj[indivial_i,:] = [ 9. 6. 145. 151.]
198 cord_individual_obj[indivial_i,:] = [10. 7. 121. 128.]
199 cord_individual_obj[indivial_i,:] = [11. 8. 178. 186.]
200 cord_individual_obj[indivial_i,:] = [12. 6. 131. 137.]
201 cord_individual_obj[indivial_i,:] = [13. 7. 179. 186.]
202 cord_individual_obj[indivial_i,:] = [14. 7. 172. 179.]
203 cord_individual_obj[indivial_i,:] = [15. 7. 125. 132.]
204 cord_individual_obj[indivial_i,:] = [16. 9. 153. 162.]
205 cord_individual_obj[indivial_i,:] = [17. 7. 100. 107.]
206 cord_individual_obj[indivial_i,:] = [18. 5. 167. 172.]
207 cord_individual_obj[indivial_i,:] = [19. 9. 177. 186.]
208 cord_individual_obj[indivial_i,:] = [20. 7. 127. 134.]
209 cord_individual_obj[indivial_i,:] = [21. 7. 99. 106.]
210 cord_individual_obj[indivial_i,:] = [22. 9. 115. 124.]
211 cord_individual_obj[indivial_i,:] = [23. 7. 149. 156.]
212 cord_individual_obj[indivial_i,:] = [24. 8. 185. 193.]
213
214 min(cord_individual_obj[:,3]) = 69.0
215 historl_G_best_iter[iter,3] = 69.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 6. 114. 120.]
220 cord_individual_obj[indivial_i,:] = [ 1. 7. 62. 69.]
221 cord_individual_obj[indivial_i,:] = [ 2. 8. 97. 105.]
222 cord_individual_obj[indivial_i,:] = [ 3. 7. 167. 174.]
223 cord_individual_obj[indivial_i,:] = [ 4. 8. 88. 96.]
224 cord_individual_obj[indivial_i,:] = [ 5. 8. 202. 210.]
225 cord_individual_obj[indivial_i,:] = [ 6. 8. 203. 211.]
226 cord_individual_obj[indivial_i,:] = [ 7. 6. 78. 84.]
227 cord_individual_obj[indivial_i,:] = [ 8. 9. 108. 117.]
228 cord_individual_obj[indivial_i,:] = [ 9. 6. 113. 119.]
229 cord_individual_obj[indivial_i,:] = [10. 7. 117. 124.]
230 cord_individual_obj[indivial_i,:] = [11. 7. 144. 151.]
231 cord_individual_obj[indivial_i,:] = [12. 8. 125. 133.]
232 cord_individual_obj[indivial_i,:] = [13. 5. 129. 134.]
233 cord_individual_obj[indivial_i,:] = [14. 10. 129. 139.]
234 cord_individual_obj[indivial_i,:] = [15. 6. 151. 157.]
235 cord_individual_obj[indivial_i,:] = [16. 7. 150. 157.]
236 cord_individual_obj[indivial_i,:] = [17. 7. 101. 108.]
237 cord_individual_obj[indivial_i,:] = [18. 9. 107. 116.]
238 cord_individual_obj[indivial_i,:] = [19. 7. 117. 124.]
239 cord_individual_obj[indivial_i,:] = [20. 6. 137. 143.]
240 cord_individual_obj[indivial_i,:] = [21. 10. 123. 133.]
241 cord_individual_obj[indivial_i,:] = [22. 8. 90. 98.]
242 cord_individual_obj[indivial_i,:] = [23. 6. 199. 205.]
243 cord_individual_obj[indivial_i,:] = [24. 8. 168. 176.]
244
245 min(cord_individual_obj[:,3]) = 69.0
246 historl_G_best_iter[iter,3] = 69.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 8. 119. 127.]
251 cord_individual_obj[indivial_i, :] = [ 1. 7. 152. 159.]
252 cord_individual_obj[indivial_i, :] = [ 2. 7. 108. 115.]
253 cord_individual_obj[indivial_i, :] = [ 3. 7. 179. 186.]
254 cord_individual_obj[indivial_i, :] = [ 4. 8. 84. 92.]
255 cord_individual_obj[indivial_i, :] = [ 5. 9. 112. 121.]
256 cord_individual_obj[indivial_i, :] = [ 6. 7. 62. 69.]
257 cord_individual_obj[indivial_i, :] = [ 7. 9. 171. 180.]
258 cord_individual_obj[indivial_i, :] = [ 8. 11. 134. 145.]
259 cord_individual_obj[indivial_i, :] = [ 9. 6. 102. 108.]
260 cord_individual_obj[indivial_i, :] = [ 10. 8. 97. 105.]
261 cord_individual_obj[indivial_i, :] = [ 11. 7. 173. 180.]
262 cord_individual_obj[indivial_i, :] = [ 12. 7. 123. 130.]
263 cord_individual_obj[indivial_i, :] = [ 13. 8. 255. 263.]
264 cord_individual_obj[indivial_i, :] = [ 14. 9. 105. 114.]
265 cord_individual_obj[indivial_i, :] = [ 15. 7. 89. 96.]
266 cord_individual_obj[indivial_i, :] = [ 16. 8. 148. 156.]
267 cord_individual_obj[indivial_i, :] = [ 17. 7. 156. 163.]
268 cord_individual_obj[indivial_i, :] = [ 18. 9. 168. 177.]
269 cord_individual_obj[indivial_i, :] = [ 19. 8. 159. 167.]
270 cord_individual_obj[indivial_i, :] = [ 20. 7. 173. 180.]
271 cord_individual_obj[indivial_i, :] = [ 21. 9. 125. 134.]
272 cord_individual_obj[indivial_i, :] = [ 22. 8. 83. 91.]
273 cord_individual_obj[indivial_i, :] = [ 23. 7. 222. 229.]
274 cord_individual_obj[indivial_i, :] = [ 24. 8. 122. 130.]
275

276 min(cord_individual_obj[:, 3]) = 69.0
277 historl_G_best_iter[iter, 3] = 69.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 8. 157. 165.]
282 cord_individual_obj[indivial_i, :] = [ 1. 8. 149. 157.]
283 cord_individual_obj[indivial_i, :] = [ 2. 7. 116. 123.]
284 cord_individual_obj[indivial_i, :] = [ 3. 8. 182. 190.]
285 cord_individual_obj[indivial_i, :] = [ 4. 7. 91. 98.]
286 cord_individual_obj[indivial_i, :] = [ 5. 8. 137. 145.]
287 cord_individual_obj[indivial_i, :] = [ 6. 7. 201. 208.]
288 cord_individual_obj[indivial_i, :] = [ 7. 8. 124. 132.]
289 cord_individual_obj[indivial_i, :] = [ 8. 8. 119. 127.]
290 cord_individual_obj[indivial_i, :] = [ 9. 6. 226. 232.]
291 cord_individual_obj[indivial_i, :] = [ 10. 10. 117. 127.]
292 cord_individual_obj[indivial_i, :] = [ 11. 7. 112. 119.]
293 cord_individual_obj[indivial_i, :] = [ 12. 8. 87. 95.]
294 cord_individual_obj[indivial_i, :] = [ 13. 7. 62. 69.]
295 cord_individual_obj[indivial_i, :] = [ 14. 9. 109. 118.]
296 cord_individual_obj[indivial_i, :] = [ 15. 9. 163. 172.]
297 cord_individual_obj[indivial_i, :] = [ 16. 8. 219. 227.]
298 cord_individual_obj[indivial_i, :] = [ 17. 7. 151. 158.]
299 cord_individual_obj[indivial_i, :] = [ 18. 8. 149. 157.]
300 cord_individual_obj[indivial_i, :] = [ 19. 6. 97. 103.]
301 cord_individual_obj[indivial_i, :] = [ 20. 7. 175. 182.]
302 cord_individual_obj[indivial_i, :] = [ 21. 8. 124. 132.]
303 cord_individual_obj[indivial_i, :] = [ 22. 7. 168. 175.]
304 cord_individual_obj[indivial_i, :] = [ 23. 7. 137. 144.]
305 cord_individual_obj[indivial_i, :] = [ 24. 7. 167. 174.]
306

307 min(cord_individual_obj[:, 3]) = 69.0
308 historl_G_best_iter[iter, 3] = 69.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 9. 95. 104.]
313 cord_individual_obj[indivial_i, :] = [ 1. 8. 146. 154.]
314 cord_individual_obj[indivial_i, :] = [ 2. 9. 120. 129.]
315 cord_individual_obj[indivial_i, :] = [ 3. 8. 148. 156.]
316 cord_individual_obj[indivial_i, :] = [ 4. 9. 118. 127.]
317 cord_individual_obj[indivial_i, :] = [ 5. 7. 92. 99.]
318 cord_individual_obj[indivial_i, :] = [ 6. 7. 177. 184.]
319 cord_individual_obj[indivial_i, :] = [ 7. 7. 70. 77.]
320 cord_individual_obj[indivial_i, :] = [ 8. 9. 133. 142.]
321 cord_individual_obj[indivial_i, :] = [ 9. 7. 62. 69.]
322 cord_individual_obj[indivial_i, :] = [ 10. 8. 130. 138.]
323 cord_individual_obj[indivial_i, :] = [ 11. 8. 123. 131.]
324 cord_individual_obj[indivial_i, :] = [ 12. 5. 121. 126.]
325 cord_individual_obj[indivial_i, :] = [ 13. 7. 193. 200.]
326 cord_individual_obj[indivial_i, :] = [ 14. 10. 121. 131.]
327 cord_individual_obj[indivial_i, :] = [ 15. 8. 113. 121.]
328 cord_individual_obj[indivial_i, :] = [ 16. 7. 125. 132.]
329 cord_individual_obj[indivial_i, :] = [ 17. 7. 160. 167.]
330 cord_individual_obj[indivial_i, :] = [ 18. 7. 127. 134.]
331 cord_individual_obj[indivial_i, :] = [ 19. 7. 151. 158.]

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332 cord_individual_obj[indivial_i, :] = [ 20.  9. 175. 184.]
333 cord_individual_obj[indivial_i, :] = [21.  8. 68. 76.]
334 cord_individual_obj[indivial_i, :] = [ 22.  7. 103. 110.]
335 cord_individual_obj[indivial_i, :] = [ 23.  7. 153. 160.]
336 cord_individual_obj[indivial_i, :] = [ 24.  7. 206. 213.]
337
338 min(cord_individual_obj[:, 3]) = 69.0
339 histol_G_best_iter[iter, 3] = 69.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0.  7. 128. 135.]
344 cord_individual_obj[indivial_i, :] = [ 1.  8. 123. 131.]
345 cord_individual_obj[indivial_i, :] = [ 2.  7. 134. 141.]
346 cord_individual_obj[indivial_i, :] = [ 3.  9. 151. 160.]
347 cord_individual_obj[indivial_i, :] = [ 4.  9. 132. 141.]
348 cord_individual_obj[indivial_i, :] = [ 5.  7. 81. 88.]
349 cord_individual_obj[indivial_i, :] = [ 6.  8. 169. 177.]
350 cord_individual_obj[indivial_i, :] = [ 7.  6. 138. 144.]
351 cord_individual_obj[indivial_i, :] = [ 8.  9. 104. 113.]
352 cord_individual_obj[indivial_i, :] = [ 9.  7. 152. 159.]
353 cord_individual_obj[indivial_i, :] = [10.  8. 113. 121.]
354 cord_individual_obj[indivial_i, :] = [11.  8. 119. 127.]
355 cord_individual_obj[indivial_i, :] = [12.  7. 147. 154.]
356 cord_individual_obj[indivial_i, :] = [13.  8. 191. 199.]
357 cord_individual_obj[indivial_i, :] = [14.  7. 137. 144.]
358 cord_individual_obj[indivial_i, :] = [15.  7. 123. 130.]
359 cord_individual_obj[indivial_i, :] = [16.  8. 103. 111.]
360 cord_individual_obj[indivial_i, :] = [17.  7. 100. 107.]
361 cord_individual_obj[indivial_i, :] = [18.  9. 128. 137.]
362 cord_individual_obj[indivial_i, :] = [19.  8. 172. 180.]
363 cord_individual_obj[indivial_i, :] = [20.  8. 159. 167.]
364 cord_individual_obj[indivial_i, :] = [21.  9. 123. 132.]
365 cord_individual_obj[indivial_i, :] = [22.  8. 123. 131.]
366 cord_individual_obj[indivial_i, :] = [23.  8. 159. 167.]
367 cord_individual_obj[indivial_i, :] = [24.  7. 62. 69.]
368
369 min(cord_individual_obj[:, 3]) = 69.0
370 histol_G_best_iter[iter, 3] = 69.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0.  7. 129. 136.]
375 cord_individual_obj[indivial_i, :] = [ 1.  7. 157. 164.]
376 cord_individual_obj[indivial_i, :] = [ 2.  6. 129. 135.]
377 cord_individual_obj[indivial_i, :] = [ 3.  7. 115. 122.]
378 cord_individual_obj[indivial_i, :] = [ 4.  8. 113. 121.]
379 cord_individual_obj[indivial_i, :] = [ 5.  10. 112. 122.]
380 cord_individual_obj[indivial_i, :] = [ 6.  8. 151. 159.]
381 cord_individual_obj[indivial_i, :] = [ 7.  8. 148. 156.]
382 cord_individual_obj[indivial_i, :] = [ 8.  8. 110. 118.]
383 cord_individual_obj[indivial_i, :] = [ 9.  7. 126. 133.]
384 cord_individual_obj[indivial_i, :] = [10.  7. 128. 135.]
385 cord_individual_obj[indivial_i, :] = [11.  9. 145. 154.]
386 cord_individual_obj[indivial_i, :] = [12.  8. 145. 153.]
387 cord_individual_obj[indivial_i, :] = [13.  7. 62. 69.]
388 cord_individual_obj[indivial_i, :] = [14.  7. 118. 125.]
389 cord_individual_obj[indivial_i, :] = [15.  7. 182. 189.]
390 cord_individual_obj[indivial_i, :] = [16.  8. 122. 130.]
391 cord_individual_obj[indivial_i, :] = [17.  7. 170. 177.]
392 cord_individual_obj[indivial_i, :] = [18.  8. 101. 109.]
393 cord_individual_obj[indivial_i, :] = [19.  7. 185. 192.]
394 cord_individual_obj[indivial_i, :] = [20.  9. 202. 211.]
395 cord_individual_obj[indivial_i, :] = [21.  9. 128. 137.]
396 cord_individual_obj[indivial_i, :] = [22.  8. 113. 121.]
397 cord_individual_obj[indivial_i, :] = [23.  7. 140. 147.]
398 cord_individual_obj[indivial_i, :] = [24.  7. 162. 169.]
399
400 min(cord_individual_obj[:, 3]) = 69.0
401 histol_G_best_iter[iter, 3] = 69.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0.  9. 180. 189.]
406 cord_individual_obj[indivial_i, :] = [ 1.  8. 117. 125.]
407 cord_individual_obj[indivial_i, :] = [ 2.  7. 121. 128.]
408 cord_individual_obj[indivial_i, :] = [ 3.  7. 122. 129.]
409 cord_individual_obj[indivial_i, :] = [ 4.  8. 95. 103.]
410 cord_individual_obj[indivial_i, :] = [ 5.  8. 85. 93.]
411 cord_individual_obj[indivial_i, :] = [ 6.  8. 151. 159.]
412 cord_individual_obj[indivial_i, :] = [ 7.  8. 161. 169.]
413 cord_individual_obj[indivial_i, :] = [ 8.  8. 130. 138.]
414 cord_individual_obj[indivial_i, :] = [ 9.  7. 138. 145.]
415 cord_individual_obj[indivial_i, :] = [10.  9. 79. 88.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 6. 182. 188.]
417 cord_individual_obj[indivial_i,:] = [ 12. 7. 169. 176.]
418 cord_individual_obj[indivial_i,:] = [ 13. 9. 231. 240.]
419 cord_individual_obj[indivial_i,:] = [14. 9. 82. 91.]
420 cord_individual_obj[indivial_i,:] = [ 15. 8. 126. 134.]
421 cord_individual_obj[indivial_i,:] = [ 16. 8. 211. 219.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 151. 162.]
423 cord_individual_obj[indivial_i,:] = [ 18. 8. 122. 130.]
424 cord_individual_obj[indivial_i,:] = [ 19. 6. 157. 163.]
425 cord_individual_obj[indivial_i,:] = [20. 7. 62. 69.]
426 cord_individual_obj[indivial_i,:] = [ 21. 9. 123. 132.]
427 cord_individual_obj[indivial_i,:] = [ 22. 9. 151. 160.]
428 cord_individual_obj[indivial_i,:] = [ 23. 7. 125. 132.]
429 cord_individual_obj[indivial_i,:] = [ 24. 6. 132. 138.]
430
431 min(cord_individual_obj[:,3]) = 69.0
432 histol_G_best_iter[iter,3] = 69.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 6. 122. 128.]
437 cord_individual_obj[indivial_i,:] = [ 1. 6. 117. 123.]
438 cord_individual_obj[indivial_i,:] = [ 2. 7. 71. 78.]
439 cord_individual_obj[indivial_i,:] = [ 3. 8. 131. 139.]
440 cord_individual_obj[indivial_i,:] = [ 4. 9. 114. 123.]
441 cord_individual_obj[indivial_i,:] = [ 5. 9. 127. 136.]
442 cord_individual_obj[indivial_i,:] = [ 6. 9. 175. 184.]
443 cord_individual_obj[indivial_i,:] = [ 7. 8. 148. 156.]
444 cord_individual_obj[indivial_i,:] = [ 8. 10. 159. 169.]
445 cord_individual_obj[indivial_i,:] = [ 9. 7. 151. 158.]
446 cord_individual_obj[indivial_i,:] = [10. 8. 103. 111.]
447 cord_individual_obj[indivial_i,:] = [11. 7. 122. 129.]
448 cord_individual_obj[indivial_i,:] = [12. 7. 163. 170.]
449 cord_individual_obj[indivial_i,:] = [13. 7. 62. 69.]
450 cord_individual_obj[indivial_i,:] = [14. 7. 135. 142.]
451 cord_individual_obj[indivial_i,:] = [15. 8. 122. 130.]
452 cord_individual_obj[indivial_i,:] = [16. 8. 99. 107.]
453 cord_individual_obj[indivial_i,:] = [17. 9. 214. 223.]
454 cord_individual_obj[indivial_i,:] = [18. 7. 104. 111.]
455 cord_individual_obj[indivial_i,:] = [19. 8. 215. 223.]
456 cord_individual_obj[indivial_i,:] = [20. 8. 178. 186.]
457 cord_individual_obj[indivial_i,:] = [21. 9. 113. 122.]
458 cord_individual_obj[indivial_i,:] = [22. 6. 133. 139.]
459 cord_individual_obj[indivial_i,:] = [23. 7. 138. 145.]
460 cord_individual_obj[indivial_i,:] = [24. 7. 176. 183.]
461
462 min(cord_individual_obj[:,3]) = 69.0
463 histol_G_best_iter[iter,3] = 69.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 8. 114. 122.]
468 cord_individual_obj[indivial_i,:] = [ 1. 7. 158. 165.]
469 cord_individual_obj[indivial_i,:] = [ 2. 8. 97. 105.]
470 cord_individual_obj[indivial_i,:] = [ 3. 8. 105. 113.]
471 cord_individual_obj[indivial_i,:] = [ 4. 6. 101. 107.]
472 cord_individual_obj[indivial_i,:] = [ 5. 8. 106. 114.]
473 cord_individual_obj[indivial_i,:] = [ 6. 9. 162. 171.]
474 cord_individual_obj[indivial_i,:] = [ 7. 6. 208. 214.]
475 cord_individual_obj[indivial_i,:] = [ 8. 8. 129. 137.]
476 cord_individual_obj[indivial_i,:] = [ 9. 6. 145. 151.]
477 cord_individual_obj[indivial_i,:] = [10. 9. 94. 103.]
478 cord_individual_obj[indivial_i,:] = [11. 8. 163. 171.]
479 cord_individual_obj[indivial_i,:] = [12. 8. 116. 124.]
480 cord_individual_obj[indivial_i,:] = [13. 7. 197. 204.]
481 cord_individual_obj[indivial_i,:] = [14. 8. 114. 122.]
482 cord_individual_obj[indivial_i,:] = [15. 8. 130. 138.]
483 cord_individual_obj[indivial_i,:] = [16. 7. 194. 201.]
484 cord_individual_obj[indivial_i,:] = [17. 7. 62. 69.]
485 cord_individual_obj[indivial_i,:] = [18. 7. 145. 152.]
486 cord_individual_obj[indivial_i,:] = [19. 6. 95. 101.]
487 cord_individual_obj[indivial_i,:] = [20. 9. 160. 169.]
488 cord_individual_obj[indivial_i,:] = [21. 10. 163. 173.]
489 cord_individual_obj[indivial_i,:] = [22. 7. 124. 131.]
490 cord_individual_obj[indivial_i,:] = [23. 7. 145. 152.]
491 cord_individual_obj[indivial_i,:] = [24. 8. 137. 145.]
492
493 min(cord_individual_obj[:,3]) = 69.0
494 histol_G_best_iter[iter,3] = 69.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 7. 78. 85.]
499 cord_individual_obj[indivial_i,:] = [ 1. 7. 101. 108.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 8. 157. 165.]
501 cord_individual_obj[indivial_i,:] = [ 3. 7. 159. 166.]
502 cord_individual_obj[indivial_i,:] = [ 4. 6. 106. 112.]
503 cord_individual_obj[indivial_i,:] = [ 5. 9. 89. 98.]
504 cord_individual_obj[indivial_i,:] = [ 6. 8. 80. 88.]
505 cord_individual_obj[indivial_i,:] = [ 7. 7. 62. 69.]
506 cord_individual_obj[indivial_i,:] = [ 8. 11. 138. 149.]
507 cord_individual_obj[indivial_i,:] = [ 9. 5. 141. 146.]
508 cord_individual_obj[indivial_i,:] = [10. 9. 87. 96.]
509 cord_individual_obj[indivial_i,:] = [11. 6. 101. 107.]
510 cord_individual_obj[indivial_i,:] = [12. 7. 110. 117.]
511 cord_individual_obj[indivial_i,:] = [13. 8. 119. 127.]
512 cord_individual_obj[indivial_i,:] = [14. 9. 139. 148.]
513 cord_individual_obj[indivial_i,:] = [15. 9. 97. 106.]
514 cord_individual_obj[indivial_i,:] = [16. 9. 125. 134.]
515 cord_individual_obj[indivial_i,:] = [17. 9. 96. 105.]
516 cord_individual_obj[indivial_i,:] = [18. 6. 126. 132.]
517 cord_individual_obj[indivial_i,:] = [19. 7. 121. 128.]
518 cord_individual_obj[indivial_i,:] = [20. 7. 130. 137.]
519 cord_individual_obj[indivial_i,:] = [21. 9. 91. 100.]
520 cord_individual_obj[indivial_i,:] = [22. 6. 126. 132.]
521 cord_individual_obj[indivial_i,:] = [23. 6. 108. 114.]
522 cord_individual_obj[indivial_i,:] = [24. 5. 97. 102.]
523
524 min(cord_individual_obj[:, 3]) = 69.0
525 histol_G_best_iter[iter, 3] = 69.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 8. 123. 131.]
530 cord_individual_obj[indivial_i,:] = [ 1. 8. 118. 126.]
531 cord_individual_obj[indivial_i,:] = [ 2. 7. 98. 105.]
532 cord_individual_obj[indivial_i,:] = [ 3. 7. 62. 69.]
533 cord_individual_obj[indivial_i,:] = [ 4. 9. 117. 126.]
534 cord_individual_obj[indivial_i,:] = [ 5. 8. 114. 122.]
535 cord_individual_obj[indivial_i,:] = [ 6. 8. 90. 98.]
536 cord_individual_obj[indivial_i,:] = [ 7. 7. 105. 112.]
537 cord_individual_obj[indivial_i,:] = [ 8. 7. 82. 89.]
538 cord_individual_obj[indivial_i,:] = [ 9. 6. 149. 155.]
539 cord_individual_obj[indivial_i,:] = [10. 8. 102. 110.]
540 cord_individual_obj[indivial_i,:] = [11. 8. 124. 132.]
541 cord_individual_obj[indivial_i,:] = [12. 7. 166. 173.]
542 cord_individual_obj[indivial_i,:] = [13. 7. 176. 183.]
543 cord_individual_obj[indivial_i,:] = [14. 8. 101. 109.]
544 cord_individual_obj[indivial_i,:] = [15. 9. 74. 83.]
545 cord_individual_obj[indivial_i,:] = [16. 7. 176. 183.]
546 cord_individual_obj[indivial_i,:] = [17. 7. 119. 126.]
547 cord_individual_obj[indivial_i,:] = [18. 8. 156. 164.]
548 cord_individual_obj[indivial_i,:] = [19. 7. 149. 156.]
549 cord_individual_obj[indivial_i,:] = [20. 7. 141. 148.]
550 cord_individual_obj[indivial_i,:] = [21. 8. 76. 84.]
551 cord_individual_obj[indivial_i,:] = [22. 9. 138. 147.]
552 cord_individual_obj[indivial_i,:] = [23. 8. 115. 123.]
553 cord_individual_obj[indivial_i,:] = [24. 8. 109. 117.]
554
555 min(cord_individual_obj[:, 3]) = 69.0
556 histol_G_best_iter[iter, 3] = 69.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 6. 100. 106.]
561 cord_individual_obj[indivial_i,:] = [ 1. 8. 145. 153.]
562 cord_individual_obj[indivial_i,:] = [ 2. 6. 129. 135.]
563 cord_individual_obj[indivial_i,:] = [ 3. 10. 129. 139.]
564 cord_individual_obj[indivial_i,:] = [ 4. 8. 161. 169.]
565 cord_individual_obj[indivial_i,:] = [ 5. 8. 123. 131.]
566 cord_individual_obj[indivial_i,:] = [ 6. 8. 110. 118.]
567 cord_individual_obj[indivial_i,:] = [ 7. 8. 106. 114.]
568 cord_individual_obj[indivial_i,:] = [ 8. 9. 146. 155.]
569 cord_individual_obj[indivial_i,:] = [ 9. 6. 138. 144.]
570 cord_individual_obj[indivial_i,:] = [10. 8. 106. 114.]
571 cord_individual_obj[indivial_i,:] = [11. 8. 111. 119.]
572 cord_individual_obj[indivial_i,:] = [12. 7. 173. 180.]
573 cord_individual_obj[indivial_i,:] = [13. 7. 62. 69.]
574 cord_individual_obj[indivial_i,:] = [14. 7. 132. 139.]
575 cord_individual_obj[indivial_i,:] = [15. 7. 119. 126.]
576 cord_individual_obj[indivial_i,:] = [16. 7. 135. 142.]
577 cord_individual_obj[indivial_i,:] = [17. 9. 113. 122.]
578 cord_individual_obj[indivial_i,:] = [18. 7. 116. 123.]
579 cord_individual_obj[indivial_i,:] = [19. 7. 164. 171.]
580 cord_individual_obj[indivial_i,:] = [20. 8. 198. 206.]
581 cord_individual_obj[indivial_i,:] = [21. 8. 123. 131.]
582 cord_individual_obj[indivial_i,:] = [22. 7. 125. 132.]
583 cord_individual_obj[indivial_i,:] = [23. 5. 177. 182.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [24. 7. 92. 99.]
585
586     min(cord_individual_obj[:, 3]) = 69.0
587     historl_G_best_iter[iter, 3] = 69.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 8. 86. 94.]
592     cord_individual_obj[indivial_i, :] = [ 1. 8. 131. 139.]
593     cord_individual_obj[indivial_i, :] = [ 2. 7. 111. 118.]
594     cord_individual_obj[indivial_i, :] = [ 3. 10. 136. 146.]
595     cord_individual_obj[indivial_i, :] = [ 4. 8. 119. 127.]
596     cord_individual_obj[indivial_i, :] = [ 5. 7. 130. 137.]
597     cord_individual_obj[indivial_i, :] = [ 6. 8. 204. 212.]
598     cord_individual_obj[indivial_i, :] = [ 7. 6. 174. 180.]
599     cord_individual_obj[indivial_i, :] = [ 8. 8. 111. 119.]
600     cord_individual_obj[indivial_i, :] = [ 9. 6. 123. 129.]
601     cord_individual_obj[indivial_i, :] = [10. 10. 112. 122.]
602     cord_individual_obj[indivial_i, :] = [11. 7. 133. 140.]
603     cord_individual_obj[indivial_i, :] = [12. 8. 203. 211.]
604     cord_individual_obj[indivial_i, :] = [13. 9. 182. 191.]
605     cord_individual_obj[indivial_i, :] = [14. 8. 112. 120.]
606     cord_individual_obj[indivial_i, :] = [15. 7. 125. 132.]
607     cord_individual_obj[indivial_i, :] = [16. 8. 136. 144.]
608     cord_individual_obj[indivial_i, :] = [17. 8. 114. 122.]
609     cord_individual_obj[indivial_i, :] = [18. 6. 112. 118.]
610     cord_individual_obj[indivial_i, :] = [19. 8. 177. 185.]
611     cord_individual_obj[indivial_i, :] = [20. 7. 62. 69.]
612     cord_individual_obj[indivial_i, :] = [21. 8. 139. 147.]
613     cord_individual_obj[indivial_i, :] = [22. 8. 201. 209.]
614     cord_individual_obj[indivial_i, :] = [23. 6. 88. 94.]
615     cord_individual_obj[indivial_i, :] = [24. 6. 66. 72.]
616
617     min(cord_individual_obj[:, 3]) = 69.0
618     historl_G_best_iter[iter, 3] = 69.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 6. 136. 142.]
623     cord_individual_obj[indivial_i, :] = [ 1. 6. 204. 210.]
624     cord_individual_obj[indivial_i, :] = [ 2. 8. 119. 127.]
625     cord_individual_obj[indivial_i, :] = [ 3. 8. 155. 163.]
626     cord_individual_obj[indivial_i, :] = [ 4. 8. 87. 95.]
627     cord_individual_obj[indivial_i, :] = [ 5. 8. 142. 150.]
628     cord_individual_obj[indivial_i, :] = [ 6. 7. 62. 69.]
629     cord_individual_obj[indivial_i, :] = [ 7. 9. 118. 127.]
630     cord_individual_obj[indivial_i, :] = [ 8. 7. 123. 130.]
631     cord_individual_obj[indivial_i, :] = [ 9. 7. 137. 144.]
632     cord_individual_obj[indivial_i, :] = [10. 7. 111. 118.]
633     cord_individual_obj[indivial_i, :] = [11. 7. 201. 208.]
634     cord_individual_obj[indivial_i, :] = [12. 7. 142. 149.]
635     cord_individual_obj[indivial_i, :] = [13. 8. 139. 147.]
636     cord_individual_obj[indivial_i, :] = [14. 10. 110. 120.]
637     cord_individual_obj[indivial_i, :] = [15. 8. 122. 130.]
638     cord_individual_obj[indivial_i, :] = [16. 7. 107. 114.]
639     cord_individual_obj[indivial_i, :] = [17. 7. 154. 161.]
640     cord_individual_obj[indivial_i, :] = [18. 9. 154. 163.]
641     cord_individual_obj[indivial_i, :] = [19. 7. 139. 146.]
642     cord_individual_obj[indivial_i, :] = [20. 9. 143. 152.]
643     cord_individual_obj[indivial_i, :] = [21. 9. 133. 142.]
644     cord_individual_obj[indivial_i, :] = [22. 8. 139. 147.]
645     cord_individual_obj[indivial_i, :] = [23. 5. 135. 140.]
646     cord_individual_obj[indivial_i, :] = [24. 6. 134. 140.]
647
648     min(cord_individual_obj[:, 3]) = 69.0
649     historl_G_best_iter[iter, 3] = 69.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 7. 143. 150.]
654     cord_individual_obj[indivial_i, :] = [ 1. 7. 62. 69.]
655     cord_individual_obj[indivial_i, :] = [ 2. 8. 74. 82.]
656     cord_individual_obj[indivial_i, :] = [ 3. 7. 149. 156.]
657     cord_individual_obj[indivial_i, :] = [ 4. 8. 220. 228.]
658     cord_individual_obj[indivial_i, :] = [ 5. 8. 184. 192.]
659     cord_individual_obj[indivial_i, :] = [ 6. 7. 198. 205.]
660     cord_individual_obj[indivial_i, :] = [ 7. 7. 180. 187.]
661     cord_individual_obj[indivial_i, :] = [ 8. 9. 127. 136.]
662     cord_individual_obj[indivial_i, :] = [ 9. 7. 99. 106.]
663     cord_individual_obj[indivial_i, :] = [10. 7. 88. 95.]
664     cord_individual_obj[indivial_i, :] = [11. 8. 161. 169.]
665     cord_individual_obj[indivial_i, :] = [12. 8. 153. 161.]
666     cord_individual_obj[indivial_i, :] = [13. 6. 112. 118.]
667     cord_individual_obj[indivial_i, :] = [14. 7. 173. 180.]
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668 cord_individual_obj[indivial_i,:] = [15. 9. 89. 98.]
669 cord_individual_obj[indivial_i,:] = [16. 8. 162. 170.]
670 cord_individual_obj[indivial_i,:] = [17. 8. 144. 152.]
671 cord_individual_obj[indivial_i,:] = [18. 8. 114. 122.]
672 cord_individual_obj[indivial_i,:] = [19. 7. 102. 109.]
673 cord_individual_obj[indivial_i,:] = [20. 7. 129. 136.]
674 cord_individual_obj[indivial_i,:] = [21. 7. 73. 80.]
675 cord_individual_obj[indivial_i,:] = [22. 7. 103. 110.]
676 cord_individual_obj[indivial_i,:] = [23. 6. 137. 143.]
677 cord_individual_obj[indivial_i,:] = [24. 7. 120. 127.]
678
679 min(cord_individual_obj[:,3]) = 69.0
680 historl_G_best_iter[iter,3] = 69.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 161.0
689 Proportion_of_area = 0.14907407407407408
690 BEST_CHROM =
691 berth: [13. 15.5 18.5 7. 17.5 25.5 3.5 11.5 2.5 19. 25.5 11.5 24. 4.5
692 4.5]
693 time: [0. 4. 4. 2. 1. 1. 4. 2. 0. 3. 2. 0. 0. 4.]
694 num_QC: [5. 2. 3. 4. 3. 3. 3. 3. 3. 2. 3. 4. 7.]
695 Objective function values and some other indicators:
696 Obj0 = 7.00          Obj1 = 62.00        Obj0 + Obj1 = 69.00
697 Total movement of crane: 6.00
698 Total waiting time in berth position: 29.00
699 Total index of q during berthing: 794.00
700 Specific arrangement for each vessel:
701 V_id: 0      li: 8.0           xi: 13.0           bow of i: 9.0           tail of i: 17.0           gama_i0: 0.0           gama_i1: 1
702 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
703 load_i: 140.0
704 V_id: 1      li: 3.0           xi: 15.5           bow of i: 14.0           tail of i: 17.0           gama_i0: 4.0           gama_i1: 7
705 .0          gama_i1 + 1: 8.0   gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 140.0           work
706 load_i: 140.0
707 V_id: 2      li: 3.0           xi: 18.5           bow of i: 17.0           tail of i: 20.0           gama_i0: 4.0           gama_i1: 4
708 .0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
709 load_i: 60.0
710 V_id: 3      li: 4.0           xi: 7.0            bow of i: 5.0           tail of i: 9.0           gama_i0: 2.0           gama_i1: 3.0
711 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work load_i:
712 140.0
713 V_id: 4      li: 7.0           xi: 17.5           bow of i: 14.0           tail of i: 21.0           gama_i0: 2.0           gama_i1: 3
714 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
715 load_i: 100.0
716 V_id: 5      li: 9.0           xi: 25.5           bow of i: 21.0           tail of i: 30.0           gama_i0: 1.0           gama_i1: 2
717 .0          gama_i1 + 1: 3.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
718 load_i: 100.0
719 V_id: 6      li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 1.0           gama_i1: 1.0
720 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work load_i:
721 60.0
722 V_id: 7      li: 5.0           xi: 11.5           bow of i: 9.0           tail of i: 14.0           gama_i0: 4.0           gama_i1: 5
723 .0          gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
724 load_i: 80.0
725 V_id: 8      li: 5.0           xi: 2.5            bow of i: 0.0           tail of i: 5.0           gama_i0: 2.0           gama_i1: 3.0
726 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work load_i:
727 100.0
728 V_id: 9      li: 4.0           xi: 19.0           bow of i: 17.0           tail of i: 21.0           gama_i0: 0.0           gama_i1: 1
729 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
730 load_i: 80.0
731 V_id: 10     li: 9.0           xi: 25.5           bow of i: 21.0           tail of i: 30.0           gama_i0: 3.0           gama_i1: 1
732 .0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
733 load_i: 100.0
734 V_id: 11     li: 5.0           xi: 11.5           bow of i: 9.0           tail of i: 14.0           gama_i0: 2.0           gama_i1: 1
735 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work
736 load_i: 60.0
737 V_id: 12     li: 6.0           xi: 24.0           bow of i: 21.0           tail of i: 27.0           gama_i0: 0.0           gama_i1: 1
738 .0          gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
739 load_i: 60.0
740 V_id: 13     li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 0.0           gama_i1: 0.0
741 .0          gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 80.0           work load_i:
742 80.0
743 V_id: 14     li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 4.0           gama_i1: 4.0
744 .0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 140.0           work load_i:
745 140.0
746
747 Algorithm finished and the total CPU time: 436 s
748 End
749

```