

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 8. 113. 121.]
81 cord_individual_obj[indivial_i,:] = [ 17. 10. 143. 153.]
82 cord_individual_obj[indivial_i,:] = [ 18. 9. 111. 120.]
83 cord_individual_obj[indivial_i,:] = [ 19. 9. 166. 175.]
84 cord_individual_obj[indivial_i,:] = [ 20. 8. 137. 145.]
85 cord_individual_obj[indivial_i,:] = [ 21. 9. 207. 216.]
86 cord_individual_obj[indivial_i,:] = [ 22. 8. 121. 129.]
87 cord_individual_obj[indivial_i,:] = [ 23. 8. 134. 142.]
88 cord_individual_obj[indivial_i,:] = [ 24. 11. 115. 126.]
89
90 min(cord_individual_obj[:,3]) = 111.0
91 historl_G_best_iter[iter,3] = 111.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 11. 270. 281.]
96 cord_individual_obj[indivial_i,:] = [ 1. 9. 224. 233.]
97 cord_individual_obj[indivial_i,:] = [ 2. 10. 127. 137.]
98 cord_individual_obj[indivial_i,:] = [ 3. 9. 141. 150.]
99 cord_individual_obj[indivial_i,:] = [ 4. 10. 101. 111.]
100 cord_individual_obj[indivial_i,:] = [ 5. 9. 190. 199.]
101 cord_individual_obj[indivial_i,:] = [ 6. 7. 154. 161.]
102 cord_individual_obj[indivial_i,:] = [ 7. 9. 132. 141.]
103 cord_individual_obj[indivial_i,:] = [ 8. 9. 185. 194.]
104 cord_individual_obj[indivial_i,:] = [ 9. 8. 171. 179.]
105 cord_individual_obj[indivial_i,:] = [ 10. 9. 180. 189.]
106 cord_individual_obj[indivial_i,:] = [ 11. 9. 169. 178.]
107 cord_individual_obj[indivial_i,:] = [ 12. 9. 120. 129.]
108 cord_individual_obj[indivial_i,:] = [ 13. 13. 216. 229.]
109 cord_individual_obj[indivial_i,:] = [ 14. 8. 168. 176.]
110 cord_individual_obj[indivial_i,:] = [ 15. 13. 189. 202.]
111 cord_individual_obj[indivial_i,:] = [ 16. 8. 176. 184.]
112 cord_individual_obj[indivial_i,:] = [ 17. 9. 137. 146.]
113 cord_individual_obj[indivial_i,:] = [ 18. 11. 149. 160.]
114 cord_individual_obj[indivial_i,:] = [ 19. 8. 166. 174.]
115 cord_individual_obj[indivial_i,:] = [ 20. 7. 208. 215.]
116 cord_individual_obj[indivial_i,:] = [ 21. 9. 160. 169.]
117 cord_individual_obj[indivial_i,:] = [ 22. 10. 194. 204.]
118 cord_individual_obj[indivial_i,:] = [ 23. 9. 144. 153.]
119 cord_individual_obj[indivial_i,:] = [ 24. 10. 150. 160.]
120
121 min(cord_individual_obj[:,3]) = 111.0
122 historl_G_best_iter[iter,3] = 111.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 10. 101. 111.]
127 cord_individual_obj[indivial_i,:] = [ 1. 9. 138. 147.]
128 cord_individual_obj[indivial_i,:] = [ 2. 12. 139. 151.]
129 cord_individual_obj[indivial_i,:] = [ 3. 9. 126. 135.]
130 cord_individual_obj[indivial_i,:] = [ 4. 9. 195. 204.]
131 cord_individual_obj[indivial_i,:] = [ 5. 9. 150. 159.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 172. 181.]
133 cord_individual_obj[indivial_i,:] = [ 7. 8. 157. 165.]
134 cord_individual_obj[indivial_i,:] = [ 8. 8. 168. 176.]
135 cord_individual_obj[indivial_i,:] = [ 9. 9. 128. 137.]
136 cord_individual_obj[indivial_i,:] = [ 10. 9. 145. 154.]
137 cord_individual_obj[indivial_i,:] = [ 11. 8. 121. 129.]
138 cord_individual_obj[indivial_i,:] = [ 12. 8. 186. 194.]
139 cord_individual_obj[indivial_i,:] = [ 13. 11. 167. 178.]
140 cord_individual_obj[indivial_i,:] = [ 14. 8. 147. 155.]
141 cord_individual_obj[indivial_i,:] = [ 15. 13. 211. 224.]
142 cord_individual_obj[indivial_i,:] = [ 16. 10. 134. 144.]
143 cord_individual_obj[indivial_i,:] = [ 17. 9. 131. 140.]
144 cord_individual_obj[indivial_i,:] = [ 18. 9. 153. 162.]
145 cord_individual_obj[indivial_i,:] = [ 19. 8. 174. 182.]
146 cord_individual_obj[indivial_i,:] = [ 20. 9. 175. 184.]
147 cord_individual_obj[indivial_i,:] = [ 21. 10. 188. 198.]
148 cord_individual_obj[indivial_i,:] = [ 22. 9. 99. 108.]
149 cord_individual_obj[indivial_i,:] = [ 23. 10. 155. 165.]
150 cord_individual_obj[indivial_i,:] = [ 24. 9. 154. 163.]
151
152 min(cord_individual_obj[:,3]) = 108.0
153 historl_G_best_iter[iter,3] = 108.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 9. 159. 168.]
158 cord_individual_obj[indivial_i,:] = [ 1. 8. 120. 128.]
159 cord_individual_obj[indivial_i,:] = [ 2. 7. 149. 156.]
160 cord_individual_obj[indivial_i,:] = [ 3. 11. 103. 114.]
161 cord_individual_obj[indivial_i,:] = [ 4. 9. 95. 104.]
162 cord_individual_obj[indivial_i,:] = [ 5. 8. 155. 163.]
163 cord_individual_obj[indivial_i,:] = [ 6. 9. 125. 134.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 8. 117. 125.]
165 cord_individual_obj[indivial_i,:] = [ 8. 10. 170. 180.]
166 cord_individual_obj[indivial_i,:] = [ 9. 10. 113. 123.]
167 cord_individual_obj[indivial_i,:] = [ 10. 8. 116. 124.]
168 cord_individual_obj[indivial_i,:] = [ 11. 9. 123. 132.]
169 cord_individual_obj[indivial_i,:] = [ 12. 8. 136. 144.]
170 cord_individual_obj[indivial_i,:] = [ 13. 9. 170. 179.]
171 cord_individual_obj[indivial_i,:] = [ 14. 10. 160. 170.]
172 cord_individual_obj[indivial_i,:] = [ 15. 9. 99. 108.]
173 cord_individual_obj[indivial_i,:] = [ 16. 9. 96. 105.]
174 cord_individual_obj[indivial_i,:] = [ 17. 9. 157. 166.]
175 cord_individual_obj[indivial_i,:] = [ 18. 9. 133. 142.]
176 cord_individual_obj[indivial_i,:] = [ 19. 8. 180. 188.]
177 cord_individual_obj[indivial_i,:] = [ 20. 11. 126. 137.]
178 cord_individual_obj[indivial_i,:] = [ 21. 10. 134. 144.]
179 cord_individual_obj[indivial_i,:] = [ 22. 10. 101. 111.]
180 cord_individual_obj[indivial_i,:] = [ 23. 7. 175. 182.]
181 cord_individual_obj[indivial_i,:] = [ 24. 10. 130. 140.]
182
183 min(cord_individual_obj[:,3]) = 104.0
184 historl_G_best_iter[iter,3] = 104.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 10. 161. 171.]
189 cord_individual_obj[indivial_i,:] = [ 1. 10. 191. 201.]
190 cord_individual_obj[indivial_i,:] = [ 2. 9. 134. 143.]
191 cord_individual_obj[indivial_i,:] = [ 3. 9. 162. 171.]
192 cord_individual_obj[indivial_i,:] = [ 4. 9. 166. 175.]
193 cord_individual_obj[indivial_i,:] = [ 5. 7. 115. 122.]
194 cord_individual_obj[indivial_i,:] = [ 6. 6. 189. 195.]
195 cord_individual_obj[indivial_i,:] = [ 7. 8. 146. 154.]
196 cord_individual_obj[indivial_i,:] = [ 8. 9. 168. 177.]
197 cord_individual_obj[indivial_i,:] = [ 9. 8. 189. 197.]
198 cord_individual_obj[indivial_i,:] = [ 10. 9. 146. 155.]
199 cord_individual_obj[indivial_i,:] = [ 11. 9. 174. 183.]
200 cord_individual_obj[indivial_i,:] = [ 12. 9. 224. 233.]
201 cord_individual_obj[indivial_i,:] = [ 13. 8. 158. 166.]
202 cord_individual_obj[indivial_i,:] = [ 14. 8. 177. 185.]
203 cord_individual_obj[indivial_i,:] = [ 15. 10. 267. 277.]
204 cord_individual_obj[indivial_i,:] = [ 16. 11. 172. 183.]
205 cord_individual_obj[indivial_i,:] = [ 17. 9. 123. 132.]
206 cord_individual_obj[indivial_i,:] = [ 18. 9. 145. 154.]
207 cord_individual_obj[indivial_i,:] = [ 19. 9. 95. 104.]
208 cord_individual_obj[indivial_i,:] = [ 20. 8. 149. 157.]
209 cord_individual_obj[indivial_i,:] = [ 21. 8. 195. 203.]
210 cord_individual_obj[indivial_i,:] = [ 22. 7. 126. 133.]
211 cord_individual_obj[indivial_i,:] = [ 23. 9. 194. 203.]
212 cord_individual_obj[indivial_i,:] = [ 24. 8. 165. 173.]
213
214 min(cord_individual_obj[:,3]) = 104.0
215 historl_G_best_iter[iter,3] = 104.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 9. 125. 134.]
220 cord_individual_obj[indivial_i,:] = [ 1. 8. 122. 130.]
221 cord_individual_obj[indivial_i,:] = [ 2. 8. 111. 119.]
222 cord_individual_obj[indivial_i,:] = [ 3. 8. 182. 190.]
223 cord_individual_obj[indivial_i,:] = [ 4. 10. 208. 218.]
224 cord_individual_obj[indivial_i,:] = [ 5. 9. 195. 204.]
225 cord_individual_obj[indivial_i,:] = [ 6. 8. 163. 171.]
226 cord_individual_obj[indivial_i,:] = [ 7. 10. 158. 168.]
227 cord_individual_obj[indivial_i,:] = [ 8. 11. 191. 202.]
228 cord_individual_obj[indivial_i,:] = [ 9. 8. 142. 150.]
229 cord_individual_obj[indivial_i,:] = [ 10. 8. 198. 206.]
230 cord_individual_obj[indivial_i,:] = [ 11. 11. 167. 178.]
231 cord_individual_obj[indivial_i,:] = [ 12. 8. 148. 156.]
232 cord_individual_obj[indivial_i,:] = [ 13. 8. 158. 166.]
233 cord_individual_obj[indivial_i,:] = [ 14. 8. 149. 157.]
234 cord_individual_obj[indivial_i,:] = [ 15. 9. 95. 104.]
235 cord_individual_obj[indivial_i,:] = [ 16. 9. 149. 158.]
236 cord_individual_obj[indivial_i,:] = [ 17. 8. 172. 180.]
237 cord_individual_obj[indivial_i,:] = [ 18. 9. 200. 209.]
238 cord_individual_obj[indivial_i,:] = [ 19. 9. 192. 201.]
239 cord_individual_obj[indivial_i,:] = [ 20. 8. 177. 185.]
240 cord_individual_obj[indivial_i,:] = [ 21. 8. 184. 192.]
241 cord_individual_obj[indivial_i,:] = [ 22. 9. 190. 199.]
242 cord_individual_obj[indivial_i,:] = [ 23. 8. 181. 189.]
243 cord_individual_obj[indivial_i,:] = [ 24. 9. 161. 170.]
244
245 min(cord_individual_obj[:,3]) = 104.0
246 historl_G_best_iter[iter,3] = 104.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 10. 146. 156.]
251 cord_individual_obj[indivial_i, :] = [ 1. 8. 91. 99.]
252 cord_individual_obj[indivial_i, :] = [ 2. 10. 146. 156.]
253 cord_individual_obj[indivial_i, :] = [ 3. 8. 122. 130.]
254 cord_individual_obj[indivial_i, :] = [ 4. 9. 95. 104.]
255 cord_individual_obj[indivial_i, :] = [ 5. 9. 142. 151.]
256 cord_individual_obj[indivial_i, :] = [ 6. 8. 93. 101.]
257 cord_individual_obj[indivial_i, :] = [ 7. 8. 149. 157.]
258 cord_individual_obj[indivial_i, :] = [ 8. 9. 164. 173.]
259 cord_individual_obj[indivial_i, :] = [ 9. 9. 162. 171.]
260 cord_individual_obj[indivial_i, :] = [ 10. 11. 129. 140.]
261 cord_individual_obj[indivial_i, :] = [ 11. 9. 162. 171.]
262 cord_individual_obj[indivial_i, :] = [ 12. 9. 151. 160.]
263 cord_individual_obj[indivial_i, :] = [ 13. 8. 134. 142.]
264 cord_individual_obj[indivial_i, :] = [ 14. 8. 109. 117.]
265 cord_individual_obj[indivial_i, :] = [ 15. 11. 204. 215.]
266 cord_individual_obj[indivial_i, :] = [ 16. 9. 124. 133.]
267 cord_individual_obj[indivial_i, :] = [ 17. 8. 134. 142.]
268 cord_individual_obj[indivial_i, :] = [ 18. 8. 119. 127.]
269 cord_individual_obj[indivial_i, :] = [ 19. 9. 210. 219.]
270 cord_individual_obj[indivial_i, :] = [ 20. 8. 115. 123.]
271 cord_individual_obj[indivial_i, :] = [ 21. 9. 153. 162.]
272 cord_individual_obj[indivial_i, :] = [ 22. 7. 169. 176.]
273 cord_individual_obj[indivial_i, :] = [ 23. 9. 137. 146.]
274 cord_individual_obj[indivial_i, :] = [ 24. 11. 160. 171.]
275

276 min(cord_individual_obj[:, 3]) = 99.0
277 historl_G_best_iter[iter, 3] = 99.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 7. 155. 162.]
282 cord_individual_obj[indivial_i, :] = [ 1. 8. 203. 211.]
283 cord_individual_obj[indivial_i, :] = [ 2. 9. 152. 161.]
284 cord_individual_obj[indivial_i, :] = [ 3. 9. 179. 188.]
285 cord_individual_obj[indivial_i, :] = [ 4. 8. 236. 244.]
286 cord_individual_obj[indivial_i, :] = [ 5. 11. 204. 215.]
287 cord_individual_obj[indivial_i, :] = [ 6. 8. 185. 193.]
288 cord_individual_obj[indivial_i, :] = [ 7. 9. 173. 182.]
289 cord_individual_obj[indivial_i, :] = [ 8. 7. 189. 196.]
290 cord_individual_obj[indivial_i, :] = [ 9. 8. 136. 144.]
291 cord_individual_obj[indivial_i, :] = [ 10. 9. 204. 213.]
292 cord_individual_obj[indivial_i, :] = [ 11. 8. 156. 164.]
293 cord_individual_obj[indivial_i, :] = [ 12. 10. 160. 170.]
294 cord_individual_obj[indivial_i, :] = [ 13. 8. 148. 156.]
295 cord_individual_obj[indivial_i, :] = [ 14. 9. 176. 185.]
296 cord_individual_obj[indivial_i, :] = [ 15. 7. 157. 164.]
297 cord_individual_obj[indivial_i, :] = [ 16. 8. 176. 184.]
298 cord_individual_obj[indivial_i, :] = [ 17. 9. 165. 174.]
299 cord_individual_obj[indivial_i, :] = [ 18. 7. 150. 157.]
300 cord_individual_obj[indivial_i, :] = [ 19. 8. 91. 99.]
301 cord_individual_obj[indivial_i, :] = [ 20. 9. 172. 181.]
302 cord_individual_obj[indivial_i, :] = [ 21. 8. 185. 193.]
303 cord_individual_obj[indivial_i, :] = [ 22. 7. 184. 191.]
304 cord_individual_obj[indivial_i, :] = [ 23. 8. 193. 201.]
305 cord_individual_obj[indivial_i, :] = [ 24. 8. 205. 213.]
306

307 min(cord_individual_obj[:, 3]) = 99.0
308 historl_G_best_iter[iter, 3] = 99.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 8. 206. 214.]
313 cord_individual_obj[indivial_i, :] = [ 1. 8. 191. 199.]
314 cord_individual_obj[indivial_i, :] = [ 2. 8. 153. 161.]
315 cord_individual_obj[indivial_i, :] = [ 3. 9. 204. 213.]
316 cord_individual_obj[indivial_i, :] = [ 4. 8. 91. 99.]
317 cord_individual_obj[indivial_i, :] = [ 5. 10. 201. 211.]
318 cord_individual_obj[indivial_i, :] = [ 6. 8. 198. 206.]
319 cord_individual_obj[indivial_i, :] = [ 7. 9. 184. 193.]
320 cord_individual_obj[indivial_i, :] = [ 8. 8. 195. 203.]
321 cord_individual_obj[indivial_i, :] = [ 9. 8. 188. 196.]
322 cord_individual_obj[indivial_i, :] = [ 10. 9. 172. 181.]
323 cord_individual_obj[indivial_i, :] = [ 11. 9. 220. 229.]
324 cord_individual_obj[indivial_i, :] = [ 12. 9. 183. 192.]
325 cord_individual_obj[indivial_i, :] = [ 13. 10. 198. 208.]
326 cord_individual_obj[indivial_i, :] = [ 14. 8. 200. 208.]
327 cord_individual_obj[indivial_i, :] = [ 15. 9. 228. 237.]
328 cord_individual_obj[indivial_i, :] = [ 16. 8. 139. 147.]
329 cord_individual_obj[indivial_i, :] = [ 17. 8. 129. 137.]
330 cord_individual_obj[indivial_i, :] = [ 18. 8. 160. 168.]
331 cord_individual_obj[indivial_i, :] = [ 19. 8. 150. 158.]

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332 cord_individual_obj[indivial_i, :] = [ 20.  9. 201. 210.]
333 cord_individual_obj[indivial_i, :] = [ 21.  9. 132. 141.]
334 cord_individual_obj[indivial_i, :] = [ 22.  7. 164. 171.]
335 cord_individual_obj[indivial_i, :] = [ 23.  8. 219. 227.]
336 cord_individual_obj[indivial_i, :] = [ 24.  9. 192. 201.]
337
338 min(cord_individual_obj[:, 3]) = 99.0
339 histol_G_best_iter[iter, 3] = 99.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0.  7. 186. 193.]
344 cord_individual_obj[indivial_i, :] = [ 1.  8. 164. 172.]
345 cord_individual_obj[indivial_i, :] = [ 2.  8. 164. 172.]
346 cord_individual_obj[indivial_i, :] = [ 3. 11. 144. 155.]
347 cord_individual_obj[indivial_i, :] = [ 4.  8. 181. 189.]
348 cord_individual_obj[indivial_i, :] = [ 5. 10. 176. 186.]
349 cord_individual_obj[indivial_i, :] = [ 6.  7. 119. 126.]
350 cord_individual_obj[indivial_i, :] = [ 7.  9. 183. 192.]
351 cord_individual_obj[indivial_i, :] = [ 8.  9. 179. 188.]
352 cord_individual_obj[indivial_i, :] = [ 9.  8. 177. 185.]
353 cord_individual_obj[indivial_i, :] = [ 10. 10. 142. 152.]
354 cord_individual_obj[indivial_i, :] = [ 11.  8. 191. 199.]
355 cord_individual_obj[indivial_i, :] = [ 12.  7. 207. 214.]
356 cord_individual_obj[indivial_i, :] = [ 13.  9. 196. 205.]
357 cord_individual_obj[indivial_i, :] = [ 14.  8. 163. 171.]
358 cord_individual_obj[indivial_i, :] = [ 15.  8. 91. 99.]
359 cord_individual_obj[indivial_i, :] = [ 16.  8. 134. 142.]
360 cord_individual_obj[indivial_i, :] = [ 17.  8. 216. 224.]
361 cord_individual_obj[indivial_i, :] = [ 18.  9. 125. 134.]
362 cord_individual_obj[indivial_i, :] = [ 19. 10. 144. 154.]
363 cord_individual_obj[indivial_i, :] = [ 20.  8. 222. 230.]
364 cord_individual_obj[indivial_i, :] = [ 21. 11. 139. 150.]
365 cord_individual_obj[indivial_i, :] = [ 22.  9. 204. 213.]
366 cord_individual_obj[indivial_i, :] = [ 23.  9. 172. 181.]
367 cord_individual_obj[indivial_i, :] = [ 24.  9. 174. 183.]
368
369 min(cord_individual_obj[:, 3]) = 99.0
370 histol_G_best_iter[iter, 3] = 99.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0.  9. 238. 247.]
375 cord_individual_obj[indivial_i, :] = [ 1.  8. 213. 221.]
376 cord_individual_obj[indivial_i, :] = [ 2.  8. 158. 166.]
377 cord_individual_obj[indivial_i, :] = [ 3.  8. 142. 150.]
378 cord_individual_obj[indivial_i, :] = [ 4.  8. 169. 177.]
379 cord_individual_obj[indivial_i, :] = [ 5.  9. 189. 198.]
380 cord_individual_obj[indivial_i, :] = [ 6.  8. 199. 207.]
381 cord_individual_obj[indivial_i, :] = [ 7. 11. 163. 174.]
382 cord_individual_obj[indivial_i, :] = [ 8.  8. 191. 199.]
383 cord_individual_obj[indivial_i, :] = [ 9. 10. 143. 153.]
384 cord_individual_obj[indivial_i, :] = [ 10. 8. 176. 184.]
385 cord_individual_obj[indivial_i, :] = [ 11.  9. 162. 171.]
386 cord_individual_obj[indivial_i, :] = [ 12.  8. 204. 212.]
387 cord_individual_obj[indivial_i, :] = [ 13.  8. 175. 183.]
388 cord_individual_obj[indivial_i, :] = [ 14.  8. 158. 166.]
389 cord_individual_obj[indivial_i, :] = [ 15.  9. 191. 200.]
390 cord_individual_obj[indivial_i, :] = [ 16.  9. 212. 221.]
391 cord_individual_obj[indivial_i, :] = [ 17. 10. 168. 178.]
392 cord_individual_obj[indivial_i, :] = [ 18.  7. 132. 139.]
393 cord_individual_obj[indivial_i, :] = [ 19.  8. 165. 173.]
394 cord_individual_obj[indivial_i, :] = [ 20.  8. 91. 99.]
395 cord_individual_obj[indivial_i, :] = [ 21.  8. 139. 147.]
396 cord_individual_obj[indivial_i, :] = [ 22.  8. 176. 184.]
397 cord_individual_obj[indivial_i, :] = [ 23.  8. 221. 229.]
398 cord_individual_obj[indivial_i, :] = [ 24.  8. 214. 222.]
399
400 min(cord_individual_obj[:, 3]) = 99.0
401 histol_G_best_iter[iter, 3] = 99.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0.  8. 91. 99.]
406 cord_individual_obj[indivial_i, :] = [ 1.  8. 180. 188.]
407 cord_individual_obj[indivial_i, :] = [ 2.  8. 203. 211.]
408 cord_individual_obj[indivial_i, :] = [ 3.  9. 146. 155.]
409 cord_individual_obj[indivial_i, :] = [ 4.  8. 194. 202.]
410 cord_individual_obj[indivial_i, :] = [ 5.  8. 160. 168.]
411 cord_individual_obj[indivial_i, :] = [ 6.  8. 173. 181.]
412 cord_individual_obj[indivial_i, :] = [ 7. 10. 170. 180.]
413 cord_individual_obj[indivial_i, :] = [ 8.  9. 167. 176.]
414 cord_individual_obj[indivial_i, :] = [ 9.  8. 137. 145.]
415 cord_individual_obj[indivial_i, :] = [ 10. 9. 193. 202.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 8. 232. 240.]
417 cord_individual_obj[indivial_i,:] = [ 12. 9. 218. 227.]
418 cord_individual_obj[indivial_i,:] = [ 13. 9. 205. 214.]
419 cord_individual_obj[indivial_i,:] = [ 14. 9. 212. 221.]
420 cord_individual_obj[indivial_i,:] = [ 15. 9. 188. 197.]
421 cord_individual_obj[indivial_i,:] = [ 16. 9. 266. 275.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 171. 182.]
423 cord_individual_obj[indivial_i,:] = [ 18. 9. 215. 224.]
424 cord_individual_obj[indivial_i,:] = [ 19. 9. 191. 200.]
425 cord_individual_obj[indivial_i,:] = [ 20. 8. 205. 213.]
426 cord_individual_obj[indivial_i,:] = [ 21. 10. 190. 200.]
427 cord_individual_obj[indivial_i,:] = [ 22. 10. 173. 183.]
428 cord_individual_obj[indivial_i,:] = [ 23. 7. 217. 224.]
429 cord_individual_obj[indivial_i,:] = [ 24. 8. 206. 214.]
430
431 min(cord_individual_obj[:,3]) = 99.0
432 histol_G_best_iter[iter,3] = 99.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 7. 151. 158.]
437 cord_individual_obj[indivial_i,:] = [ 1. 9. 145. 154.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 150. 159.]
439 cord_individual_obj[indivial_i,:] = [ 3. 8. 153. 161.]
440 cord_individual_obj[indivial_i,:] = [ 4. 11. 196. 207.]
441 cord_individual_obj[indivial_i,:] = [ 5. 9. 103. 112.]
442 cord_individual_obj[indivial_i,:] = [ 6. 8. 141. 149.]
443 cord_individual_obj[indivial_i,:] = [ 7. 9. 117. 126.]
444 cord_individual_obj[indivial_i,:] = [ 8. 9. 162. 171.]
445 cord_individual_obj[indivial_i,:] = [ 9. 8. 112. 120.]
446 cord_individual_obj[indivial_i,:] = [ 10. 11. 194. 205.]
447 cord_individual_obj[indivial_i,:] = [ 11. 9. 152. 161.]
448 cord_individual_obj[indivial_i,:] = [ 12. 9. 136. 145.]
449 cord_individual_obj[indivial_i,:] = [ 13. 8. 172. 180.]
450 cord_individual_obj[indivial_i,:] = [ 14. 8. 128. 136.]
451 cord_individual_obj[indivial_i,:] = [ 15. 10. 154. 164.]
452 cord_individual_obj[indivial_i,:] = [ 16. 8. 91. 99.]
453 cord_individual_obj[indivial_i,:] = [ 17. 10. 139. 149.]
454 cord_individual_obj[indivial_i,:] = [ 18. 9. 138. 147.]
455 cord_individual_obj[indivial_i,:] = [ 19. 8. 107. 115.]
456 cord_individual_obj[indivial_i,:] = [ 20. 11. 202. 213.]
457 cord_individual_obj[indivial_i,:] = [ 21. 9. 175. 184.]
458 cord_individual_obj[indivial_i,:] = [ 22. 9. 175. 184.]
459 cord_individual_obj[indivial_i,:] = [ 23. 9. 196. 205.]
460 cord_individual_obj[indivial_i,:] = [ 24. 11. 230. 241.]
461
462 min(cord_individual_obj[:,3]) = 99.0
463 histol_G_best_iter[iter,3] = 99.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 7. 159. 166.]
468 cord_individual_obj[indivial_i,:] = [ 1. 8. 152. 160.]
469 cord_individual_obj[indivial_i,:] = [ 2. 10. 177. 187.]
470 cord_individual_obj[indivial_i,:] = [ 3. 10. 200. 210.]
471 cord_individual_obj[indivial_i,:] = [ 4. 9. 215. 224.]
472 cord_individual_obj[indivial_i,:] = [ 5. 9. 159. 168.]
473 cord_individual_obj[indivial_i,:] = [ 6. 7. 110. 117.]
474 cord_individual_obj[indivial_i,:] = [ 7. 9. 151. 160.]
475 cord_individual_obj[indivial_i,:] = [ 8. 11. 215. 226.]
476 cord_individual_obj[indivial_i,:] = [ 9. 9. 185. 194.]
477 cord_individual_obj[indivial_i,:] = [ 10. 9. 192. 201.]
478 cord_individual_obj[indivial_i,:] = [ 11. 9. 134. 143.]
479 cord_individual_obj[indivial_i,:] = [ 12. 8. 131. 139.]
480 cord_individual_obj[indivial_i,:] = [ 13. 10. 137. 147.]
481 cord_individual_obj[indivial_i,:] = [ 14. 9. 156. 165.]
482 cord_individual_obj[indivial_i,:] = [ 15. 9. 191. 200.]
483 cord_individual_obj[indivial_i,:] = [ 16. 8. 172. 180.]
484 cord_individual_obj[indivial_i,:] = [ 17. 9. 176. 185.]
485 cord_individual_obj[indivial_i,:] = [ 18. 8. 156. 164.]
486 cord_individual_obj[indivial_i,:] = [ 19. 9. 199. 208.]
487 cord_individual_obj[indivial_i,:] = [ 20. 8. 158. 166.]
488 cord_individual_obj[indivial_i,:] = [ 21. 9. 198. 207.]
489 cord_individual_obj[indivial_i,:] = [ 22. 6. 159. 165.]
490 cord_individual_obj[indivial_i,:] = [ 23. 8. 168. 176.]
491 cord_individual_obj[indivial_i,:] = [ 24. 8. 91. 99.]
492
493 min(cord_individual_obj[:,3]) = 99.0
494 histol_G_best_iter[iter,3] = 99.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 9. 219. 228.]
499 cord_individual_obj[indivial_i,:] = [ 1. 8. 198. 206.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 10. 206. 216.]
501 cord_individual_obj[indivial_i,:] = [ 3. 8. 162. 170.]
502 cord_individual_obj[indivial_i,:] = [ 4. 9. 258. 267.]
503 cord_individual_obj[indivial_i,:] = [ 5. 9. 168. 177.]
504 cord_individual_obj[indivial_i,:] = [ 6. 9. 174. 183.]
505 cord_individual_obj[indivial_i,:] = [ 7. 8. 233. 241.]
506 cord_individual_obj[indivial_i,:] = [ 8. 8. 91. 99.]
507 cord_individual_obj[indivial_i,:] = [ 9. 8. 169. 177.]
508 cord_individual_obj[indivial_i,:] = [ 10. 10. 175. 185.]
509 cord_individual_obj[indivial_i,:] = [ 11. 8. 237. 245.]
510 cord_individual_obj[indivial_i,:] = [ 12. 9. 180. 189.]
511 cord_individual_obj[indivial_i,:] = [ 13. 10. 147. 157.]
512 cord_individual_obj[indivial_i,:] = [ 14. 9. 188. 197.]
513 cord_individual_obj[indivial_i,:] = [ 15. 9. 200. 209.]
514 cord_individual_obj[indivial_i,:] = [ 16. 10. 181. 191.]
515 cord_individual_obj[indivial_i,:] = [ 17. 10. 204. 214.]
516 cord_individual_obj[indivial_i,:] = [ 18. 9. 131. 140.]
517 cord_individual_obj[indivial_i,:] = [ 19. 8. 166. 174.]
518 cord_individual_obj[indivial_i,:] = [ 20. 11. 160. 171.]
519 cord_individual_obj[indivial_i,:] = [ 21. 8. 188. 196.]
520 cord_individual_obj[indivial_i,:] = [ 22. 10. 125. 135.]
521 cord_individual_obj[indivial_i,:] = [ 23. 9. 219. 228.]
522 cord_individual_obj[indivial_i,:] = [ 24. 9. 197. 206.]
523
524 min(cord_individual_obj[:, 3]) = 99.0
525 histol_G_best_iter[iter, 3] = 99.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 7. 222. 229.]
530 cord_individual_obj[indivial_i,:] = [ 1. 8. 175. 183.]
531 cord_individual_obj[indivial_i,:] = [ 2. 9. 165. 174.]
532 cord_individual_obj[indivial_i,:] = [ 3. 8. 145. 153.]
533 cord_individual_obj[indivial_i,:] = [ 4. 8. 91. 99.]
534 cord_individual_obj[indivial_i,:] = [ 5. 9. 142. 151.]
535 cord_individual_obj[indivial_i,:] = [ 6. 8. 181. 189.]
536 cord_individual_obj[indivial_i,:] = [ 7. 9. 200. 209.]
537 cord_individual_obj[indivial_i,:] = [ 8. 9. 198. 207.]
538 cord_individual_obj[indivial_i,:] = [ 9. 8. 125. 133.]
539 cord_individual_obj[indivial_i,:] = [ 10. 11. 183. 194.]
540 cord_individual_obj[indivial_i,:] = [ 11. 9. 182. 191.]
541 cord_individual_obj[indivial_i,:] = [ 12. 8. 203. 211.]
542 cord_individual_obj[indivial_i,:] = [ 13. 9. 188. 197.]
543 cord_individual_obj[indivial_i,:] = [ 14. 8. 151. 159.]
544 cord_individual_obj[indivial_i,:] = [ 15. 7. 171. 178.]
545 cord_individual_obj[indivial_i,:] = [ 16. 8. 157. 165.]
546 cord_individual_obj[indivial_i,:] = [ 17. 12. 166. 178.]
547 cord_individual_obj[indivial_i,:] = [ 18. 7. 177. 184.]
548 cord_individual_obj[indivial_i,:] = [ 19. 8. 137. 145.]
549 cord_individual_obj[indivial_i,:] = [ 20. 9. 179. 188.]
550 cord_individual_obj[indivial_i,:] = [ 21. 9. 155. 164.]
551 cord_individual_obj[indivial_i,:] = [ 22. 11. 243. 254.]
552 cord_individual_obj[indivial_i,:] = [ 23. 7. 139. 146.]
553 cord_individual_obj[indivial_i,:] = [ 24. 9. 285. 294.]
554
555 min(cord_individual_obj[:, 3]) = 99.0
556 histol_G_best_iter[iter, 3] = 99.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 9. 195. 204.]
561 cord_individual_obj[indivial_i,:] = [ 1. 8. 152. 160.]
562 cord_individual_obj[indivial_i,:] = [ 2. 10. 187. 197.]
563 cord_individual_obj[indivial_i,:] = [ 3. 8. 134. 142.]
564 cord_individual_obj[indivial_i,:] = [ 4. 8. 181. 189.]
565 cord_individual_obj[indivial_i,:] = [ 5. 8. 134. 142.]
566 cord_individual_obj[indivial_i,:] = [ 6. 10. 185. 195.]
567 cord_individual_obj[indivial_i,:] = [ 7. 7. 203. 210.]
568 cord_individual_obj[indivial_i,:] = [ 8. 7. 211. 218.]
569 cord_individual_obj[indivial_i,:] = [ 9. 10. 149. 159.]
570 cord_individual_obj[indivial_i,:] = [ 10. 8. 166. 174.]
571 cord_individual_obj[indivial_i,:] = [ 11. 9. 202. 211.]
572 cord_individual_obj[indivial_i,:] = [ 12. 11. 191. 202.]
573 cord_individual_obj[indivial_i,:] = [ 13. 8. 154. 162.]
574 cord_individual_obj[indivial_i,:] = [ 14. 11. 174. 185.]
575 cord_individual_obj[indivial_i,:] = [ 15. 8. 179. 187.]
576 cord_individual_obj[indivial_i,:] = [ 16. 8. 154. 162.]
577 cord_individual_obj[indivial_i,:] = [ 17. 9. 151. 160.]
578 cord_individual_obj[indivial_i,:] = [ 18. 9. 218. 227.]
579 cord_individual_obj[indivial_i,:] = [ 19. 8. 150. 158.]
580 cord_individual_obj[indivial_i,:] = [ 20. 8. 180. 188.]
581 cord_individual_obj[indivial_i,:] = [ 21. 8. 224. 232.]
582 cord_individual_obj[indivial_i,:] = [ 22. 9. 164. 173.]
583 cord_individual_obj[indivial_i,:] = [ 23. 8. 162. 170.]

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584     cord_individual_obj[indivial_i, :] = [24. 8. 91. 99.]
585
586     min(cord_individual_obj[:, 3]) = 99.0
587     historl_G_best_iter[iter, 3] = 99.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 8. 211. 219.]
592     cord_individual_obj[indivial_i, :] = [ 1. 9. 154. 163.]
593     cord_individual_obj[indivial_i, :] = [ 2. 10. 180. 190.]
594     cord_individual_obj[indivial_i, :] = [ 3. 8. 132. 140.]
595     cord_individual_obj[indivial_i, :] = [ 4. 8. 214. 222.]
596     cord_individual_obj[indivial_i, :] = [ 5. 7. 181. 188.]
597     cord_individual_obj[indivial_i, :] = [ 6. 7. 199. 206.]
598     cord_individual_obj[indivial_i, :] = [ 7. 10. 181. 191.]
599     cord_individual_obj[indivial_i, :] = [ 8. 9. 202. 211.]
600     cord_individual_obj[indivial_i, :] = [ 9. 9. 141. 150.]
601     cord_individual_obj[indivial_i, :] = [10. 8. 212. 220.]
602     cord_individual_obj[indivial_i, :] = [11. 8. 148. 156.]
603     cord_individual_obj[indivial_i, :] = [12. 10. 233. 243.]
604     cord_individual_obj[indivial_i, :] = [13. 8. 195. 203.]
605     cord_individual_obj[indivial_i, :] = [14. 9. 205. 214.]
606     cord_individual_obj[indivial_i, :] = [15. 9. 163. 172.]
607     cord_individual_obj[indivial_i, :] = [16. 9. 244. 253.]
608     cord_individual_obj[indivial_i, :] = [17. 9. 175. 184.]
609     cord_individual_obj[indivial_i, :] = [18. 8. 191. 199.]
610     cord_individual_obj[indivial_i, :] = [19. 7. 156. 163.]
611     cord_individual_obj[indivial_i, :] = [20. 7. 176. 183.]
612     cord_individual_obj[indivial_i, :] = [21. 8. 91. 99.]
613     cord_individual_obj[indivial_i, :] = [22. 9. 163. 172.]
614     cord_individual_obj[indivial_i, :] = [23. 9. 166. 175.]
615     cord_individual_obj[indivial_i, :] = [24. 8. 194. 202.]
616
617     min(cord_individual_obj[:, 3]) = 99.0
618     historl_G_best_iter[iter, 3] = 99.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 9. 113. 122.]
623     cord_individual_obj[indivial_i, :] = [ 1. 9. 141. 150.]
624     cord_individual_obj[indivial_i, :] = [ 2. 10. 137. 147.]
625     cord_individual_obj[indivial_i, :] = [ 3. 9. 166. 175.]
626     cord_individual_obj[indivial_i, :] = [ 4. 11. 188. 199.]
627     cord_individual_obj[indivial_i, :] = [ 5. 9. 174. 183.]
628     cord_individual_obj[indivial_i, :] = [ 6. 8. 125. 133.]
629     cord_individual_obj[indivial_i, :] = [ 7. 9. 163. 172.]
630     cord_individual_obj[indivial_i, :] = [ 8. 9. 199. 208.]
631     cord_individual_obj[indivial_i, :] = [ 9. 8. 118. 126.]
632     cord_individual_obj[indivial_i, :] = [10. 11. 196. 207.]
633     cord_individual_obj[indivial_i, :] = [11. 7. 180. 187.]
634     cord_individual_obj[indivial_i, :] = [12. 9. 189. 198.]
635     cord_individual_obj[indivial_i, :] = [13. 9. 178. 187.]
636     cord_individual_obj[indivial_i, :] = [14. 8. 199. 207.]
637     cord_individual_obj[indivial_i, :] = [15. 10. 197. 207.]
638     cord_individual_obj[indivial_i, :] = [16. 8. 91. 99.]
639     cord_individual_obj[indivial_i, :] = [17. 10. 160. 170.]
640     cord_individual_obj[indivial_i, :] = [18. 8. 161. 169.]
641     cord_individual_obj[indivial_i, :] = [19. 9. 128. 137.]
642     cord_individual_obj[indivial_i, :] = [20. 8. 179. 187.]
643     cord_individual_obj[indivial_i, :] = [21. 9. 190. 199.]
644     cord_individual_obj[indivial_i, :] = [22. 8. 206. 214.]
645     cord_individual_obj[indivial_i, :] = [23. 9. 148. 157.]
646     cord_individual_obj[indivial_i, :] = [24. 8. 137. 145.]
647
648     min(cord_individual_obj[:, 3]) = 99.0
649     historl_G_best_iter[iter, 3] = 99.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 7. 170. 177.]
654     cord_individual_obj[indivial_i, :] = [ 1. 9. 178. 187.]
655     cord_individual_obj[indivial_i, :] = [ 2. 10. 157. 167.]
656     cord_individual_obj[indivial_i, :] = [ 3. 8. 149. 157.]
657     cord_individual_obj[indivial_i, :] = [ 4. 8. 208. 216.]
658     cord_individual_obj[indivial_i, :] = [ 5. 7. 241. 248.]
659     cord_individual_obj[indivial_i, :] = [ 6. 8. 191. 199.]
660     cord_individual_obj[indivial_i, :] = [ 7. 8. 175. 183.]
661     cord_individual_obj[indivial_i, :] = [ 8. 11. 177. 188.]
662     cord_individual_obj[indivial_i, :] = [ 9. 8. 171. 179.]
663     cord_individual_obj[indivial_i, :] = [10. 8. 215. 223.]
664     cord_individual_obj[indivial_i, :] = [11. 9. 166. 175.]
665     cord_individual_obj[indivial_i, :] = [12. 8. 173. 181.]
666     cord_individual_obj[indivial_i, :] = [13. 7. 132. 139.]
667     cord_individual_obj[indivial_i, :] = [14. 8. 180. 188.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 9. 214. 223.]
669 cord_individual_obj[indivial_i,:] = [ 16. 9. 174. 183.]
670 cord_individual_obj[indivial_i,:] = [ 17. 9. 165. 174.]
671 cord_individual_obj[indivial_i,:] = [ 18. 8. 218. 226.]
672 cord_individual_obj[indivial_i,:] = [ 19. 8. 166. 174.]
673 cord_individual_obj[indivial_i,:] = [ 20. 9. 205. 214.]
674 cord_individual_obj[indivial_i,:] = [ 21. 10. 160. 170.]
675 cord_individual_obj[indivial_i,:] = [ 22. 8. 91. 99.]
676 cord_individual_obj[indivial_i,:] = [ 23. 9. 192. 201.]
677 cord_individual_obj[indivial_i,:] = [ 24. 7. 261. 268.]
678
679 min(cord_individual_obj[:,3]) = 99.0
680 historl_G_best_iter[iter,3] = 99.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 218.0
689 Proportion_of_area = 0.20185185185187
690 BEST_CHROM =
691 berth: [24. 4.5 11. 25. 17. 16.5 4.5 2. 19. 10.5 12. 24.5 4.5 13.
692 25. ]
693 time: [3. 3. 0. 4. 0. 5. 5. 7. 1. 5. 3. 0. 0. 2. 6.]
694 num_QC: [4. 4. 4. 2. 4. 5. 3. 2. 3. 2. 4. 2. 2. 8. 2.]
695 Objective function values and some other indicators:
696 Obj0 = 8.00          Obj1 = 91.00          Obj0 + Obj1 = 99.00
697 Total movement of crane: 6.00
698 Total waiting time in berth position: 44.00
699 Total index of q during berthing: 1002.00
700 Specific arrangement for each vessel:
701 V_id: 0      li: 6.0           xi: 24.0           bow of i: 21.0           tail of i: 27.0           gama_i0: 3.0           gama_i1: 3
702 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0   demand_i: 60.0       work
703 load_i: 60.0          work load gap_i: 0
704 V_id: 1      li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 3.0           gama_i1: 4.0
705 .0          gama_i1 + 1: 5.0   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: 4.0           xi: 11.0           bow of i: 9.0           tail of i: 13.0           gama_i0: 0.0           gama_i1: 1
708 .0          gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 140.0       work
709 load_i: 140.0          work load gap_i: 0
710 V_id: 3      li: 8.0           xi: 25.0           bow of i: 21.0           tail of i: 29.0           gama_i0: 4.0           gama_i1: 5
711 .0          gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 80.0        work
712 load_i: 80.0          work load gap_i: 0
713 V_id: 4      li: 8.0           xi: 17.0           bow of i: 13.0           tail of i: 21.0           gama_i0: 0.0           gama_i1: 0
714 .0          gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0   demand_i: 80.0        work
715 load_i: 80.0          work load gap_i: 0
716 V_id: 5      li: 9.0           xi: 16.5           bow of i: 12.0           tail of i: 21.0           gama_i0: 5.0           gama_i1: 6
717 .0          gama_i1 + 1: 7.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 160.0       work
718 load_i: 160.0          work load gap_i: 0
719 V_id: 6      li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 5.0           gama_i1: 6.0
720 .0          gama_i1 + 1: 7.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 120.0       work load_i:
721 120.0          work load gap_i: 0
722 V_id: 7      li: 4.0           xi: 2.0            bow of i: 0.0           tail of i: 4.0           gama_i0: 7.0           gama_i1: 8.0
723 .0          gama_i1 + 1: 9.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 80.0        work load_i:
724 80.0          work load gap_i: 0
725 V_id: 8      li: 4.0           xi: 19.0           bow of i: 17.0           tail of i: 21.0           gama_i0: 1.0           gama_i1: 3
726 .0          gama_i1 + 1: 4.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 160.0       work
727 load_i: 160.0          work load gap_i: 0
728 V_id: 9      li: 3.0           xi: 10.5           bow of i: 9.0           tail of i: 12.0           gama_i0: 5.0           gama_i1: 7
729 .0          gama_i1 + 1: 8.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 120.0       work
730 load_i: 120.0          work load gap_i: 0
731 V_id: 10     li: 6.0           xi: 12.0           bow of i: 9.0           tail of i: 15.0           gama_i0: 3.0           gama_i1: 1
732 : 4.0          gama_i1 + 1: 5.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 120.0       work
733 load_i: 120.0          work load gap_i: 0
734 V_id: 11     li: 7.0           xi: 24.5           bow of i: 21.0           tail of i: 28.0           gama_i0: 0.0           gama_i1: 1
735 : 2.0          gama_i1 + 1: 3.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 120.0       work
736 load_i: 120.0          work load gap_i: 0
737 V_id: 12     li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 0.0           gama_i1: 2.0
738 100.0          gama_i1 + 1: 3.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 100.0       work load_i:
739 V_id: 13     li: 8.0           xi: 13.0           bow of i: 9.0           tail of i: 17.0           gama_i0: 2.0           gama_i1: 1
740 : 2.0          gama_i1 + 1: 3.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0   demand_i: 160.0       work
741 load_i: 160.0          work load gap_i: 0
742 V_id: 14     li: 8.0           xi: 25.0           bow of i: 21.0           tail of i: 29.0           gama_i0: 6.0           gama_i1: 1
743 : 8.0          gama_i1 + 1: 9.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 100.0       work
744 load_i: 100.0          work load gap_i: 0
745
746 Algorithm finished and the total CPU time: 445 s
747 End
748
749

```