

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 12. 410. 422.]
81 cord_individual_obj[indivial_i,:] = [ 17. 10. 375. 385.]
82 cord_individual_obj[indivial_i,:] = [ 18. 10. 427. 437.]
83 cord_individual_obj[indivial_i,:] = [ 19. 13. 423. 436.]
84 cord_individual_obj[indivial_i,:] = [ 20. 9. 317. 326.]
85 cord_individual_obj[indivial_i,:] = [ 21. 11. 411. 422.]
86 cord_individual_obj[indivial_i,:] = [ 22. 11. 420. 431.]
87 cord_individual_obj[indivial_i,:] = [ 23. 11. 393. 404.]
88 cord_individual_obj[indivial_i,:] = [ 24. 12. 392. 404.]
89
90 min(cord_individual_obj[:,3]) = 232.0
91 historl_G_best_iter[iter, 3] = 232.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 11. 343. 354.]
96 cord_individual_obj[indivial_i,:] = [ 1. 9. 327. 336.]
97 cord_individual_obj[indivial_i,:] = [ 2. 11. 272. 283.]
98 cord_individual_obj[indivial_i,:] = [ 3. 14. 366. 380.]
99 cord_individual_obj[indivial_i,:] = [ 4. 11. 299. 310.]
100 cord_individual_obj[indivial_i,:] = [ 5. 11. 296. 307.]
101 cord_individual_obj[indivial_i,:] = [ 6. 10. 270. 280.]
102 cord_individual_obj[indivial_i,:] = [ 7. 10. 222. 232.]
103 cord_individual_obj[indivial_i,:] = [ 8. 9. 287. 296.]
104 cord_individual_obj[indivial_i,:] = [ 9. 16. 400. 416.]
105 cord_individual_obj[indivial_i,:] = [ 10. 12. 345. 357.]
106 cord_individual_obj[indivial_i,:] = [ 11. 9. 267. 276.]
107 cord_individual_obj[indivial_i,:] = [ 12. 10. 315. 325.]
108 cord_individual_obj[indivial_i,:] = [ 13. 11. 348. 359.]
109 cord_individual_obj[indivial_i,:] = [ 14. 10. 253. 263.]
110 cord_individual_obj[indivial_i,:] = [ 15. 12. 384. 396.]
111 cord_individual_obj[indivial_i,:] = [ 16. 12. 275. 287.]
112 cord_individual_obj[indivial_i,:] = [ 17. 9. 323. 332.]
113 cord_individual_obj[indivial_i,:] = [ 18. 12. 307. 319.]
114 cord_individual_obj[indivial_i,:] = [ 19. 12. 365. 377.]
115 cord_individual_obj[indivial_i,:] = [ 20. 10. 316. 326.]
116 cord_individual_obj[indivial_i,:] = [ 21. 11. 419. 430.]
117 cord_individual_obj[indivial_i,:] = [ 22. 10. 322. 332.]
118 cord_individual_obj[indivial_i,:] = [ 23. 11. 291. 302.]
119 cord_individual_obj[indivial_i,:] = [ 24. 10. 277. 287.]
120
121 min(cord_individual_obj[:,3]) = 232.0
122 historl_G_best_iter[iter, 3] = 232.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 12. 329. 341.]
127 cord_individual_obj[indivial_i,:] = [ 1. 10. 345. 355.]
128 cord_individual_obj[indivial_i,:] = [ 2. 12. 383. 395.]
129 cord_individual_obj[indivial_i,:] = [ 3. 12. 447. 459.]
130 cord_individual_obj[indivial_i,:] = [ 4. 13. 377. 390.]
131 cord_individual_obj[indivial_i,:] = [ 5. 10. 327. 337.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 342. 351.]
133 cord_individual_obj[indivial_i,:] = [ 7. 9. 344. 353.]
134 cord_individual_obj[indivial_i,:] = [ 8. 11. 317. 328.]
135 cord_individual_obj[indivial_i,:] = [ 9. 13. 379. 392.]
136 cord_individual_obj[indivial_i,:] = [ 10. 10. 397. 407.]
137 cord_individual_obj[indivial_i,:] = [ 11. 9. 301. 310.]
138 cord_individual_obj[indivial_i,:] = [ 12. 11. 396. 407.]
139 cord_individual_obj[indivial_i,:] = [ 13. 10. 411. 421.]
140 cord_individual_obj[indivial_i,:] = [ 14. 11. 391. 402.]
141 cord_individual_obj[indivial_i,:] = [ 15. 10. 333. 343.]
142 cord_individual_obj[indivial_i,:] = [ 16. 12. 421. 433.]
143 cord_individual_obj[indivial_i,:] = [ 17. 10. 412. 422.]
144 cord_individual_obj[indivial_i,:] = [ 18. 12. 375. 387.]
145 cord_individual_obj[indivial_i,:] = [ 19. 10. 374. 384.]
146 cord_individual_obj[indivial_i,:] = [ 20. 11. 346. 357.]
147 cord_individual_obj[indivial_i,:] = [ 21. 10. 222. 232.]
148 cord_individual_obj[indivial_i,:] = [ 22. 11. 414. 425.]
149 cord_individual_obj[indivial_i,:] = [ 23. 10. 418. 428.]
150 cord_individual_obj[indivial_i,:] = [ 24. 11. 349. 360.]
151
152 min(cord_individual_obj[:,3]) = 232.0
153 historl_G_best_iter[iter, 3] = 232.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 10. 245. 255.]
158 cord_individual_obj[indivial_i,:] = [ 1. 12. 332. 344.]
159 cord_individual_obj[indivial_i,:] = [ 2. 9. 305. 314.]
160 cord_individual_obj[indivial_i,:] = [ 3. 10. 222. 232.]
161 cord_individual_obj[indivial_i,:] = [ 4. 12. 408. 420.]
162 cord_individual_obj[indivial_i,:] = [ 5. 12. 423. 435.]
163 cord_individual_obj[indivial_i,:] = [ 6. 10. 320. 330.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 11. 410. 421.]
165 cord_individual_obj[indivial_i,:] = [ 8. 10. 261. 271.]
166 cord_individual_obj[indivial_i,:] = [ 9. 11. 409. 420.]
167 cord_individual_obj[indivial_i,:] = [ 10. 11. 348. 359.]
168 cord_individual_obj[indivial_i,:] = [ 11. 9. 352. 361.]
169 cord_individual_obj[indivial_i,:] = [ 12. 12. 363. 375.]
170 cord_individual_obj[indivial_i,:] = [ 13. 12. 351. 363.]
171 cord_individual_obj[indivial_i,:] = [ 14. 12. 314. 326.]
172 cord_individual_obj[indivial_i,:] = [ 15. 12. 408. 420.]
173 cord_individual_obj[indivial_i,:] = [ 16. 11. 460. 471.]
174 cord_individual_obj[indivial_i,:] = [ 17. 9. 424. 433.]
175 cord_individual_obj[indivial_i,:] = [ 18. 11. 437. 448.]
176 cord_individual_obj[indivial_i,:] = [ 19. 11. 407. 418.]
177 cord_individual_obj[indivial_i,:] = [ 20. 10. 328. 338.]
178 cord_individual_obj[indivial_i,:] = [ 21. 11. 359. 370.]
179 cord_individual_obj[indivial_i,:] = [ 22. 10. 383. 393.]
180 cord_individual_obj[indivial_i,:] = [ 23. 12. 435. 447.]
181 cord_individual_obj[indivial_i,:] = [ 24. 11. 348. 359.]
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. 8. 266. 274.]
189 cord_individual_obj[indivial_i,:] = [ 1. 10. 353. 363.]
190 cord_individual_obj[indivial_i,:] = [ 2. 9. 302. 311.]
191 cord_individual_obj[indivial_i,:] = [ 3. 12. 422. 434.]
192 cord_individual_obj[indivial_i,:] = [ 4. 12. 391. 403.]
193 cord_individual_obj[indivial_i,:] = [ 5. 10. 313. 323.]
194 cord_individual_obj[indivial_i,:] = [ 6. 10. 305. 315.]
195 cord_individual_obj[indivial_i,:] = [ 7. 12. 390. 402.]
196 cord_individual_obj[indivial_i,:] = [ 8. 8. 354. 362.]
197 cord_individual_obj[indivial_i,:] = [ 9. 13. 503. 516.]
198 cord_individual_obj[indivial_i,:] = [ 10. 11. 363. 374.]
199 cord_individual_obj[indivial_i,:] = [ 11. 10. 319. 329.]
200 cord_individual_obj[indivial_i,:] = [ 12. 11. 488. 499.]
201 cord_individual_obj[indivial_i,:] = [ 13. 10. 342. 352.]
202 cord_individual_obj[indivial_i,:] = [ 14. 11. 337. 348.]
203 cord_individual_obj[indivial_i,:] = [ 15. 10. 323. 333.]
204 cord_individual_obj[indivial_i,:] = [ 16. 10. 222. 232.]
205 cord_individual_obj[indivial_i,:] = [ 17. 10. 421. 431.]
206 cord_individual_obj[indivial_i,:] = [ 18. 13. 404. 417.]
207 cord_individual_obj[indivial_i,:] = [ 19. 11. 401. 412.]
208 cord_individual_obj[indivial_i,:] = [ 20. 12. 321. 333.]
209 cord_individual_obj[indivial_i,:] = [ 21. 13. 407. 420.]
210 cord_individual_obj[indivial_i,:] = [ 22. 12. 401. 413.]
211 cord_individual_obj[indivial_i,:] = [ 23. 12. 384. 396.]
212 cord_individual_obj[indivial_i,:] = [ 24. 12. 367. 379.]
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. 10. 309. 319.]
220 cord_individual_obj[indivial_i,:] = [ 1. 10. 349. 359.]
221 cord_individual_obj[indivial_i,:] = [ 2. 11. 338. 349.]
222 cord_individual_obj[indivial_i,:] = [ 3. 10. 260. 270.]
223 cord_individual_obj[indivial_i,:] = [ 4. 11. 364. 375.]
224 cord_individual_obj[indivial_i,:] = [ 5. 11. 270. 281.]
225 cord_individual_obj[indivial_i,:] = [ 6. 11. 305. 316.]
226 cord_individual_obj[indivial_i,:] = [ 7. 9. 276. 285.]
227 cord_individual_obj[indivial_i,:] = [ 8. 11. 279. 290.]
228 cord_individual_obj[indivial_i,:] = [ 9. 10. 222. 232.]
229 cord_individual_obj[indivial_i,:] = [ 10. 11. 357. 368.]
230 cord_individual_obj[indivial_i,:] = [ 11. 9. 204. 213.]
231 cord_individual_obj[indivial_i,:] = [ 12. 12. 350. 362.]
232 cord_individual_obj[indivial_i,:] = [ 13. 10. 344. 354.]
233 cord_individual_obj[indivial_i,:] = [ 14. 11. 313. 324.]
234 cord_individual_obj[indivial_i,:] = [ 15. 11. 420. 431.]
235 cord_individual_obj[indivial_i,:] = [ 16. 12. 374. 386.]
236 cord_individual_obj[indivial_i,:] = [ 17. 10. 318. 328.]
237 cord_individual_obj[indivial_i,:] = [ 18. 9. 308. 317.]
238 cord_individual_obj[indivial_i,:] = [ 19. 10. 363. 373.]
239 cord_individual_obj[indivial_i,:] = [ 20. 12. 333. 345.]
240 cord_individual_obj[indivial_i,:] = [ 21. 12. 374. 386.]
241 cord_individual_obj[indivial_i,:] = [ 22. 10. 276. 286.]
242 cord_individual_obj[indivial_i,:] = [ 23. 11. 324. 335.]
243 cord_individual_obj[indivial_i,:] = [ 24. 11. 291. 302.]
244
245 min(cord_individual_obj[:,3]) = 213.0
246 historl_G_best_iter[iter,3] = 213.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  9. 347. 356.]
251 cord_individual_obj[indivial_i, :] = [ 1. 10. 333. 343.]
252 cord_individual_obj[indivial_i, :] = [ 2. 10. 279. 289.]
253 cord_individual_obj[indivial_i, :] = [ 3. 15. 375. 390.]
254 cord_individual_obj[indivial_i, :] = [ 4. 10. 323. 333.]
255 cord_individual_obj[indivial_i, :] = [ 5. 12. 334. 346.]
256 cord_individual_obj[indivial_i, :] = [ 6. 10. 299. 309.]
257 cord_individual_obj[indivial_i, :] = [ 7. 10. 319. 329.]
258 cord_individual_obj[indivial_i, :] = [ 8. 9. 311. 320.]
259 cord_individual_obj[indivial_i, :] = [ 9. 11. 381. 392.]
260 cord_individual_obj[indivial_i, :] = [ 10. 11. 353. 364.]
261 cord_individual_obj[indivial_i, :] = [ 11. 11. 328. 339.]
262 cord_individual_obj[indivial_i, :] = [ 12. 11. 376. 387.]
263 cord_individual_obj[indivial_i, :] = [ 13. 10. 294. 304.]
264 cord_individual_obj[indivial_i, :] = [ 14. 12. 307. 319.]
265 cord_individual_obj[indivial_i, :] = [ 15. 9. 204. 213.]
266 cord_individual_obj[indivial_i, :] = [ 16. 13. 328. 341.]
267 cord_individual_obj[indivial_i, :] = [ 17. 9. 286. 295.]
268 cord_individual_obj[indivial_i, :] = [ 18. 10. 276. 286.]
269 cord_individual_obj[indivial_i, :] = [ 19. 10. 297. 307.]
270 cord_individual_obj[indivial_i, :] = [ 20. 11. 275. 286.]
271 cord_individual_obj[indivial_i, :] = [ 21. 10. 345. 355.]
272 cord_individual_obj[indivial_i, :] = [ 22. 10. 264. 274.]
273 cord_individual_obj[indivial_i, :] = [ 23. 11. 299. 310.]
274 cord_individual_obj[indivial_i, :] = [ 24. 13. 358. 371.]
275

276 min(cord_individual_obj[:, 3]) = 213.0
277 historl_G_best_iter[iter, 3] = 213.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 10. 324. 334.]
282 cord_individual_obj[indivial_i, :] = [ 1. 10. 339. 349.]
283 cord_individual_obj[indivial_i, :] = [ 2. 9. 259. 268.]
284 cord_individual_obj[indivial_i, :] = [ 3. 12. 344. 356.]
285 cord_individual_obj[indivial_i, :] = [ 4. 12. 290. 302.]
286 cord_individual_obj[indivial_i, :] = [ 5. 10. 291. 301.]
287 cord_individual_obj[indivial_i, :] = [ 6. 11. 235. 246.]
288 cord_individual_obj[indivial_i, :] = [ 7. 12. 379. 391.]
289 cord_individual_obj[indivial_i, :] = [ 8. 11. 217. 228.]
290 cord_individual_obj[indivial_i, :] = [ 9. 9. 204. 213.]
291 cord_individual_obj[indivial_i, :] = [ 10. 15. 391. 406.]
292 cord_individual_obj[indivial_i, :] = [ 11. 9. 260. 269.]
293 cord_individual_obj[indivial_i, :] = [ 12. 11. 334. 345.]
294 cord_individual_obj[indivial_i, :] = [ 13. 10. 384. 394.]
295 cord_individual_obj[indivial_i, :] = [ 14. 12. 290. 302.]
296 cord_individual_obj[indivial_i, :] = [ 15. 9. 281. 290.]
297 cord_individual_obj[indivial_i, :] = [ 16. 10. 329. 339.]
298 cord_individual_obj[indivial_i, :] = [ 17. 9. 275. 284.]
299 cord_individual_obj[indivial_i, :] = [ 18. 11. 270. 281.]
300 cord_individual_obj[indivial_i, :] = [ 19. 11. 366. 377.]
301 cord_individual_obj[indivial_i, :] = [ 20. 10. 317. 327.]
302 cord_individual_obj[indivial_i, :] = [ 21. 10. 289. 299.]
303 cord_individual_obj[indivial_i, :] = [ 22. 11. 294. 305.]
304 cord_individual_obj[indivial_i, :] = [ 23. 10. 270. 280.]
305 cord_individual_obj[indivial_i, :] = [ 24. 12. 319. 331.]
306

307 min(cord_individual_obj[:, 3]) = 213.0
308 historl_G_best_iter[iter, 3] = 213.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 11. 251. 262.]
313 cord_individual_obj[indivial_i, :] = [ 1. 11. 323. 334.]
314 cord_individual_obj[indivial_i, :] = [ 2. 8. 322. 330.]
315 cord_individual_obj[indivial_i, :] = [ 3. 11. 356. 367.]
316 cord_individual_obj[indivial_i, :] = [ 4. 11. 329. 340.]
317 cord_individual_obj[indivial_i, :] = [ 5. 10. 345. 355.]
318 cord_individual_obj[indivial_i, :] = [ 6. 8. 251. 259.]
319 cord_individual_obj[indivial_i, :] = [ 7. 12. 360. 372.]
320 cord_individual_obj[indivial_i, :] = [ 8. 11. 382. 393.]
321 cord_individual_obj[indivial_i, :] = [ 9. 11. 341. 352.]
322 cord_individual_obj[indivial_i, :] = [ 10. 9. 204. 213.]
323 cord_individual_obj[indivial_i, :] = [ 11. 9. 297. 306.]
324 cord_individual_obj[indivial_i, :] = [ 12. 9. 368. 377.]
325 cord_individual_obj[indivial_i, :] = [ 13. 8. 344. 352.]
326 cord_individual_obj[indivial_i, :] = [ 14. 9. 382. 391.]
327 cord_individual_obj[indivial_i, :] = [ 15. 9. 329. 338.]
328 cord_individual_obj[indivial_i, :] = [ 16. 11. 382. 393.]
329 cord_individual_obj[indivial_i, :] = [ 17. 10. 296. 306.]
330 cord_individual_obj[indivial_i, :] = [ 18. 10. 315. 325.]
331 cord_individual_obj[indivial_i, :] = [ 19. 10. 294. 304.]

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332 cord_individual_obj[indivial_i, :] = [ 20.  8. 269. 277.]
333 cord_individual_obj[indivial_i, :] = [ 21. 11. 392. 403.]
334 cord_individual_obj[indivial_i, :] = [ 22. 10. 316. 326.]
335 cord_individual_obj[indivial_i, :] = [ 23. 10. 323. 333.]
336 cord_individual_obj[indivial_i, :] = [ 24. 11. 304. 315.]
337
338 min(cord_individual_obj[:, 3]) = 213.0
339 histol_G_best_iter[iter, 3] = 213.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 11. 321. 332.]
344 cord_individual_obj[indivial_i, :] = [ 1. 14. 332. 346.]
345 cord_individual_obj[indivial_i, :] = [ 2. 10. 248. 258.]
346 cord_individual_obj[indivial_i, :] = [ 3. 12. 347. 359.]
347 cord_individual_obj[indivial_i, :] = [ 4. 12. 357. 369.]
348 cord_individual_obj[indivial_i, :] = [ 5. 10. 357. 367.]
349 cord_individual_obj[indivial_i, :] = [ 6. 11. 320. 331.]
350 cord_individual_obj[indivial_i, :] = [ 7. 9. 313. 322.]
351 cord_individual_obj[indivial_i, :] = [ 8. 8. 291. 299.]
352 cord_individual_obj[indivial_i, :] = [ 9. 9. 346. 355.]
353 cord_individual_obj[indivial_i, :] = [ 10. 10. 316. 326.]
354 cord_individual_obj[indivial_i, :] = [ 11. 13. 382. 395.]
355 cord_individual_obj[indivial_i, :] = [ 12. 11. 461. 472.]
356 cord_individual_obj[indivial_i, :] = [ 13. 10. 348. 358.]
357 cord_individual_obj[indivial_i, :] = [ 14. 10. 304. 314.]
358 cord_individual_obj[indivial_i, :] = [ 15. 10. 384. 394.]
359 cord_individual_obj[indivial_i, :] = [ 16. 12. 338. 350.]
360 cord_individual_obj[indivial_i, :] = [ 17. 10. 291. 301.]
361 cord_individual_obj[indivial_i, :] = [ 18. 12. 274. 286.]
362 cord_individual_obj[indivial_i, :] = [ 19. 13. 347. 360.]
363 cord_individual_obj[indivial_i, :] = [ 20. 9. 338. 347.]
364 cord_individual_obj[indivial_i, :] = [ 21. 9. 204. 213.]
365 cord_individual_obj[indivial_i, :] = [ 22. 8. 306. 314.]
366 cord_individual_obj[indivial_i, :] = [ 23. 13. 369. 382.]
367 cord_individual_obj[indivial_i, :] = [ 24. 10. 394. 404.]
368
369 min(cord_individual_obj[:, 3]) = 213.0
370 histol_G_best_iter[iter, 3] = 213.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 9. 280. 289.]
375 cord_individual_obj[indivial_i, :] = [ 1. 12. 306. 318.]
376 cord_individual_obj[indivial_i, :] = [ 2. 9. 291. 300.]
377 cord_individual_obj[indivial_i, :] = [ 3. 10. 342. 352.]
378 cord_individual_obj[indivial_i, :] = [ 4. 12. 275. 287.]
379 cord_individual_obj[indivial_i, :] = [ 5. 10. 322. 332.]
380 cord_individual_obj[indivial_i, :] = [ 6. 11. 216. 227.]
381 cord_individual_obj[indivial_i, :] = [ 7. 13. 231. 244.]
382 cord_individual_obj[indivial_i, :] = [ 8. 8. 240. 248.]
383 cord_individual_obj[indivial_i, :] = [ 9. 11. 327. 338.]
384 cord_individual_obj[indivial_i, :] = [ 10. 14. 304. 318.]
385 cord_individual_obj[indivial_i, :] = [ 11. 9. 279. 288.]
386 cord_individual_obj[indivial_i, :] = [ 12. 9. 204. 213.]
387 cord_individual_obj[indivial_i, :] = [ 13. 10. 350. 360.]
388 cord_individual_obj[indivial_i, :] = [ 14. 13. 303. 316.]
389 cord_individual_obj[indivial_i, :] = [ 15. 10. 217. 227.]
390 cord_individual_obj[indivial_i, :] = [ 16. 13. 283. 296.]
391 cord_individual_obj[indivial_i, :] = [ 17. 9. 322. 331.]
392 cord_individual_obj[indivial_i, :] = [ 18. 12. 265. 277.]
393 cord_individual_obj[indivial_i, :] = [ 19. 11. 249. 260.]
394 cord_individual_obj[indivial_i, :] = [ 20. 11. 226. 237.]
395 cord_individual_obj[indivial_i, :] = [ 21. 11. 328. 339.]
396 cord_individual_obj[indivial_i, :] = [ 22. 10. 263. 273.]
397 cord_individual_obj[indivial_i, :] = [ 23. 13. 330. 343.]
398 cord_individual_obj[indivial_i, :] = [ 24. 10. 254. 264.]
399
400 min(cord_individual_obj[:, 3]) = 213.0
401 histol_G_best_iter[iter, 3] = 213.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 9. 247. 256.]
406 cord_individual_obj[indivial_i, :] = [ 1. 11. 381. 392.]
407 cord_individual_obj[indivial_i, :] = [ 2. 12. 260. 272.]
408 cord_individual_obj[indivial_i, :] = [ 3. 12. 332. 344.]
409 cord_individual_obj[indivial_i, :] = [ 4. 12. 257. 269.]
410 cord_individual_obj[indivial_i, :] = [ 5. 10. 251. 261.]
411 cord_individual_obj[indivial_i, :] = [ 6. 11. 277. 288.]
412 cord_individual_obj[indivial_i, :] = [ 7. 12. 362. 374.]
413 cord_individual_obj[indivial_i, :] = [ 8. 9. 352. 361.]
414 cord_individual_obj[indivial_i, :] = [ 9. 11. 391. 402.]
415 cord_individual_obj[indivial_i, :] = [ 10. 14. 303. 317.]

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```

416 cord_individual_obj[indivial_i,:] = [ 11. 9. 367. 376.]
417 cord_individual_obj[indivial_i,:] = [ 12. 12. 394. 406.]
418 cord_individual_obj[indivial_i,:] = [ 13. 9. 204. 213.]
419 cord_individual_obj[indivial_i,:] = [ 14. 10. 319. 329.]
420 cord_individual_obj[indivial_i,:] = [ 15. 13. 378. 391.]
421 cord_individual_obj[indivial_i,:] = [ 16. 10. 281. 291.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 355. 366.]
423 cord_individual_obj[indivial_i,:] = [ 18. 10. 305. 315.]
424 cord_individual_obj[indivial_i,:] = [ 19. 11. 271. 282.]
425 cord_individual_obj[indivial_i,:] = [ 20. 10. 312. 322.]
426 cord_individual_obj[indivial_i,:] = [ 21. 10. 337. 347.]
427 cord_individual_obj[indivial_i,:] = [ 22. 10. 256. 266.]
428 cord_individual_obj[indivial_i,:] = [ 23. 12. 315. 327.]
429 cord_individual_obj[indivial_i,:] = [ 24. 11. 255. 266.]
430
431 min(cord_individual_obj[:,3]) = 213.0
432 histol_G_best_iter[iter,3] = 213.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 10. 307. 317.]
437 cord_individual_obj[indivial_i,:] = [ 1. 8. 283. 291.]
438 cord_individual_obj[indivial_i,:] = [ 2. 9. 309. 318.]
439 cord_individual_obj[indivial_i,:] = [ 3. 12. 364. 376.]
440 cord_individual_obj[indivial_i,:] = [ 4. 13. 387. 400.]
441 cord_individual_obj[indivial_i,:] = [ 5. 10. 304. 314.]
442 cord_individual_obj[indivial_i,:] = [ 6. 10. 291. 301.]
443 cord_individual_obj[indivial_i,:] = [ 7. 11. 403. 414.]
444 cord_individual_obj[indivial_i,:] = [ 8. 10. 327. 337.]
445 cord_individual_obj[indivial_i,:] = [ 9. 10. 396. 406.]
446 cord_individual_obj[indivial_i,:] = [ 10. 11. 253. 264.]
447 cord_individual_obj[indivial_i,:] = [ 11. 10. 328. 338.]
448 cord_individual_obj[indivial_i,:] = [ 12. 9. 204. 213.]
449 cord_individual_obj[indivial_i,:] = [ 13. 10. 328. 338.]
450 cord_individual_obj[indivial_i,:] = [ 14. 9. 275. 284.]
451 cord_individual_obj[indivial_i,:] = [ 15. 10. 293. 303.]
452 cord_individual_obj[indivial_i,:] = [ 16. 13. 419. 432.]
453 cord_individual_obj[indivial_i,:] = [ 17. 11. 319. 330.]
454 cord_individual_obj[indivial_i,:] = [ 18. 12. 262. 274.]
455 cord_individual_obj[indivial_i,:] = [ 19. 13. 341. 354.]
456 cord_individual_obj[indivial_i,:] = [ 20. 9. 289. 298.]
457 cord_individual_obj[indivial_i,:] = [ 21. 10. 365. 375.]
458 cord_individual_obj[indivial_i,:] = [ 22. 10. 276. 286.]
459 cord_individual_obj[indivial_i,:] = [ 23. 11. 233. 244.]
460 cord_individual_obj[indivial_i,:] = [ 24. 11. 332. 343.]
461
462 min(cord_individual_obj[:,3]) = 213.0
463 histol_G_best_iter[iter,3] = 213.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 9. 225. 234.]
468 cord_individual_obj[indivial_i,:] = [ 1. 10. 261. 271.]
469 cord_individual_obj[indivial_i,:] = [ 2. 10. 205. 215.]
470 cord_individual_obj[indivial_i,:] = [ 3. 11. 302. 313.]
471 cord_individual_obj[indivial_i,:] = [ 4. 11. 255. 266.]
472 cord_individual_obj[indivial_i,:] = [ 5. 11. 272. 283.]
473 cord_individual_obj[indivial_i,:] = [ 6. 9. 360. 369.]
474 cord_individual_obj[indivial_i,:] = [ 7. 11. 240. 251.]
475 cord_individual_obj[indivial_i,:] = [ 8. 9. 234. 243.]
476 cord_individual_obj[indivial_i,:] = [ 9. 12. 225. 237.]
477 cord_individual_obj[indivial_i,:] = [ 10. 10. 280. 290.]
478 cord_individual_obj[indivial_i,:] = [ 11. 11. 232. 243.]
479 cord_individual_obj[indivial_i,:] = [ 12. 12. 393. 405.]
480 cord_individual_obj[indivial_i,:] = [ 13. 11. 276. 287.]
481 cord_individual_obj[indivial_i,:] = [ 14. 10. 245. 255.]
482 cord_individual_obj[indivial_i,:] = [ 15. 10. 257. 267.]
483 cord_individual_obj[indivial_i,:] = [ 16. 9. 204. 213.]
484 cord_individual_obj[indivial_i,:] = [ 17. 9. 217. 226.]
485 cord_individual_obj[indivial_i,:] = [ 18. 14. 266. 280.]
486 cord_individual_obj[indivial_i,:] = [ 19. 12. 300. 312.]
487 cord_individual_obj[indivial_i,:] = [ 20. 10. 269. 279.]
488 cord_individual_obj[indivial_i,:] = [ 21. 10. 325. 335.]
489 cord_individual_obj[indivial_i,:] = [ 22. 10. 267. 277.]
490 cord_individual_obj[indivial_i,:] = [ 23. 13. 286. 299.]
491 cord_individual_obj[indivial_i,:] = [ 24. 10. 277. 287.]
492
493 min(cord_individual_obj[:,3]) = 213.0
494 histol_G_best_iter[iter,3] = 213.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 11. 324. 335.]
499 cord_individual_obj[indivial_i,:] = [ 1. 10. 317. 327.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 8. 284. 292.]
501 cord_individual_obj[indivial_i, :] = [ 3. 12. 271. 283.]
502 cord_individual_obj[indivial_i, :] = [ 4. 11. 309. 320.]
503 cord_individual_obj[indivial_i, :] = [ 5. 13. 313. 326.]
504 cord_individual_obj[indivial_i, :] = [ 6. 11. 350. 361.]
505 cord_individual_obj[indivial_i, :] = [ 7. 10. 367. 377.]
506 cord_individual_obj[indivial_i, :] = [ 8. 9. 357. 366.]
507 cord_individual_obj[indivial_i, :] = [ 9. 12. 340. 352.]
508 cord_individual_obj[indivial_i, :] = [ 10. 10. 338. 348.]
509 cord_individual_obj[indivial_i, :] = [ 11. 11. 333. 344.]
510 cord_individual_obj[indivial_i, :] = [ 12. 9. 204. 213.]
511 cord_individual_obj[indivial_i, :] = [ 13. 10. 347. 357.]
512 cord_individual_obj[indivial_i, :] = [ 14. 11. 340. 351.]
513 cord_individual_obj[indivial_i, :] = [ 15. 12. 454. 466.]
514 cord_individual_obj[indivial_i, :] = [ 16. 11. 336. 347.]
515 cord_individual_obj[indivial_i, :] = [ 17. 8. 288. 296.]
516 cord_individual_obj[indivial_i, :] = [ 18. 11. 272. 283.]
517 cord_individual_obj[indivial_i, :] = [ 19. 10. 310. 320.]
518 cord_individual_obj[indivial_i, :] = [ 20. 11. 296. 307.]
519 cord_individual_obj[indivial_i, :] = [ 21. 10. 307. 317.]
520 cord_individual_obj[indivial_i, :] = [ 22. 10. 372. 382.]
521 cord_individual_obj[indivial_i, :] = [ 23. 12. 351. 363.]
522 cord_individual_obj[indivial_i, :] = [ 24. 12. 306. 318.]
523
524 min(cord_individual_obj[:, 3]) = 213.0
525 histol_G_best_iter[iter, 3] = 213.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 9. 211. 220.]
530 cord_individual_obj[indivial_i, :] = [ 1. 11. 289. 300.]
531 cord_individual_obj[indivial_i, :] = [ 2. 11. 318. 329.]
532 cord_individual_obj[indivial_i, :] = [ 3. 10. 305. 315.]
533 cord_individual_obj[indivial_i, :] = [ 4. 12. 318. 330.]
534 cord_individual_obj[indivial_i, :] = [ 5. 10. 290. 300.]
535 cord_individual_obj[indivial_i, :] = [ 6. 10. 276. 286.]
536 cord_individual_obj[indivial_i, :] = [ 7. 12. 229. 241.]
537 cord_individual_obj[indivial_i, :] = [ 8. 9. 234. 243.]
538 cord_individual_obj[indivial_i, :] = [ 9. 13. 402. 415.]
539 cord_individual_obj[indivial_i, :] = [ 10. 11. 275. 286.]
540 cord_individual_obj[indivial_i, :] = [ 11. 11. 389. 400.]
541 cord_individual_obj[indivial_i, :] = [ 12. 12. 393. 405.]
542 cord_individual_obj[indivial_i, :] = [ 13. 13. 327. 340.]
543 cord_individual_obj[indivial_i, :] = [ 14. 10. 284. 294.]
544 cord_individual_obj[indivial_i, :] = [ 15. 9. 204. 213.]
545 cord_individual_obj[indivial_i, :] = [ 16. 12. 291. 303.]
546 cord_individual_obj[indivial_i, :] = [ 17. 11. 258. 269.]
547 cord_individual_obj[indivial_i, :] = [ 18. 11. 214. 225.]
548 cord_individual_obj[indivial_i, :] = [ 19. 9. 323. 332.]
549 cord_individual_obj[indivial_i, :] = [ 20. 11. 321. 332.]
550 cord_individual_obj[indivial_i, :] = [ 21. 12. 280. 292.]
551 cord_individual_obj[indivial_i, :] = [ 22. 11. 246. 257.]
552 cord_individual_obj[indivial_i, :] = [ 23. 10. 271. 281.]
553 cord_individual_obj[indivial_i, :] = [ 24. 9. 225. 234.]
554
555 min(cord_individual_obj[:, 3]) = 213.0
556 histol_G_best_iter[iter, 3] = 213.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 11. 328. 339.]
561 cord_individual_obj[indivial_i, :] = [ 1. 13. 278. 291.]
562 cord_individual_obj[indivial_i, :] = [ 2. 12. 357. 369.]
563 cord_individual_obj[indivial_i, :] = [ 3. 11. 346. 357.]
564 cord_individual_obj[indivial_i, :] = [ 4. 11. 366. 377.]
565 cord_individual_obj[indivial_i, :] = [ 5. 12. 250. 262.]
566 cord_individual_obj[indivial_i, :] = [ 6. 12. 404. 416.]
567 cord_individual_obj[indivial_i, :] = [ 7. 11. 294. 305.]
568 cord_individual_obj[indivial_i, :] = [ 8. 9. 229. 238.]
569 cord_individual_obj[indivial_i, :] = [ 9. 9. 204. 213.]
570 cord_individual_obj[indivial_i, :] = [ 10. 10. 249. 259.]
571 cord_individual_obj[indivial_i, :] = [ 11. 8. 255. 263.]
572 cord_individual_obj[indivial_i, :] = [ 12. 10. 221. 231.]
573 cord_individual_obj[indivial_i, :] = [ 13. 12. 331. 343.]
574 cord_individual_obj[indivial_i, :] = [ 14. 10. 288. 298.]
575 cord_individual_obj[indivial_i, :] = [ 15. 9. 237. 246.]
576 cord_individual_obj[indivial_i, :] = [ 16. 10. 332. 342.]
577 cord_individual_obj[indivial_i, :] = [ 17. 10. 259. 269.]
578 cord_individual_obj[indivial_i, :] = [ 18. 12. 335. 347.]
579 cord_individual_obj[indivial_i, :] = [ 19. 13. 316. 329.]
580 cord_individual_obj[indivial_i, :] = [ 20. 9. 268. 277.]
581 cord_individual_obj[indivial_i, :] = [ 21. 10. 309. 319.]
582 cord_individual_obj[indivial_i, :] = [ 22. 10. 247. 257.]
583 cord_individual_obj[indivial_i, :] = [ 23. 11. 263. 274.]

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584     cord_individual_obj[indivial_i, :] = [ 24. 10. 268. 278.]
585
586     min(cord_individual_obj[:, 3]) = 213.0
587     historl_G_best_iter[iter, 3] = 213.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 8. 227. 235.]
592     cord_individual_obj[indivial_i, :] = [ 1. 12. 280. 292.]
593     cord_individual_obj[indivial_i, :] = [ 2. 13. 325. 338.]
594     cord_individual_obj[indivial_i, :] = [ 3. 10. 332. 342.]
595     cord_individual_obj[indivial_i, :] = [ 4. 12. 276. 288.]
596     cord_individual_obj[indivial_i, :] = [ 5. 11. 251. 262.]
597     cord_individual_obj[indivial_i, :] = [ 6. 9. 204. 213.]
598     cord_individual_obj[indivial_i, :] = [ 7. 9. 258. 267.]
599     cord_individual_obj[indivial_i, :] = [ 8. 10. 239. 249.]
600     cord_individual_obj[indivial_i, :] = [ 9. 11. 305. 316.]
601     cord_individual_obj[indivial_i, :] = [ 10. 12. 226. 238.]
602     cord_individual_obj[indivial_i, :] = [ 11. 10. 304. 314.]
603     cord_individual_obj[indivial_i, :] = [ 12. 10. 283. 293.]
604     cord_individual_obj[indivial_i, :] = [ 13. 10. 327. 337.]
605     cord_individual_obj[indivial_i, :] = [ 14. 12. 315. 327.]
606     cord_individual_obj[indivial_i, :] = [ 15. 13. 256. 269.]
607     cord_individual_obj[indivial_i, :] = [ 16. 13. 240. 253.]
608     cord_individual_obj[indivial_i, :] = [ 17. 10. 302. 312.]
609     cord_individual_obj[indivial_i, :] = [ 18. 12. 238. 250.]
610     cord_individual_obj[indivial_i, :] = [ 19. 12. 251. 263.]
611     cord_individual_obj[indivial_i, :] = [ 20. 12. 339. 351.]
612     cord_individual_obj[indivial_i, :] = [ 21. 12. 274. 286.]
613     cord_individual_obj[indivial_i, :] = [ 22. 11. 219. 230.]
614     cord_individual_obj[indivial_i, :] = [ 23. 12. 361. 373.]
615     cord_individual_obj[indivial_i, :] = [ 24. 11. 222. 233.]
616
617     min(cord_individual_obj[:, 3]) = 213.0
618     historl_G_best_iter[iter, 3] = 213.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 11. 356. 367.]
623     cord_individual_obj[indivial_i, :] = [ 1. 11. 282. 293.]
624     cord_individual_obj[indivial_i, :] = [ 2. 10. 294. 304.]
625     cord_individual_obj[indivial_i, :] = [ 3. 13. 328. 341.]
626     cord_individual_obj[indivial_i, :] = [ 4. 13. 364. 377.]
627     cord_individual_obj[indivial_i, :] = [ 5. 12. 303. 315.]
628     cord_individual_obj[indivial_i, :] = [ 6. 11. 327. 338.]
629     cord_individual_obj[indivial_i, :] = [ 7. 11. 405. 416.]
630     cord_individual_obj[indivial_i, :] = [ 8. 9. 327. 336.]
631     cord_individual_obj[indivial_i, :] = [ 9. 8. 377. 385.]
632     cord_individual_obj[indivial_i, :] = [ 10. 10. 334. 344.]
633     cord_individual_obj[indivial_i, :] = [ 11. 9. 240. 249.]
634     cord_individual_obj[indivial_i, :] = [ 12. 11. 472. 483.]
635     cord_individual_obj[indivial_i, :] = [ 13. 8. 311. 319.]
636     cord_individual_obj[indivial_i, :] = [ 14. 10. 362. 372.]
637     cord_individual_obj[indivial_i, :] = [ 15. 10. 326. 336.]
638     cord_individual_obj[indivial_i, :] = [ 16. 14. 315. 329.]
639     cord_individual_obj[indivial_i, :] = [ 17. 11. 317. 328.]
640     cord_individual_obj[indivial_i, :] = [ 18. 10. 293. 303.]
641     cord_individual_obj[indivial_i, :] = [ 19. 11. 344. 355.]
642     cord_individual_obj[indivial_i, :] = [ 20. 11. 355. 366.]
643     cord_individual_obj[indivial_i, :] = [ 21. 10. 255. 265.]
644     cord_individual_obj[indivial_i, :] = [ 22. 11. 373. 384.]
645     cord_individual_obj[indivial_i, :] = [ 23. 9. 204. 213.]
646     cord_individual_obj[indivial_i, :] = [ 24. 11. 327. 338.]
647
648     min(cord_individual_obj[:, 3]) = 213.0
649     historl_G_best_iter[iter, 3] = 213.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 10. 284. 294.]
654     cord_individual_obj[indivial_i, :] = [ 1. 9. 227. 236.]
655     cord_individual_obj[indivial_i, :] = [ 2. 10. 257. 267.]
656     cord_individual_obj[indivial_i, :] = [ 3. 10. 321. 331.]
657     cord_individual_obj[indivial_i, :] = [ 4. 13. 304. 317.]
658     cord_individual_obj[indivial_i, :] = [ 5. 10. 286. 296.]
659     cord_individual_obj[indivial_i, :] = [ 6. 10. 192. 202.]
660     cord_individual_obj[indivial_i, :] = [ 7. 11. 228. 239.]
661     cord_individual_obj[indivial_i, :] = [ 8. 8. 260. 268.]
662     cord_individual_obj[indivial_i, :] = [ 9. 12. 351. 363.]
663     cord_individual_obj[indivial_i, :] = [ 10. 10. 287. 297.]
664     cord_individual_obj[indivial_i, :] = [ 11. 10. 303. 313.]
665     cord_individual_obj[indivial_i, :] = [ 12. 9. 204. 213.]
666     cord_individual_obj[indivial_i, :] = [ 13. 9. 356. 365.]
667     cord_individual_obj[indivial_i, :] = [ 14. 10. 248. 258.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 11. 254. 265.]
669 cord_individual_obj[indivial_i,:] = [ 16. 11. 309. 320.]
670 cord_individual_obj[indivial_i,:] = [ 17. 9. 247. 256.]
671 cord_individual_obj[indivial_i,:] = [ 18. 11. 243. 254.]
672 cord_individual_obj[indivial_i,:] = [ 19. 12. 360. 372.]
673 cord_individual_obj[indivial_i,:] = [ 20. 10. 285. 295.]
674 cord_individual_obj[indivial_i,:] = [ 21. 11. 280. 291.]
675 cord_individual_obj[indivial_i,:] = [ 22. 10. 325. 335.]
676 cord_individual_obj[indivial_i,:] = [ 23. 12. 332. 344.]
677 cord_individual_obj[indivial_i,:] = [ 24. 9. 321. 330.]
678
679 min(cord_individual_obj[:, 3]) = 202.0
680 historl_G_best_iter[iter, 3] = 202.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 237.0
689 Proportion_of_area = 0.21944444444444444
690 BEST_CHROM =
691 berth: [ 2.5 4.5 11.5 19.5 7.5 26. 28. 27. 3.5 15. 24. 12. 22.5 4.5
692 18. 25.5 3.5 19. 11.5 11.5 ]
693 time: [ 8. 1. 6. 6. 8. 0. 2. 6. 5. 8. 2. 3. 3. 3. 2. 4. 0. 0. 1. 0. ]
694 num_QC: [ 2. 3. 1. 6. 4. 3. 2. 2. 2. 2. 3. 2. 3. 5. 2. 3. 4. 4. 5. 5. ]
695 Objective function values and some other indicators:
696 Obj0 = 10.00      Obj1 = 192.00      Obj0 + Obj1 = 202.00
697 Total movement of crane: 52.00
698 Total waiting time in berth position: 68.00
699 Total index of q during berthing: 1329.00
700 Specific arrangement for each vessel:
701 V_id: 0          li: 5.0           xi: 2.5           bow of i: 0.0           tail of i: 5.0           gama_i0: 8.0           gama_i1: 9.0
702 load_i: 60.0     gama_i1 + 1: 10.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 60.0         work
703 V_id: 1          li: 9.0           xi: 4.5           bow of i: 0.0           tail of i: 9.0           gama_i0: 1.0           gama_i1: 2.0
704 load_i: 80.0     gama_i1 + 1: 3.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 80.0         work load_i:
705 V_id: 2          li: 3.0           xi: 11.5          bow of i: 10.0          tail of i: 13.0          gama_i0: 6.0           gama_i1: 9
706 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
707 V_id: 3          li: 9.0           xi: 19.5          bow of i: 15.0          tail of i: 24.0          gama_i0: 6.0           gama_i1: 7
708 load_i: 140.0    gama_i1 + 1: 8.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 140.0        work
709 V_id: 4          li: 5.0           xi: 7.5            bow of i: 5.0           tail of i: 10.0          gama_i0: 8.0           gama_i1: 9.0
710 load_i: 160.0    gama_i1 + 1: 10.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 160.0        work
711 V_id: 5          li: 8.0           xi: 26.0           bow of i: 22.0          tail of i: 30.0          gama_i0: 0.0           gama_i1: 1
712 load_i: 120.0    gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 120.0        work
713 V_id: 6          li: 4.0           xi: 28.0           bow of i: 26.0          tail of i: 30.0          gama_i0: 2.0           gama_i1: 3
714 load_i: 60.0     gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 60.0         work
715 V_id: 7          li: 6.0           xi: 27.0           bow of i: 24.0          tail of i: 30.0          gama_i0: 6.0           gama_i1: 8
716 load_i: 100.0    gama_i1 + 1: 9.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 100.0        work
717 V_id: 8          li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 5.0           gama_i1: 7.0
718 load_i: 100.0    gama_i1 + 1: 8.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 100.0        work load_i:
719 V_id: 9          li: 4.0           xi: 15.0           bow of i: 13.0          tail of i: 17.0          gama_i0: 8.0           gama_i1: 120.0
720 load_i: 120.0    gama_i1 + 1: 11.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 120.0        work
721 V_id: 10         li: 4.0           xi: 24.0           bow of i: 22.0          tail of i: 26.0          gama_i0: 2.0           gama_i1: 60.0
722 load_i: 60.0     gama_i1 + 1: 3.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0   demand_i: 60.0         work
723 V_id: 11         li: 6.0           xi: 12.0            bow of i: 9.0           tail of i: 15.0          gama_i0: 3.0           gama_i1: 100.0
724 load_i: 100.0    gama_i1 + 1: 6.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 100.0        work
725 V_id: 12         li: 3.0           xi: 22.5           bow of i: 21.0          tail of i: 24.0          gama_i0: 3.0           gama_i1: 160.0
726 load_i: 160.0    gama_i1 + 1: 6.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 160.0        work
727 V_id: 13         li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 3.0           gama_i1: 4.0
728 load_i: 160.0    gama_i1 + 1: 5.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 160.0        work load_i:
729 V_id: 14         li: 6.0           xi: 18.0           bow of i: 15.0          tail of i: 21.0          gama_i0: 2.0           gama_i1: 120.0
730 load_i: 120.0    gama_i1 + 1: 5.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0   demand_i: 120.0        work
731 V_id: 15         li: 3.0           xi: 25.5           bow of i: 24.0          tail of i: 27.0          gama_i0: 4.0           gama_i1: 120.0
732 load_i: 120.0    gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0   demand_i: 120.0        work
733 V_id: 16         li: 7.0           xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 0.0           gama_i1: 0.0
734 load_i: 80.0     gama_i1 + 1: 1.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0   demand_i: 80.0         work load_i:

```

unknown

718	V_id: 17 : 1.0 load_i: 160.0	li: 6.0 gama_i1 + 1: 2.0 work load gap_i: 0	xi: 19.0 gama_i1 - gama_i0: 1.0	bow of i: 16.0	tail of i: 22.0 duration_time_i: 2.0	gama_i0: 0.0 demand_i: 160.0	gama_i1 work
719	V_id: 18 : 2.0 load_i: 120.0	li: 5.0 gama_i1 + 1: 3.0 work load gap_i: 0	xi: 11.5 gama_i1 - gama_i0: 1.0	bow of i: 9.0	tail of i: 14.0 duration_time_i: 2.0	gama_i0: 1.0 demand_i: 120.0	gama_i1 work
720	V_id: 19 : 0.0 load_i: 80.0	li: 9.0 gama_i1 + 1: 1.0 work load gap_i: 0	xi: 11.5 gama_i1 - gama_i0: 0.0	bow of i: 7.0	tail of i: 16.0 duration_time_i: 1.0	gama_i0: 0.0 demand_i: 80.0	gama_i1 work

721

722 Algorithm finished and the total CPU time: 564 s

723 End

724