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1 C:\Users\Julia\AppData\Local\Programs\Python\Python38-32\python.exe C:/CS363 AI/C
2 Console output is saving to: C:\CS363_AI\CS363_Artificial_Intelligence_Repo\HW2
3 filename hw2dataset_10.txt
4 Provided
5 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
6      0.7      0.8      0.4      0.7      0.3
7 total iterations: 5
8 -----Gender Table-----
9 P(Gender=0) P(Gender=1)
10    0.726477  0.273523
11
12
13 -----Weight|Gender Table-----
14 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|C
15      0.862349      0.137651      0.634399      0.365601
16
17
18 -----Height|Gender Table-----
19 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ger
20      0.688252      0.311748      4.480958e-07      1.0
21
22
23 Test Case #1
24 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
25    0.383271      0.511622      0.027045      0.465921      0.96269
26 total iterations: 5
27 -----Gender Table-----
28 P(Gender=0) P(Gender=1)
29    0.726481  0.273519
30
31
32 -----Weight|Gender Table-----
33 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|C
34      0.86235      0.13765      0.634394      0.365606
35
36
37 -----Height|Gender Table-----
38 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ger
39      0.688248      0.311752      7.684886e-07      0.999999
40
41
42 Test Case #2
43 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
44    0.527978      0.816105      0.256124      0.931043      0.141905
45 total iterations: 5
46 -----Gender Table-----
47 P(Gender=0) P(Gender=1)
48    0.726472  0.273528
49
50
51 -----Weight|Gender Table-----

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52 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
53      0.862348      0.137652      0.634407      0.365593
54
55
56 -----Height|Gender Table-----
57 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
58      0.688258      0.311742      2.295971e-07      1.0
59
60
61 Test Case #3
62 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
63      0.1      0.1      0.1      0.1      0.1
64 total iterations: 6
65 -----Gender Table-----
66 P(Gender=0) P(Gender=1)
67      0.726475      0.273525
68
69
70 -----Weight|Gender Table-----
71 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
72      0.862349      0.137651      0.634403      0.365597
73
74
75 -----Height|Gender Table-----
76 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
77      0.688255      0.311745      4.158310e-07      1.0
78
79
80 Test Case #4
81 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
82      0.9      0.9      0.9      0.9      0.9
83 total iterations: 5
84 -----Gender Table-----
85 P(Gender=0) P(Gender=1)
86      0.726481      0.273519
87
88
89 -----Weight|Gender Table-----
90 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
91      0.86235      0.13765      0.634395      0.365605
92
93
94 -----Height|Gender Table-----
95 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
96      0.688249      0.311751      5.168287e-07      0.999999
97
98
99 Test Case #5
100 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
101      0.5      0.5      0.5      0.5      0.5
102 total iterations: 6

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103 -----Gender Table-----
104 P(Gender=0) P(Gender=1)
105 0.726476 0.273524
106
107
108 -----Weight|Gender Table-----
109 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
110 0.862349 0.137651 0.634402 0.365598
111
112
113 -----Height|Gender Table-----
114 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
115 0.688254 0.311746 2.123324e-07 1.0
116
117
118 *****
119 filename hw2dataset_30.txt
120 Provided
121 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
122 0.7 0.8 0.4 0.7 0.3
123 total iterations: 4
124 -----Gender Table-----
125 P(Gender=0) P(Gender=1)
126 0.555546 0.444454
127
128
129 -----Weight|Gender Table-----
130 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
131 0.892362 0.107638 0.234562 0.765438
132
133
134 -----Height|Gender Table-----
135 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
136 0.532355 0.467645 0.234562 0.765438
137
138
139 Test Case #1
140 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
141 0.383271 0.511622 0.027045 0.465921 0.96269
142 total iterations: 5
143 -----Gender Table-----
144 P(Gender=0) P(Gender=1)
145 0.555562 0.444438
146
147
148 -----Weight|Gender Table-----
149 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
150 0.892329 0.107671 0.234578 0.765422
151
152
153 -----Height|Gender Table-----

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154 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
155      0.532334      0.467666      0.234578      0.765422
156
157
158 Test Case #2
159 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
160      0.527978      0.816105      0.256124      0.931043      0.141905
161 total iterations: 4
162 -----Gender Table-----
163 P(Gender=0) P(Gender=1)
164      0.555383      0.444617
165
166
167 -----Weight|Gender Table-----
168 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
169      0.892667      0.107333      0.234423      0.765577
170
171
172 -----Height|Gender Table-----
173 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
174      0.532555      0.467445      0.234423      0.765577
175
176
177 Test Case #3
178 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
179      0.1      0.1      0.1      0.1      0.1
180 total iterations: 4
181 -----Gender Table-----
182 P(Gender=0) P(Gender=1)
183      0.555503      0.444497
184
185
186 -----Weight|Gender Table-----
187 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
188      0.892397      0.107603      0.234582      0.765418
189
190
191 -----Height|Gender Table-----
192 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
193      0.532363      0.467637      0.234582      0.765418
194
195
196 Test Case #4
197 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
198      0.9      0.9      0.9      0.9      0.9
199 total iterations: 6
200 -----Gender Table-----
201 P(Gender=0) P(Gender=1)
202      0.555464      0.444536
203
204

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205 -----Weight|Gender Table-----
206 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
207      0.892513      0.107487      0.234494      0.765506
208
209
210 -----Height|Gender Table-----
211 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
212      0.532454      0.467546      0.234494      0.765506
213
214
215 Test Case #5
216 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
217      0.5      0.5      0.5      0.5      0.5
218 total iterations: 5
219 -----Gender Table-----
220 P(Gender=0) P(Gender=1)
221      0.555512      0.444488
222
223
224 -----Weight|Gender Table-----
225 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
226      0.892423      0.107577      0.234537      0.765463
227
228
229 -----Height|Gender Table-----
230 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
231      0.532394      0.467606      0.234537      0.765463
232
233
234 *****
235 filename hw2dataset_50.txt
236 Provided
237 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
238      0.7      0.8      0.4      0.7      0.3
239 total iterations: 30
240 -----Gender Table-----
241 P(Gender=0) P(Gender=1)
242      0.704226      0.295774
243
244
245 -----Weight|Gender Table-----
246 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
247      0.69528      0.30472      0.373143      0.626857
248
249
250 -----Height|Gender Table-----
251 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
252      0.851907      0.148093      0.000221      0.999779
253
254
255 Test Case #1

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256 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
257 0.383271 0.511622 0.027045 0.465921 0.96269
258 total iterations: 32
259 -----Gender Table-----
260 P(Gender=0) P(Gender=1)
261 0.704212 0.295788
262
263
264 -----Weight|Gender Table-----
265 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
266 0.695288 0.304712 0.373139 0.626861
267
268
269 -----Height|Gender Table-----
270 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|G
271 0.851903 0.148097 0.000269 0.999731
272
273
274 Test Case #2
275 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
276 0.527978 0.816105 0.256124 0.931043 0.141905
277 total iterations: 29
278 -----Gender Table-----
279 P(Gender=0) P(Gender=1)
280 0.704219 0.295781
281
282
283 -----Weight|Gender Table-----
284 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
285 0.695284 0.304716 0.373141 0.626859
286
287
288 -----Height|Gender Table-----
289 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|G
290 0.851905 0.148095 0.000243 0.999757
291
292
293 Test Case #3
294 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
295 0.1 0.1 0.1 0.1 0.1
296 total iterations: 35
297 -----Gender Table-----
298 P(Gender=0) P(Gender=1)
299 0.704215 0.295785
300
301
302 -----Weight|Gender Table-----
303 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
304 0.695286 0.304714 0.37314 0.62686
305
306

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307 -----Height|Gender Table-----
308 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
309      0.851904      0.148096      0.000259      0.999741
310
311
312 Test Case #4
313 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
314      0.9      0.9      0.9      0.9      0.9
315 total iterations: 27
316 -----Gender Table-----
317 P(Gender=0) P(Gender=1)
318      0.704222      0.295778
319
320
321 -----Weight|Gender Table-----
322 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
323      0.695282      0.304718      0.373142      0.626858
324
325
326 -----Height|Gender Table-----
327 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
328      0.851906      0.148094      0.000233      0.999767
329
330
331 Test Case #5
332 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
333      0.5      0.5      0.5      0.5      0.5
334 total iterations: 33
335 -----Gender Table-----
336 P(Gender=0) P(Gender=1)
337      0.704217      0.295783
338
339
340 -----Weight|Gender Table-----
341 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
342      0.695285      0.304715      0.373141      0.626859
343
344
345 -----Height|Gender Table-----
346 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
347      0.851905      0.148095      0.000249      0.999751
348
349
350 *****
351 filename hw2dataset_70.txt
352 Provided
353 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
354      0.7      0.8      0.4      0.7      0.3
355 total iterations: 65
356 -----Gender Table-----
357 P(Gender=0) P(Gender=1)

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358 0.573436 0.426564
359
360
361 -----Weight|Gender Table-----
362 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
363 0.502635 0.497365 0.027595 0.972405
364
365
366 -----Height|Gender Table-----
367 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
368 0.546578 0.453422 0.202953 0.797047
369
370
371 Test Case #1
372 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
373 0.383271 0.511622 0.027045 0.465921 0.96269
374 total iterations: 9
375 -----Gender Table-----
376 P(Gender=0) P(Gender=1)
377 0.576453 0.423547
378
379
380 -----Weight|Gender Table-----
381 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
382 0.504306 0.495694 0.021937 0.978063
383
384
385 -----Height|Gender Table-----
386 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
387 0.544071 0.455929 0.203918 0.796082
388
389
390 Test Case #2
391 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
392 0.527978 0.816105 0.256124 0.931043 0.141905
393 total iterations: 80
394 -----Gender Table-----
395 P(Gender=0) P(Gender=1)
396 0.573502 0.426498
397
398
399 -----Weight|Gender Table-----
400 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
401 0.502683 0.497317 0.027457 0.972543
402
403
404 -----Height|Gender Table-----
405 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
406 0.546521 0.453479 0.202977 0.797023
407
408

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409 Test Case #3
410 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
411     0.1         0.1         0.1         0.1         0.1
412 total iterations: 82
413 -----Gender Table-----
414 P(Gender=0) P(Gender=1)
415     0.573483  0.426517
416
417
418 -----Weight|Gender Table-----
419 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
420     0.502668      0.497332      0.027498      0.972502
421
422
423 -----Height|Gender Table-----
424 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
425     0.546538      0.453462      0.20297      0.79703
426
427
428 Test Case #4
429 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
430     0.9         0.9         0.9         0.9         0.9
431 total iterations: 22
432 -----Gender Table-----
433 P(Gender=0) P(Gender=1)
434     0.573507  0.426493
435
436
437 -----Weight|Gender Table-----
438 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
439     0.502686      0.497314      0.027448      0.972552
440
441
442 -----Height|Gender Table-----
443 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
444     0.546517      0.453483      0.202978      0.797022
445
446
447 Test Case #5
448 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
449     0.5         0.5         0.5         0.5         0.5
450 total iterations: 75
451 -----Gender Table-----
452 P(Gender=0) P(Gender=1)
453     0.573511  0.426489
454
455
456 -----Weight|Gender Table-----
457 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
458     0.502689      0.497311      0.027439      0.972561
459

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460
461 -----Height|Gender Table-----
462 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
463      0.546513      0.453487      0.20298      0.79702
464
465
466 *****
467 filename hw2dataset_100.txt
468 Provided
469 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
470      0.7      0.8      0.4      0.7      0.3
471 total iterations: 8
472 -----Gender Table-----
473 P(Gender=0) P(Gender=1)
474      0.720806      0.279194
475
476
477 -----Weight|Gender Table-----
478 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
479      0.831221      0.168779      0.361221      0.638779
480
481
482 -----Height|Gender Table-----
483 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
484      0.7813      0.2187      0.311017      0.688983
485
486
487 Test Case #1
488 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
489      0.383271      0.511622      0.027045      0.465921      0.96269
490 total iterations: 19
491 -----Gender Table-----
492 P(Gender=0) P(Gender=1)
493      0.76765      0.23235
494
495
496 -----Weight|Gender Table-----
497 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|
498      0.823673      0.176327      0.291403      0.708597
499
500
501 -----Height|Gender Table-----
502 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Ge
503      0.75895      0.24105      0.290044      0.709956
504
505
506 Test Case #2
507 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
508      0.527978      0.816105      0.256124      0.931043      0.141905
509 total iterations: 7
510 -----Gender Table-----

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511 P(Gender=0) P(Gender=1)
512     0.62245    0.37755
513
514
515 -----Weight|Gender Table-----
516 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|Gender=1)
517     0.80374         0.19626         0.528968        0.471032
518
519
520 -----Height|Gender Table-----
521 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Gender=1)
522     0.914255        0.085745        0.214335        0.785665
523
524
525 Test Case #3
526 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
527     0.1         0.1         0.1         0.1         0.1
528 total iterations: 2
529 -----Gender Table-----
530 P(Gender=0) P(Gender=1)
531     0.1       0.9
532
533
534 -----Weight|Gender Table-----
535 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|Gender=1)
536     0.7         0.3         0.7         0.3
537
538
539 -----Height|Gender Table-----
540 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Gender=1)
541     0.65        0.35        0.65        0.35
542
543
544 Test Case #4
545 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
546     0.9         0.9         0.9         0.9         0.9
547 total iterations: 2
548 -----Gender Table-----
549 P(Gender=0) P(Gender=1)
550     0.9       0.1
551
552
553 -----Weight|Gender Table-----
554 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|Gender=1)
555     0.7         0.3         0.7         0.3
556
557
558 -----Height|Gender Table-----
559 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Gender=1)
560     0.65        0.35        0.65        0.35
561

```

```
562
563 Test Case #5
564 P(Gender=0) P(Weight=0|Gender=0) P(Weight=0|Gender=1) P(Height=0|Gender=0)
565      0.5      0.5      0.5      0.5      0.5
566 total iterations: 2
567 -----Gender Table-----
568 P(Gender=0) P(Gender=1)
569      0.5      0.5
570
571
572 -----Weight|Gender Table-----
573 P(Weight=0|Gender=0) P(Weight=1|Gender=0) P(Weight=0|Gender=1) P(Weight=1|Gender=1)
574      0.7      0.3      0.7      0.3
575
576
577 -----Height|Gender Table-----
578 P(Height=0|Gender=0) P(Height=1|Gender=0) P(Height=0|Gender=1) P(Height=1|Gender=1)
579      0.65      0.35      0.65      0.35
580
581
582
583 Process finished with exit code 0
584
```