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1 "C:\Program Files\Java\jdk-10.0.1\bin\java.exe" "-
  javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2018.1.
  6\lib\idea_rt.jar=54913:C:\Program Files\JetBrains\
  IntelliJ IDEA 2018.1.6\bin" -Dfile.encoding=UTF-8 -
  classpath C:\Projects\java\HCM\out\production\HCM;C:\Users
  \ricky\Downloads\jackson-core-2.9.5.jar;C:\Users\ricky\
  Downloads\jackson-databind-2.9.5.jar;C:\Users\ricky\
  Downloads\jackson-annotations-2.9.5.jar;C:\Users\ricky\.m2
  \repository\org\junit\jupiter\junit-jupiter-api\5.0.0\
  junit-jupiter-api-5.0.0.jar;C:\Users\ricky\.m2\repository\
  org\apiguardian\apiguardian-api\1.0.0\apiguardian-api-1.0.
  0.jar;C:\Users\ricky\.m2\repository\org\opentest4j\
  opentest4j\1.0.0\opentest4j-1.0.0.jar;C:\Users\ricky\.m2\
  repository\org\junit\platform\junit-platform-commons\1.0.0
  \junit-platform-commons-1.0.0.jar com.company.Metric
2 [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
3 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?]
4 reference sentence: [?] [?] [?] [?] [?] [?] [?]
5 current ngram size: 1
6 match size: 7
7 candidate gram size: 9
8 old match ngram 1 sum: 0
9 old candidate ngram 1 sum: 0
10 now match ngram 1 sum: 7
11 now candidate ngram 1 sum: 9
12 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?]
13 reference sentence: [?] [?] [?] [?] [?] [?] [?]
14 current ngram size: 2
15 match size: 6
16 candidate gram size: 8
17 old match ngram 2 sum: 0
18 old candidate ngram 2 sum: 0
19 now match ngram 2 sum: 6
20 now candidate ngram 2 sum: 8
21 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?]
22 reference sentence: [?] [?] [?] [?] [?] [?] [?]
23 current ngram size: 3
24 match size: 5
25 candidate gram size: 7
26 old match ngram 3 sum: 0
27 old candidate ngram 3 sum: 0
28 now match ngram 3 sum: 5
29 now candidate ngram 3 sum: 7
30 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?]
31 reference sentence: [?] [?] [?] [?] [?] [?] [?]
32 current ngram size: 4
33 match size: 4
34 candidate gram size: 6
35 old match ngram 4 sum: 0

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36 old candidate ngram 4 sum: 0
37 now match ngram 4 sum: 4
38 now candidate ngram 4 sum: 6
39 old   BPC: 0
40 candidate size: 9
41 current   BPC: 9
42 old   BPR: 0
43 reference size: 7
44 current   BPR: 7
45 candidate sentence: 23
46 reference sentence: 23
47 current ngram size: 1
48 match size: 2
49 candidate gram size: 2
50 old match ngram 1 sum: 7
51 old candidate ngram 1 sum: 9
52 now match ngram 1 sum: 9
53 now candidate ngram 1 sum: 11
54 candidate sentence: 23
55 reference sentence: 23
56 current ngram size: 2
57 match size: 1
58 candidate gram size: 1
59 old match ngram 2 sum: 6
60 old candidate ngram 2 sum: 8
61 now match ngram 2 sum: 7
62 now candidate ngram 2 sum: 9
63 old   BPC: 9
64 candidate size: 2
65 current   BPC: 11
66 old   BPR: 7
67 reference size: 2
68 current   BPR: 9
69 candidate sentence: 

|   |   |   |   |
|---|---|---|---|
| ? | ? | ? | ? |
|---|---|---|---|


70 reference sentence: 

|   |   |   |   |   |
|---|---|---|---|---|
| ? | ? | ? | ? | ? |
|---|---|---|---|---|


71 current ngram size: 1
72 match size: 1
73 candidate gram size: 4
74 old match ngram 1 sum: 9
75 old candidate ngram 1 sum: 11
76 now match ngram 1 sum: 10
77 now candidate ngram 1 sum: 15
78 candidate sentence: 

|   |   |   |   |
|---|---|---|---|
| ? | ? | ? | ? |
|---|---|---|---|


79 reference sentence: 

|   |   |   |   |   |
|---|---|---|---|---|
| ? | ? | ? | ? | ? |
|---|---|---|---|---|


80 current ngram size: 2
81 match size: 0
82 candidate gram size: 3
83 old match ngram 2 sum: 7
84 old candidate ngram 2 sum: 9

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85 now match ngram 2 sum: 7
86 now candidate ngram 2 sum: 12
87 candidate sentence: [?][?][?][?]
88 reference sentence: [?][?][?][?]
89 current ngram size: 3
90 match size: 0
91 candidate gram size: 2
92 old match ngram 3 sum: 5
93 old candidate ngram 3 sum: 7
94 now match ngram 3 sum: 5
95 now candidate ngram 3 sum: 9
96 candidate sentence: [?][?][?][?]
97 reference sentence: [?][?][?][?]
98 current ngram size: 4
99 match size: 0
100 candidate gram size: 1
101 old match ngram 4 sum: 4
102 old candidate ngram 4 sum: 6
103 now match ngram 4 sum: 4
104 now candidate ngram 4 sum: 7
105 old BPC: 11
106 candidate size: 4
107 current BPC: 15
108 old BPR: 9
109 reference size: 5
110 current BPR: 14
111 candidate sentence: 1999[?][0][2][?].
112 reference sentence: 1999[?][0][2][?].
113 current ngram size: 1
114 match size: 9
115 candidate gram size: 9
116 old match ngram 1 sum: 10
117 old candidate ngram 1 sum: 15
118 now match ngram 1 sum: 19
119 now candidate ngram 1 sum: 24
120 candidate sentence: 1999[?][0][2][?].
121 reference sentence: 1999[?][0][2][?].
122 current ngram size: 2
123 match size: 8
124 candidate gram size: 8
125 old match ngram 2 sum: 7
126 old candidate ngram 2 sum: 12
127 now match ngram 2 sum: 15
128 now candidate ngram 2 sum: 20
129 candidate sentence: 1999[?][0][2][?].
130 reference sentence: 1999[?][0][2][?].
131 current ngram size: 3
132 match size: 7
133 candidate gram size: 7

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134 old match ngram 3 sum: 5
135 old candidate ngram 3 sum: 9
136 now match ngram 3 sum: 12
137 now candidate ngram 3 sum: 16
138 candidate sentence: 1999[?][0][2][?].
139 reference sentence: 1999[?][0][2][?].
140 current ngram size: 4
141 match size: 6
142 candidate gram size: 6
143 old match ngram 4 sum: 4
144 old candidate ngram 4 sum: 7
145 now match ngram 4 sum: 10
146 now candidate ngram 4 sum: 13
147 old BPC: 15
148 candidate size: 9
149 current BPC: 24
150 old BPR: 14
151 reference size: 9
152 current BPR: 23
153 candidate sentence: java[?][?][?][?][?][?]
154 reference sentence: python[?][?][?][?][?][?]
155 current ngram size: 1
156 match size: 5
157 candidate gram size: 11
158 old match ngram 1 sum: 19
159 old candidate ngram 1 sum: 24
160 now match ngram 1 sum: 24
161 now candidate ngram 1 sum: 35
162 candidate sentence: java[?][?][?][?][?][?]
163 reference sentence: python[?][?][?][?][?][?]
164 current ngram size: 2
165 match size: 3
166 candidate gram size: 10
167 old match ngram 2 sum: 15
168 old candidate ngram 2 sum: 20
169 now match ngram 2 sum: 18
170 now candidate ngram 2 sum: 30
171 candidate sentence: java[?][?][?][?][?][?]
172 reference sentence: python[?][?][?][?][?][?]
173 current ngram size: 3
174 match size: 1
175 candidate gram size: 9
176 old match ngram 3 sum: 12
177 old candidate ngram 3 sum: 16
178 now match ngram 3 sum: 13
179 now candidate ngram 3 sum: 25
180 candidate sentence: java[?][?][?][?][?][?]
181 reference sentence: python[?][?][?][?][?][?]
182 current ngram size: 4
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183 match size: 0
184 candidate gram size: 8
185 old match ngram 4 sum: 10
186 old candidate ngram 4 sum: 13
187 now match ngram 4 sum: 10
188 now candidate ngram 4 sum: 21
189 old   BPC: 24
190 candidate size: 11
191 current   BPC: 35
192 old   BPR: 23
193 reference size: 12
194 current   BPR: 35
195 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
196 reference sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
197 current ngram size: 1
198 match size: 10
199 candidate gram size: 12
200 old match ngram 1 sum: 24
201 old candidate ngram 1 sum: 35
202 now match ngram 1 sum: 34
203 now candidate ngram 1 sum: 47
204 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
205 reference sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
206 current ngram size: 2
207 match size: 8
208 candidate gram size: 11
209 old match ngram 2 sum: 18
210 old candidate ngram 2 sum: 30
211 now match ngram 2 sum: 26
212 now candidate ngram 2 sum: 41
213 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
214 reference sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
215 current ngram size: 3
216 match size: 6
217 candidate gram size: 10
218 old match ngram 3 sum: 13
219 old candidate ngram 3 sum: 25
220 now match ngram 3 sum: 19
221 now candidate ngram 3 sum: 35
222 candidate sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
223 reference sentence: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]
224 current ngram size: 4
225 match size: 4
226 candidate gram size: 9
227 old match ngram 4 sum: 10
228 old candidate ngram 4 sum: 21
229 now match ngram 4 sum: 14
230 now candidate ngram 4 sum: 30
231 old   BPC: 35

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232 candidate size: 12
233 current   BPC: 47
234 old      BPR: 35
235 reference size: 14
236 current   BPR: 49
237 candidate sentence: 

|   |   |   |   |
|---|---|---|---|
| ? | ? | ? | ? |
|---|---|---|---|


238 reference sentence: 

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| ? | ? | ? | ? | ? | ? |
|---|---|---|---|---|---|


239 current ngram size: 1
240 match size: 4
241 candidate gram size: 4
242 old match ngram 1 sum: 34
243 old candidate ngram 1 sum: 47
244 now match ngram 1 sum: 38
245 now candidate ngram 1 sum: 51
246 candidate sentence: 

|   |   |   |   |
|---|---|---|---|
| ? | ? | ? | ? |
|---|---|---|---|


247 reference sentence: 

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| ? | ? | ? | ? | ? | ? |
|---|---|---|---|---|---|


248 current ngram size: 2
249 match size: 1
250 candidate gram size: 3
251 old match ngram 2 sum: 26
252 old candidate ngram 2 sum: 41
253 now match ngram 2 sum: 27
254 now candidate ngram 2 sum: 44
255 candidate sentence: 

|   |   |   |   |
|---|---|---|---|
| ? | ? | ? | ? |
|---|---|---|---|


256 reference sentence: 

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| ? | ? | ? | ? | ? | ? |
|---|---|---|---|---|---|


257 current ngram size: 3
258 match size: 0
259 candidate gram size: 2
260 old match ngram 3 sum: 19
261 old candidate ngram 3 sum: 35
262 now match ngram 3 sum: 19
263 now candidate ngram 3 sum: 37
264 candidate sentence: 

|   |   |   |   |
|---|---|---|---|
| ? | ? | ? | ? |
|---|---|---|---|


265 reference sentence: 

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| ? | ? | ? | ? | ? | ? |
|---|---|---|---|---|---|


266 current ngram size: 4
267 match size: 0
268 candidate gram size: 1
269 old match ngram 4 sum: 14
270 old candidate ngram 4 sum: 30
271 now match ngram 4 sum: 14
272 now candidate ngram 4 sum: 31
273 old      BPC: 47
274 candidate size: 4
275 current   BPC: 51
276 old      BPR: 49
277 reference size: 7
278 current   BPR: 56
279 candidate sentence: 

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| ? | ? | ? | ? | ? | ? | ? |
|---|---|---|---|---|---|---|


280 reference sentence: 

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| ? | ? | ? | ? | ? | ? | ? |
|---|---|---|---|---|---|---|


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281 current ngram size: 1
282 match size: 6
283 candidate gram size: 8
284 old match ngram 1 sum: 38
285 old candidate ngram 1 sum: 51
286 now match ngram 1 sum: 44
287 now candidate ngram 1 sum: 59
288 candidate sentence: [?][?][?][?][?][?][?][?]
289 reference sentence: [?][?][?][?][?][?][?][?]
290 current ngram size: 2
291 match size: 3
292 candidate gram size: 7
293 old match ngram 2 sum: 27
294 old candidate ngram 2 sum: 44
295 now match ngram 2 sum: 30
296 now candidate ngram 2 sum: 51
297 candidate sentence: [?][?][?][?][?][?][?][?]
298 reference sentence: [?][?][?][?][?][?][?][?]
299 current ngram size: 3
300 match size: 1
301 candidate gram size: 6
302 old match ngram 3 sum: 19
303 old candidate ngram 3 sum: 37
304 now match ngram 3 sum: 20
305 now candidate ngram 3 sum: 43
306 candidate sentence: [?][?][?][?][?][?][?][?]
307 reference sentence: [?][?][?][?][?][?][?][?]
308 current ngram size: 4
309 match size: 0
310 candidate gram size: 5
311 old match ngram 4 sum: 14
312 old candidate ngram 4 sum: 31
313 now match ngram 4 sum: 14
314 now candidate ngram 4 sum: 36
315 old BPC: 51
316 candidate size: 8
317 current BPC: 59
318 old BPR: 56
319 reference size: 9
320 current BPR: 65
321 candidate sentence: [?][?][?][?][?][?][?][?][?]
322 reference sentence: [?][?][?][?][?][?][?][?][?]
323 current ngram size: 1
324 match size: 6
325 candidate gram size: 10
326 old match ngram 1 sum: 44
327 old candidate ngram 1 sum: 59
328 now match ngram 1 sum: 50
329 now candidate ngram 1 sum: 69

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330 candidate sentence: [?][?][?][?][?][?][?][?][?]
331 reference sentence: [?][?][?][?][?][?][?][?][?]
332 current ngram size: 2
333 match size: 4
334 candidate gram size: 9
335 old match ngram 2 sum: 30
336 old candidate ngram 2 sum: 51
337 now match ngram 2 sum: 34
338 now candidate ngram 2 sum: 60
339 candidate sentence: [?][?][?][?][?][?][?][?][?]
340 reference sentence: [?][?][?][?][?][?][?][?][?]
341 current ngram size: 3
342 match size: 2
343 candidate gram size: 8
344 old match ngram 3 sum: 20
345 old candidate ngram 3 sum: 43
346 now match ngram 3 sum: 22
347 now candidate ngram 3 sum: 51
348 candidate sentence: [?][?][?][?][?][?][?][?][?]
349 reference sentence: [?][?][?][?][?][?][?][?][?]
350 current ngram size: 4
351 match size: 1
352 candidate gram size: 7
353 old match ngram 4 sum: 14
354 old candidate ngram 4 sum: 36
355 now match ngram 4 sum: 15
356 now candidate ngram 4 sum: 43
357 old   BPC: 59
358 candidate size: 10
359 current   BPC: 69
360 old   BPR: 65
361 reference size: 10
362 current   BPR: 75
363 candidate sentence: [?][?][?][?][?][?][?]
364 reference sentence: [?][?][?][?][?][?]
365 current ngram size: 1
366 match size: 4
367 candidate gram size: 7
368 old match ngram 1 sum: 50
369 old candidate ngram 1 sum: 69
370 now match ngram 1 sum: 54
371 now candidate ngram 1 sum: 76
372 candidate sentence: [?][?][?][?][?][?]
373 reference sentence: [?][?][?][?][?][?]
374 current ngram size: 2
375 match size: 1
376 candidate gram size: 6
377 old match ngram 2 sum: 34
378 old candidate ngram 2 sum: 60

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379 now match ngram 2 sum: 35
380 now candidate ngram 2 sum: 66
381 candidate sentence: [?][?][?][?][?][?]
382 reference sentence: [?][?][?][?][?][?]
383 current ngram size: 3
384 match size: 0
385 candidate gram size: 5
386 old match ngram 3 sum: 22
387 old candidate ngram 3 sum: 51
388 now match ngram 3 sum: 22
389 now candidate ngram 3 sum: 56
390 candidate sentence: [?][?][?][?][?][?]
391 reference sentence: [?][?][?][?][?][?]
392 current ngram size: 4
393 match size: 0
394 candidate gram size: 4
395 old match ngram 4 sum: 15
396 old candidate ngram 4 sum: 43
397 now match ngram 4 sum: 15
398 now candidate ngram 4 sum: 47
399 old BPC: 69
400 candidate size: 7
401 current BPC: 76
402 old BPR: 75
403 reference size: 7
404 current BPR: 82
405 candidate sentence: A22
406 reference sentence: A22
407 current ngram size: 1
408 match size: 3
409 candidate gram size: 3
410 old match ngram 1 sum: 54
411 old candidate ngram 1 sum: 76
412 now match ngram 1 sum: 57
413 now candidate ngram 1 sum: 79
414 candidate sentence: A22
415 reference sentence: A22
416 current ngram size: 2
417 match size: 2
418 candidate gram size: 2
419 old match ngram 2 sum: 35
420 old candidate ngram 2 sum: 66
421 now match ngram 2 sum: 37
422 now candidate ngram 2 sum: 68
423 candidate sentence: A22
424 reference sentence: A22
425 current ngram size: 3
426 match size: 1
427 candidate gram size: 1
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428 old match ngram 3 sum: 22
429 old candidate ngram 3 sum: 56
430 now match ngram 3 sum: 23
431 now candidate ngram 3 sum: 57
432 old BPC: 76
433 candidate size: 3
434 current BPC: 79
435 old BPR: 82
436 reference size: 3
437 current BPR: 85
438 size: 1 match ngrams: 57 candidate ngrams: 79P_1 = 0.
    7215189873417721
439 size: 2 match ngrams: 37 candidate ngrams: 68P_2 = 0.
    5441176470588235
440 size: 3 match ngrams: 23 candidate ngrams: 57P_3 = 0.
    40350877192982454
441 size: 4 match ngrams: 15 candidate ngrams: 47P_4 = 0.
    3191489361702128
442 score size 1: 0.7215189873417721
443 score size 2 : 0.39259121370067007
444 score size 3 : 0.15841399851079668
445 score size 4 : 0.05055765909919043
446 BP =  $e^{\min(1 - 85 / 79, 0)}$  = 0.9268631351503016
447 bleu score: 0.4395035104538599
448 rouge score: 0.7151114329565812
449
450 Process finished with exit code 0
451
```