

unknown

```

80 cord_individual_obj[indivial_i,:] = [ 16. 7. 109. 116.]
81 cord_individual_obj[indivial_i,:] = [ 17. 9. 183. 192.]
82 cord_individual_obj[indivial_i,:] = [ 18. 9. 132. 141.]
83 cord_individual_obj[indivial_i,:] = [ 19. 10. 145. 155.]
84 cord_individual_obj[indivial_i,:] = [ 20. 9. 164. 173.]
85 cord_individual_obj[indivial_i,:] = [ 21. 8. 120. 128.]
86 cord_individual_obj[indivial_i,:] = [ 22. 8. 121. 129.]
87 cord_individual_obj[indivial_i,:] = [ 23. 10. 124. 134.]
88 cord_individual_obj[indivial_i,:] = [ 24. 9. 102. 111.]
89
90 min(cord_individual_obj[:,3]) = 85.0
91 historl_G_best_iter[iter, 3] = 85.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 8. 98. 106.]
96 cord_individual_obj[indivial_i,:] = [ 1. 10. 135. 145.]
97 cord_individual_obj[indivial_i,:] = [ 2. 9. 146. 155.]
98 cord_individual_obj[indivial_i,:] = [ 3. 8. 132. 140.]
99 cord_individual_obj[indivial_i,:] = [ 4. 9. 118. 127.]
100 cord_individual_obj[indivial_i,:] = [ 5. 10. 151. 161.]
101 cord_individual_obj[indivial_i,:] = [ 6. 12. 97. 109.]
102 cord_individual_obj[indivial_i,:] = [ 7. 8. 88. 96.]
103 cord_individual_obj[indivial_i,:] = [ 8. 9. 102. 111.]
104 cord_individual_obj[indivial_i,:] = [ 9. 9. 187. 196.]
105 cord_individual_obj[indivial_i,:] = [ 10. 8. 181. 189.]
106 cord_individual_obj[indivial_i,:] = [ 11. 8. 113. 121.]
107 cord_individual_obj[indivial_i,:] = [ 12. 8. 193. 201.]
108 cord_individual_obj[indivial_i,:] = [ 13. 8. 137. 145.]
109 cord_individual_obj[indivial_i,:] = [ 14. 10. 136. 146.]
110 cord_individual_obj[indivial_i,:] = [ 15. 9. 64. 73.]
111 cord_individual_obj[indivial_i,:] = [ 16. 9. 150. 159.]
112 cord_individual_obj[indivial_i,:] = [ 17. 8. 77. 85.]
113 cord_individual_obj[indivial_i,:] = [ 18. 8. 152. 160.]
114 cord_individual_obj[indivial_i,:] = [ 19. 11. 146. 157.]
115 cord_individual_obj[indivial_i,:] = [ 20. 8. 120. 128.]
116 cord_individual_obj[indivial_i,:] = [ 21. 10. 146. 156.]
117 cord_individual_obj[indivial_i,:] = [ 22. 10. 138. 148.]
118 cord_individual_obj[indivial_i,:] = [ 23. 9. 128. 137.]
119 cord_individual_obj[indivial_i,:] = [ 24. 9. 103. 112.]
120
121 min(cord_individual_obj[:,3]) = 73.0
122 historl_G_best_iter[iter, 3] = 73.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 9. 111. 120.]
127 cord_individual_obj[indivial_i,:] = [ 1. 9. 132. 141.]
128 cord_individual_obj[indivial_i,:] = [ 2. 10. 137. 147.]
129 cord_individual_obj[indivial_i,:] = [ 3. 10. 127. 137.]
130 cord_individual_obj[indivial_i,:] = [ 4. 8. 181. 189.]
131 cord_individual_obj[indivial_i,:] = [ 5. 8. 109. 117.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 132. 141.]
133 cord_individual_obj[indivial_i,:] = [ 7. 9. 148. 157.]
134 cord_individual_obj[indivial_i,:] = [ 8. 8. 107. 115.]
135 cord_individual_obj[indivial_i,:] = [ 9. 9. 130. 139.]
136 cord_individual_obj[indivial_i,:] = [ 10. 8. 246. 254.]
137 cord_individual_obj[indivial_i,:] = [ 11. 9. 105. 114.]
138 cord_individual_obj[indivial_i,:] = [ 12. 9. 64. 73.]
139 cord_individual_obj[indivial_i,:] = [ 13. 9. 187. 196.]
140 cord_individual_obj[indivial_i,:] = [ 14. 10. 161. 171.]
141 cord_individual_obj[indivial_i,:] = [ 15. 10. 165. 175.]
142 cord_individual_obj[indivial_i,:] = [ 16. 10. 105. 115.]
143 cord_individual_obj[indivial_i,:] = [ 17. 10. 136. 146.]
144 cord_individual_obj[indivial_i,:] = [ 18. 9. 173. 182.]
145 cord_individual_obj[indivial_i,:] = [ 19. 11. 100. 111.]
146 cord_individual_obj[indivial_i,:] = [ 20. 10. 110. 120.]
147 cord_individual_obj[indivial_i,:] = [ 21. 9. 110. 119.]
148 cord_individual_obj[indivial_i,:] = [ 22. 8. 202. 210.]
149 cord_individual_obj[indivial_i,:] = [ 23. 10. 100. 110.]
150 cord_individual_obj[indivial_i,:] = [ 24. 10. 137. 147.]
151
152 min(cord_individual_obj[:,3]) = 73.0
153 historl_G_best_iter[iter, 3] = 73.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 11. 121. 132.]
158 cord_individual_obj[indivial_i,:] = [ 1. 11. 98. 109.]
159 cord_individual_obj[indivial_i,:] = [ 2. 11. 103. 114.]
160 cord_individual_obj[indivial_i,:] = [ 3. 9. 125. 134.]
161 cord_individual_obj[indivial_i,:] = [ 4. 10. 169. 179.]
162 cord_individual_obj[indivial_i,:] = [ 5. 10. 125. 135.]
163 cord_individual_obj[indivial_i,:] = [ 6. 11. 141. 152.]

```

```

164 cord_individual_obj[indivial_i, :] = [ 7. 10. 138. 148.]
165 cord_individual_obj[indivial_i, :] = [ 8. 9. 184. 193.]
166 cord_individual_obj[indivial_i, :] = [ 9. 9. 149. 158.]
167 cord_individual_obj[indivial_i, :] = [10. 9. 64. 73.]
168 cord_individual_obj[indivial_i, :] = [11. 9. 127. 136.]
169 cord_individual_obj[indivial_i, :] = [12. 8. 135. 143.]
170 cord_individual_obj[indivial_i, :] = [13. 10. 155. 165.]
171 cord_individual_obj[indivial_i, :] = [14. 9. 189. 198.]
172 cord_individual_obj[indivial_i, :] = [15. 10. 113. 123.]
173 cord_individual_obj[indivial_i, :] = [16. 12. 115. 127.]
174 cord_individual_obj[indivial_i, :] = [17. 10. 135. 145.]
175 cord_individual_obj[indivial_i, :] = [18. 10. 109. 119.]
176 cord_individual_obj[indivial_i, :] = [19. 11. 112. 123.]
177 cord_individual_obj[indivial_i, :] = [20. 9. 111. 120.]
178 cord_individual_obj[indivial_i, :] = [21. 11. 178. 189.]
179 cord_individual_obj[indivial_i, :] = [22. 9. 146. 155.]
180 cord_individual_obj[indivial_i, :] = [23. 10. 91. 101.]
181 cord_individual_obj[indivial_i, :] = [24. 11. 111. 122.]
182
183 min(cord_individual_obj[:, 3]) = 73.0
184 historl_G_best_iter[iter, 3] = 73.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i, :] = [ 0. 10. 118. 128.]
189 cord_individual_obj[indivial_i, :] = [ 1. 10. 126. 136.]
190 cord_individual_obj[indivial_i, :] = [ 2. 8. 129. 137.]
191 cord_individual_obj[indivial_i, :] = [ 3. 9. 137. 146.]
192 cord_individual_obj[indivial_i, :] = [ 4. 8. 77. 85.]
193 cord_individual_obj[indivial_i, :] = [ 5. 10. 180. 190.]
194 cord_individual_obj[indivial_i, :] = [ 6. 11. 120. 131.]
195 cord_individual_obj[indivial_i, :] = [ 7. 11. 127. 138.]
196 cord_individual_obj[indivial_i, :] = [ 8. 9. 127. 136.]
197 cord_individual_obj[indivial_i, :] = [ 9. 10. 106. 116.]
198 cord_individual_obj[indivial_i, :] = [10. 7. 133. 140.]
199 cord_individual_obj[indivial_i, :] = [11. 9. 161. 170.]
200 cord_individual_obj[indivial_i, :] = [12. 10. 134. 144.]
201 cord_individual_obj[indivial_i, :] = [13. 9. 185. 194.]
202 cord_individual_obj[indivial_i, :] = [14. 9. 64. 73.]
203 cord_individual_obj[indivial_i, :] = [15. 9. 141. 150.]
204 cord_individual_obj[indivial_i, :] = [16. 8. 156. 164.]
205 cord_individual_obj[indivial_i, :] = [17. 11. 90. 101.]
206 cord_individual_obj[indivial_i, :] = [18. 8. 137. 145.]
207 cord_individual_obj[indivial_i, :] = [19. 10. 138. 148.]
208 cord_individual_obj[indivial_i, :] = [20. 9. 164. 173.]
209 cord_individual_obj[indivial_i, :] = [21. 8. 155. 163.]
210 cord_individual_obj[indivial_i, :] = [22. 9. 97. 106.]
211 cord_individual_obj[indivial_i, :] = [23. 8. 117. 125.]
212 cord_individual_obj[indivial_i, :] = [24. 10. 142. 152.]
213
214 min(cord_individual_obj[:, 3]) = 73.0
215 historl_G_best_iter[iter, 3] = 73.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i, :] = [ 0. 11. 119. 130.]
220 cord_individual_obj[indivial_i, :] = [ 1. 10. 128. 138.]
221 cord_individual_obj[indivial_i, :] = [ 2. 13. 214. 227.]
222 cord_individual_obj[indivial_i, :] = [ 3. 11. 217. 228.]
223 cord_individual_obj[indivial_i, :] = [ 4. 9. 124. 133.]
224 cord_individual_obj[indivial_i, :] = [ 5. 9. 69. 78.]
225 cord_individual_obj[indivial_i, :] = [ 6. 8. 156. 164.]
226 cord_individual_obj[indivial_i, :] = [ 7. 10. 145. 155.]
227 cord_individual_obj[indivial_i, :] = [ 8. 10. 123. 133.]
228 cord_individual_obj[indivial_i, :] = [ 9. 11. 113. 124.]
229 cord_individual_obj[indivial_i, :] = [10. 10. 168. 178.]
230 cord_individual_obj[indivial_i, :] = [11. 10. 188. 198.]
231 cord_individual_obj[indivial_i, :] = [12. 9. 86. 95.]
232 cord_individual_obj[indivial_i, :] = [13. 9. 64. 73.]
233 cord_individual_obj[indivial_i, :] = [14. 10. 140. 150.]
234 cord_individual_obj[indivial_i, :] = [15. 10. 148. 158.]
235 cord_individual_obj[indivial_i, :] = [16. 11. 137. 148.]
236 cord_individual_obj[indivial_i, :] = [17. 9. 125. 134.]
237 cord_individual_obj[indivial_i, :] = [18. 11. 166. 177.]
238 cord_individual_obj[indivial_i, :] = [19. 10. 76. 86.]
239 cord_individual_obj[indivial_i, :] = [20. 10. 128. 138.]
240 cord_individual_obj[indivial_i, :] = [21. 9. 113. 122.]
241 cord_individual_obj[indivial_i, :] = [22. 9. 134. 143.]
242 cord_individual_obj[indivial_i, :] = [23. 11. 102. 113.]
243 cord_individual_obj[indivial_i, :] = [24. 11. 120. 131.]
244
245 min(cord_individual_obj[:, 3]) = 73.0
246 historl_G_best_iter[iter, 3] = 73.0
247 Begin iteration:

```

```

248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  9. 81. 90.]
251 cord_individual_obj[indivial_i, :] = [ 1.  9. 128. 137.]
252 cord_individual_obj[indivial_i, :] = [ 2.  8. 135. 143.]
253 cord_individual_obj[indivial_i, :] = [ 3.  9. 64. 73.]
254 cord_individual_obj[indivial_i, :] = [ 4.  9. 135. 144.]
255 cord_individual_obj[indivial_i, :] = [ 5.  10. 135. 145.]
256 cord_individual_obj[indivial_i, :] = [ 6.  9. 96. 105.]
257 cord_individual_obj[indivial_i, :] = [ 7.  9. 160. 169.]
258 cord_individual_obj[indivial_i, :] = [ 8.  10. 101. 111.]
259 cord_individual_obj[indivial_i, :] = [ 9.  9. 121. 130.]
260 cord_individual_obj[indivial_i, :] = [ 10. 8. 161. 169.]
261 cord_individual_obj[indivial_i, :] = [ 11. 7. 120. 127.]
262 cord_individual_obj[indivial_i, :] = [ 12. 10. 115. 125.]
263 cord_individual_obj[indivial_i, :] = [ 13. 9. 118. 127.]
264 cord_individual_obj[indivial_i, :] = [ 14. 9. 91. 100.]
265 cord_individual_obj[indivial_i, :] = [ 15. 10. 179. 189.]
266 cord_individual_obj[indivial_i, :] = [ 16. 9. 139. 148.]
267 cord_individual_obj[indivial_i, :] = [ 17. 11. 130. 141.]
268 cord_individual_obj[indivial_i, :] = [ 18. 9. 155. 164.]
269 cord_individual_obj[indivial_i, :] = [ 19. 10. 122. 132.]
270 cord_individual_obj[indivial_i, :] = [ 20. 10. 123. 133.]
271 cord_individual_obj[indivial_i, :] = [ 21. 10. 153. 163.]
272 cord_individual_obj[indivial_i, :] = [ 22. 10. 113. 123.]
273 cord_individual_obj[indivial_i, :] = [ 23. 8. 156. 164.]
274 cord_individual_obj[indivial_i, :] = [ 24. 10. 117. 127.]
275

276 min(cord_individual_obj[:, 3]) = 73.0
277 historl_G_best_iter[iter, 3] = 73.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 10. 98. 108.]
282 cord_individual_obj[indivial_i, :] = [ 1. 9. 135. 144.]
283 cord_individual_obj[indivial_i, :] = [ 2. 12. 120. 132.]
284 cord_individual_obj[indivial_i, :] = [ 3. 9. 147. 156.]
285 cord_individual_obj[indivial_i, :] = [ 4. 9. 169. 178.]
286 cord_individual_obj[indivial_i, :] = [ 5. 9. 110. 119.]
287 cord_individual_obj[indivial_i, :] = [ 6. 11. 116. 127.]
288 cord_individual_obj[indivial_i, :] = [ 7. 10. 105. 115.]
289 cord_individual_obj[indivial_i, :] = [ 8. 10. 81. 91.]
290 cord_individual_obj[indivial_i, :] = [ 9. 10. 161. 171.]
291 cord_individual_obj[indivial_i, :] = [ 10. 8. 139. 147.]
292 cord_individual_obj[indivial_i, :] = [ 11. 13. 177. 190.]
293 cord_individual_obj[indivial_i, :] = [ 12. 9. 100. 109.]
294 cord_individual_obj[indivial_i, :] = [ 13. 8. 222. 230.]
295 cord_individual_obj[indivial_i, :] = [ 14. 9. 123. 132.]
296 cord_individual_obj[indivial_i, :] = [ 15. 9. 64. 73.]
297 cord_individual_obj[indivial_i, :] = [ 16. 9. 219. 228.]
298 cord_individual_obj[indivial_i, :] = [ 17. 10. 161. 171.]
299 cord_individual_obj[indivial_i, :] = [ 18. 10. 142. 152.]
300 cord_individual_obj[indivial_i, :] = [ 19. 12. 95. 107.]
301 cord_individual_obj[indivial_i, :] = [ 20. 10. 116. 126.]
302 cord_individual_obj[indivial_i, :] = [ 21. 9. 95. 104.]
303 cord_individual_obj[indivial_i, :] = [ 22. 7. 145. 152.]
304 cord_individual_obj[indivial_i, :] = [ 23. 10. 122. 132.]
305 cord_individual_obj[indivial_i, :] = [ 24. 7. 141. 148.]
306

307 min(cord_individual_obj[:, 3]) = 73.0
308 historl_G_best_iter[iter, 3] = 73.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 9. 134. 143.]
313 cord_individual_obj[indivial_i, :] = [ 1. 10. 157. 167.]
314 cord_individual_obj[indivial_i, :] = [ 2. 9. 132. 141.]
315 cord_individual_obj[indivial_i, :] = [ 3. 10. 111. 121.]
316 cord_individual_obj[indivial_i, :] = [ 4. 8. 110. 118.]
317 cord_individual_obj[indivial_i, :] = [ 5. 10. 155. 165.]
318 cord_individual_obj[indivial_i, :] = [ 6. 10. 115. 125.]
319 cord_individual_obj[indivial_i, :] = [ 7. 8. 122. 130.]
320 cord_individual_obj[indivial_i, :] = [ 8. 9. 105. 114.]
321 cord_individual_obj[indivial_i, :] = [ 9. 8. 126. 134.]
322 cord_individual_obj[indivial_i, :] = [ 10. 8. 120. 128.]
323 cord_individual_obj[indivial_i, :] = [ 11. 9. 139. 148.]
324 cord_individual_obj[indivial_i, :] = [ 12. 10. 164. 174.]
325 cord_individual_obj[indivial_i, :] = [ 13. 9. 64. 73.]
326 cord_individual_obj[indivial_i, :] = [ 14. 11. 102. 113.]
327 cord_individual_obj[indivial_i, :] = [ 15. 8. 123. 131.]
328 cord_individual_obj[indivial_i, :] = [ 16. 9. 121. 130.]
329 cord_individual_obj[indivial_i, :] = [ 17. 9. 140. 149.]
330 cord_individual_obj[indivial_i, :] = [ 18. 8. 143. 151.]
331 cord_individual_obj[indivial_i, :] = [ 19. 9. 176. 185.]

```

```

332 cord_individual_obj[indivial_i, :] = [ 20. 10. 163. 173.]
333 cord_individual_obj[indivial_i, :] = [ 21. 10. 132. 142.]
334 cord_individual_obj[indivial_i, :] = [ 22. 9. 158. 167.]
335 cord_individual_obj[indivial_i, :] = [ 23. 8. 131. 139.]
336 cord_individual_obj[indivial_i, :] = [ 24. 10. 151. 161.]
337
338 min(cord_individual_obj[:, 3]) = 73.0
339 histol_G_best_iter[iter, 3] = 73.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 9. 127. 136.]
344 cord_individual_obj[indivial_i, :] = [ 1. 9. 127. 136.]
345 cord_individual_obj[indivial_i, :] = [ 2. 8. 134. 142.]
346 cord_individual_obj[indivial_i, :] = [ 3. 9. 141. 150.]
347 cord_individual_obj[indivial_i, :] = [ 4. 7. 115. 122.]
348 cord_individual_obj[indivial_i, :] = [ 5. 10. 85. 95.]
349 cord_individual_obj[indivial_i, :] = [ 6. 9. 116. 125.]
350 cord_individual_obj[indivial_i, :] = [ 7. 10. 162. 172.]
351 cord_individual_obj[indivial_i, :] = [ 8. 9. 119. 128.]
352 cord_individual_obj[indivial_i, :] = [ 9. 9. 141. 150.]
353 cord_individual_obj[indivial_i, :] = [ 10. 8. 138. 146.]
354 cord_individual_obj[indivial_i, :] = [ 11. 9. 102. 111.]
355 cord_individual_obj[indivial_i, :] = [ 12. 9. 124. 133.]
356 cord_individual_obj[indivial_i, :] = [ 13. 8. 155. 163.]
357 cord_individual_obj[indivial_i, :] = [ 14. 9. 171. 180.]
358 cord_individual_obj[indivial_i, :] = [ 15. 8. 164. 172.]
359 cord_individual_obj[indivial_i, :] = [ 16. 9. 145. 154.]
360 cord_individual_obj[indivial_i, :] = [ 17. 10. 170. 180.]
361 cord_individual_obj[indivial_i, :] = [ 18. 10. 160. 170.]
362 cord_individual_obj[indivial_i, :] = [ 19. 9. 64. 73.]
363 cord_individual_obj[indivial_i, :] = [ 20. 9. 142. 151.]
364 cord_individual_obj[indivial_i, :] = [ 21. 9. 166. 175.]
365 cord_individual_obj[indivial_i, :] = [ 22. 11. 128. 139.]
366 cord_individual_obj[indivial_i, :] = [ 23. 10. 101. 111.]
367 cord_individual_obj[indivial_i, :] = [ 24. 8. 157. 165.]
368
369 min(cord_individual_obj[:, 3]) = 73.0
370 histol_G_best_iter[iter, 3] = 73.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 9. 141. 150.]
375 cord_individual_obj[indivial_i, :] = [ 1. 9. 132. 141.]
376 cord_individual_obj[indivial_i, :] = [ 2. 7. 161. 168.]
377 cord_individual_obj[indivial_i, :] = [ 3. 9. 134. 143.]
378 cord_individual_obj[indivial_i, :] = [ 4. 8. 95. 103.]
379 cord_individual_obj[indivial_i, :] = [ 5. 11. 145. 156.]
380 cord_individual_obj[indivial_i, :] = [ 6. 9. 89. 98.]
381 cord_individual_obj[indivial_i, :] = [ 7. 8. 166. 174.]
382 cord_individual_obj[indivial_i, :] = [ 8. 8. 112. 120.]
383 cord_individual_obj[indivial_i, :] = [ 9. 10. 198. 208.]
384 cord_individual_obj[indivial_i, :] = [ 10. 8. 121. 129.]
385 cord_individual_obj[indivial_i, :] = [ 11. 9. 92. 101.]
386 cord_individual_obj[indivial_i, :] = [ 12. 9. 125. 134.]
387 cord_individual_obj[indivial_i, :] = [ 13. 8. 158. 166.]
388 cord_individual_obj[indivial_i, :] = [ 14. 9. 64. 73.]
389 cord_individual_obj[indivial_i, :] = [ 15. 9. 138. 147.]
390 cord_individual_obj[indivial_i, :] = [ 16. 9. 122. 131.]
391 cord_individual_obj[indivial_i, :] = [ 17. 11. 122. 133.]
392 cord_individual_obj[indivial_i, :] = [ 18. 10. 123. 133.]
393 cord_individual_obj[indivial_i, :] = [ 19. 13. 124. 137.]
394 cord_individual_obj[indivial_i, :] = [ 20. 8. 152. 160.]
395 cord_individual_obj[indivial_i, :] = [ 21. 10. 128. 138.]
396 cord_individual_obj[indivial_i, :] = [ 22. 10. 110. 120.]
397 cord_individual_obj[indivial_i, :] = [ 23. 9. 97. 106.]
398 cord_individual_obj[indivial_i, :] = [ 24. 12. 136. 148.]
399
400 min(cord_individual_obj[:, 3]) = 73.0
401 histol_G_best_iter[iter, 3] = 73.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 12. 170. 182.]
406 cord_individual_obj[indivial_i, :] = [ 1. 11. 148. 159.]
407 cord_individual_obj[indivial_i, :] = [ 2. 8. 76. 84.]
408 cord_individual_obj[indivial_i, :] = [ 3. 9. 141. 150.]
409 cord_individual_obj[indivial_i, :] = [ 4. 7. 122. 129.]
410 cord_individual_obj[indivial_i, :] = [ 5. 9. 166. 175.]
411 cord_individual_obj[indivial_i, :] = [ 6. 9. 142. 151.]
412 cord_individual_obj[indivial_i, :] = [ 7. 10. 149. 159.]
413 cord_individual_obj[indivial_i, :] = [ 8. 9. 167. 176.]
414 cord_individual_obj[indivial_i, :] = [ 9. 9. 64. 73.]
415 cord_individual_obj[indivial_i, :] = [ 10. 9. 128. 137.]

```

```

416 cord_individual_obj[indivial_i,:] = [ 11. 11. 149. 160.]
417 cord_individual_obj[indivial_i,:] = [ 12. 10. 108. 118.]
418 cord_individual_obj[indivial_i,:] = [ 13. 8. 133. 141.]
419 cord_individual_obj[indivial_i,:] = [ 14. 9. 154. 163.]
420 cord_individual_obj[indivial_i,:] = [ 15. 9. 159. 168.]
421 cord_individual_obj[indivial_i,:] = [ 16. 9. 108. 117.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 150. 161.]
423 cord_individual_obj[indivial_i,:] = [ 18. 7. 119. 126.]
424 cord_individual_obj[indivial_i,:] = [ 19. 11. 148. 159.]
425 cord_individual_obj[indivial_i,:] = [ 20. 10. 158. 168.]
426 cord_individual_obj[indivial_i,:] = [ 21. 13. 93. 106.]
427 cord_individual_obj[indivial_i,:] = [ 22. 8. 108. 116.]
428 cord_individual_obj[indivial_i,:] = [ 23. 8. 141. 149.]
429 cord_individual_obj[indivial_i,:] = [ 24. 10. 145. 155.]
430
431 min(cord_individual_obj[:,3]) = 73.0
432 histol_G_best_iter[iter,3] = 73.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 9. 64. 73.]
437 cord_individual_obj[indivial_i,:] = [ 1. 9. 127. 136.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 193. 202.]
439 cord_individual_obj[indivial_i,:] = [ 3. 9. 136. 145.]
440 cord_individual_obj[indivial_i,:] = [ 4. 9. 117. 126.]
441 cord_individual_obj[indivial_i,:] = [ 5. 10. 175. 185.]
442 cord_individual_obj[indivial_i,:] = [ 6. 12. 89. 101.]
443 cord_individual_obj[indivial_i,:] = [ 7. 10. 117. 127.]
444 cord_individual_obj[indivial_i,:] = [ 8. 9. 132. 141.]
445 cord_individual_obj[indivial_i,:] = [ 9. 9. 160. 169.]
446 cord_individual_obj[indivial_i,:] = [ 10. 7. 167. 174.]
447 cord_individual_obj[indivial_i,:] = [ 11. 10. 116. 126.]
448 cord_individual_obj[indivial_i,:] = [ 12. 10. 79. 89.]
449 cord_individual_obj[indivial_i,:] = [ 13. 11. 97. 108.]
450 cord_individual_obj[indivial_i,:] = [ 14. 8. 158. 166.]
451 cord_individual_obj[indivial_i,:] = [ 15. 11. 119. 130.]
452 cord_individual_obj[indivial_i,:] = [ 16. 11. 148. 159.]
453 cord_individual_obj[indivial_i,:] = [ 17. 11. 127. 138.]
454 cord_individual_obj[indivial_i,:] = [ 18. 8. 204. 212.]
455 cord_individual_obj[indivial_i,:] = [ 19. 12. 149. 161.]
456 cord_individual_obj[indivial_i,:] = [ 20. 9. 121. 130.]
457 cord_individual_obj[indivial_i,:] = [ 21. 10. 108. 118.]
458 cord_individual_obj[indivial_i,:] = [ 22. 7. 144. 151.]
459 cord_individual_obj[indivial_i,:] = [ 23. 8. 122. 130.]
460 cord_individual_obj[indivial_i,:] = [ 24. 12. 167. 179.]
461
462 min(cord_individual_obj[:,3]) = 73.0
463 histol_G_best_iter[iter,3] = 73.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 10. 148. 158.]
468 cord_individual_obj[indivial_i,:] = [ 1. 9. 120. 129.]
469 cord_individual_obj[indivial_i,:] = [ 2. 11. 155. 166.]
470 cord_individual_obj[indivial_i,:] = [ 3. 10. 128. 138.]
471 cord_individual_obj[indivial_i,:] = [ 4. 8. 101. 109.]
472 cord_individual_obj[indivial_i,:] = [ 5. 10. 160. 170.]
473 cord_individual_obj[indivial_i,:] = [ 6. 9. 143. 152.]
474 cord_individual_obj[indivial_i,:] = [ 7. 10. 155. 165.]
475 cord_individual_obj[indivial_i,:] = [ 8. 9. 138. 147.]
476 cord_individual_obj[indivial_i,:] = [ 9. 11. 177. 188.]
477 cord_individual_obj[indivial_i,:] = [ 10. 10. 165. 175.]
478 cord_individual_obj[indivial_i,:] = [ 11. 9. 144. 153.]
479 cord_individual_obj[indivial_i,:] = [ 12. 9. 121. 130.]
480 cord_individual_obj[indivial_i,:] = [ 13. 8. 95. 103.]
481 cord_individual_obj[indivial_i,:] = [ 14. 11. 151. 162.]
482 cord_individual_obj[indivial_i,:] = [ 15. 10. 121. 131.]
483 cord_individual_obj[indivial_i,:] = [ 16. 10. 148. 158.]
484 cord_individual_obj[indivial_i,:] = [ 17. 11. 128. 139.]
485 cord_individual_obj[indivial_i,:] = [ 18. 9. 64. 73.]
486 cord_individual_obj[indivial_i,:] = [ 19. 9. 115. 124.]
487 cord_individual_obj[indivial_i,:] = [ 20. 9. 187. 196.]
488 cord_individual_obj[indivial_i,:] = [ 21. 10. 86. 96.]
489 cord_individual_obj[indivial_i,:] = [ 22. 8. 140. 148.]
490 cord_individual_obj[indivial_i,:] = [ 23. 9. 118. 127.]
491 cord_individual_obj[indivial_i,:] = [ 24. 11. 89. 100.]
492
493 min(cord_individual_obj[:,3]) = 73.0
494 histol_G_best_iter[iter,3] = 73.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 9. 133. 142.]
499 cord_individual_obj[indivial_i,:] = [ 1. 11. 149. 160.]

```

```

500 cord_individual_obj[indivial_i, :] = [ 2. 8. 164. 172.]
501 cord_individual_obj[indivial_i, :] = [ 3. 10. 107. 117.]
502 cord_individual_obj[indivial_i, :] = [ 4. 9. 126. 135.]
503 cord_individual_obj[indivial_i, :] = [ 5. 9. 145. 154.]
504 cord_individual_obj[indivial_i, :] = [ 6. 13. 99. 112.]
505 cord_individual_obj[indivial_i, :] = [ 7. 10. 158. 168.]
506 cord_individual_obj[indivial_i, :] = [ 8. 9. 178. 187.]
507 cord_individual_obj[indivial_i, :] = [ 9. 9. 154. 163.]
508 cord_individual_obj[indivial_i, :] = [ 10. 7. 147. 154.]
509 cord_individual_obj[indivial_i, :] = [ 11. 9. 151. 160.]
510 cord_individual_obj[indivial_i, :] = [ 12. 8. 154. 162.]
511 cord_individual_obj[indivial_i, :] = [ 13. 8. 119. 127.]
512 cord_individual_obj[indivial_i, :] = [ 14. 8. 163. 171.]
513 cord_individual_obj[indivial_i, :] = [ 15. 10. 174. 184.]
514 cord_individual_obj[indivial_i, :] = [ 16. 9. 164. 173.]
515 cord_individual_obj[indivial_i, :] = [ 17. 11. 130. 141.]
516 cord_individual_obj[indivial_i, :] = [ 18. 8. 157. 165.]
517 cord_individual_obj[indivial_i, :] = [ 19. 10. 148. 158.]
518 cord_individual_obj[indivial_i, :] = [ 20. 9. 64. 73.]
519 cord_individual_obj[indivial_i, :] = [ 21. 11. 131. 142.]
520 cord_individual_obj[indivial_i, :] = [ 22. 9. 119. 128.]
521 cord_individual_obj[indivial_i, :] = [ 23. 9. 101. 110.]
522 cord_individual_obj[indivial_i, :] = [ 24. 9. 105. 114.]
523
524 min(cord_individual_obj[:, 3]) = 73.0
525 histol_G_best_iter[iter, 3] = 73.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 8. 186. 194.]
530 cord_individual_obj[indivial_i, :] = [ 1. 9. 125. 134.]
531 cord_individual_obj[indivial_i, :] = [ 2. 9. 139. 148.]
532 cord_individual_obj[indivial_i, :] = [ 3. 8. 115. 123.]
533 cord_individual_obj[indivial_i, :] = [ 4. 9. 149. 158.]
534 cord_individual_obj[indivial_i, :] = [ 5. 9. 132. 141.]
535 cord_individual_obj[indivial_i, :] = [ 6. 9. 125. 134.]
536 cord_individual_obj[indivial_i, :] = [ 7. 8. 145. 153.]
537 cord_individual_obj[indivial_i, :] = [ 8. 9. 64. 73.]
538 cord_individual_obj[indivial_i, :] = [ 9. 8. 154. 162.]
539 cord_individual_obj[indivial_i, :] = [ 10. 8. 126. 134.]
540 cord_individual_obj[indivial_i, :] = [ 11. 8. 142. 150.]
541 cord_individual_obj[indivial_i, :] = [ 12. 9. 140. 149.]
542 cord_individual_obj[indivial_i, :] = [ 13. 10. 181. 191.]
543 cord_individual_obj[indivial_i, :] = [ 14. 10. 152. 162.]
544 cord_individual_obj[indivial_i, :] = [ 15. 10. 151. 161.]
545 cord_individual_obj[indivial_i, :] = [ 16. 8. 119. 127.]
546 cord_individual_obj[indivial_i, :] = [ 17. 11. 144. 155.]
547 cord_individual_obj[indivial_i, :] = [ 18. 8. 160. 168.]
548 cord_individual_obj[indivial_i, :] = [ 19. 9. 124. 133.]
549 cord_individual_obj[indivial_i, :] = [ 20. 9. 153. 162.]
550 cord_individual_obj[indivial_i, :] = [ 21. 9. 104. 113.]
551 cord_individual_obj[indivial_i, :] = [ 22. 9. 132. 141.]
552 cord_individual_obj[indivial_i, :] = [ 23. 8. 134. 142.]
553 cord_individual_obj[indivial_i, :] = [ 24. 10. 111. 121.]
554
555 min(cord_individual_obj[:, 3]) = 73.0
556 histol_G_best_iter[iter, 3] = 73.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 9. 64. 73.]
561 cord_individual_obj[indivial_i, :] = [ 1. 9. 129. 138.]
562 cord_individual_obj[indivial_i, :] = [ 2. 9. 158. 167.]
563 cord_individual_obj[indivial_i, :] = [ 3. 9. 157. 166.]
564 cord_individual_obj[indivial_i, :] = [ 4. 9. 130. 139.]
565 cord_individual_obj[indivial_i, :] = [ 5. 9. 196. 205.]
566 cord_individual_obj[indivial_i, :] = [ 6. 9. 98. 107.]
567 cord_individual_obj[indivial_i, :] = [ 7. 12. 125. 137.]
568 cord_individual_obj[indivial_i, :] = [ 8. 8. 134. 142.]
569 cord_individual_obj[indivial_i, :] = [ 9. 10. 185. 195.]
570 cord_individual_obj[indivial_i, :] = [ 10. 8. 146. 154.]
571 cord_individual_obj[indivial_i, :] = [ 11. 8. 174. 182.]
572 cord_individual_obj[indivial_i, :] = [ 12. 8. 133. 141.]
573 cord_individual_obj[indivial_i, :] = [ 13. 8. 142. 150.]
574 cord_individual_obj[indivial_i, :] = [ 14. 9. 118. 127.]
575 cord_individual_obj[indivial_i, :] = [ 15. 10. 166. 176.]
576 cord_individual_obj[indivial_i, :] = [ 16. 8. 161. 169.]
577 cord_individual_obj[indivial_i, :] = [ 17. 11. 155. 166.]
578 cord_individual_obj[indivial_i, :] = [ 18. 9. 156. 165.]
579 cord_individual_obj[indivial_i, :] = [ 19. 13. 119. 132.]
580 cord_individual_obj[indivial_i, :] = [ 20. 9. 134. 143.]
581 cord_individual_obj[indivial_i, :] = [ 21. 11. 154. 165.]
582 cord_individual_obj[indivial_i, :] = [ 22. 9. 123. 132.]
583 cord_individual_obj[indivial_i, :] = [ 23. 8. 131. 139.]

```

```

584     cord_individual_obj[indivial_i, :] = [ 24. 10. 114. 124.]
585
586     min(cord_individual_obj[:, 3]) = 73.0
587     historl_G_best_iter[iter, 3] = 73.0
588 Begin iteration:
589 iter = 18
590     cord_individual_obj[indivial_i, :] = [ 0. 11. 116. 127.]
591     cord_individual_obj[indivial_i, :] = [ 1. 11. 152. 163.]
592     cord_individual_obj[indivial_i, :] = [ 2. 10. 125. 135.]
593     cord_individual_obj[indivial_i, :] = [ 3. 11. 154. 165.]
594     cord_individual_obj[indivial_i, :] = [ 4. 9. 122. 131.]
595     cord_individual_obj[indivial_i, :] = [ 5. 9. 64. 73.]
596     cord_individual_obj[indivial_i, :] = [ 6. 12. 108. 120.]
597     cord_individual_obj[indivial_i, :] = [ 7. 11. 79. 90.]
598     cord_individual_obj[indivial_i, :] = [ 8. 11. 134. 145.]
599     cord_individual_obj[indivial_i, :] = [ 9. 9. 143. 152.]
600     cord_individual_obj[indivial_i, :] = [ 10. 8. 120. 128.]
601     cord_individual_obj[indivial_i, :] = [ 11. 11. 142. 153.]
602     cord_individual_obj[indivial_i, :] = [ 12. 11. 101. 112.]
603     cord_individual_obj[indivial_i, :] = [ 13. 8. 114. 122.]
604     cord_individual_obj[indivial_i, :] = [ 14. 11. 154. 165.]
605     cord_individual_obj[indivial_i, :] = [ 15. 11. 133. 144.]
606     cord_individual_obj[indivial_i, :] = [ 16. 10. 190. 200.]
607     cord_individual_obj[indivial_i, :] = [ 17. 10. 206. 216.]
608     cord_individual_obj[indivial_i, :] = [ 18. 11. 187. 198.]
609     cord_individual_obj[indivial_i, :] = [ 19. 11. 94. 105.]
610     cord_individual_obj[indivial_i, :] = [ 20. 8. 191. 199.]
611     cord_individual_obj[indivial_i, :] = [ 21. 8. 103. 111.]
612     cord_individual_obj[indivial_i, :] = [ 22. 8. 138. 146.]
613     cord_individual_obj[indivial_i, :] = [ 23. 9. 111. 120.]
614     cord_individual_obj[indivial_i, :] = [ 24. 10. 133. 143.]
615
616
617     min(cord_individual_obj[:, 3]) = 73.0
618     historl_G_best_iter[iter, 3] = 73.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 10. 160. 170.]
623     cord_individual_obj[indivial_i, :] = [ 1. 10. 122. 132.]
624     cord_individual_obj[indivial_i, :] = [ 2. 9. 171. 180.]
625     cord_individual_obj[indivial_i, :] = [ 3. 11. 162. 173.]
626     cord_individual_obj[indivial_i, :] = [ 4. 9. 137. 146.]
627     cord_individual_obj[indivial_i, :] = [ 5. 10. 190. 200.]
628     cord_individual_obj[indivial_i, :] = [ 6. 10. 111. 121.]
629     cord_individual_obj[indivial_i, :] = [ 7. 11. 119. 130.]
630     cord_individual_obj[indivial_i, :] = [ 8. 9. 117. 126.]
631     cord_individual_obj[indivial_i, :] = [ 9. 12. 187. 199.]
632     cord_individual_obj[indivial_i, :] = [ 10. 8. 155. 163.]
633     cord_individual_obj[indivial_i, :] = [ 11. 10. 144. 154.]
634     cord_individual_obj[indivial_i, :] = [ 12. 7. 122. 129.]
635     cord_individual_obj[indivial_i, :] = [ 13. 9. 111. 120.]
636     cord_individual_obj[indivial_i, :] = [ 14. 9. 90. 99.]
637     cord_individual_obj[indivial_i, :] = [ 15. 10. 155. 165.]
638     cord_individual_obj[indivial_i, :] = [ 16. 9. 130. 139.]
639     cord_individual_obj[indivial_i, :] = [ 17. 9. 64. 73.]
640     cord_individual_obj[indivial_i, :] = [ 18. 11. 216. 227.]
641     cord_individual_obj[indivial_i, :] = [ 19. 11. 110. 121.]
642     cord_individual_obj[indivial_i, :] = [ 20. 9. 135. 144.]
643     cord_individual_obj[indivial_i, :] = [ 21. 12. 172. 184.]
644     cord_individual_obj[indivial_i, :] = [ 22. 9. 171. 180.]
645     cord_individual_obj[indivial_i, :] = [ 23. 11. 111. 122.]
646     cord_individual_obj[indivial_i, :] = [ 24. 10. 165. 175.]
647
648     min(cord_individual_obj[:, 3]) = 73.0
649     historl_G_best_iter[iter, 3] = 73.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 9. 183. 192.]
654     cord_individual_obj[indivial_i, :] = [ 1. 12. 167. 179.]
655     cord_individual_obj[indivial_i, :] = [ 2. 9. 151. 160.]
656     cord_individual_obj[indivial_i, :] = [ 3. 9. 186. 195.]
657     cord_individual_obj[indivial_i, :] = [ 4. 8. 172. 180.]
658     cord_individual_obj[indivial_i, :] = [ 5. 10. 105. 115.]
659     cord_individual_obj[indivial_i, :] = [ 6. 9. 107. 116.]
660     cord_individual_obj[indivial_i, :] = [ 7. 9. 120. 129.]
661     cord_individual_obj[indivial_i, :] = [ 8. 9. 145. 154.]
662     cord_individual_obj[indivial_i, :] = [ 9. 10. 134. 144.]
663     cord_individual_obj[indivial_i, :] = [ 10. 10. 145. 155.]
664     cord_individual_obj[indivial_i, :] = [ 11. 9. 116. 125.]
665     cord_individual_obj[indivial_i, :] = [ 12. 12. 166. 178.]
666     cord_individual_obj[indivial_i, :] = [ 13. 9. 158. 167.]
667     cord_individual_obj[indivial_i, :] = [ 14. 11. 133. 144.]

```

```

668 cord_individual_obj[indivial_i,:] = [ 15. 9. 140. 149.]
669 cord_individual_obj[indivial_i,:] = [ 16. 10. 125. 135.]
670 cord_individual_obj[indivial_i,:] = [ 17. 10. 138. 148.]
671 cord_individual_obj[indivial_i,:] = [ 18. 9. 64. 73.]
672 cord_individual_obj[indivial_i,:] = [ 19. 12. 110. 122.]
673 cord_individual_obj[indivial_i,:] = [ 20. 10. 162. 172.]
674 cord_individual_obj[indivial_i,:] = [ 21. 11. 164. 175.]
675 cord_individual_obj[indivial_i,:] = [ 22. 8. 141. 149.]
676 cord_individual_obj[indivial_i,:] = [ 23. 9. 103. 112.]
677 cord_individual_obj[indivial_i,:] = [ 24. 11. 114. 125.]
678
679 min(cord_individual_obj[:,3]) = 73.0
680 historl_G_best_iter[iter,3] = 73.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 249.0
689 Proportion_of_area = 0.2305555555555555
690 BEST_CHROM =
691 berth: [ 4.5 11.5 13.5 2. 5.5 13. 8.5 18.5 24.5 12.5 23.5 9.5 7.5 18.
692 18.5 3. 24.5 3.5]
693 time: [0. 2. 7. 5. 6. 5. 6. 0. 3. 0. 0. 7. 5. 6. 3. 1. 5. 3.]
694 num_QC: [6. 2. 2. 2. 2. 4. 3. 3. 2. 4. 2. 5. 4. 2. 3. 5. 2. 3.]
695 Objective function values and some other indicators:
696 Obj0 = 9.00 Obj1 = 64.00 Obj0 + Obj1 = 73.00
697 Total movement of crane: 0.00
698 Total waiting time in berth position: 64.00
699 Total index of q during berthing: 971.00
700 Specific arrangement for each vessel:
701 V_id: 0 li: 9.0 xi: 4.5 bow of i: 0.0 tail of i: 9.0 gama_i0: 0.0 gama_i1: 0.0
702 .0 work load gap_i: 0 gama_i1 + 1: 1.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 120.0 work load_i:
703 V_id: 1 li: 9.0 xi: 11.5 bow of i: 7.0 tail of i: 16.0 gama_i0: 2.0 gama_i1: 4
704 .0 work load gap_i: 0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work
705 V_id: 2 li: 3.0 xi: 13.5 bow of i: 12.0 tail of i: 15.0 gama_i0: 7.0 gama_i1: 8
706 .0 work load gap_i: 0 gama_i1 + 1: 9.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 60.0 work
707 V_id: 3 li: 4.0 xi: 2.0 bow of i: 0.0 tail of i: 4.0 gama_i0: 5.0 gama_i1: 7.0
708 .0 work load gap_i: 0 gama_i1 + 1: 8.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 120.0 work load_i:
709 V_id: 4 li: 3.0 xi: 5.5 bow of i: 4.0 tail of i: 7.0 gama_i0: 6.0 gama_i1: 9.0
710 .0 work load gap_i: 0 gama_i1 + 1: 10.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 140.0 work
711 V_id: 5 li: 4.0 xi: 13.0 bow of i: 11.0 tail of i: 15.0 gama_i0: 5.0 gama_i1: 6
712 .0 work load gap_i: 0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 100.0 work
713 V_id: 6 li: 3.0 xi: 8.5 bow of i: 7.0 tail of i: 10.0 gama_i0: 6.0 gama_i1: 6.0
714 .0 work load gap_i: 0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 60.0 work load_i:
715 V_id: 7 li: 5.0 xi: 18.5 bow of i: 16.0 tail of i: 21.0 gama_i0: 0.0 gama_i1: 2
716 .0 work load gap_i: 0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 140.0 work
717 V_id: 8 li: 7.0 xi: 24.5 bow of i: 21.0 tail of i: 28.0 gama_i0: 3.0 gama_i1: 4
718 .0 work load gap_i: 0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 60.0 work
719 V_id: 9 li: 7.0 xi: 12.5 bow of i: 9.0 tail of i: 16.0 gama_i0: 0.0 gama_i1: 1
720 .0 work load gap_i: 0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work
721 V_id: 10 li: 5.0 xi: 23.5 bow of i: 21.0 tail of i: 26.0 gama_i0: 0.0 gama_i1: 1
722 .0 work load gap_i: 0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 120.0 work
723 V_id: 11 li: 5.0 xi: 9.5 bow of i: 7.0 tail of i: 12.0 gama_i0: 7.0 gama_i1: 8
724 .0 work load gap_i: 0 gama_i1 + 1: 9.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work
725 V_id: 12 li: 7.0 xi: 7.5 bow of i: 4.0 tail of i: 11.0 gama_i0: 5.0 gama_i1: 5
726 .0 work load gap_i: 0 gama_i1 + 1: 6.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 80.0 work
727 V_id: 13 li: 6.0 xi: 18.0 bow of i: 15.0 tail of i: 21.0 gama_i0: 6.0 gama_i1: 1
728 .0 work load gap_i: 0 gama_i1 + 1: 9.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work
729 V_id: 14 li: 5.0 xi: 18.5 bow of i: 16.0 tail of i: 21.0 gama_i0: 3.0 gama_i1: 1
730 .0 work load gap_i: 0 gama_i1 + 1: 6.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 140.0 work
731 V_id: 15 li: 6.0 xi: 3.0 bow of i: 0.0 tail of i: 6.0 gama_i0: 1.0 gama_i1: 2
732 .0 work load gap_i: 0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 140.0 work load_i:
733 V_id: 16 li: 7.0 xi: 24.5 bow of i: 21.0 tail of i: 28.0 gama_i0: 5.0 gama_i1: 1
734 .0 work load gap_i: 0 gama_i1 + 1: 8.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work

```

unknown

718 V_id: 17 li: 7.0 xi: 3.5 bow of i: 0.0 tail of i: 7.0 gama_i0: 3.0 gama_i1: 4.0
100.0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 100.0 work load_i:
719
720 Algorithm finished and the total CPU time: 501 s
721 End
722