

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 12. 507. 519.]
81 cord_individual_obj[indivial_i,:] = [ 17. 10. 378. 388.]
82 cord_individual_obj[indivial_i,:] = [ 18. 10. 347. 357.]
83 cord_individual_obj[indivial_i,:] = [ 19. 12. 287. 299.]
84 cord_individual_obj[indivial_i,:] = [ 20. 11. 322. 333.]
85 cord_individual_obj[indivial_i,:] = [ 21. 10. 360. 370.]
86 cord_individual_obj[indivial_i,:] = [ 22. 11. 457. 468.]
87 cord_individual_obj[indivial_i,:] = [ 23. 11. 314. 325.]
88 cord_individual_obj[indivial_i,:] = [ 24. 11. 386. 397.]
89
90 min(cord_individual_obj[:,3]) = 260.0
91 historl_G_best_iter[iter, 3] = 260.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 11. 309. 320.]
96 cord_individual_obj[indivial_i,:] = [ 1. 11. 249. 260.]
97 cord_individual_obj[indivial_i,:] = [ 2. 11. 353. 364.]
98 cord_individual_obj[indivial_i,:] = [ 3. 10. 323. 333.]
99 cord_individual_obj[indivial_i,:] = [ 4. 11. 291. 302.]
100 cord_individual_obj[indivial_i,:] = [ 5. 13. 363. 376.]
101 cord_individual_obj[indivial_i,:] = [ 6. 11. 262. 273.]
102 cord_individual_obj[indivial_i,:] = [ 7. 10. 300. 310.]
103 cord_individual_obj[indivial_i,:] = [ 8. 10. 253. 263.]
104 cord_individual_obj[indivial_i,:] = [ 9. 11. 277. 288.]
105 cord_individual_obj[indivial_i,:] = [ 10. 12. 339. 351.]
106 cord_individual_obj[indivial_i,:] = [ 11. 11. 247. 258.]
107 cord_individual_obj[indivial_i,:] = [ 12. 9. 294. 303.]
108 cord_individual_obj[indivial_i,:] = [ 13. 11. 236. 247.]
109 cord_individual_obj[indivial_i,:] = [ 14. 11. 297. 308.]
110 cord_individual_obj[indivial_i,:] = [ 15. 12. 342. 354.]
111 cord_individual_obj[indivial_i,:] = [ 16. 9. 261. 270.]
112 cord_individual_obj[indivial_i,:] = [ 17. 10. 229. 239.]
113 cord_individual_obj[indivial_i,:] = [ 18. 13. 283. 296.]
114 cord_individual_obj[indivial_i,:] = [ 19. 12. 384. 396.]
115 cord_individual_obj[indivial_i,:] = [ 20. 10. 232. 242.]
116 cord_individual_obj[indivial_i,:] = [ 21. 11. 313. 324.]
117 cord_individual_obj[indivial_i,:] = [ 22. 12. 277. 289.]
118 cord_individual_obj[indivial_i,:] = [ 23. 11. 306. 317.]
119 cord_individual_obj[indivial_i,:] = [ 24. 11. 261. 272.]
120
121 min(cord_individual_obj[:,3]) = 239.0
122 historl_G_best_iter[iter, 3] = 239.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 12. 311. 323.]
127 cord_individual_obj[indivial_i,:] = [ 1. 11. 294. 305.]
128 cord_individual_obj[indivial_i,:] = [ 2. 11. 264. 275.]
129 cord_individual_obj[indivial_i,:] = [ 3. 9. 237. 246.]
130 cord_individual_obj[indivial_i,:] = [ 4. 10. 246. 256.]
131 cord_individual_obj[indivial_i,:] = [ 5. 11. 251. 262.]
132 cord_individual_obj[indivial_i,:] = [ 6. 11. 259. 270.]
133 cord_individual_obj[indivial_i,:] = [ 7. 13. 218. 231.]
134 cord_individual_obj[indivial_i,:] = [ 8. 12. 282. 294.]
135 cord_individual_obj[indivial_i,:] = [ 9. 11. 276. 287.]
136 cord_individual_obj[indivial_i,:] = [ 10. 13. 274. 287.]
137 cord_individual_obj[indivial_i,:] = [ 11. 11. 250. 261.]
138 cord_individual_obj[indivial_i,:] = [ 12. 12. 287. 299.]
139 cord_individual_obj[indivial_i,:] = [ 13. 12. 244. 256.]
140 cord_individual_obj[indivial_i,:] = [ 14. 11. 226. 237.]
141 cord_individual_obj[indivial_i,:] = [ 15. 12. 266. 278.]
142 cord_individual_obj[indivial_i,:] = [ 16. 12. 187. 199.]
143 cord_individual_obj[indivial_i,:] = [ 17. 13. 243. 256.]
144 cord_individual_obj[indivial_i,:] = [ 18. 12. 285. 297.]
145 cord_individual_obj[indivial_i,:] = [ 19. 10. 229. 239.]
146 cord_individual_obj[indivial_i,:] = [ 20. 13. 265. 278.]
147 cord_individual_obj[indivial_i,:] = [ 21. 10. 247. 257.]
148 cord_individual_obj[indivial_i,:] = [ 22. 10. 270. 280.]
149 cord_individual_obj[indivial_i,:] = [ 23. 13. 238. 251.]
150 cord_individual_obj[indivial_i,:] = [ 24. 12. 214. 226.]
151
152 min(cord_individual_obj[:,3]) = 199.0
153 historl_G_best_iter[iter, 3] = 199.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 12. 187. 199.]
158 cord_individual_obj[indivial_i,:] = [ 1. 10. 259. 269.]
159 cord_individual_obj[indivial_i,:] = [ 2. 10. 272. 282.]
160 cord_individual_obj[indivial_i,:] = [ 3. 11. 250. 261.]
161 cord_individual_obj[indivial_i,:] = [ 4. 11. 229. 240.]
162 cord_individual_obj[indivial_i,:] = [ 5. 9. 234. 243.]
163 cord_individual_obj[indivial_i,:] = [ 6. 11. 267. 278.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 12. 276. 288.]
165 cord_individual_obj[indivial_i,:] = [ 8. 12. 315. 327.]
166 cord_individual_obj[indivial_i,:] = [ 9. 10. 240. 250.]
167 cord_individual_obj[indivial_i,:] = [ 10. 13. 288. 301.]
168 cord_individual_obj[indivial_i,:] = [ 11. 9. 260. 269.]
169 cord_individual_obj[indivial_i,:] = [ 12. 12. 283. 295.]
170 cord_individual_obj[indivial_i,:] = [ 13. 12. 173. 185.]
171 cord_individual_obj[indivial_i,:] = [ 14. 13. 253. 266.]
172 cord_individual_obj[indivial_i,:] = [ 15. 12. 283. 295.]
173 cord_individual_obj[indivial_i,:] = [ 16. 11. 270. 281.]
174 cord_individual_obj[indivial_i,:] = [ 17. 12. 304. 316.]
175 cord_individual_obj[indivial_i,:] = [ 18. 12. 236. 248.]
176 cord_individual_obj[indivial_i,:] = [ 19. 11. 259. 270.]
177 cord_individual_obj[indivial_i,:] = [ 20. 10. 256. 266.]
178 cord_individual_obj[indivial_i,:] = [ 21. 12. 322. 334.]
179 cord_individual_obj[indivial_i,:] = [ 22. 12. 320. 332.]
180 cord_individual_obj[indivial_i,:] = [ 23. 13. 261. 274.]
181 cord_individual_obj[indivial_i,:] = [ 24. 13. 248. 261.]
182
183 min(cord_individual_obj[:,3]) = 185.0
184 historl_G_best_iter[iter, 3] = 185.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 11. 237. 248.]
189 cord_individual_obj[indivial_i,:] = [ 1. 13. 207. 220.]
190 cord_individual_obj[indivial_i,:] = [ 2. 12. 217. 229.]
191 cord_individual_obj[indivial_i,:] = [ 3. 11. 198. 209.]
192 cord_individual_obj[indivial_i,:] = [ 4. 12. 205. 217.]
193 cord_individual_obj[indivial_i,:] = [ 5. 12. 247. 259.]
194 cord_individual_obj[indivial_i,:] = [ 6. 12. 224. 236.]
195 cord_individual_obj[indivial_i,:] = [ 7. 12. 232. 244.]
196 cord_individual_obj[indivial_i,:] = [ 8. 10. 218. 228.]
197 cord_individual_obj[indivial_i,:] = [ 9. 11. 250. 261.]
198 cord_individual_obj[indivial_i,:] = [ 10. 15. 283. 298.]
199 cord_individual_obj[indivial_i,:] = [ 11. 9. 259. 268.]
200 cord_individual_obj[indivial_i,:] = [ 12. 10. 197. 207.]
201 cord_individual_obj[indivial_i,:] = [ 13. 13. 190. 203.]
202 cord_individual_obj[indivial_i,:] = [ 14. 11. 257. 268.]
203 cord_individual_obj[indivial_i,:] = [ 15. 13. 199. 212.]
204 cord_individual_obj[indivial_i,:] = [ 16. 11. 196. 207.]
205 cord_individual_obj[indivial_i,:] = [ 17. 11. 192. 203.]
206 cord_individual_obj[indivial_i,:] = [ 18. 10. 212. 222.]
207 cord_individual_obj[indivial_i,:] = [ 19. 12. 205. 217.]
208 cord_individual_obj[indivial_i,:] = [ 20. 15. 217. 232.]
209 cord_individual_obj[indivial_i,:] = [ 21. 12. 173. 185.]
210 cord_individual_obj[indivial_i,:] = [ 22. 10. 263. 273.]
211 cord_individual_obj[indivial_i,:] = [ 23. 11. 236. 247.]
212 cord_individual_obj[indivial_i,:] = [ 24. 12. 207. 219.]
213
214 min(cord_individual_obj[:,3]) = 185.0
215 historl_G_best_iter[iter, 3] = 185.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 11. 226. 237.]
220 cord_individual_obj[indivial_i,:] = [ 1. 11. 242. 253.]
221 cord_individual_obj[indivial_i,:] = [ 2. 11. 278. 289.]
222 cord_individual_obj[indivial_i,:] = [ 3. 11. 272. 283.]
223 cord_individual_obj[indivial_i,:] = [ 4. 10. 261. 271.]
224 cord_individual_obj[indivial_i,:] = [ 5. 12. 191. 203.]
225 cord_individual_obj[indivial_i,:] = [ 6. 10. 239. 249.]
226 cord_individual_obj[indivial_i,:] = [ 7. 10. 245. 255.]
227 cord_individual_obj[indivial_i,:] = [ 8. 13. 156. 169.]
228 cord_individual_obj[indivial_i,:] = [ 9. 12. 265. 277.]
229 cord_individual_obj[indivial_i,:] = [ 10. 12. 173. 185.]
230 cord_individual_obj[indivial_i,:] = [ 11. 10. 206. 216.]
231 cord_individual_obj[indivial_i,:] = [ 12. 10. 215. 225.]
232 cord_individual_obj[indivial_i,:] = [ 13. 10. 221. 231.]
233 cord_individual_obj[indivial_i,:] = [ 14. 12. 226. 238.]
234 cord_individual_obj[indivial_i,:] = [ 15. 10. 174. 184.]
235 cord_individual_obj[indivial_i,:] = [ 16. 12. 199. 211.]
236 cord_individual_obj[indivial_i,:] = [ 17. 11. 304. 315.]
237 cord_individual_obj[indivial_i,:] = [ 18. 13. 268. 281.]
238 cord_individual_obj[indivial_i,:] = [ 19. 10. 252. 262.]
239 cord_individual_obj[indivial_i,:] = [ 20. 12. 249. 261.]
240 cord_individual_obj[indivial_i,:] = [ 21. 11. 233. 244.]
241 cord_individual_obj[indivial_i,:] = [ 22. 10. 277. 287.]
242 cord_individual_obj[indivial_i,:] = [ 23. 11. 224. 235.]
243 cord_individual_obj[indivial_i,:] = [ 24. 10. 288. 298.]
244
245 min(cord_individual_obj[:,3]) = 169.0
246 historl_G_best_iter[iter, 3] = 169.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 12. 250. 262.]
251 cord_individual_obj[indivial_i, :] = [ 1. 11. 250. 261.]
252 cord_individual_obj[indivial_i, :] = [ 2. 10. 184. 194.]
253 cord_individual_obj[indivial_i, :] = [ 3. 11. 275. 286.]
254 cord_individual_obj[indivial_i, :] = [ 4. 12. 369. 381.]
255 cord_individual_obj[indivial_i, :] = [ 5. 10. 270. 280.]
256 cord_individual_obj[indivial_i, :] = [ 6. 11. 294. 305.]
257 cord_individual_obj[indivial_i, :] = [ 7. 11. 291. 302.]
258 cord_individual_obj[indivial_i, :] = [ 8. 9. 244. 253.]
259 cord_individual_obj[indivial_i, :] = [ 9. 11. 324. 335.]
260 cord_individual_obj[indivial_i, :] = [ 10. 12. 223. 235.]
261 cord_individual_obj[indivial_i, :] = [ 11. 10. 254. 264.]
262 cord_individual_obj[indivial_i, :] = [ 12. 10. 256. 266.]
263 cord_individual_obj[indivial_i, :] = [ 13. 11. 200. 211.]
264 cord_individual_obj[indivial_i, :] = [ 14. 12. 283. 295.]
265 cord_individual_obj[indivial_i, :] = [ 15. 10. 278. 288.]
266 cord_individual_obj[indivial_i, :] = [ 16. 12. 264. 276.]
267 cord_individual_obj[indivial_i, :] = [ 17. 13. 156. 169.]
268 cord_individual_obj[indivial_i, :] = [ 18. 12. 213. 225.]
269 cord_individual_obj[indivial_i, :] = [ 19. 11. 278. 289.]
270 cord_individual_obj[indivial_i, :] = [ 20. 11. 234. 245.]
271 cord_individual_obj[indivial_i, :] = [ 21. 10. 274. 284.]
272 cord_individual_obj[indivial_i, :] = [ 22. 12. 212. 224.]
273 cord_individual_obj[indivial_i, :] = [ 23. 10. 267. 277.]
274 cord_individual_obj[indivial_i, :] = [ 24. 11. 222. 233.]
275

276 min(cord_individual_obj[:, 3]) = 169.0
277 historl_G_best_iter[iter, 3] = 169.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 10. 186. 196.]
282 cord_individual_obj[indivial_i, :] = [ 1. 11. 231. 242.]
283 cord_individual_obj[indivial_i, :] = [ 2. 12. 202. 214.]
284 cord_individual_obj[indivial_i, :] = [ 3. 12. 218. 230.]
285 cord_individual_obj[indivial_i, :] = [ 4. 13. 156. 169.]
286 cord_individual_obj[indivial_i, :] = [ 5. 10. 184. 194.]
287 cord_individual_obj[indivial_i, :] = [ 6. 10. 218. 228.]
288 cord_individual_obj[indivial_i, :] = [ 7. 12. 239. 251.]
289 cord_individual_obj[indivial_i, :] = [ 8. 11. 233. 244.]
290 cord_individual_obj[indivial_i, :] = [ 9. 10. 291. 301.]
291 cord_individual_obj[indivial_i, :] = [ 10. 12. 211. 223.]
292 cord_individual_obj[indivial_i, :] = [ 11. 11. 204. 215.]
293 cord_individual_obj[indivial_i, :] = [ 12. 12. 259. 271.]
294 cord_individual_obj[indivial_i, :] = [ 13. 10. 187. 197.]
295 cord_individual_obj[indivial_i, :] = [ 14. 10. 236. 246.]
296 cord_individual_obj[indivial_i, :] = [ 15. 12. 245. 257.]
297 cord_individual_obj[indivial_i, :] = [ 16. 13. 206. 219.]
298 cord_individual_obj[indivial_i, :] = [ 17. 11. 238. 249.]
299 cord_individual_obj[indivial_i, :] = [ 18. 12. 229. 241.]
300 cord_individual_obj[indivial_i, :] = [ 19. 11. 218. 229.]
301 cord_individual_obj[indivial_i, :] = [ 20. 11. 186. 197.]
302 cord_individual_obj[indivial_i, :] = [ 21. 10. 262. 272.]
303 cord_individual_obj[indivial_i, :] = [ 22. 11. 245. 256.]
304 cord_individual_obj[indivial_i, :] = [ 23. 12. 228. 240.]
305 cord_individual_obj[indivial_i, :] = [ 24. 11. 213. 224.]
306

307 min(cord_individual_obj[:, 3]) = 169.0
308 historl_G_best_iter[iter, 3] = 169.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 9. 235. 244.]
313 cord_individual_obj[indivial_i, :] = [ 1. 11. 231. 242.]
314 cord_individual_obj[indivial_i, :] = [ 2. 8. 227. 235.]
315 cord_individual_obj[indivial_i, :] = [ 3. 10. 200. 210.]
316 cord_individual_obj[indivial_i, :] = [ 4. 11. 241. 252.]
317 cord_individual_obj[indivial_i, :] = [ 5. 11. 269. 280.]
318 cord_individual_obj[indivial_i, :] = [ 6. 11. 211. 222.]
319 cord_individual_obj[indivial_i, :] = [ 7. 12. 268. 280.]
320 cord_individual_obj[indivial_i, :] = [ 8. 10. 215. 225.]
321 cord_individual_obj[indivial_i, :] = [ 9. 13. 156. 169.]
322 cord_individual_obj[indivial_i, :] = [ 10. 10. 302. 312.]
323 cord_individual_obj[indivial_i, :] = [ 11. 10. 195. 205.]
324 cord_individual_obj[indivial_i, :] = [ 12. 11. 318. 329.]
325 cord_individual_obj[indivial_i, :] = [ 13. 11. 221. 232.]
326 cord_individual_obj[indivial_i, :] = [ 14. 11. 224. 235.]
327 cord_individual_obj[indivial_i, :] = [ 15. 11. 248. 259.]
328 cord_individual_obj[indivial_i, :] = [ 16. 11. 243. 254.]
329 cord_individual_obj[indivial_i, :] = [ 17. 11. 270. 281.]
330 cord_individual_obj[indivial_i, :] = [ 18. 12. 271. 283.]
331 cord_individual_obj[indivial_i, :] = [ 19. 12. 286. 298.]

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unknown

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332     cord_individual_obj[indivial_i, :] = [ 20.  9. 259. 268.]
333     cord_individual_obj[indivial_i, :] = [ 21. 11. 258. 269.]
334     cord_individual_obj[indivial_i, :] = [ 22. 10. 230. 240.]
335     cord_individual_obj[indivial_i, :] = [ 23. 10. 268. 278.]
336     cord_individual_obj[indivial_i, :] = [ 24. 11. 228. 239.]
337
338 min(cord_individual_obj[:, 3]) = 169.0
339 historl_G_best_iter[iter, 3] = 169.0
340 Begin iteration:
341
342 iter = 10
343     cord_individual_obj[indivial_i, :] = [ 0. 11. 251. 262.]
344     cord_individual_obj[indivial_i, :] = [ 1. 10. 186. 196.]
345     cord_individual_obj[indivial_i, :] = [ 2. 12. 218. 230.]
346     cord_individual_obj[indivial_i, :] = [ 3. 11. 148. 159.]
347     cord_individual_obj[indivial_i, :] = [ 4. 11. 232. 243.]
348     cord_individual_obj[indivial_i, :] = [ 5. 11. 189. 200.]
349     cord_individual_obj[indivial_i, :] = [ 6. 11. 220. 231.]
350     cord_individual_obj[indivial_i, :] = [ 7. 11. 215. 226.]
351     cord_individual_obj[indivial_i, :] = [ 8. 11. 235. 246.]
352     cord_individual_obj[indivial_i, :] = [ 9. 11. 274. 285.]
353     cord_individual_obj[indivial_i, :] = [ 10. 11. 198. 209.]
354     cord_individual_obj[indivial_i, :] = [ 11. 11. 203. 214.]
355     cord_individual_obj[indivial_i, :] = [ 12. 13. 156. 169.]
356     cord_individual_obj[indivial_i, :] = [ 13. 10. 175. 185.]
357     cord_individual_obj[indivial_i, :] = [ 14. 11. 199. 210.]
358     cord_individual_obj[indivial_i, :] = [ 15. 11. 248. 259.]
359     cord_individual_obj[indivial_i, :] = [ 16. 13. 240. 253.]
360     cord_individual_obj[indivial_i, :] = [ 17. 11. 274. 285.]
361     cord_individual_obj[indivial_i, :] = [ 18. 12. 216. 228.]
362     cord_individual_obj[indivial_i, :] = [ 19. 11. 212. 223.]
363     cord_individual_obj[indivial_i, :] = [ 20. 12. 267. 279.]
364     cord_individual_obj[indivial_i, :] = [ 21. 11. 235. 246.]
365     cord_individual_obj[indivial_i, :] = [ 22. 11. 270. 281.]
366     cord_individual_obj[indivial_i, :] = [ 23. 11. 242. 253.]
367     cord_individual_obj[indivial_i, :] = [ 24. 11. 176. 187.]
368
369 min(cord_individual_obj[:, 3]) = 159.0
370 historl_G_best_iter[iter, 3] = 159.0
371 Begin iteration:
372
373 iter = 11
374     cord_individual_obj[indivial_i, :] = [ 0. 10. 206. 216.]
375     cord_individual_obj[indivial_i, :] = [ 1. 10. 287. 297.]
376     cord_individual_obj[indivial_i, :] = [ 2. 12. 206. 218.]
377     cord_individual_obj[indivial_i, :] = [ 3. 10. 265. 275.]
378     cord_individual_obj[indivial_i, :] = [ 4. 11. 232. 243.]
379     cord_individual_obj[indivial_i, :] = [ 5. 11. 174. 185.]
380     cord_individual_obj[indivial_i, :] = [ 6. 11. 190. 201.]
381     cord_individual_obj[indivial_i, :] = [ 7. 11. 201. 212.]
382     cord_individual_obj[indivial_i, :] = [ 8. 10. 182. 192.]
383     cord_individual_obj[indivial_i, :] = [ 9. 11. 148. 159.]
384     cord_individual_obj[indivial_i, :] = [ 10. 12. 192. 204.]
385     cord_individual_obj[indivial_i, :] = [ 11. 11. 191. 202.]
386     cord_individual_obj[indivial_i, :] = [ 12. 12. 190. 202.]
387     cord_individual_obj[indivial_i, :] = [ 13. 10. 203. 213.]
388     cord_individual_obj[indivial_i, :] = [ 14. 11. 233. 244.]
389     cord_individual_obj[indivial_i, :] = [ 15. 12. 210. 222.]
390     cord_individual_obj[indivial_i, :] = [ 16. 11. 219. 230.]
391     cord_individual_obj[indivial_i, :] = [ 17. 14. 286. 300.]
392     cord_individual_obj[indivial_i, :] = [ 18. 11. 222. 233.]
393     cord_individual_obj[indivial_i, :] = [ 19. 11. 255. 266.]
394     cord_individual_obj[indivial_i, :] = [ 20. 11. 235. 246.]
395     cord_individual_obj[indivial_i, :] = [ 21. 10. 198. 208.]
396     cord_individual_obj[indivial_i, :] = [ 22. 10. 212. 222.]
397     cord_individual_obj[indivial_i, :] = [ 23. 11. 198. 209.]
398     cord_individual_obj[indivial_i, :] = [ 24. 12. 228. 240.]
399
400 min(cord_individual_obj[:, 3]) = 159.0
401 historl_G_best_iter[iter, 3] = 159.0
402 Begin iteration:
403
404 iter = 12
405     cord_individual_obj[indivial_i, :] = [ 0. 10. 230. 240.]
406     cord_individual_obj[indivial_i, :] = [ 1. 10. 226. 236.]
407     cord_individual_obj[indivial_i, :] = [ 2. 11. 200. 211.]
408     cord_individual_obj[indivial_i, :] = [ 3. 12. 227. 239.]
409     cord_individual_obj[indivial_i, :] = [ 4. 12. 229. 241.]
410     cord_individual_obj[indivial_i, :] = [ 5. 10. 274. 284.]
411     cord_individual_obj[indivial_i, :] = [ 6. 10. 191. 201.]
412     cord_individual_obj[indivial_i, :] = [ 7. 12. 223. 235.]
413     cord_individual_obj[indivial_i, :] = [ 8. 12. 252. 264.]
414     cord_individual_obj[indivial_i, :] = [ 9. 11. 329. 340.]
415     cord_individual_obj[indivial_i, :] = [ 10. 12. 217. 229.]
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416 cord_individual_obj[indivial_i,:] = [ 11. 11. 273. 284.]
417 cord_individual_obj[indivial_i,:] = [ 12. 13. 233. 246.]
418 cord_individual_obj[indivial_i,:] = [ 13. 13. 236. 249.]
419 cord_individual_obj[indivial_i,:] = [ 14. 11. 255. 266.]
420 cord_individual_obj[indivial_i,:] = [ 15. 12. 226. 238.]
421 cord_individual_obj[indivial_i,:] = [ 16. 10. 193. 203.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 148. 159.]
423 cord_individual_obj[indivial_i,:] = [ 18. 11. 172. 183.]
424 cord_individual_obj[indivial_i,:] = [ 19. 12. 220. 232.]
425 cord_individual_obj[indivial_i,:] = [ 20. 13. 245. 258.]
426 cord_individual_obj[indivial_i,:] = [ 21. 9. 186. 195.]
427 cord_individual_obj[indivial_i,:] = [ 22. 9. 186. 195.]
428 cord_individual_obj[indivial_i,:] = [ 23. 12. 210. 222.]
429 cord_individual_obj[indivial_i,:] = [ 24. 10. 241. 251.]
430
431 min(cord_individual_obj[:,3]) = 159.0
432 histol_G_best_iter[iter,3] = 159.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 11. 241. 252.]
437 cord_individual_obj[indivial_i,:] = [ 1. 11. 216. 227.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 234. 243.]
439 cord_individual_obj[indivial_i,:] = [ 3. 10. 231. 241.]
440 cord_individual_obj[indivial_i,:] = [ 4. 12. 246. 258.]
441 cord_individual_obj[indivial_i,:] = [ 5. 10. 252. 262.]
442 cord_individual_obj[indivial_i,:] = [ 6. 13. 215. 228.]
443 cord_individual_obj[indivial_i,:] = [ 7. 10. 187. 197.]
444 cord_individual_obj[indivial_i,:] = [ 8. 12. 250. 262.]
445 cord_individual_obj[indivial_i,:] = [ 9. 11. 148. 159.]
446 cord_individual_obj[indivial_i,:] = [ 10. 10. 225. 235.]
447 cord_individual_obj[indivial_i,:] = [ 11. 10. 156. 166.]
448 cord_individual_obj[indivial_i,:] = [ 12. 12. 222. 234.]
449 cord_individual_obj[indivial_i,:] = [ 13. 12. 214. 226.]
450 cord_individual_obj[indivial_i,:] = [ 14. 10. 209. 219.]
451 cord_individual_obj[indivial_i,:] = [ 15. 10. 217. 227.]
452 cord_individual_obj[indivial_i,:] = [ 16. 11. 248. 259.]
453 cord_individual_obj[indivial_i,:] = [ 17. 12. 256. 268.]
454 cord_individual_obj[indivial_i,:] = [ 18. 12. 211. 223.]
455 cord_individual_obj[indivial_i,:] = [ 19. 11. 232. 243.]
456 cord_individual_obj[indivial_i,:] = [ 20. 12. 239. 251.]
457 cord_individual_obj[indivial_i,:] = [ 21. 8. 252. 260.]
458 cord_individual_obj[indivial_i,:] = [ 22. 10. 211. 221.]
459 cord_individual_obj[indivial_i,:] = [ 23. 10. 233. 243.]
460 cord_individual_obj[indivial_i,:] = [ 24. 12. 195. 207.]
461
462 min(cord_individual_obj[:,3]) = 159.0
463 histol_G_best_iter[iter,3] = 159.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 12. 227. 239.]
468 cord_individual_obj[indivial_i,:] = [ 1. 11. 184. 195.]
469 cord_individual_obj[indivial_i,:] = [ 2. 11. 221. 232.]
470 cord_individual_obj[indivial_i,:] = [ 3. 9. 226. 235.]
471 cord_individual_obj[indivial_i,:] = [ 4. 10. 195. 205.]
472 cord_individual_obj[indivial_i,:] = [ 5. 13. 219. 232.]
473 cord_individual_obj[indivial_i,:] = [ 6. 12. 247. 259.]
474 cord_individual_obj[indivial_i,:] = [ 7. 12. 154. 166.]
475 cord_individual_obj[indivial_i,:] = [ 8. 10. 217. 227.]
476 cord_individual_obj[indivial_i,:] = [ 9. 12. 232. 244.]
477 cord_individual_obj[indivial_i,:] = [ 10. 10. 242. 252.]
478 cord_individual_obj[indivial_i,:] = [ 11. 10. 225. 235.]
479 cord_individual_obj[indivial_i,:] = [ 12. 11. 187. 198.]
480 cord_individual_obj[indivial_i,:] = [ 13. 12. 252. 264.]
481 cord_individual_obj[indivial_i,:] = [ 14. 9. 212. 221.]
482 cord_individual_obj[indivial_i,:] = [ 15. 11. 203. 214.]
483 cord_individual_obj[indivial_i,:] = [ 16. 10. 215. 225.]
484 cord_individual_obj[indivial_i,:] = [ 17. 11. 148. 159.]
485 cord_individual_obj[indivial_i,:] = [ 18. 10. 227. 237.]
486 cord_individual_obj[indivial_i,:] = [ 19. 12. 228. 240.]
487 cord_individual_obj[indivial_i,:] = [ 20. 11. 224. 235.]
488 cord_individual_obj[indivial_i,:] = [ 21. 9. 226. 235.]
489 cord_individual_obj[indivial_i,:] = [ 22. 9. 261. 270.]
490 cord_individual_obj[indivial_i,:] = [ 23. 10. 233. 243.]
491 cord_individual_obj[indivial_i,:] = [ 24. 13. 222. 235.]
492
493 min(cord_individual_obj[:,3]) = 159.0
494 histol_G_best_iter[iter,3] = 159.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 11. 163. 174.]
499 cord_individual_obj[indivial_i,:] = [ 1. 11. 167. 178.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 12. 207. 219.]
501 cord_individual_obj[indivial_i, :] = [ 3. 11. 200. 211.]
502 cord_individual_obj[indivial_i, :] = [ 4. 12. 200. 212.]
503 cord_individual_obj[indivial_i, :] = [ 5. 11. 196. 207.]
504 cord_individual_obj[indivial_i, :] = [ 6. 9. 173. 182.]
505 cord_individual_obj[indivial_i, :] = [ 7. 12. 192. 204.]
506 cord_individual_obj[indivial_i, :] = [ 8. 11. 232. 243.]
507 cord_individual_obj[indivial_i, :] = [ 9. 12. 226. 238.]
508 cord_individual_obj[indivial_i, :] = [ 10. 12. 169. 181.]
509 cord_individual_obj[indivial_i, :] = [ 11. 12. 154. 166.]
510 cord_individual_obj[indivial_i, :] = [ 12. 12. 197. 209.]
511 cord_individual_obj[indivial_i, :] = [ 13. 11. 202. 213.]
512 cord_individual_obj[indivial_i, :] = [ 14. 11. 267. 278.]
513 cord_individual_obj[indivial_i, :] = [ 15. 11. 162. 173.]
514 cord_individual_obj[indivial_i, :] = [ 16. 10. 199. 209.]
515 cord_individual_obj[indivial_i, :] = [ 17. 12. 241. 253.]
516 cord_individual_obj[indivial_i, :] = [ 18. 11. 197. 208.]
517 cord_individual_obj[indivial_i, :] = [ 19. 10. 201. 211.]
518 cord_individual_obj[indivial_i, :] = [ 20. 13. 178. 191.]
519 cord_individual_obj[indivial_i, :] = [ 21. 10. 205. 215.]
520 cord_individual_obj[indivial_i, :] = [ 22. 11. 148. 159.]
521 cord_individual_obj[indivial_i, :] = [ 23. 12. 208. 220.]
522 cord_individual_obj[indivial_i, :] = [ 24. 11. 232. 243.]
523
524 min(cord_individual_obj[:, 3]) = 159.0
525 histol_G_best_iter[iter, 3] = 159.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 11. 200. 211.]
530 cord_individual_obj[indivial_i, :] = [ 1. 11. 223. 234.]
531 cord_individual_obj[indivial_i, :] = [ 2. 13. 214. 227.]
532 cord_individual_obj[indivial_i, :] = [ 3. 13. 178. 191.]
533 cord_individual_obj[indivial_i, :] = [ 4. 12. 209. 221.]
534 cord_individual_obj[indivial_i, :] = [ 5. 10. 201. 211.]
535 cord_individual_obj[indivial_i, :] = [ 6. 10. 190. 200.]
536 cord_individual_obj[indivial_i, :] = [ 7. 13. 249. 262.]
537 cord_individual_obj[indivial_i, :] = [ 8. 9. 201. 210.]
538 cord_individual_obj[indivial_i, :] = [ 9. 12. 238. 250.]
539 cord_individual_obj[indivial_i, :] = [ 10. 10. 185. 195.]
540 cord_individual_obj[indivial_i, :] = [ 11. 9. 177. 186.]
541 cord_individual_obj[indivial_i, :] = [ 12. 12. 191. 203.]
542 cord_individual_obj[indivial_i, :] = [ 13. 9. 206. 215.]
543 cord_individual_obj[indivial_i, :] = [ 14. 11. 148. 159.]
544 cord_individual_obj[indivial_i, :] = [ 15. 10. 231. 241.]
545 cord_individual_obj[indivial_i, :] = [ 16. 10. 204. 214.]
546 cord_individual_obj[indivial_i, :] = [ 17. 11. 183. 194.]
547 cord_individual_obj[indivial_i, :] = [ 18. 10. 260. 270.]
548 cord_individual_obj[indivial_i, :] = [ 19. 11. 204. 215.]
549 cord_individual_obj[indivial_i, :] = [ 20. 12. 218. 230.]
550 cord_individual_obj[indivial_i, :] = [ 21. 11. 284. 295.]
551 cord_individual_obj[indivial_i, :] = [ 22. 11. 212. 223.]
552 cord_individual_obj[indivial_i, :] = [ 23. 11. 213. 224.]
553 cord_individual_obj[indivial_i, :] = [ 24. 11. 210. 221.]
554
555 min(cord_individual_obj[:, 3]) = 159.0
556 histol_G_best_iter[iter, 3] = 159.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 11. 186. 197.]
561 cord_individual_obj[indivial_i, :] = [ 1. 11. 274. 285.]
562 cord_individual_obj[indivial_i, :] = [ 2. 10. 221. 231.]
563 cord_individual_obj[indivial_i, :] = [ 3. 9. 258. 267.]
564 cord_individual_obj[indivial_i, :] = [ 4. 12. 180. 192.]
565 cord_individual_obj[indivial_i, :] = [ 5. 10. 273. 283.]
566 cord_individual_obj[indivial_i, :] = [ 6. 11. 158. 169.]
567 cord_individual_obj[indivial_i, :] = [ 7. 10. 308. 318.]
568 cord_individual_obj[indivial_i, :] = [ 8. 10. 204. 214.]
569 cord_individual_obj[indivial_i, :] = [ 9. 11. 242. 253.]
570 cord_individual_obj[indivial_i, :] = [ 10. 11. 259. 270.]
571 cord_individual_obj[indivial_i, :] = [ 11. 10. 189. 199.]
572 cord_individual_obj[indivial_i, :] = [ 12. 13. 222. 235.]
573 cord_individual_obj[indivial_i, :] = [ 13. 11. 187. 198.]
574 cord_individual_obj[indivial_i, :] = [ 14. 10. 209. 219.]
575 cord_individual_obj[indivial_i, :] = [ 15. 13. 174. 187.]
576 cord_individual_obj[indivial_i, :] = [ 16. 10. 233. 243.]
577 cord_individual_obj[indivial_i, :] = [ 17. 12. 243. 255.]
578 cord_individual_obj[indivial_i, :] = [ 18. 10. 158. 168.]
579 cord_individual_obj[indivial_i, :] = [ 19. 11. 173. 184.]
580 cord_individual_obj[indivial_i, :] = [ 20. 11. 203. 214.]
581 cord_individual_obj[indivial_i, :] = [ 21. 11. 148. 159.]
582 cord_individual_obj[indivial_i, :] = [ 22. 10. 241. 251.]
583 cord_individual_obj[indivial_i, :] = [ 23. 11. 222. 233.]

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584     cord_individual_obj[indivial_i, :] = [ 24. 10. 274. 284.]
585
586     min(cord_individual_obj[:, 3]) = 159.0
587     historl_G_best_iter[iter, 3] = 159.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 10. 179. 189.]
592     cord_individual_obj[indivial_i, :] = [ 1. 11. 197. 208.]
593     cord_individual_obj[indivial_i, :] = [ 2. 11. 218. 229.]
594     cord_individual_obj[indivial_i, :] = [ 3. 11. 238. 249.]
595     cord_individual_obj[indivial_i, :] = [ 4. 11. 255. 266.]
596     cord_individual_obj[indivial_i, :] = [ 5. 12. 249. 261.]
597     cord_individual_obj[indivial_i, :] = [ 6. 11. 190. 201.]
598     cord_individual_obj[indivial_i, :] = [ 7. 11. 148. 159.]
599     cord_individual_obj[indivial_i, :] = [ 8. 10. 233. 243.]
600     cord_individual_obj[indivial_i, :] = [ 9. 11. 187. 198.]
601     cord_individual_obj[indivial_i, :] = [ 10. 12. 244. 256.]
602     cord_individual_obj[indivial_i, :] = [ 11. 11. 233. 244.]
603     cord_individual_obj[indivial_i, :] = [ 12. 10. 222. 232.]
604     cord_individual_obj[indivial_i, :] = [ 13. 11. 242. 253.]
605     cord_individual_obj[indivial_i, :] = [ 14. 10. 245. 255.]
606     cord_individual_obj[indivial_i, :] = [ 15. 11. 220. 231.]
607     cord_individual_obj[indivial_i, :] = [ 16. 10. 212. 222.]
608     cord_individual_obj[indivial_i, :] = [ 17. 11. 222. 233.]
609     cord_individual_obj[indivial_i, :] = [ 18. 13. 267. 280.]
610     cord_individual_obj[indivial_i, :] = [ 19. 11. 261. 272.]
611     cord_individual_obj[indivial_i, :] = [ 20. 12. 226. 238.]
612     cord_individual_obj[indivial_i, :] = [ 21. 10. 238. 248.]
613     cord_individual_obj[indivial_i, :] = [ 22. 9. 218. 227.]
614     cord_individual_obj[indivial_i, :] = [ 23. 10. 322. 332.]
615     cord_individual_obj[indivial_i, :] = [ 24. 13. 215. 228.]
616
617     min(cord_individual_obj[:, 3]) = 159.0
618     historl_G_best_iter[iter, 3] = 159.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 11. 210. 221.]
623     cord_individual_obj[indivial_i, :] = [ 1. 10. 192. 202.]
624     cord_individual_obj[indivial_i, :] = [ 2. 12. 218. 230.]
625     cord_individual_obj[indivial_i, :] = [ 3. 12. 226. 238.]
626     cord_individual_obj[indivial_i, :] = [ 4. 12. 181. 193.]
627     cord_individual_obj[indivial_i, :] = [ 5. 10. 331. 341.]
628     cord_individual_obj[indivial_i, :] = [ 6. 12. 233. 245.]
629     cord_individual_obj[indivial_i, :] = [ 7. 12. 237. 249.]
630     cord_individual_obj[indivial_i, :] = [ 8. 13. 242. 255.]
631     cord_individual_obj[indivial_i, :] = [ 9. 11. 208. 219.]
632     cord_individual_obj[indivial_i, :] = [ 10. 11. 228. 239.]
633     cord_individual_obj[indivial_i, :] = [ 11. 9. 202. 211.]
634     cord_individual_obj[indivial_i, :] = [ 12. 12. 257. 269.]
635     cord_individual_obj[indivial_i, :] = [ 13. 12. 180. 192.]
636     cord_individual_obj[indivial_i, :] = [ 14. 10. 213. 223.]
637     cord_individual_obj[indivial_i, :] = [ 15. 11. 207. 218.]
638     cord_individual_obj[indivial_i, :] = [ 16. 12. 227. 239.]
639     cord_individual_obj[indivial_i, :] = [ 17. 11. 161. 172.]
640     cord_individual_obj[indivial_i, :] = [ 18. 11. 193. 204.]
641     cord_individual_obj[indivial_i, :] = [ 19. 10. 152. 162.]
642     cord_individual_obj[indivial_i, :] = [ 20. 12. 207. 219.]
643     cord_individual_obj[indivial_i, :] = [ 21. 9. 208. 217.]
644     cord_individual_obj[indivial_i, :] = [ 22. 11. 242. 253.]
645     cord_individual_obj[indivial_i, :] = [ 23. 11. 148. 159.]
646     cord_individual_obj[indivial_i, :] = [ 24. 11. 201. 212.]
647
648     min(cord_individual_obj[:, 3]) = 159.0
649     historl_G_best_iter[iter, 3] = 159.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 10. 225. 235.]
654     cord_individual_obj[indivial_i, :] = [ 1. 10. 197. 207.]
655     cord_individual_obj[indivial_i, :] = [ 2. 11. 229. 240.]
656     cord_individual_obj[indivial_i, :] = [ 3. 10. 233. 243.]
657     cord_individual_obj[indivial_i, :] = [ 4. 10. 252. 262.]
658     cord_individual_obj[indivial_i, :] = [ 5. 11. 148. 159.]
659     cord_individual_obj[indivial_i, :] = [ 6. 12. 198. 210.]
660     cord_individual_obj[indivial_i, :] = [ 7. 11. 200. 211.]
661     cord_individual_obj[indivial_i, :] = [ 8. 13. 267. 280.]
662     cord_individual_obj[indivial_i, :] = [ 9. 14. 261. 275.]
663     cord_individual_obj[indivial_i, :] = [ 10. 11. 261. 272.]
664     cord_individual_obj[indivial_i, :] = [ 11. 10. 222. 232.]
665     cord_individual_obj[indivial_i, :] = [ 12. 12. 239. 251.]
666     cord_individual_obj[indivial_i, :] = [ 13. 10. 219. 229.]
667     cord_individual_obj[indivial_i, :] = [ 14. 10. 231. 241.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 9. 205. 214.]
669 cord_individual_obj[indivial_i,:] = [ 16. 10. 225. 235.]
670 cord_individual_obj[indivial_i,:] = [ 17. 11. 250. 261.]
671 cord_individual_obj[indivial_i,:] = [ 18. 11. 229. 240.]
672 cord_individual_obj[indivial_i,:] = [ 19. 11. 212. 223.]
673 cord_individual_obj[indivial_i,:] = [ 20. 12. 213. 225.]
674 cord_individual_obj[indivial_i,:] = [ 21. 11. 201. 212.]
675 cord_individual_obj[indivial_i,:] = [ 22. 10. 225. 235.]
676 cord_individual_obj[indivial_i,:] = [ 23. 10. 238. 248.]
677 cord_individual_obj[indivial_i,:] = [ 24. 13. 237. 250.]
678
679 min(cord_individual_obj[:,3]) = 159.0
680 historl_G_best_iter[iter,3] = 159.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 277.0
689 Proportion_of_area = 0.2564814814814815
690 BEST_CHROM =
691 berth: [ 4.5 19.5 24. 13.5 14. 8.5 20.5 10.5 26. 5. 24. 1.5 4. 16.5
692 6.5 19. 12.5 26. 19.5 1.5]
693 time: [10. 3. 5. 7. 6. 6. 8. 4. 2. 5. 6. 5. 3. 4. 0. 1. 0. 0.
694 0. 0.]
695 num_QC: [4. 3. 5. 2. 6. 1. 2. 4. 2. 3. 4. 2. 3. 2. 3. 5. 3.]
696 Objective function values and some other indicators:
697 Obj0 = 11.00 Obj1 = 148.00 Obj0 + Obj1 = 159.00
698 Total movement of crane: 26.00
699 Total waiting time in berth position: 75.00
700 Total index of q during berthing: 1248.00
701 Specific arrangement for each vessel:
702 V_id: 0 li: 9.0 xi: 4.5 bow of i: 0.0 tail of i: 9.0 gama_i0: 10.0 gama_i1: 11.0
703 load_i: 120.0 gama_i1 + 1: 12.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work
703 V_id: 1 li: 9.0 xi: 19.5 bow of i: 15.0 tail of i: 24.0 gama_i0: 3.0 gama_i1: 3
703 .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 60.0 work
704 V_id: 2 li: 8.0 xi: 24.0 bow of i: 20.0 tail of i: 28.0 gama_i0: 5.0 gama_i1: 5
704 .0 gama_i1 + 1: 6.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 80.0 work
705 V_id: 3 li: 7.0 xi: 13.5 bow of i: 10.0 tail of i: 17.0 gama_i0: 7.0 gama_i1: 9
705 .0 gama_i1 + 1: 10.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work
706 V_id: 4 li: 8.0 xi: 14.0 bow of i: 10.0 tail of i: 18.0 gama_i0: 6.0 gama_i1: 6
706 .0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 80.0 work
707 V_id: 5 li: 3.0 xi: 8.5 bow of i: 7.0 tail of i: 10.0 gama_i0: 6.0 gama_i1: 9.0
707 load_i: 80.0 gama_i1 + 1: 10.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 80.0 work
708 V_id: 6 li: 7.0 xi: 20.5 bow of i: 17.0 tail of i: 24.0 gama_i0: 8.0 gama_i1: 8
708 10.0 gama_i1 + 1: 11.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 120.0 work
709 V_id: 7 li: 5.0 xi: 10.5 bow of i: 8.0 tail of i: 13.0 gama_i0: 4.0 gama_i1: 5
709 .0 gama_i1 + 1: 6.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 160.0 work
710 V_id: 8 li: 4.0 xi: 26.0 bow of i: 24.0 tail of i: 28.0 gama_i0: 2.0 gama_i1: 4
710 .0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 120.0 work
711 V_id: 9 li: 4.0 xi: 5.0 bow of i: 3.0 tail of i: 7.0 gama_i0: 5.0 gama_i1: 7.0
711 160.0 gama_i1 + 1: 8.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 160.0 work load_i:
712 V_id: 10 li: 8.0 xi: 24.0 bow of i: 20.0 tail of i: 28.0 gama_i0: 6.0 gama_i1: 11
712 : 7.0 gama_i1 + 1: 8.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 160.0 work
713 V_id: 11 li: 3.0 xi: 1.5 bow of i: 0.0 tail of i: 3.0 gama_i0: 5.0 gama_i1: 8.0
713 140.0 gama_i1 + 1: 9.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 140.0 work load_i:
714 V_id: 12 li: 8.0 xi: 4.0 bow of i: 0.0 tail of i: 8.0 gama_i0: 3.0 gama_i1: 4.0
714 80.0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 80.0 work load_i:
715 V_id: 13 li: 7.0 xi: 16.5 bow of i: 13.0 tail of i: 20.0 gama_i0: 4.0 gama_i1: 11
715 : 5.0 gama_i1 + 1: 6.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 160.0 work
716 V_id: 14 li: 7.0 xi: 6.5 bow of i: 3.0 tail of i: 10.0 gama_i0: 0.0 gama_i1: 2
716 .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work
717 V_id: 15 li: 8.0 xi: 19.0 bow of i: 15.0 tail of i: 23.0 gama_i0: 1.0 gama_i1: 11
717 : 2.0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 100.0 work
718 V_id: 16 li: 5.0 xi: 12.5 bow of i: 10.0 tail of i: 15.0 gama_i0: 0.0 gama_i1: 11
718 : 3.0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 160.0 work

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unknown

|     |  |                          |                                 |                |                 |                              |                           |
|-----|--|--------------------------|---------------------------------|----------------|-----------------|------------------------------|---------------------------|
| 718 | load_i: 160.0                                    | work load gap_i: 0       |                                 |                |                 |                              |                           |
| 719 | V_id: 17 : 1.0                                   | li: 4.0 gama_i1 + 1: 2.0 | xi: 26.0 gama_i1 - gama_i0: 1.0 | bow of i: 24.0 | tail of i: 28.0 | gama_i0: 0.0 demand_i: 120.0 | gama_i1 work              |
| 720 | load_i: 120.0                                    | work load gap_i: 0       |                                 |                |                 |                              |                           |
|     | V_id: 18 : 0.0                                   | li: 9.0 gama_i1 + 1: 1.0 | xi: 19.5 gama_i1 - gama_i0: 0.0 | bow of i: 15.0 | tail of i: 24.0 | gama_i0: 0.0 demand_i: 60.0  | gama_i1 work              |
| 721 | load_i: 60.0                                     | work load gap_i: 0       |                                 |                |                 |                              |                           |
|     | V_id: 19 : 100.0                                 | li: 3.0 gama_i1 + 1: 2.0 | xi: 1.5 gama_i1 - gama_i0: 1.0  | bow of i: 0.0  | tail of i: 3.0  | gama_i0: 0.0 demand_i: 100.0 | gama_i1: 1.0 work load_i: |
| 722 |  | work load gap_i: 0       |                                 |                |                 |                              |                           |
| 723 | Algorithm finished and the total CPU time: 519 s |                          |                                 |                |                 |                              |                           |
| 724 | End  |                          |                                 |                |                 |                              |                           |
| 725 |  |                          |                                 |                |                 |                              |                           |