

unknown

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80 cord_individual_obj[indivial_i, :] = [ 16. 9. 171. 180.]
81 cord_individual_obj[indivial_i, :] = [ 17. 10. 121. 131.]
82 cord_individual_obj[indivial_i, :] = [ 18. 8. 140. 148.]
83 cord_individual_obj[indivial_i, :] = [ 19. 10. 156. 166.]
84 cord_individual_obj[indivial_i, :] = [ 20. 9. 94. 103.]
85 cord_individual_obj[indivial_i, :] = [ 21. 9. 168. 177.]
86 cord_individual_obj[indivial_i, :] = [ 22. 10. 107. 117.]
87 cord_individual_obj[indivial_i, :] = [ 23. 9. 228. 237.]
88 cord_individual_obj[indivial_i, :] = [ 24. 9. 167. 176.]
89
90 min(cord_individual_obj[:, 3]) = 70.0
91 historl_G_best_iter[iter, 3] = 70.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i, :] = [ 0. 9. 164. 173.]
96 cord_individual_obj[indivial_i, :] = [ 1. 10. 150. 160.]
97 cord_individual_obj[indivial_i, :] = [ 2. 11. 174. 185.]
98 cord_individual_obj[indivial_i, :] = [ 3. 10. 200. 210.]
99 cord_individual_obj[indivial_i, :] = [ 4. 11. 171. 182.]
100 cord_individual_obj[indivial_i, :] = [ 5. 8. 184. 192.]
101 cord_individual_obj[indivial_i, :] = [ 6. 9. 156. 165.]
102 cord_individual_obj[indivial_i, :] = [ 7. 11. 115. 126.]
103 cord_individual_obj[indivial_i, :] = [ 8. 9. 131. 140.]
104 cord_individual_obj[indivial_i, :] = [ 9. 10. 203. 213.]
105 cord_individual_obj[indivial_i, :] = [ 10. 9. 148. 157.]
106 cord_individual_obj[indivial_i, :] = [ 11. 8. 151. 159.]
107 cord_individual_obj[indivial_i, :] = [ 12. 9. 192. 201.]
108 cord_individual_obj[indivial_i, :] = [ 13. 10. 183. 193.]
109 cord_individual_obj[indivial_i, :] = [ 14. 9. 61. 70.]
110 cord_individual_obj[indivial_i, :] = [ 15. 8. 199. 207.]
111 cord_individual_obj[indivial_i, :] = [ 16. 10. 102. 112.]
112 cord_individual_obj[indivial_i, :] = [ 17. 10. 163. 173.]
113 cord_individual_obj[indivial_i, :] = [ 18. 8. 236. 244.]
114 cord_individual_obj[indivial_i, :] = [ 19. 12. 127. 139.]
115 cord_individual_obj[indivial_i, :] = [ 20. 10. 169. 179.]
116 cord_individual_obj[indivial_i, :] = [ 21. 9. 136. 145.]
117 cord_individual_obj[indivial_i, :] = [ 22. 8. 166. 174.]
118 cord_individual_obj[indivial_i, :] = [ 23. 10. 95. 105.]
119 cord_individual_obj[indivial_i, :] = [ 24. 11. 172. 183.]
120
121 min(cord_individual_obj[:, 3]) = 70.0
122 historl_G_best_iter[iter, 3] = 70.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i, :] = [ 0. 10. 95. 105.]
127 cord_individual_obj[indivial_i, :] = [ 1. 9. 151. 160.]
128 cord_individual_obj[indivial_i, :] = [ 2. 9. 118. 127.]
129 cord_individual_obj[indivial_i, :] = [ 3. 12. 124. 136.]
130 cord_individual_obj[indivial_i, :] = [ 4. 12. 108. 120.]
131 cord_individual_obj[indivial_i, :] = [ 5. 9. 140. 149.]
132 cord_individual_obj[indivial_i, :] = [ 6. 9. 126. 135.]
133 cord_individual_obj[indivial_i, :] = [ 7. 9. 146. 155.]
134 cord_individual_obj[indivial_i, :] = [ 8. 9. 108. 117.]
135 cord_individual_obj[indivial_i, :] = [ 9. 9. 183. 192.]
136 cord_individual_obj[indivial_i, :] = [ 10. 10. 195. 205.]
137 cord_individual_obj[indivial_i, :] = [ 11. 9. 147. 156.]
138 cord_individual_obj[indivial_i, :] = [ 12. 9. 210. 219.]
139 cord_individual_obj[indivial_i, :] = [ 13. 9. 177. 186.]
140 cord_individual_obj[indivial_i, :] = [ 14. 10. 151. 161.]
141 cord_individual_obj[indivial_i, :] = [ 15. 8. 169. 177.]
142 cord_individual_obj[indivial_i, :] = [ 16. 10. 124. 134.]
143 cord_individual_obj[indivial_i, :] = [ 17. 10. 150. 160.]
144 cord_individual_obj[indivial_i, :] = [ 18. 9. 61. 70.]
145 cord_individual_obj[indivial_i, :] = [ 19. 12. 178. 190.]
146 cord_individual_obj[indivial_i, :] = [ 20. 11. 181. 192.]
147 cord_individual_obj[indivial_i, :] = [ 21. 10. 174. 184.]
148 cord_individual_obj[indivial_i, :] = [ 22. 9. 130. 139.]
149 cord_individual_obj[indivial_i, :] = [ 23. 10. 150. 160.]
150 cord_individual_obj[indivial_i, :] = [ 24. 9. 115. 124.]
151
152 min(cord_individual_obj[:, 3]) = 70.0
153 historl_G_best_iter[iter, 3] = 70.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i, :] = [ 0. 9. 155. 164.]
158 cord_individual_obj[indivial_i, :] = [ 1. 8. 89. 97.]
159 cord_individual_obj[indivial_i, :] = [ 2. 10. 152. 162.]
160 cord_individual_obj[indivial_i, :] = [ 3. 11. 141. 152.]
161 cord_individual_obj[indivial_i, :] = [ 4. 8. 208. 216.]
162 cord_individual_obj[indivial_i, :] = [ 5. 13. 177. 190.]
163 cord_individual_obj[indivial_i, :] = [ 6. 8. 117. 125.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 10. 178. 188.]
165 cord_individual_obj[indivial_i,:] = [ 8. 8. 123. 131.]
166 cord_individual_obj[indivial_i,:] = [ 9. 8. 192. 200.]
167 cord_individual_obj[indivial_i,:] = [10. 13. 177. 190.]
168 cord_individual_obj[indivial_i,:] = [11. 9. 168. 177.]
169 cord_individual_obj[indivial_i,:] = [12. 9. 61. 70.]
170 cord_individual_obj[indivial_i,:] = [13. 9. 144. 153.]
171 cord_individual_obj[indivial_i,:] = [14. 10. 197. 207.]
172 cord_individual_obj[indivial_i,:] = [15. 7. 194. 201.]
173 cord_individual_obj[indivial_i,:] = [16. 9. 155. 164.]
174 cord_individual_obj[indivial_i,:] = [17. 9. 154. 163.]
175 cord_individual_obj[indivial_i,:] = [18. 8. 174. 182.]
176 cord_individual_obj[indivial_i,:] = [19. 10. 114. 124.]
177 cord_individual_obj[indivial_i,:] = [20. 11. 128. 139.]
178 cord_individual_obj[indivial_i,:] = [21. 9. 141. 150.]
179 cord_individual_obj[indivial_i,:] = [22. 8. 113. 121.]
180 cord_individual_obj[indivial_i,:] = [23. 8. 154. 162.]
181 cord_individual_obj[indivial_i,:] = [24. 11. 167. 178.]
182
183 min(cord_individual_obj[:,3]) = 70.0
184 historl_G_best_iter[iter,3] = 70.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 10. 123. 133.]
189 cord_individual_obj[indivial_i,:] = [ 1. 8. 188. 196.]
190 cord_individual_obj[indivial_i,:] = [ 2. 10. 110. 120.]
191 cord_individual_obj[indivial_i,:] = [ 3. 8. 172. 180.]
192 cord_individual_obj[indivial_i,:] = [ 4. 9. 61. 70.]
193 cord_individual_obj[indivial_i,:] = [ 5. 8. 177. 185.]
194 cord_individual_obj[indivial_i,:] = [ 6. 9. 148. 157.]
195 cord_individual_obj[indivial_i,:] = [ 7. 12. 140. 152.]
196 cord_individual_obj[indivial_i,:] = [ 8. 8. 154. 162.]
197 cord_individual_obj[indivial_i,:] = [ 9. 12. 146. 158.]
198 cord_individual_obj[indivial_i,:] = [10. 8. 129. 137.]
199 cord_individual_obj[indivial_i,:] = [11. 9. 152. 161.]
200 cord_individual_obj[indivial_i,:] = [12. 9. 164. 173.]
201 cord_individual_obj[indivial_i,:] = [13. 10. 128. 138.]
202 cord_individual_obj[indivial_i,:] = [14. 9. 147. 156.]
203 cord_individual_obj[indivial_i,:] = [15. 10. 153. 163.]
204 cord_individual_obj[indivial_i,:] = [16. 10. 128. 138.]
205 cord_individual_obj[indivial_i,:] = [17. 9. 192. 201.]
206 cord_individual_obj[indivial_i,:] = [18. 9. 173. 182.]
207 cord_individual_obj[indivial_i,:] = [19. 9. 165. 174.]
208 cord_individual_obj[indivial_i,:] = [20. 10. 212. 222.]
209 cord_individual_obj[indivial_i,:] = [21. 8. 167. 175.]
210 cord_individual_obj[indivial_i,:] = [22. 7. 202. 209.]
211 cord_individual_obj[indivial_i,:] = [23. 9. 186. 195.]
212 cord_individual_obj[indivial_i,:] = [24. 10. 129. 139.]
213
214 min(cord_individual_obj[:,3]) = 70.0
215 historl_G_best_iter[iter,3] = 70.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 12. 189. 201.]
220 cord_individual_obj[indivial_i,:] = [ 1. 10. 170. 180.]
221 cord_individual_obj[indivial_i,:] = [ 2. 13. 178. 191.]
222 cord_individual_obj[indivial_i,:] = [ 3. 8. 123. 131.]
223 cord_individual_obj[indivial_i,:] = [ 4. 10. 165. 175.]
224 cord_individual_obj[indivial_i,:] = [ 5. 9. 116. 125.]
225 cord_individual_obj[indivial_i,:] = [ 6. 9. 142. 151.]
226 cord_individual_obj[indivial_i,:] = [ 7. 12. 153. 165.]
227 cord_individual_obj[indivial_i,:] = [ 8. 9. 122. 131.]
228 cord_individual_obj[indivial_i,:] = [ 9. 11. 154. 165.]
229 cord_individual_obj[indivial_i,:] = [10. 8. 167. 175.]
230 cord_individual_obj[indivial_i,:] = [11. 11. 176. 187.]
231 cord_individual_obj[indivial_i,:] = [12. 9. 126. 135.]
232 cord_individual_obj[indivial_i,:] = [13. 10. 126. 136.]
233 cord_individual_obj[indivial_i,:] = [14. 10. 141. 151.]
234 cord_individual_obj[indivial_i,:] = [15. 12. 122. 134.]
235 cord_individual_obj[indivial_i,:] = [16. 8. 140. 148.]
236 cord_individual_obj[indivial_i,:] = [17. 11. 139. 150.]
237 cord_individual_obj[indivial_i,:] = [18. 10. 155. 165.]
238 cord_individual_obj[indivial_i,:] = [19. 10. 129. 139.]
239 cord_individual_obj[indivial_i,:] = [20. 9. 61. 70.]
240 cord_individual_obj[indivial_i,:] = [21. 9. 189. 198.]
241 cord_individual_obj[indivial_i,:] = [22. 8. 153. 161.]
242 cord_individual_obj[indivial_i,:] = [23. 10. 188. 198.]
243 cord_individual_obj[indivial_i,:] = [24. 11. 175. 186.]
244
245 min(cord_individual_obj[:,3]) = 70.0
246 historl_G_best_iter[iter,3] = 70.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  9. 61. 70.]
251 cord_individual_obj[indivial_i, :] = [ 1. 12. 134. 146.]
252 cord_individual_obj[indivial_i, :] = [ 2. 10. 154. 164.]
253 cord_individual_obj[indivial_i, :] = [ 3. 11. 173. 184.]
254 cord_individual_obj[indivial_i, :] = [ 4. 11. 109. 120.]
255 cord_individual_obj[indivial_i, :] = [ 5. 11. 125. 136.]
256 cord_individual_obj[indivial_i, :] = [ 6. 12. 157. 169.]
257 cord_individual_obj[indivial_i, :] = [ 7. 8. 126. 134.]
258 cord_individual_obj[indivial_i, :] = [ 8. 7. 175. 182.]
259 cord_individual_obj[indivial_i, :] = [ 9. 8. 159. 167.]
260 cord_individual_obj[indivial_i, :] = [ 10. 10. 142. 152.]
261 cord_individual_obj[indivial_i, :] = [ 11. 9. 231. 240.]
262 cord_individual_obj[indivial_i, :] = [ 12. 9. 203. 212.]
263 cord_individual_obj[indivial_i, :] = [ 13. 10. 168. 178.]
264 cord_individual_obj[indivial_i, :] = [ 14. 9. 229. 238.]
265 cord_individual_obj[indivial_i, :] = [ 15. 8. 150. 158.]
266 cord_individual_obj[indivial_i, :] = [ 16. 10. 135. 145.]
267 cord_individual_obj[indivial_i, :] = [ 17. 10. 181. 191.]
268 cord_individual_obj[indivial_i, :] = [ 18. 8. 144. 152.]
269 cord_individual_obj[indivial_i, :] = [ 19. 10. 166. 176.]
270 cord_individual_obj[indivial_i, :] = [ 20. 10. 125. 135.]
271 cord_individual_obj[indivial_i, :] = [ 21. 9. 132. 141.]
272 cord_individual_obj[indivial_i, :] = [ 22. 9. 143. 152.]
273 cord_individual_obj[indivial_i, :] = [ 23. 9. 198. 207.]
274 cord_individual_obj[indivial_i, :] = [ 24. 10. 139. 149.]
275

276 min(cord_individual_obj[:, 3]) = 70.0
277 historl_G_best_iter[iter, 3] = 70.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0.  9. 166. 175.]
282 cord_individual_obj[indivial_i, :] = [ 1. 7. 164. 171.]
283 cord_individual_obj[indivial_i, :] = [ 2. 11. 156. 167.]
284 cord_individual_obj[indivial_i, :] = [ 3. 12. 167. 179.]
285 cord_individual_obj[indivial_i, :] = [ 4. 10. 131. 141.]
286 cord_individual_obj[indivial_i, :] = [ 5. 10. 219. 229.]
287 cord_individual_obj[indivial_i, :] = [ 6. 9. 135. 144.]
288 cord_individual_obj[indivial_i, :] = [ 7. 12. 118. 130.]
289 cord_individual_obj[indivial_i, :] = [ 8. 8. 124. 132.]
290 cord_individual_obj[indivial_i, :] = [ 9. 10. 206. 216.]
291 cord_individual_obj[indivial_i, :] = [ 10. 10. 118. 128.]
292 cord_individual_obj[indivial_i, :] = [ 11. 9. 61. 70.]
293 cord_individual_obj[indivial_i, :] = [ 12. 9. 156. 165.]
294 cord_individual_obj[indivial_i, :] = [ 13. 9. 142. 151.]
295 cord_individual_obj[indivial_i, :] = [ 14. 11. 226. 237.]
296 cord_individual_obj[indivial_i, :] = [ 15. 10. 189. 199.]
297 cord_individual_obj[indivial_i, :] = [ 16. 9. 171. 180.]
298 cord_individual_obj[indivial_i, :] = [ 17. 9. 151. 160.]
299 cord_individual_obj[indivial_i, :] = [ 18. 9. 146. 155.]
300 cord_individual_obj[indivial_i, :] = [ 19. 10. 155. 165.]
301 cord_individual_obj[indivial_i, :] = [ 20. 10. 142. 152.]
302 cord_individual_obj[indivial_i, :] = [ 21. 9. 135. 144.]
303 cord_individual_obj[indivial_i, :] = [ 22. 8. 175. 183.]
304 cord_individual_obj[indivial_i, :] = [ 23. 8. 161. 169.]
305 cord_individual_obj[indivial_i, :] = [ 24. 11. 140. 151.]
306

307 min(cord_individual_obj[:, 3]) = 70.0
308 historl_G_best_iter[iter, 3] = 70.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0.  9. 134. 143.]
313 cord_individual_obj[indivial_i, :] = [ 1. 9. 106. 115.]
314 cord_individual_obj[indivial_i, :] = [ 2. 11. 187. 198.]
315 cord_individual_obj[indivial_i, :] = [ 3. 10. 131. 141.]
316 cord_individual_obj[indivial_i, :] = [ 4. 9. 146. 155.]
317 cord_individual_obj[indivial_i, :] = [ 5. 9. 122. 131.]
318 cord_individual_obj[indivial_i, :] = [ 6. 10. 135. 145.]
319 cord_individual_obj[indivial_i, :] = [ 7. 12. 194. 206.]
320 cord_individual_obj[indivial_i, :] = [ 8. 9. 116. 125.]
321 cord_individual_obj[indivial_i, :] = [ 9. 10. 108. 118.]
322 cord_individual_obj[indivial_i, :] = [ 10. 11. 194. 205.]
323 cord_individual_obj[indivial_i, :] = [ 11. 9. 184. 193.]
324 cord_individual_obj[indivial_i, :] = [ 12. 9. 146. 155.]
325 cord_individual_obj[indivial_i, :] = [ 13. 12. 151. 163.]
326 cord_individual_obj[indivial_i, :] = [ 14. 9. 61. 70.]
327 cord_individual_obj[indivial_i, :] = [ 15. 11. 117. 128.]
328 cord_individual_obj[indivial_i, :] = [ 16. 11. 140. 151.]
329 cord_individual_obj[indivial_i, :] = [ 17. 11. 206. 217.]
330 cord_individual_obj[indivial_i, :] = [ 18. 9. 170. 179.]
331 cord_individual_obj[indivial_i, :] = [ 19. 10. 146. 156.]

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332 cord_individual_obj[indivial_i,:] = [ 20. 12. 142. 154.]
333 cord_individual_obj[indivial_i,:] = [ 21. 9. 153. 162.]
334 cord_individual_obj[indivial_i,:] = [ 22. 8. 182. 190.]
335 cord_individual_obj[indivial_i,:] = [ 23. 8. 213. 221.]
336 cord_individual_obj[indivial_i,:] = [ 24. 10. 148. 158.]
337
338 min(cord_individual_obj[:,3]) = 70.0
339 histol_G_best_iter[iter,3] = 70.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i,:] = [ 0. 10. 117. 127.]
344 cord_individual_obj[indivial_i,:] = [ 1. 9. 142. 151.]
345 cord_individual_obj[indivial_i,:] = [ 2. 11. 139. 150.]
346 cord_individual_obj[indivial_i,:] = [ 3. 9. 225. 234.]
347 cord_individual_obj[indivial_i,:] = [ 4. 9. 178. 187.]
348 cord_individual_obj[indivial_i,:] = [ 5. 7. 156. 163.]
349 cord_individual_obj[indivial_i,:] = [ 6. 9. 132. 141.]
350 cord_individual_obj[indivial_i,:] = [ 7. 11. 161. 172.]
351 cord_individual_obj[indivial_i,:] = [ 8. 9. 164. 173.]
352 cord_individual_obj[indivial_i,:] = [ 9. 11. 144. 155.]
353 cord_individual_obj[indivial_i,:] = [ 10. 9. 131. 140.]
354 cord_individual_obj[indivial_i,:] = [ 11. 9. 142. 151.]
355 cord_individual_obj[indivial_i,:] = [ 12. 11. 148. 159.]
356 cord_individual_obj[indivial_i,:] = [ 13. 8. 110. 118.]
357 cord_individual_obj[indivial_i,:] = [ 14. 8. 229. 237.]
358 cord_individual_obj[indivial_i,:] = [ 15. 10. 113. 123.]
359 cord_individual_obj[indivial_i,:] = [ 16. 10. 164. 174.]
360 cord_individual_obj[indivial_i,:] = [ 17. 10. 153. 163.]
361 cord_individual_obj[indivial_i,:] = [ 18. 7. 129. 136.]
362 cord_individual_obj[indivial_i,:] = [ 19. 10. 150. 160.]
363 cord_individual_obj[indivial_i,:] = [ 20. 10. 138. 148.]
364 cord_individual_obj[indivial_i,:] = [ 21. 9. 101. 110.]
365 cord_individual_obj[indivial_i,:] = [ 22. 9. 165. 174.]
366 cord_individual_obj[indivial_i,:] = [ 23. 9. 61. 70.]
367 cord_individual_obj[indivial_i,:] = [ 24. 10. 187. 197.]
368
369 min(cord_individual_obj[:,3]) = 70.0
370 histol_G_best_iter[iter,3] = 70.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i,:] = [ 0. 10. 113. 123.]
375 cord_individual_obj[indivial_i,:] = [ 1. 8. 149. 157.]
376 cord_individual_obj[indivial_i,:] = [ 2. 9. 256. 265.]
377 cord_individual_obj[indivial_i,:] = [ 3. 8. 194. 202.]
378 cord_individual_obj[indivial_i,:] = [ 4. 10. 145. 155.]
379 cord_individual_obj[indivial_i,:] = [ 5. 9. 128. 137.]
380 cord_individual_obj[indivial_i,:] = [ 6. 8. 138. 146.]
381 cord_individual_obj[indivial_i,:] = [ 7. 12. 176. 188.]
382 cord_individual_obj[indivial_i,:] = [ 8. 9. 182. 191.]
383 cord_individual_obj[indivial_i,:] = [ 9. 10. 167. 177.]
384 cord_individual_obj[indivial_i,:] = [ 10. 10. 149. 159.]
385 cord_individual_obj[indivial_i,:] = [ 11. 8. 217. 225.]
386 cord_individual_obj[indivial_i,:] = [ 12. 8. 148. 156.]
387 cord_individual_obj[indivial_i,:] = [ 13. 10. 218. 228.]
388 cord_individual_obj[indivial_i,:] = [ 14. 9. 61. 70.]
389 cord_individual_obj[indivial_i,:] = [ 15. 8. 181. 189.]
390 cord_individual_obj[indivial_i,:] = [ 16. 10. 87. 97.]
391 cord_individual_obj[indivial_i,:] = [ 17. 10. 153. 163.]
392 cord_individual_obj[indivial_i,:] = [ 18. 11. 205. 216.]
393 cord_individual_obj[indivial_i,:] = [ 19. 11. 143. 154.]
394 cord_individual_obj[indivial_i,:] = [ 20. 12. 195. 207.]
395 cord_individual_obj[indivial_i,:] = [ 21. 9. 138. 147.]
396 cord_individual_obj[indivial_i,:] = [ 22. 8. 166. 174.]
397 cord_individual_obj[indivial_i,:] = [ 23. 9. 240. 249.]
398 cord_individual_obj[indivial_i,:] = [ 24. 9. 143. 152.]
399
400 min(cord_individual_obj[:,3]) = 70.0
401 histol_G_best_iter[iter,3] = 70.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i,:] = [ 0. 10. 165. 175.]
406 cord_individual_obj[indivial_i,:] = [ 1. 10. 218. 228.]
407 cord_individual_obj[indivial_i,:] = [ 2. 9. 61. 70.]
408 cord_individual_obj[indivial_i,:] = [ 3. 10. 107. 117.]
409 cord_individual_obj[indivial_i,:] = [ 4. 11. 125. 136.]
410 cord_individual_obj[indivial_i,:] = [ 5. 8. 169. 177.]
411 cord_individual_obj[indivial_i,:] = [ 6. 10. 174. 184.]
412 cord_individual_obj[indivial_i,:] = [ 7. 10. 93. 103.]
413 cord_individual_obj[indivial_i,:] = [ 8. 9. 133. 142.]
414 cord_individual_obj[indivial_i,:] = [ 9. 11. 159. 170.]
415 cord_individual_obj[indivial_i,:] = [ 10. 10. 108. 118.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 9. 144. 153.]
417 cord_individual_obj[indivial_i,:] = [ 12. 8. 211. 219.]
418 cord_individual_obj[indivial_i,:] = [ 13. 9. 152. 161.]
419 cord_individual_obj[indivial_i,:] = [ 14. 9. 206. 215.]
420 cord_individual_obj[indivial_i,:] = [ 15. 10. 105. 115.]
421 cord_individual_obj[indivial_i,:] = [ 16. 9. 153. 162.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 251. 262.]
423 cord_individual_obj[indivial_i,:] = [ 18. 12. 220. 232.]
424 cord_individual_obj[indivial_i,:] = [ 19. 12. 166. 178.]
425 cord_individual_obj[indivial_i,:] = [ 20. 8. 176. 184.]
426 cord_individual_obj[indivial_i,:] = [ 21. 12. 222. 234.]
427 cord_individual_obj[indivial_i,:] = [ 22. 8. 171. 179.]
428 cord_individual_obj[indivial_i,:] = [ 23. 9. 164. 173.]
429 cord_individual_obj[indivial_i,:] = [ 24. 10. 142. 152.]
430
431 min(cord_individual_obj[:,3]) = 70.0
432 histol_G_best_iter[iter,3] = 70.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 10. 202. 212.]
437 cord_individual_obj[indivial_i,:] = [ 1. 9. 122. 131.]
438 cord_individual_obj[indivial_i,:] = [ 2. 11. 177. 188.]
439 cord_individual_obj[indivial_i,:] = [ 3. 8. 184. 192.]
440 cord_individual_obj[indivial_i,:] = [ 4. 9. 188. 197.]
441 cord_individual_obj[indivial_i,:] = [ 5. 10. 98. 108.]
442 cord_individual_obj[indivial_i,:] = [ 6. 9. 193. 202.]
443 cord_individual_obj[indivial_i,:] = [ 7. 10. 117. 127.]
444 cord_individual_obj[indivial_i,:] = [ 8. 10. 96. 106.]
445 cord_individual_obj[indivial_i,:] = [ 9. 8. 166. 174.]
446 cord_individual_obj[indivial_i,:] = [ 10. 9. 182. 191.]
447 cord_individual_obj[indivial_i,:] = [ 11. 10. 122. 132.]
448 cord_individual_obj[indivial_i,:] = [ 12. 10. 170. 180.]
449 cord_individual_obj[indivial_i,:] = [ 13. 9. 102. 111.]
450 cord_individual_obj[indivial_i,:] = [ 14. 9. 141. 150.]
451 cord_individual_obj[indivial_i,:] = [ 15. 9. 154. 163.]
452 cord_individual_obj[indivial_i,:] = [ 16. 12. 163. 175.]
453 cord_individual_obj[indivial_i,:] = [ 17. 9. 61. 70.]
454 cord_individual_obj[indivial_i,:] = [ 18. 8. 224. 232.]
455 cord_individual_obj[indivial_i,:] = [ 19. 9. 150. 159.]
456 cord_individual_obj[indivial_i,:] = [ 20. 10. 163. 173.]
457 cord_individual_obj[indivial_i,:] = [ 21. 9. 182. 191.]
458 cord_individual_obj[indivial_i,:] = [ 22. 9. 188. 197.]
459 cord_individual_obj[indivial_i,:] = [ 23. 9. 139. 148.]
460 cord_individual_obj[indivial_i,:] = [ 24. 11. 152. 163.]
461
462 min(cord_individual_obj[:,3]) = 70.0
463 histol_G_best_iter[iter,3] = 70.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 10. 160. 170.]
468 cord_individual_obj[indivial_i,:] = [ 1. 9. 136. 145.]
469 cord_individual_obj[indivial_i,:] = [ 2. 10. 118. 128.]
470 cord_individual_obj[indivial_i,:] = [ 3. 9. 159. 168.]
471 cord_individual_obj[indivial_i,:] = [ 4. 11. 149. 160.]
472 cord_individual_obj[indivial_i,:] = [ 5. 10. 105. 115.]
473 cord_individual_obj[indivial_i,:] = [ 6. 11. 149. 160.]
474 cord_individual_obj[indivial_i,:] = [ 7. 11. 123. 134.]
475 cord_individual_obj[indivial_i,:] = [ 8. 9. 222. 231.]
476 cord_individual_obj[indivial_i,:] = [ 9. 9. 125. 134.]
477 cord_individual_obj[indivial_i,:] = [ 10. 9. 158. 167.]
478 cord_individual_obj[indivial_i,:] = [ 11. 10. 189. 199.]
479 cord_individual_obj[indivial_i,:] = [ 12. 9. 178. 187.]
480 cord_individual_obj[indivial_i,:] = [ 13. 10. 127. 137.]
481 cord_individual_obj[indivial_i,:] = [ 14. 9. 169. 178.]
482 cord_individual_obj[indivial_i,:] = [ 15. 11. 126. 137.]
483 cord_individual_obj[indivial_i,:] = [ 16. 10. 141. 151.]
484 cord_individual_obj[indivial_i,:] = [ 17. 10. 159. 169.]
485 cord_individual_obj[indivial_i,:] = [ 18. 9. 61. 70.]
486 cord_individual_obj[indivial_i,:] = [ 19. 14. 157. 171.]
487 cord_individual_obj[indivial_i,:] = [ 20. 11. 131. 142.]
488 cord_individual_obj[indivial_i,:] = [ 21. 10. 156. 166.]
489 cord_individual_obj[indivial_i,:] = [ 22. 8. 101. 109.]
490 cord_individual_obj[indivial_i,:] = [ 23. 10. 187. 197.]
491 cord_individual_obj[indivial_i,:] = [ 24. 11. 217. 228.]
492
493 min(cord_individual_obj[:,3]) = 70.0
494 histol_G_best_iter[iter,3] = 70.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 9. 145. 154.]
499 cord_individual_obj[indivial_i,:] = [ 1. 11. 197. 208.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 10. 135. 145.]
501 cord_individual_obj[indivial_i,:] = [ 3. 10. 118. 128.]
502 cord_individual_obj[indivial_i,:] = [ 4. 9. 200. 209.]
503 cord_individual_obj[indivial_i,:] = [ 5. 10. 149. 159.]
504 cord_individual_obj[indivial_i,:] = [ 6. 11. 94. 105.]
505 cord_individual_obj[indivial_i,:] = [ 7. 10. 149. 159.]
506 cord_individual_obj[indivial_i,:] = [ 8. 9. 61. 70.]
507 cord_individual_obj[indivial_i,:] = [ 9. 10. 132. 142.]
508 cord_individual_obj[indivial_i,:] = [ 10. 8. 178. 186.]
509 cord_individual_obj[indivial_i,:] = [ 11. 9. 153. 162.]
510 cord_individual_obj[indivial_i,:] = [ 12. 10. 165. 175.]
511 cord_individual_obj[indivial_i,:] = [ 13. 10. 146. 156.]
512 cord_individual_obj[indivial_i,:] = [ 14. 10. 145. 155.]
513 cord_individual_obj[indivial_i,:] = [ 15. 11. 127. 138.]
514 cord_individual_obj[indivial_i,:] = [ 16. 10. 173. 183.]
515 cord_individual_obj[indivial_i,:] = [ 17. 10. 240. 250.]
516 cord_individual_obj[indivial_i,:] = [ 18. 7. 164. 171.]
517 cord_individual_obj[indivial_i,:] = [ 19. 9. 138. 147.]
518 cord_individual_obj[indivial_i,:] = [ 20. 9. 179. 188.]
519 cord_individual_obj[indivial_i,:] = [ 21. 10. 168. 178.]
520 cord_individual_obj[indivial_i,:] = [ 22. 10. 156. 166.]
521 cord_individual_obj[indivial_i,:] = [ 23. 7. 148. 155.]
522 cord_individual_obj[indivial_i,:] = [ 24. 8. 159. 167.]
523
524 min(cord_individual_obj[:, 3]) = 70.0
525 histol_G_best_iter[iter, 3] = 70.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 8. 130. 138.]
530 cord_individual_obj[indivial_i,:] = [ 1. 9. 147. 156.]
531 cord_individual_obj[indivial_i,:] = [ 2. 11. 148. 159.]
532 cord_individual_obj[indivial_i,:] = [ 3. 10. 140. 150.]
533 cord_individual_obj[indivial_i,:] = [ 4. 9. 171. 180.]
534 cord_individual_obj[indivial_i,:] = [ 5. 9. 196. 205.]
535 cord_individual_obj[indivial_i,:] = [ 6. 9. 175. 184.]
536 cord_individual_obj[indivial_i,:] = [ 7. 11. 159. 170.]
537 cord_individual_obj[indivial_i,:] = [ 8. 8. 203. 211.]
538 cord_individual_obj[indivial_i,:] = [ 9. 9. 133. 142.]
539 cord_individual_obj[indivial_i,:] = [ 10. 11. 148. 159.]
540 cord_individual_obj[indivial_i,:] = [ 11. 10. 139. 149.]
541 cord_individual_obj[indivial_i,:] = [ 12. 8. 170. 178.]
542 cord_individual_obj[indivial_i,:] = [ 13. 10. 174. 184.]
543 cord_individual_obj[indivial_i,:] = [ 14. 9. 214. 223.]
544 cord_individual_obj[indivial_i,:] = [ 15. 8. 167. 175.]
545 cord_individual_obj[indivial_i,:] = [ 16. 10. 164. 174.]
546 cord_individual_obj[indivial_i,:] = [ 17. 9. 61. 70.]
547 cord_individual_obj[indivial_i,:] = [ 18. 8. 126. 134.]
548 cord_individual_obj[indivial_i,:] = [ 19. 9. 130. 139.]
549 cord_individual_obj[indivial_i,:] = [ 20. 10. 128. 138.]
550 cord_individual_obj[indivial_i,:] = [ 21. 10. 144. 154.]
551 cord_individual_obj[indivial_i,:] = [ 22. 8. 103. 111.]
552 cord_individual_obj[indivial_i,:] = [ 23. 9. 201. 210.]
553 cord_individual_obj[indivial_i,:] = [ 24. 10. 143. 153.]
554
555 min(cord_individual_obj[:, 3]) = 70.0
556 histol_G_best_iter[iter, 3] = 70.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 9. 162. 171.]
561 cord_individual_obj[indivial_i,:] = [ 1. 9. 140. 149.]
562 cord_individual_obj[indivial_i,:] = [ 2. 11. 177. 188.]
563 cord_individual_obj[indivial_i,:] = [ 3. 10. 186. 196.]
564 cord_individual_obj[indivial_i,:] = [ 4. 11. 258. 269.]
565 cord_individual_obj[indivial_i,:] = [ 5. 10. 102. 112.]
566 cord_individual_obj[indivial_i,:] = [ 6. 9. 115. 124.]
567 cord_individual_obj[indivial_i,:] = [ 7. 11. 122. 133.]
568 cord_individual_obj[indivial_i,:] = [ 8. 8. 183. 191.]
569 cord_individual_obj[indivial_i,:] = [ 9. 9. 175. 184.]
570 cord_individual_obj[indivial_i,:] = [ 10. 10. 205. 215.]
571 cord_individual_obj[indivial_i,:] = [ 11. 11. 164. 175.]
572 cord_individual_obj[indivial_i,:] = [ 12. 9. 197. 206.]
573 cord_individual_obj[indivial_i,:] = [ 13. 9. 111. 120.]
574 cord_individual_obj[indivial_i,:] = [ 14. 9. 61. 70.]
575 cord_individual_obj[indivial_i,:] = [ 15. 9. 208. 217.]
576 cord_individual_obj[indivial_i,:] = [ 16. 10. 122. 132.]
577 cord_individual_obj[indivial_i,:] = [ 17. 9. 160. 169.]
578 cord_individual_obj[indivial_i,:] = [ 18. 8. 160. 168.]
579 cord_individual_obj[indivial_i,:] = [ 19. 10. 195. 205.]
580 cord_individual_obj[indivial_i,:] = [ 20. 9. 128. 137.]
581 cord_individual_obj[indivial_i,:] = [ 21. 11. 136. 147.]
582 cord_individual_obj[indivial_i,:] = [ 22. 8. 167. 175.]
583 cord_individual_obj[indivial_i,:] = [ 23. 9. 123. 132.]

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584     cord_individual_obj[indivial_i, :] = [ 24.  9. 141. 150.]
585
586     min(cord_individual_obj[:, 3]) = 70.0
587     historl_G_best_iter[iter, 3] = 70.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 11. 149. 160.]
592     cord_individual_obj[indivial_i, :] = [ 1. 11. 189. 200.]
593     cord_individual_obj[indivial_i, :] = [ 2. 10. 164. 174.]
594     cord_individual_obj[indivial_i, :] = [ 3. 11. 134. 145.]
595     cord_individual_obj[indivial_i, :] = [ 4. 9. 61. 70.]
596     cord_individual_obj[indivial_i, :] = [ 5. 10. 166. 176.]
597     cord_individual_obj[indivial_i, :] = [ 6. 8. 232. 240.]
598     cord_individual_obj[indivial_i, :] = [ 7. 11. 171. 182.]
599     cord_individual_obj[indivial_i, :] = [ 8. 9. 242. 251.]
600     cord_individual_obj[indivial_i, :] = [ 9. 8. 216. 224.]
601     cord_individual_obj[indivial_i, :] = [ 10. 9. 119. 128.]
602     cord_individual_obj[indivial_i, :] = [ 11. 11. 148. 159.]
603     cord_individual_obj[indivial_i, :] = [ 12. 8. 225. 233.]
604     cord_individual_obj[indivial_i, :] = [ 13. 11. 149. 160.]
605     cord_individual_obj[indivial_i, :] = [ 14. 9. 152. 161.]
606     cord_individual_obj[indivial_i, :] = [ 15. 11. 173. 184.]
607     cord_individual_obj[indivial_i, :] = [ 16. 12. 137. 149.]
608     cord_individual_obj[indivial_i, :] = [ 17. 9. 111. 120.]
609     cord_individual_obj[indivial_i, :] = [ 18. 10. 173. 183.]
610     cord_individual_obj[indivial_i, :] = [ 19. 11. 159. 170.]
611     cord_individual_obj[indivial_i, :] = [ 20. 10. 203. 213.]
612     cord_individual_obj[indivial_i, :] = [ 21. 11. 149. 160.]
613     cord_individual_obj[indivial_i, :] = [ 22. 8. 141. 149.]
614     cord_individual_obj[indivial_i, :] = [ 23. 10. 170. 180.]
615     cord_individual_obj[indivial_i, :] = [ 24. 9. 123. 132.]
616
617     min(cord_individual_obj[:, 3]) = 70.0
618     historl_G_best_iter[iter, 3] = 70.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 8. 169. 177.]
623     cord_individual_obj[indivial_i, :] = [ 1. 10. 108. 118.]
624     cord_individual_obj[indivial_i, :] = [ 2. 10. 197. 207.]
625     cord_individual_obj[indivial_i, :] = [ 3. 11. 199. 210.]
626     cord_individual_obj[indivial_i, :] = [ 4. 10. 113. 123.]
627     cord_individual_obj[indivial_i, :] = [ 5. 10. 196. 206.]
628     cord_individual_obj[indivial_i, :] = [ 6. 10. 133. 143.]
629     cord_individual_obj[indivial_i, :] = [ 7. 11. 188. 199.]
630     cord_individual_obj[indivial_i, :] = [ 8. 9. 61. 70.]
631     cord_individual_obj[indivial_i, :] = [ 9. 9. 141. 150.]
632     cord_individual_obj[indivial_i, :] = [ 10. 10. 136. 146.]
633     cord_individual_obj[indivial_i, :] = [ 11. 9. 117. 126.]
634     cord_individual_obj[indivial_i, :] = [ 12. 10. 185. 195.]
635     cord_individual_obj[indivial_i, :] = [ 13. 12. 161. 173.]
636     cord_individual_obj[indivial_i, :] = [ 14. 9. 229. 238.]
637     cord_individual_obj[indivial_i, :] = [ 15. 12. 120. 132.]
638     cord_individual_obj[indivial_i, :] = [ 16. 9. 121. 130.]
639     cord_individual_obj[indivial_i, :] = [ 17. 10. 175. 185.]
640     cord_individual_obj[indivial_i, :] = [ 18. 9. 137. 146.]
641     cord_individual_obj[indivial_i, :] = [ 19. 9. 126. 135.]
642     cord_individual_obj[indivial_i, :] = [ 20. 10. 98. 108.]
643     cord_individual_obj[indivial_i, :] = [ 21. 10. 152. 162.]
644     cord_individual_obj[indivial_i, :] = [ 22. 8. 144. 152.]
645     cord_individual_obj[indivial_i, :] = [ 23. 8. 161. 169.]
646     cord_individual_obj[indivial_i, :] = [ 24. 10. 165. 175.]
647
648     min(cord_individual_obj[:, 3]) = 70.0
649     historl_G_best_iter[iter, 3] = 70.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 9. 165. 174.]
654     cord_individual_obj[indivial_i, :] = [ 1. 10. 108. 118.]
655     cord_individual_obj[indivial_i, :] = [ 2. 12. 99. 111.]
656     cord_individual_obj[indivial_i, :] = [ 3. 11. 192. 203.]
657     cord_individual_obj[indivial_i, :] = [ 4. 8. 127. 135.]
658     cord_individual_obj[indivial_i, :] = [ 5. 11. 137. 148.]
659     cord_individual_obj[indivial_i, :] = [ 6. 8. 192. 200.]
660     cord_individual_obj[indivial_i, :] = [ 7. 11. 142. 153.]
661     cord_individual_obj[indivial_i, :] = [ 8. 8. 193. 201.]
662     cord_individual_obj[indivial_i, :] = [ 9. 10. 143. 153.]
663     cord_individual_obj[indivial_i, :] = [ 10. 8. 120. 128.]
664     cord_individual_obj[indivial_i, :] = [ 11. 9. 151. 160.]
665     cord_individual_obj[indivial_i, :] = [ 12. 8. 108. 116.]
666     cord_individual_obj[indivial_i, :] = [ 13. 11. 90. 101.]
667     cord_individual_obj[indivial_i, :] = [ 14. 9. 61. 70.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 9. 184. 193.]
669 cord_individual_obj[indivial_i,:] = [ 16. 10. 146. 156.]
670 cord_individual_obj[indivial_i,:] = [ 17. 11. 160. 171.]
671 cord_individual_obj[indivial_i,:] = [ 18. 11. 153. 164.]
672 cord_individual_obj[indivial_i,:] = [ 19. 10. 144. 154.]
673 cord_individual_obj[indivial_i,:] = [ 20. 9. 153. 162.]
674 cord_individual_obj[indivial_i,:] = [ 21. 11. 158. 169.]
675 cord_individual_obj[indivial_i,:] = [ 22. 8. 143. 151.]
676 cord_individual_obj[indivial_i,:] = [ 23. 10. 103. 113.]
677 cord_individual_obj[indivial_i,:] = [ 24. 10. 163. 173.]
678
679 min(cord_individual_obj[:,3]) = 70.0
680 historl_G_best_iter[iter,3] = 70.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 242.0
689 Proportion_of_area = 0.22407407407407406
690 BEST_CHROM =
691 berth: [19. 9.5 5.5 6. 11.5 25.5 18.5 25. 25.5 1.5 12.5 2. 3. 10.
692 18. 5.5 18.5 14. 10.5]
693 time: [0. 5. 6. 3. 7. 2. 7. 4. 0. 0. 3. 6. 4. 0. 5. 0. 3. 0. 2.]
694 num_QC: [3. 3. 2. 3. 2. 2. 4. 2. 2. 2. 3. 2. 4. 4. 3. 2. 3. 4. 5.]
695 Objective function values and some other indicators:
696 Obj0 = 9.00          Obj1 = 61.00          Obj0 + Obj1 = 70.00
697 Total movement of crane: 4.00
698 Total waiting time in berth position: 57.00
699 Total index of q during berthing: 1126.00
700 Specific arrangement for each vessel:
701 V_id: 0      li: 6.0      xi: 19.0      bow of i: 16.0      tail of i: 22.0      gama_i0: 0.0      gama_i1: 2
702 .0           gama_i1 + 1: 3.0      gama_i1 - gama_i0: 2.0      duration_time_i: 3.0      demand_i: 160.0      work
703 load_i: 160.0      work load gap_i: 0
704 V_id: 1      li: 5.0      xi: 9.5      bow of i: 7.0      tail of i: 12.0      gama_i0: 5.0      gama_i1: 6.0
705 .0           gama_i1 + 1: 7.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 120.0      work load_i:
706 120.0      work load gap_i: 0
707 V_id: 2      li: 3.0      xi: 5.5      bow of i: 4.0      tail of i: 7.0      gama_i0: 6.0      gama_i1: 8.0
708 .0           gama_i1 + 1: 9.0      gama_i1 - gama_i0: 2.0      duration_time_i: 3.0      demand_i: 100.0      work load_i:
709 100.0      work load gap_i: 0
710 V_id: 3      li: 6.0      xi: 6.0      bow of i: 3.0      tail of i: 9.0      gama_i0: 3.0      gama_i1: 3.0
711 .0           gama_i1 + 1: 4.0      gama_i1 - gama_i0: 0.0      duration_time_i: 1.0      demand_i: 60.0      work load_i:
712 60.0      work load gap_i: 0
713 V_id: 4      li: 9.0      xi: 11.5      bow of i: 7.0      tail of i: 16.0      gama_i0: 7.0      gama_i1: 9
714 .0           gama_i1 + 1: 10.0      gama_i1 - gama_i0: 2.0      duration_time_i: 3.0      demand_i: 100.0      work
715 100.0      work load gap_i: 0
716 V_id: 5      li: 7.0      xi: 25.5      bow of i: 22.0      tail of i: 29.0      gama_i0: 2.0      gama_i1: 3
717 .0           gama_i1 + 1: 4.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 80.0      work
718 80.0      work load gap_i: 0
719 V_id: 6      li: 5.0      xi: 18.5      bow of i: 16.0      tail of i: 21.0      gama_i0: 7.0      gama_i1: 8
720 .0           gama_i1 + 1: 9.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 120.0      work
721 120.0      work load gap_i: 0
722 V_id: 7      li: 8.0      xi: 25.0      bow of i: 21.0      tail of i: 29.0      gama_i0: 4.0      gama_i1: 7
723 .0           gama_i1 + 1: 8.0      gama_i1 - gama_i0: 3.0      duration_time_i: 4.0      demand_i: 160.0      work
724 160.0      work load gap_i: 0
725 V_id: 8      li: 7.0      xi: 25.5      bow of i: 22.0      tail of i: 29.0      gama_i0: 0.0      gama_i1: 1
726 .0           gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 80.0      work
727 80.0      work load gap_i: 0
728 V_id: 9      li: 3.0      xi: 1.5      bow of i: 0.0      tail of i: 3.0      gama_i0: 0.0      gama_i1: 3.0
729 .0           gama_i1 + 1: 4.0      gama_i1 - gama_i0: 3.0      duration_time_i: 4.0      demand_i: 160.0      work load_i:
730 160.0      work load gap_i: 0
731 V_id: 10     li: 7.0      xi: 12.5      bow of i: 9.0      tail of i: 16.0      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: 80.0      work
733 80.0      work load gap_i: 0
734 V_id: 11     li: 4.0      xi: 2.0      bow of i: 0.0      tail of i: 4.0      gama_i0: 6.0      gama_i1: 8.0
735 .0           gama_i1 + 1: 9.0      gama_i1 - gama_i0: 2.0      duration_time_i: 3.0      demand_i: 100.0      work load_i:
736 100.0      work load gap_i: 0
737 V_id: 12     li: 6.0      xi: 3.0      bow of i: 0.0      tail of i: 6.0      gama_i0: 4.0      gama_i1: 5.0
738 .0           gama_i1 + 1: 6.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 100.0      work load_i:
739 100.0      work load gap_i: 0
740 V_id: 13     li: 4.0      xi: 10.0      bow of i: 8.0      tail of i: 12.0      gama_i0: 0.0      gama_i1: 1
741 .0           gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 100.0      work
742 100.0      work load gap_i: 0
743 V_id: 14     li: 4.0      xi: 18.0      bow of i: 16.0      tail of i: 20.0      gama_i0: 5.0      gama_i1: 1
744 .0           gama_i1 + 1: 7.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 100.0      work
745 100.0      work load gap_i: 0
746 V_id: 15     li: 5.0      xi: 5.5      bow of i: 3.0      tail of i: 8.0      gama_i0: 0.0      gama_i1: 2
747 .0           gama_i1 + 1: 3.0      gama_i1 - gama_i0: 2.0      duration_time_i: 3.0      demand_i: 100.0      work load_i:
748 100.0      work load gap_i: 0
749 V_id: 16     li: 5.0      xi: 18.5      bow of i: 16.0      tail of i: 21.0      gama_i0: 3.0      gama_i1: 1
750 .0           gama_i1 + 1: 5.0      gama_i1 - gama_i0: 1.0      duration_time_i: 2.0      demand_i: 100.0      work
751 100.0      work load gap_i: 0

```

unknown

718	V_id: 17 : 1.0 load_i: 140.0	li: 4.0 gama_i1 + 1: 2.0 work load gap_i: 0	xi: 14.0 gama_i1 - gama_i0: 1.0	bow of i: 12.0	tail of i: 16.0 duration_time_i: 2.0	gama_i0: 0.0 demand_i: 140.0	gama_i1 work
719	V_id: 18 : 2.0 load_i: 100.0	li: 5.0 gama_i1 + 1: 3.0 work load gap_i: 0	xi: 10.5 gama_i1 - gama_i0: 0.0	bow of i: 8.0	tail of i: 13.0 duration_time_i: 1.0	gama_i0: 2.0 demand_i: 100.0	gama_i1 work
720	Algorithm finished and the total CPU time: 510 s						
721	End						
722							
723							