

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 14. 342. 356.]
81 cord_individual_obj[indivial_i,:] = [ 17. 10. 338. 348.]
82 cord_individual_obj[indivial_i,:] = [ 18. 10. 252. 262.]
83 cord_individual_obj[indivial_i,:] = [ 19. 10. 333. 343.]
84 cord_individual_obj[indivial_i,:] = [ 20. 12. 384. 396.]
85 cord_individual_obj[indivial_i,:] = [ 21. 12. 385. 397.]
86 cord_individual_obj[indivial_i,:] = [ 22. 11. 294. 305.]
87 cord_individual_obj[indivial_i,:] = [ 23. 13. 253. 266.]
88 cord_individual_obj[indivial_i,:] = [ 24. 10. 304. 314.]
89
90 min(cord_individual_obj[:,3]) = 262.0
91 historl_G_best_iter[iter,3] = 262.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 11. 339. 350.]
96 cord_individual_obj[indivial_i,:] = [ 1. 10. 342. 352.]
97 cord_individual_obj[indivial_i,:] = [ 2. 10. 402. 412.]
98 cord_individual_obj[indivial_i,:] = [ 3. 11. 339. 350.]
99 cord_individual_obj[indivial_i,:] = [ 4. 12. 250. 262.]
100 cord_individual_obj[indivial_i,:] = [ 5. 12. 281. 293.]
101 cord_individual_obj[indivial_i,:] = [ 6. 10. 306. 316.]
102 cord_individual_obj[indivial_i,:] = [ 7. 11. 439. 450.]
103 cord_individual_obj[indivial_i,:] = [ 8. 10. 331. 341.]
104 cord_individual_obj[indivial_i,:] = [ 9. 10. 252. 262.]
105 cord_individual_obj[indivial_i,:] = [ 10. 10. 361. 371.]
106 cord_individual_obj[indivial_i,:] = [ 11. 12. 326. 338.]
107 cord_individual_obj[indivial_i,:] = [ 12. 12. 363. 375.]
108 cord_individual_obj[indivial_i,:] = [ 13. 14. 371. 385.]
109 cord_individual_obj[indivial_i,:] = [ 14. 10. 303. 313.]
110 cord_individual_obj[indivial_i,:] = [ 15. 10. 373. 383.]
111 cord_individual_obj[indivial_i,:] = [ 16. 10. 361. 371.]
112 cord_individual_obj[indivial_i,:] = [ 17. 12. 289. 301.]
113 cord_individual_obj[indivial_i,:] = [ 18. 11. 321. 332.]
114 cord_individual_obj[indivial_i,:] = [ 19. 13. 432. 445.]
115 cord_individual_obj[indivial_i,:] = [ 20. 14. 326. 340.]
116 cord_individual_obj[indivial_i,:] = [ 21. 10. 341. 351.]
117 cord_individual_obj[indivial_i,:] = [ 22. 13. 274. 287.]
118 cord_individual_obj[indivial_i,:] = [ 23. 10. 349. 359.]
119 cord_individual_obj[indivial_i,:] = [ 24. 10. 468. 478.]
120
121 min(cord_individual_obj[:,3]) = 262.0
122 historl_G_best_iter[iter,3] = 262.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 11. 304. 315.]
127 cord_individual_obj[indivial_i,:] = [ 1. 10. 256. 266.]
128 cord_individual_obj[indivial_i,:] = [ 2. 12. 401. 413.]
129 cord_individual_obj[indivial_i,:] = [ 3. 9. 342. 351.]
130 cord_individual_obj[indivial_i,:] = [ 4. 10. 362. 372.]
131 cord_individual_obj[indivial_i,:] = [ 5. 13. 320. 333.]
132 cord_individual_obj[indivial_i,:] = [ 6. 12. 316. 328.]
133 cord_individual_obj[indivial_i,:] = [ 7. 10. 326. 336.]
134 cord_individual_obj[indivial_i,:] = [ 8. 13. 372. 385.]
135 cord_individual_obj[indivial_i,:] = [ 9. 12. 337. 349.]
136 cord_individual_obj[indivial_i,:] = [ 10. 12. 316. 328.]
137 cord_individual_obj[indivial_i,:] = [ 11. 11. 299. 310.]
138 cord_individual_obj[indivial_i,:] = [ 12. 10. 246. 256.]
139 cord_individual_obj[indivial_i,:] = [ 13. 15. 343. 358.]
140 cord_individual_obj[indivial_i,:] = [ 14. 12. 299. 311.]
141 cord_individual_obj[indivial_i,:] = [ 15. 14. 329. 343.]
142 cord_individual_obj[indivial_i,:] = [ 16. 13. 343. 356.]
143 cord_individual_obj[indivial_i,:] = [ 17. 13. 413. 426.]
144 cord_individual_obj[indivial_i,:] = [ 18. 9. 325. 334.]
145 cord_individual_obj[indivial_i,:] = [ 19. 13. 305. 318.]
146 cord_individual_obj[indivial_i,:] = [ 20. 11. 344. 355.]
147 cord_individual_obj[indivial_i,:] = [ 21. 12. 426. 438.]
148 cord_individual_obj[indivial_i,:] = [ 22. 13. 350. 363.]
149 cord_individual_obj[indivial_i,:] = [ 23. 13. 339. 352.]
150 cord_individual_obj[indivial_i,:] = [ 24. 12. 250. 262.]
151
152 min(cord_individual_obj[:,3]) = 256.0
153 historl_G_best_iter[iter,3] = 256.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 10. 332. 342.]
158 cord_individual_obj[indivial_i,:] = [ 1. 11. 266. 277.]
159 cord_individual_obj[indivial_i,:] = [ 2. 10. 298. 308.]
160 cord_individual_obj[indivial_i,:] = [ 3. 10. 304. 314.]
161 cord_individual_obj[indivial_i,:] = [ 4. 13. 344. 357.]
162 cord_individual_obj[indivial_i,:] = [ 5. 11. 267. 278.]
163 cord_individual_obj[indivial_i,:] = [ 6. 11. 280. 291.]

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164 cord_individual_obj[indivial_i, :] = [ 7. 9. 273. 282.]
165 cord_individual_obj[indivial_i, :] = [ 8. 11. 308. 319.]
166 cord_individual_obj[indivial_i, :] = [ 9. 11. 273. 284.]
167 cord_individual_obj[indivial_i, :] = [ 10. 11. 286. 297.]
168 cord_individual_obj[indivial_i, :] = [ 11. 13. 243. 256.]
169 cord_individual_obj[indivial_i, :] = [ 12. 12. 270. 282.]
170 cord_individual_obj[indivial_i, :] = [ 13. 12. 266. 278.]
171 cord_individual_obj[indivial_i, :] = [ 14. 11. 303. 314.]
172 cord_individual_obj[indivial_i, :] = [ 15. 12. 257. 269.]
173 cord_individual_obj[indivial_i, :] = [ 16. 12. 227. 239.]
174 cord_individual_obj[indivial_i, :] = [ 17. 10. 295. 305.]
175 cord_individual_obj[indivial_i, :] = [ 18. 9. 253. 262.]
176 cord_individual_obj[indivial_i, :] = [ 19. 13. 290. 303.]
177 cord_individual_obj[indivial_i, :] = [ 20. 12. 351. 363.]
178 cord_individual_obj[indivial_i, :] = [ 21. 10. 246. 256.]
179 cord_individual_obj[indivial_i, :] = [ 22. 13. 219. 232.]
180 cord_individual_obj[indivial_i, :] = [ 23. 13. 372. 385.]
181 cord_individual_obj[indivial_i, :] = [ 24. 12. 322. 334.]
182
183 min(cord_individual_obj[:, 3]) = 232.0
184 historl_G_best_iter[iter, 3] = 232.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i, :] = [ 0. 12. 297. 309.]
189 cord_individual_obj[indivial_i, :] = [ 1. 11. 385. 396.]
190 cord_individual_obj[indivial_i, :] = [ 2. 11. 284. 295.]
191 cord_individual_obj[indivial_i, :] = [ 3. 10. 312. 322.]
192 cord_individual_obj[indivial_i, :] = [ 4. 10. 337. 347.]
193 cord_individual_obj[indivial_i, :] = [ 5. 12. 279. 291.]
194 cord_individual_obj[indivial_i, :] = [ 6. 10. 282. 292.]
195 cord_individual_obj[indivial_i, :] = [ 7. 12. 287. 299.]
196 cord_individual_obj[indivial_i, :] = [ 8. 12. 273. 285.]
197 cord_individual_obj[indivial_i, :] = [ 9. 11. 346. 357.]
198 cord_individual_obj[indivial_i, :] = [ 10. 11. 284. 295.]
199 cord_individual_obj[indivial_i, :] = [ 11. 11. 292. 303.]
200 cord_individual_obj[indivial_i, :] = [ 12. 11. 288. 299.]
201 cord_individual_obj[indivial_i, :] = [ 13. 12. 322. 334.]
202 cord_individual_obj[indivial_i, :] = [ 14. 10. 269. 279.]
203 cord_individual_obj[indivial_i, :] = [ 15. 11. 309. 320.]
204 cord_individual_obj[indivial_i, :] = [ 16. 11. 338. 349.]
205 cord_individual_obj[indivial_i, :] = [ 17. 13. 239. 252.]
206 cord_individual_obj[indivial_i, :] = [ 18. 11. 284. 295.]
207 cord_individual_obj[indivial_i, :] = [ 19. 12. 304. 316.]
208 cord_individual_obj[indivial_i, :] = [ 20. 12. 318. 330.]
209 cord_individual_obj[indivial_i, :] = [ 21. 10. 325. 335.]
210 cord_individual_obj[indivial_i, :] = [ 22. 12. 319. 331.]
211 cord_individual_obj[indivial_i, :] = [ 23. 13. 219. 232.]
212 cord_individual_obj[indivial_i, :] = [ 24. 13. 289. 302.]
213
214 min(cord_individual_obj[:, 3]) = 232.0
215 historl_G_best_iter[iter, 3] = 232.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i, :] = [ 0. 14. 267. 281.]
220 cord_individual_obj[indivial_i, :] = [ 1. 13. 219. 232.]
221 cord_individual_obj[indivial_i, :] = [ 2. 11. 311. 322.]
222 cord_individual_obj[indivial_i, :] = [ 3. 13. 356. 369.]
223 cord_individual_obj[indivial_i, :] = [ 4. 12. 291. 303.]
224 cord_individual_obj[indivial_i, :] = [ 5. 11. 291. 302.]
225 cord_individual_obj[indivial_i, :] = [ 6. 11. 229. 240.]
226 cord_individual_obj[indivial_i, :] = [ 7. 12. 307. 319.]
227 cord_individual_obj[indivial_i, :] = [ 8. 10. 234. 244.]
228 cord_individual_obj[indivial_i, :] = [ 9. 12. 320. 332.]
229 cord_individual_obj[indivial_i, :] = [ 10. 12. 292. 304.]
230 cord_individual_obj[indivial_i, :] = [ 11. 10. 336. 346.]
231 cord_individual_obj[indivial_i, :] = [ 12. 11. 300. 311.]
232 cord_individual_obj[indivial_i, :] = [ 13. 12. 298. 310.]
233 cord_individual_obj[indivial_i, :] = [ 14. 12. 298. 310.]
234 cord_individual_obj[indivial_i, :] = [ 15. 14. 291. 305.]
235 cord_individual_obj[indivial_i, :] = [ 16. 12. 321. 333.]
236 cord_individual_obj[indivial_i, :] = [ 17. 11. 308. 319.]
237 cord_individual_obj[indivial_i, :] = [ 18. 12. 243. 255.]
238 cord_individual_obj[indivial_i, :] = [ 19. 13. 268. 281.]
239 cord_individual_obj[indivial_i, :] = [ 20. 11. 299. 310.]
240 cord_individual_obj[indivial_i, :] = [ 21. 10. 256. 266.]
241 cord_individual_obj[indivial_i, :] = [ 22. 13. 227. 240.]
242 cord_individual_obj[indivial_i, :] = [ 23. 12. 315. 327.]
243 cord_individual_obj[indivial_i, :] = [ 24. 11. 315. 326.]
244
245 min(cord_individual_obj[:, 3]) = 232.0
246 historl_G_best_iter[iter, 3] = 232.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 11. 247. 258.]
251 cord_individual_obj[indivial_i, :] = [ 1. 12. 309. 321.]
252 cord_individual_obj[indivial_i, :] = [ 2. 12. 410. 422.]
253 cord_individual_obj[indivial_i, :] = [ 3. 13. 219. 232.]
254 cord_individual_obj[indivial_i, :] = [ 4. 10. 351. 361.]
255 cord_individual_obj[indivial_i, :] = [ 5. 12. 372. 384.]
256 cord_individual_obj[indivial_i, :] = [ 6. 11. 334. 345.]
257 cord_individual_obj[indivial_i, :] = [ 7. 13. 373. 386.]
258 cord_individual_obj[indivial_i, :] = [ 8. 10. 306. 316.]
259 cord_individual_obj[indivial_i, :] = [ 9. 12. 336. 348.]
260 cord_individual_obj[indivial_i, :] = [ 10. 11. 443. 454.]
261 cord_individual_obj[indivial_i, :] = [ 11. 11. 325. 336.]
262 cord_individual_obj[indivial_i, :] = [ 12. 12. 369. 381.]
263 cord_individual_obj[indivial_i, :] = [ 13. 10. 302. 312.]
264 cord_individual_obj[indivial_i, :] = [ 14. 11. 334. 345.]
265 cord_individual_obj[indivial_i, :] = [ 15. 12. 331. 343.]
266 cord_individual_obj[indivial_i, :] = [ 16. 9. 291. 300.]
267 cord_individual_obj[indivial_i, :] = [ 17. 10. 293. 303.]
268 cord_individual_obj[indivial_i, :] = [ 18. 11. 304. 315.]
269 cord_individual_obj[indivial_i, :] = [ 19. 11. 293. 304.]
270 cord_individual_obj[indivial_i, :] = [ 20. 12. 352. 364.]
271 cord_individual_obj[indivial_i, :] = [ 21. 11. 306. 317.]
272 cord_individual_obj[indivial_i, :] = [ 22. 12. 269. 281.]
273 cord_individual_obj[indivial_i, :] = [ 23. 9. 258. 267.]
274 cord_individual_obj[indivial_i, :] = [ 24. 11. 306. 317.]
275

276 min(cord_individual_obj[:, 3]) = 232.0
277 historl_G_best_iter[iter, 3] = 232.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 10. 235. 245.]
282 cord_individual_obj[indivial_i, :] = [ 1. 12. 357. 369.]
283 cord_individual_obj[indivial_i, :] = [ 2. 11. 282. 293.]
284 cord_individual_obj[indivial_i, :] = [ 3. 12. 296. 308.]
285 cord_individual_obj[indivial_i, :] = [ 4. 11. 328. 339.]
286 cord_individual_obj[indivial_i, :] = [ 5. 10. 348. 358.]
287 cord_individual_obj[indivial_i, :] = [ 6. 11. 241. 252.]
288 cord_individual_obj[indivial_i, :] = [ 7. 11. 318. 329.]
289 cord_individual_obj[indivial_i, :] = [ 8. 10. 283. 293.]
290 cord_individual_obj[indivial_i, :] = [ 9. 11. 310. 321.]
291 cord_individual_obj[indivial_i, :] = [ 10. 13. 219. 232.]
292 cord_individual_obj[indivial_i, :] = [ 11. 10. 309. 319.]
293 cord_individual_obj[indivial_i, :] = [ 12. 10. 272. 282.]
294 cord_individual_obj[indivial_i, :] = [ 13. 13. 356. 369.]
295 cord_individual_obj[indivial_i, :] = [ 14. 12. 372. 384.]
296 cord_individual_obj[indivial_i, :] = [ 15. 13. 325. 338.]
297 cord_individual_obj[indivial_i, :] = [ 16. 10. 265. 275.]
298 cord_individual_obj[indivial_i, :] = [ 17. 11. 314. 325.]
299 cord_individual_obj[indivial_i, :] = [ 18. 12. 387. 399.]
300 cord_individual_obj[indivial_i, :] = [ 19. 12. 385. 397.]
301 cord_individual_obj[indivial_i, :] = [ 20. 12. 327. 339.]
302 cord_individual_obj[indivial_i, :] = [ 21. 11. 302. 313.]
303 cord_individual_obj[indivial_i, :] = [ 22. 12. 279. 291.]
304 cord_individual_obj[indivial_i, :] = [ 23. 11. 295. 306.]
305 cord_individual_obj[indivial_i, :] = [ 24. 12. 268. 280.]
306

307 min(cord_individual_obj[:, 3]) = 232.0
308 historl_G_best_iter[iter, 3] = 232.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 11. 307. 318.]
313 cord_individual_obj[indivial_i, :] = [ 1. 10. 425. 435.]
314 cord_individual_obj[indivial_i, :] = [ 2. 10. 255. 265.]
315 cord_individual_obj[indivial_i, :] = [ 3. 10. 281. 291.]
316 cord_individual_obj[indivial_i, :] = [ 4. 11. 357. 368.]
317 cord_individual_obj[indivial_i, :] = [ 5. 11. 284. 295.]
318 cord_individual_obj[indivial_i, :] = [ 6. 11. 312. 323.]
319 cord_individual_obj[indivial_i, :] = [ 7. 13. 301. 314.]
320 cord_individual_obj[indivial_i, :] = [ 8. 12. 330. 342.]
321 cord_individual_obj[indivial_i, :] = [ 9. 11. 320. 331.]
322 cord_individual_obj[indivial_i, :] = [ 10. 10. 316. 326.]
323 cord_individual_obj[indivial_i, :] = [ 11. 12. 331. 343.]
324 cord_individual_obj[indivial_i, :] = [ 12. 12. 302. 314.]
325 cord_individual_obj[indivial_i, :] = [ 13. 11. 302. 313.]
326 cord_individual_obj[indivial_i, :] = [ 14. 11. 281. 292.]
327 cord_individual_obj[indivial_i, :] = [ 15. 11. 351. 362.]
328 cord_individual_obj[indivial_i, :] = [ 16. 13. 256. 269.]
329 cord_individual_obj[indivial_i, :] = [ 17. 12. 325. 337.]
330 cord_individual_obj[indivial_i, :] = [ 18. 13. 219. 232.]
331 cord_individual_obj[indivial_i, :] = [ 19. 13. 312. 325.]

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332 cord_individual_obj[indivial_i, :] = [ 20. 12. 307. 319.]
333 cord_individual_obj[indivial_i, :] = [ 21. 11. 283. 294.]
334 cord_individual_obj[indivial_i, :] = [ 22. 10. 301. 311.]
335 cord_individual_obj[indivial_i, :] = [ 23. 11. 324. 335.]
336 cord_individual_obj[indivial_i, :] = [ 24. 11. 296. 307.]
337
338 min(cord_individual_obj[:, 3]) = 232.0
339 histol_G_best_iter[iter, 3] = 232.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 12. 273. 285.]
344 cord_individual_obj[indivial_i, :] = [ 1. 13. 219. 232.]
345 cord_individual_obj[indivial_i, :] = [ 2. 11. 330. 341.]
346 cord_individual_obj[indivial_i, :] = [ 3. 10. 223. 233.]
347 cord_individual_obj[indivial_i, :] = [ 4. 12. 243. 255.]
348 cord_individual_obj[indivial_i, :] = [ 5. 12. 226. 238.]
349 cord_individual_obj[indivial_i, :] = [ 6. 11. 298. 309.]
350 cord_individual_obj[indivial_i, :] = [ 7. 12. 335. 347.]
351 cord_individual_obj[indivial_i, :] = [ 8. 10. 273. 283.]
352 cord_individual_obj[indivial_i, :] = [ 9. 12. 307. 319.]
353 cord_individual_obj[indivial_i, :] = [ 10. 11. 221. 232.]
354 cord_individual_obj[indivial_i, :] = [ 11. 12. 197. 209.]
355 cord_individual_obj[indivial_i, :] = [ 12. 11. 222. 233.]
356 cord_individual_obj[indivial_i, :] = [ 13. 10. 218. 228.]
357 cord_individual_obj[indivial_i, :] = [ 14. 12. 269. 281.]
358 cord_individual_obj[indivial_i, :] = [ 15. 13. 289. 302.]
359 cord_individual_obj[indivial_i, :] = [ 16. 12. 242. 254.]
360 cord_individual_obj[indivial_i, :] = [ 17. 13. 256. 269.]
361 cord_individual_obj[indivial_i, :] = [ 18. 10. 296. 306.]
362 cord_individual_obj[indivial_i, :] = [ 19. 11. 318. 329.]
363 cord_individual_obj[indivial_i, :] = [ 20. 12. 247. 259.]
364 cord_individual_obj[indivial_i, :] = [ 21. 12. 194. 206.]
365 cord_individual_obj[indivial_i, :] = [ 22. 10. 226. 236.]
366 cord_individual_obj[indivial_i, :] = [ 23. 12. 307. 319.]
367 cord_individual_obj[indivial_i, :] = [ 24. 13. 278. 291.]
368
369 min(cord_individual_obj[:, 3]) = 206.0
370 histol_G_best_iter[iter, 3] = 206.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 11. 263. 274.]
375 cord_individual_obj[indivial_i, :] = [ 1. 10. 395. 405.]
376 cord_individual_obj[indivial_i, :] = [ 2. 12. 366. 378.]
377 cord_individual_obj[indivial_i, :] = [ 3. 10. 291. 301.]
378 cord_individual_obj[indivial_i, :] = [ 4. 12. 349. 361.]
379 cord_individual_obj[indivial_i, :] = [ 5. 10. 241. 251.]
380 cord_individual_obj[indivial_i, :] = [ 6. 11. 307. 318.]
381 cord_individual_obj[indivial_i, :] = [ 7. 12. 194. 206.]
382 cord_individual_obj[indivial_i, :] = [ 8. 10. 253. 263.]
383 cord_individual_obj[indivial_i, :] = [ 9. 12. 310. 322.]
384 cord_individual_obj[indivial_i, :] = [ 10. 13. 417. 430.]
385 cord_individual_obj[indivial_i, :] = [ 11. 11. 270. 281.]
386 cord_individual_obj[indivial_i, :] = [ 12. 14. 298. 312.]
387 cord_individual_obj[indivial_i, :] = [ 13. 11. 374. 385.]
388 cord_individual_obj[indivial_i, :] = [ 14. 12. 321. 333.]
389 cord_individual_obj[indivial_i, :] = [ 15. 13. 404. 417.]
390 cord_individual_obj[indivial_i, :] = [ 16. 11. 300. 311.]
391 cord_individual_obj[indivial_i, :] = [ 17. 11. 359. 370.]
392 cord_individual_obj[indivial_i, :] = [ 18. 11. 274. 285.]
393 cord_individual_obj[indivial_i, :] = [ 19. 10. 255. 265.]
394 cord_individual_obj[indivial_i, :] = [ 20. 12. 298. 310.]
395 cord_individual_obj[indivial_i, :] = [ 21. 10. 455. 465.]
396 cord_individual_obj[indivial_i, :] = [ 22. 12. 250. 262.]
397 cord_individual_obj[indivial_i, :] = [ 23. 10. 361. 371.]
398 cord_individual_obj[indivial_i, :] = [ 24. 11. 269. 280.]
399
400 min(cord_individual_obj[:, 3]) = 206.0
401 histol_G_best_iter[iter, 3] = 206.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 9. 294. 303.]
406 cord_individual_obj[indivial_i, :] = [ 1. 10. 313. 323.]
407 cord_individual_obj[indivial_i, :] = [ 2. 10. 327. 337.]
408 cord_individual_obj[indivial_i, :] = [ 3. 12. 315. 327.]
409 cord_individual_obj[indivial_i, :] = [ 4. 12. 366. 378.]
410 cord_individual_obj[indivial_i, :] = [ 5. 13. 422. 435.]
411 cord_individual_obj[indivial_i, :] = [ 6. 12. 287. 299.]
412 cord_individual_obj[indivial_i, :] = [ 7. 11. 326. 337.]
413 cord_individual_obj[indivial_i, :] = [ 8. 11. 337. 348.]
414 cord_individual_obj[indivial_i, :] = [ 9. 11. 264. 275.]
415 cord_individual_obj[indivial_i, :] = [ 10. 12. 349. 361.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 12. 314. 326.]
417 cord_individual_obj[indivial_i,:] = [ 12. 12. 356. 368.]
418 cord_individual_obj[indivial_i,:] = [ 13. 15. 437. 452.]
419 cord_individual_obj[indivial_i,:] = [ 14. 15. 353. 368.]
420 cord_individual_obj[indivial_i,:] = [ 15. 12. 357. 369.]
421 cord_individual_obj[indivial_i,:] = [ 16. 12. 335. 347.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 352. 363.]
423 cord_individual_obj[indivial_i,:] = [ 18. 10. 255. 265.]
424 cord_individual_obj[indivial_i,:] = [ 19. 11. 294. 305.]
425 cord_individual_obj[indivial_i,:] = [ 20. 9. 284. 293.]
426 cord_individual_obj[indivial_i,:] = [ 21. 12. 194. 206.]
427 cord_individual_obj[indivial_i,:] = [ 22. 12. 319. 331.]
428 cord_individual_obj[indivial_i,:] = [ 23. 12. 363. 375.]
429 cord_individual_obj[indivial_i,:] = [ 24. 12. 317. 329.]
430
431 min(cord_individual_obj[:,3]) = 206.0
432 histol_G_best_iter[iter,3] = 206.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 10. 312. 322.]
437 cord_individual_obj[indivial_i,:] = [ 1. 13. 402. 415.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 301. 310.]
439 cord_individual_obj[indivial_i,:] = [ 3. 11. 292. 303.]
440 cord_individual_obj[indivial_i,:] = [ 4. 11. 304. 315.]
441 cord_individual_obj[indivial_i,:] = [ 5. 12. 323. 335.]
442 cord_individual_obj[indivial_i,:] = [ 6. 10. 323. 333.]
443 cord_individual_obj[indivial_i,:] = [ 7. 9. 281. 290.]
444 cord_individual_obj[indivial_i,:] = [ 8. 10. 305. 315.]
445 cord_individual_obj[indivial_i,:] = [ 9. 11. 336. 347.]
446 cord_individual_obj[indivial_i,:] = [ 10. 12. 332. 344.]
447 cord_individual_obj[indivial_i,:] = [ 11. 11. 265. 276.]
448 cord_individual_obj[indivial_i,:] = [ 12. 11. 315. 326.]
449 cord_individual_obj[indivial_i,:] = [ 13. 12. 194. 206.]
450 cord_individual_obj[indivial_i,:] = [ 14. 11. 317. 328.]
451 cord_individual_obj[indivial_i,:] = [ 15. 11. 308. 319.]
452 cord_individual_obj[indivial_i,:] = [ 16. 11. 303. 314.]
453 cord_individual_obj[indivial_i,:] = [ 17. 12. 340. 352.]
454 cord_individual_obj[indivial_i,:] = [ 18. 10. 331. 341.]
455 cord_individual_obj[indivial_i,:] = [ 19. 10. 318. 328.]
456 cord_individual_obj[indivial_i,:] = [ 20. 10. 365. 375.]
457 cord_individual_obj[indivial_i,:] = [ 21. 11. 467. 478.]
458 cord_individual_obj[indivial_i,:] = [ 22. 12. 304. 316.]
459 cord_individual_obj[indivial_i,:] = [ 23. 11. 405. 416.]
460 cord_individual_obj[indivial_i,:] = [ 24. 12. 321. 333.]
461
462 min(cord_individual_obj[:,3]) = 206.0
463 histol_G_best_iter[iter,3] = 206.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 11. 299. 310.]
468 cord_individual_obj[indivial_i,:] = [ 1. 11. 322. 333.]
469 cord_individual_obj[indivial_i,:] = [ 2. 12. 368. 380.]
470 cord_individual_obj[indivial_i,:] = [ 3. 10. 311. 321.]
471 cord_individual_obj[indivial_i,:] = [ 4. 12. 369. 381.]
472 cord_individual_obj[indivial_i,:] = [ 5. 12. 450. 462.]
473 cord_individual_obj[indivial_i,:] = [ 6. 13. 322. 335.]
474 cord_individual_obj[indivial_i,:] = [ 7. 13. 328. 341.]
475 cord_individual_obj[indivial_i,:] = [ 8. 12. 361. 373.]
476 cord_individual_obj[indivial_i,:] = [ 9. 12. 312. 324.]
477 cord_individual_obj[indivial_i,:] = [ 10. 13. 430. 443.]
478 cord_individual_obj[indivial_i,:] = [ 11. 10. 278. 288.]
479 cord_individual_obj[indivial_i,:] = [ 12. 12. 300. 312.]
480 cord_individual_obj[indivial_i,:] = [ 13. 14. 396. 410.]
481 cord_individual_obj[indivial_i,:] = [ 14. 13. 371. 384.]
482 cord_individual_obj[indivial_i,:] = [ 15. 11. 291. 302.]
483 cord_individual_obj[indivial_i,:] = [ 16. 12. 325. 337.]
484 cord_individual_obj[indivial_i,:] = [ 17. 10. 454. 464.]
485 cord_individual_obj[indivial_i,:] = [ 18. 11. 377. 388.]
486 cord_individual_obj[indivial_i,:] = [ 19. 11. 308. 319.]
487 cord_individual_obj[indivial_i,:] = [ 20. 12. 282. 294.]
488 cord_individual_obj[indivial_i,:] = [ 21. 12. 194. 206.]
489 cord_individual_obj[indivial_i,:] = [ 22. 13. 293. 306.]
490 cord_individual_obj[indivial_i,:] = [ 23. 10. 313. 323.]
491 cord_individual_obj[indivial_i,:] = [ 24. 16. 333. 349.]
492
493 min(cord_individual_obj[:,3]) = 206.0
494 histol_G_best_iter[iter,3] = 206.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 10. 234. 244.]
499 cord_individual_obj[indivial_i,:] = [ 1. 12. 274. 286.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 11. 368. 379.]
501 cord_individual_obj[indivial_i,:] = [ 3. 11. 251. 262.]
502 cord_individual_obj[indivial_i,:] = [ 4. 13. 211. 224.]
503 cord_individual_obj[indivial_i,:] = [ 5. 10. 220. 230.]
504 cord_individual_obj[indivial_i,:] = [ 6. 12. 176. 188.]
505 cord_individual_obj[indivial_i,:] = [ 7. 10. 278. 288.]
506 cord_individual_obj[indivial_i,:] = [ 8. 12. 229. 241.]
507 cord_individual_obj[indivial_i,:] = [ 9. 10. 257. 267.]
508 cord_individual_obj[indivial_i,:] = [ 10. 11. 308. 319.]
509 cord_individual_obj[indivial_i,:] = [ 11. 11. 263. 274.]
510 cord_individual_obj[indivial_i,:] = [ 12. 11. 217. 228.]
511 cord_individual_obj[indivial_i,:] = [ 13. 12. 267. 279.]
512 cord_individual_obj[indivial_i,:] = [ 14. 12. 258. 270.]
513 cord_individual_obj[indivial_i,:] = [ 15. 12. 286. 298.]
514 cord_individual_obj[indivial_i,:] = [ 16. 11. 232. 243.]
515 cord_individual_obj[indivial_i,:] = [ 17. 12. 194. 206.]
516 cord_individual_obj[indivial_i,:] = [ 18. 10. 346. 356.]
517 cord_individual_obj[indivial_i,:] = [ 19. 13. 221. 234.]
518 cord_individual_obj[indivial_i,:] = [ 20. 12. 329. 341.]
519 cord_individual_obj[indivial_i,:] = [ 21. 10. 467. 477.]
520 cord_individual_obj[indivial_i,:] = [ 22. 12. 200. 212.]
521 cord_individual_obj[indivial_i,:] = [ 23. 12. 294. 306.]
522 cord_individual_obj[indivial_i,:] = [ 24. 11. 353. 364.]
523
524 min(cord_individual_obj[:, 3]) = 188.0
525 histol_G_best_iter[iter, 3] = 188.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 11. 340. 351.]
530 cord_individual_obj[indivial_i,:] = [ 1. 10. 349. 359.]
531 cord_individual_obj[indivial_i,:] = [ 2. 11. 302. 313.]
532 cord_individual_obj[indivial_i,:] = [ 3. 10. 382. 392.]
533 cord_individual_obj[indivial_i,:] = [ 4. 11. 366. 377.]
534 cord_individual_obj[indivial_i,:] = [ 5. 9. 287. 296.]
535 cord_individual_obj[indivial_i,:] = [ 6. 9. 356. 365.]
536 cord_individual_obj[indivial_i,:] = [ 7. 9. 343. 352.]
537 cord_individual_obj[indivial_i,:] = [ 8. 11. 312. 323.]
538 cord_individual_obj[indivial_i,:] = [ 9. 11. 289. 300.]
539 cord_individual_obj[indivial_i,:] = [ 10. 11. 332. 343.]
540 cord_individual_obj[indivial_i,:] = [ 11. 11. 427. 438.]
541 cord_individual_obj[indivial_i,:] = [ 12. 9. 262. 271.]
542 cord_individual_obj[indivial_i,:] = [ 13. 11. 278. 289.]
543 cord_individual_obj[indivial_i,:] = [ 14. 10. 303. 313.]
544 cord_individual_obj[indivial_i,:] = [ 15. 13. 314. 327.]
545 cord_individual_obj[indivial_i,:] = [ 16. 12. 312. 324.]
546 cord_individual_obj[indivial_i,:] = [ 17. 13. 274. 287.]
547 cord_individual_obj[indivial_i,:] = [ 18. 11. 308. 319.]
548 cord_individual_obj[indivial_i,:] = [ 19. 10. 373. 383.]
549 cord_individual_obj[indivial_i,:] = [ 20. 10. 259. 269.]
550 cord_individual_obj[indivial_i,:] = [ 21. 12. 176. 188.]
551 cord_individual_obj[indivial_i,:] = [ 22. 10. 360. 370.]
552 cord_individual_obj[indivial_i,:] = [ 23. 10. 297. 307.]
553 cord_individual_obj[indivial_i,:] = [ 24. 11. 357. 368.]
554
555 min(cord_individual_obj[:, 3]) = 188.0
556 histol_G_best_iter[iter, 3] = 188.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 10. 325. 335.]
561 cord_individual_obj[indivial_i,:] = [ 1. 10. 360. 370.]
562 cord_individual_obj[indivial_i,:] = [ 2. 10. 327. 337.]
563 cord_individual_obj[indivial_i,:] = [ 3. 9. 270. 279.]
564 cord_individual_obj[indivial_i,:] = [ 4. 12. 292. 304.]
565 cord_individual_obj[indivial_i,:] = [ 5. 9. 274. 283.]
566 cord_individual_obj[indivial_i,:] = [ 6. 10. 226. 236.]
567 cord_individual_obj[indivial_i,:] = [ 7. 10. 277. 287.]
568 cord_individual_obj[indivial_i,:] = [ 8. 13. 341. 354.]
569 cord_individual_obj[indivial_i,:] = [ 9. 11. 257. 268.]
570 cord_individual_obj[indivial_i,:] = [ 10. 11. 323. 334.]
571 cord_individual_obj[indivial_i,:] = [ 11. 12. 176. 188.]
572 cord_individual_obj[indivial_i,:] = [ 12. 11. 256. 267.]
573 cord_individual_obj[indivial_i,:] = [ 13. 11. 232. 243.]
574 cord_individual_obj[indivial_i,:] = [ 14. 13. 269. 282.]
575 cord_individual_obj[indivial_i,:] = [ 15. 13. 310. 323.]
576 cord_individual_obj[indivial_i,:] = [ 16. 11. 240. 251.]
577 cord_individual_obj[indivial_i,:] = [ 17. 12. 339. 351.]
578 cord_individual_obj[indivial_i,:] = [ 18. 11. 283. 294.]
579 cord_individual_obj[indivial_i,:] = [ 19. 10. 225. 235.]
580 cord_individual_obj[indivial_i,:] = [ 20. 11. 302. 313.]
581 cord_individual_obj[indivial_i,:] = [ 21. 12. 345. 357.]
582 cord_individual_obj[indivial_i,:] = [ 22. 10. 273. 283.]
583 cord_individual_obj[indivial_i,:] = [ 23. 9. 268. 277.]

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584     cord_individual_obj[indivial_i, :] = [ 24. 14. 303. 317.]
585
586     min(cord_individual_obj[:, 3]) = 188.0
587     historl_G_best_iter[iter, 3] = 188.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 14. 340. 354.]
592     cord_individual_obj[indivial_i, :] = [ 1. 12. 176. 188.]
593     cord_individual_obj[indivial_i, :] = [ 2. 9. 335. 344.]
594     cord_individual_obj[indivial_i, :] = [ 3. 11. 313. 324.]
595     cord_individual_obj[indivial_i, :] = [ 4. 11. 380. 391.]
596     cord_individual_obj[indivial_i, :] = [ 5. 12. 298. 310.]
597     cord_individual_obj[indivial_i, :] = [ 6. 10. 267. 277.]
598     cord_individual_obj[indivial_i, :] = [ 7. 12. 304. 316.]
599     cord_individual_obj[indivial_i, :] = [ 8. 10. 328. 338.]
600     cord_individual_obj[indivial_i, :] = [ 9. 11. 349. 360.]
601     cord_individual_obj[indivial_i, :] = [ 10. 11. 302. 313.]
602     cord_individual_obj[indivial_i, :] = [ 11. 13. 276. 289.]
603     cord_individual_obj[indivial_i, :] = [ 12. 10. 405. 415.]
604     cord_individual_obj[indivial_i, :] = [ 13. 10. 333. 343.]
605     cord_individual_obj[indivial_i, :] = [ 14. 11. 256. 267.]
606     cord_individual_obj[indivial_i, :] = [ 15. 10. 314. 324.]
607     cord_individual_obj[indivial_i, :] = [ 16. 11. 272. 283.]
608     cord_individual_obj[indivial_i, :] = [ 17. 12. 308. 320.]
609     cord_individual_obj[indivial_i, :] = [ 18. 10. 315. 325.]
610     cord_individual_obj[indivial_i, :] = [ 19. 10. 317. 327.]
611     cord_individual_obj[indivial_i, :] = [ 20. 8. 274. 282.]
612     cord_individual_obj[indivial_i, :] = [ 21. 11. 367. 378.]
613     cord_individual_obj[indivial_i, :] = [ 22. 12. 241. 253.]
614     cord_individual_obj[indivial_i, :] = [ 23. 13. 296. 309.]
615     cord_individual_obj[indivial_i, :] = [ 24. 11. 321. 332.]
616
617     min(cord_individual_obj[:, 3]) = 188.0
618     historl_G_best_iter[iter, 3] = 188.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 10. 311. 321.]
623     cord_individual_obj[indivial_i, :] = [ 1. 9. 327. 336.]
624     cord_individual_obj[indivial_i, :] = [ 2. 11. 271. 282.]
625     cord_individual_obj[indivial_i, :] = [ 3. 11. 260. 271.]
626     cord_individual_obj[indivial_i, :] = [ 4. 12. 410. 422.]
627     cord_individual_obj[indivial_i, :] = [ 5. 11. 240. 251.]
628     cord_individual_obj[indivial_i, :] = [ 6. 9. 256. 265.]
629     cord_individual_obj[indivial_i, :] = [ 7. 9. 370. 379.]
630     cord_individual_obj[indivial_i, :] = [ 8. 13. 224. 237.]
631     cord_individual_obj[indivial_i, :] = [ 9. 11. 255. 266.]
632     cord_individual_obj[indivial_i, :] = [ 10. 11. 282. 293.]
633     cord_individual_obj[indivial_i, :] = [ 11. 13. 372. 385.]
634     cord_individual_obj[indivial_i, :] = [ 12. 12. 176. 188.]
635     cord_individual_obj[indivial_i, :] = [ 13. 11. 299. 310.]
636     cord_individual_obj[indivial_i, :] = [ 14. 11. 346. 357.]
637     cord_individual_obj[indivial_i, :] = [ 15. 10. 373. 383.]
638     cord_individual_obj[indivial_i, :] = [ 16. 11. 237. 248.]
639     cord_individual_obj[indivial_i, :] = [ 17. 11. 261. 272.]
640     cord_individual_obj[indivial_i, :] = [ 18. 11. 265. 276.]
641     cord_individual_obj[indivial_i, :] = [ 19. 10. 230. 240.]
642     cord_individual_obj[indivial_i, :] = [ 20. 10. 218. 228.]
643     cord_individual_obj[indivial_i, :] = [ 21. 11. 344. 355.]
644     cord_individual_obj[indivial_i, :] = [ 22. 10. 300. 310.]
645     cord_individual_obj[indivial_i, :] = [ 23. 11. 256. 267.]
646     cord_individual_obj[indivial_i, :] = [ 24. 13. 219. 232.]
647
648     min(cord_individual_obj[:, 3]) = 188.0
649     historl_G_best_iter[iter, 3] = 188.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 12. 306. 318.]
654     cord_individual_obj[indivial_i, :] = [ 1. 10. 275. 285.]
655     cord_individual_obj[indivial_i, :] = [ 2. 10. 229. 239.]
656     cord_individual_obj[indivial_i, :] = [ 3. 11. 218. 229.]
657     cord_individual_obj[indivial_i, :] = [ 4. 12. 176. 188.]
658     cord_individual_obj[indivial_i, :] = [ 5. 13. 313. 326.]
659     cord_individual_obj[indivial_i, :] = [ 6. 11. 301. 312.]
660     cord_individual_obj[indivial_i, :] = [ 7. 11. 340. 351.]
661     cord_individual_obj[indivial_i, :] = [ 8. 11. 232. 243.]
662     cord_individual_obj[indivial_i, :] = [ 9. 11. 287. 298.]
663     cord_individual_obj[indivial_i, :] = [ 10. 10. 273. 283.]
664     cord_individual_obj[indivial_i, :] = [ 11. 14. 413. 427.]
665     cord_individual_obj[indivial_i, :] = [ 12. 10. 309. 319.]
666     cord_individual_obj[indivial_i, :] = [ 13. 11. 325. 336.]
667     cord_individual_obj[indivial_i, :] = [ 14. 12. 257. 269.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 11. 312. 323.]
669 cord_individual_obj[indivial_i,:] = [ 16. 12. 240. 252.]
670 cord_individual_obj[indivial_i,:] = [ 17. 12. 233. 245.]
671 cord_individual_obj[indivial_i,:] = [ 18. 10. 232. 242.]
672 cord_individual_obj[indivial_i,:] = [ 19. 10. 251. 261.]
673 cord_individual_obj[indivial_i,:] = [ 20. 9. 242. 251.]
674 cord_individual_obj[indivial_i,:] = [ 21. 12. 322. 334.]
675 cord_individual_obj[indivial_i,:] = [ 22. 9. 227. 236.]
676 cord_individual_obj[indivial_i,:] = [ 23. 11. 245. 256.]
677 cord_individual_obj[indivial_i,:] = [ 24. 11. 307. 318.]
678
679 min(cord_individual_obj[:,3]) = 188.0
680 historl_G_best_iter[iter,3] = 188.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 275.0
689 Proportion_of_area = 0.25462962962962965
690 BEST_CHROM =
691     berth: [11. 26.5 9.5 15. 25. 26.5 2.5 20. 4.5 19.5 18.5 24.5 26.5 4.
692 20.5 10.5 12.5 5.5 15.5 1.5]
693     time: [ 2. 10. 4. 0. 8. 2. 2. 6. 4. 8. 5. 0. 3. 0. 0. 4. 0.
694 2. 0.]
695     num_QC: [4. 3. 3. 4. 3. 2. 3. 4. 3. 3. 5. 2. 3. 7. 2. 4. 2. 4. 2. 3.]
696 Objective function values and some other indicators:
697 Obj0 = 12.00      Obj1 = 176.00      Obj0 + Obj1 = 188.00
698 Total movement of crane: 38.00
699 Total waiting time in berth position: 62.00
700 Total index of q during berthing: 1513.00
701 Specific arrangement for each vessel:
702 V_id: 0           li: 6.0           xi: 11.0           bow of i: 8.0           tail of i: 14.0           gama_i0: 2.0           gama_i1: 3
703 .0               gama_i1 + 1: 4.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
704 load_i: 140.0   work load gap_i: 0
705 V_id: 1           li: 7.0           xi: 26.5           bow of i: 23.0           tail of i: 30.0           gama_i0: 10.0           gama_i1:
706 .0               gama_i1 + 1: 13.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
707 load_i: 140.0   work load gap_i: 0
708 V_id: 2           li: 3.0           xi: 9.5           bow of i: 8.0           tail of i: 11.0           gama_i0: 4.0           gama_i1: 5.0
709 .0               gama_i1 + 1: 6.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work load_i:
710 100.0            work load gap_i: 0
711 V_id: 3           li: 4.0           xi: 15.0           bow of i: 13.0           tail of i: 17.0           gama_i0: 0.0           gama_i1: 1
712 .0               gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
713 load_i: 120.0   work load gap_i: 0
714 V_id: 4           li: 4.0           xi: 25.0           bow of i: 23.0           tail of i: 27.0           gama_i0: 8.0           gama_i1: 9
715 .0               gama_i1 + 1: 10.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
716 load_i: 120.0   work load gap_i: 0
717 V_id: 5           li: 5.0           xi: 26.5           bow of i: 24.0           tail of i: 29.0           gama_i0: 2.0           gama_i1: 4
718 .0               gama_i1 + 1: 5.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 100.0           work
719 load_i: 100.0   work load gap_i: 0
720 V_id: 6           li: 5.0           xi: 2.5           bow of i: 0.0           tail of i: 5.0           gama_i0: 2.0           gama_i1: 2.0
721 .0               gama_i1 + 1: 3.0       gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work load_i:
722 60.0            work load gap_i: 0
723 V_id: 7           li: 6.0           xi: 20.0           bow of i: 17.0           tail of i: 23.0           gama_i0: 2.0           gama_i1: 3
724 .0               gama_i1 + 1: 4.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
725 load_i: 140.0   work load gap_i: 0
726 V_id: 8           li: 9.0           xi: 4.5           bow of i: 0.0           tail of i: 9.0           gama_i0: 6.0           gama_i1: 8.0
727 .0               gama_i1 + 1: 9.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work load_i:
728 140.0            work load gap_i: 0
729 V_id: 9           li: 5.0           xi: 19.5           bow of i: 17.0           tail of i: 22.0           gama_i0: 4.0           gama_i1: 6
730 .0               gama_i1 + 1: 7.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
731 load_i: 140.0   work load gap_i: 0
732 V_id: 10          li: 9.0           xi: 18.5           bow of i: 14.0           tail of i: 23.0           gama_i0: 8.0           gama_i1:
733 .0               gama_i1 + 1: 10.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
734 load_i: 120.0   work load gap_i: 0
735 V_id: 11          li: 5.0           xi: 24.5           bow of i: 22.0           tail of i: 27.0           gama_i0: 5.0           gama_i1:
736 .0               gama_i1 + 1: 8.0       gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work
737 load_i: 120.0   work load gap_i: 0
738 V_id: 12          li: 5.0           xi: 26.5           bow of i: 24.0           tail of i: 29.0           gama_i0: 0.0           gama_i1:
739 .0               gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
740 load_i: 80.0    work load gap_i: 0
741 V_id: 13          li: 8.0           xi: 4.0           bow of i: 0.0           tail of i: 8.0           gama_i0: 3.0           gama_i1: 4.0
742 .0               gama_i1 + 1: 5.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work load_i:
743 160.0            work load gap_i: 0
744 V_id: 14          li: 7.0           xi: 20.5           bow of i: 17.0           tail of i: 24.0           gama_i0: 0.0           gama_i1:
745 .0               gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work
746 load_i: 60.0    work load gap_i: 0
747 V_id: 15          li: 5.0           xi: 10.5           bow of i: 8.0           tail of i: 13.0           gama_i0: 0.0           gama_i1:
748 .0               gama_i1 + 1: 2.0       gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
749 load_i: 140.0   work load gap_i: 0
750 V_id: 16          li: 3.0           xi: 12.5           bow of i: 11.0           tail of i: 14.0           gama_i0: 4.0           gama_i1:
751 .0               gama_i1 + 1: 8.0       gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work

```

unknown

```
718 load_i: 160.0          work load gap_i: 0
719   V_id: 17           li: 5.0           xi: 5.5           bow of i: 3.0           tail of i: 8.0           gama_i0: 0.0           gama_i1: 1.0
    gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0
140.0           work load gap_i: 0
720   V_id: 18           li: 3.0           xi: 15.5          bow of i: 14.0          tail of i: 17.0           gama_i0: 2.0           gama_i1
: 5.0           gama_i1 + 1: 6.0      gama_i1 - gama_i0: 3.0
load_i: 140.0           work load gap_i: 0
721   V_id: 19           li: 3.0           xi: 1.5            bow of i: 0.0          tail of i: 3.0           gama_i0: 0.0           gama_i1
120.0           gama_i1 + 1: 2.0      gama_i1 - gama_i0: 1.0
           work load gap_i: 0
722
723 Algorithm finished and the total CPU time: 520 s
724 End
725
```