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In [3]: runfile('D:/Hong Kong/HKUST/CSIT 6000I Search Engines/
20567171_hw2/20567171_hw2_pythoncode.py', wdir='D:/Hong Kong/HKUST/CSIT 6000I Search
Engines/20567171_hw2')
*****
query: ['bank']
DID: Doc84

top 5 keywords

billion->      [('Doc29', [6]), ('Doc36', [0, 1]), ('Doc59', [1]), ('Doc64', [2, 3]),
('Doc84', [3, 4, 4]), ('Doc90', [4]), ('Doc91', [5]), ('Doc98', [6])]
bank->      [('Doc20', [33]), ('Doc30', [0, 1]), ('Doc53', [1]), ('Doc60', [2, 3]), ('Doc73',
[3]), ('Doc84', [4, 5, 5]), ('Doc89', [5]), ('Doc90', [6]), ('Doc92', [7])]
venezuela->   [('Doc84', [0]), ('Doc88', [0]), ('Doc89', [1])]
advisory->    [('Doc84', [4]), ('Doc90', [0])]
agreed->      [('Doc84', [7])]

Unique keywords in the document: 24
Magnitude of the document vector: 10.200
Similarity score: 0.341
.....
DID: Doc60

top 5 keywords

bank->      [('Doc20', [33]), ('Doc30', [0, 1]), ('Doc53', [1]), ('Doc60', [2, 3]), ('Doc73',
[3]), ('Doc84', [4, 5, 5]), ('Doc89', [5]), ('Doc90', [6]), ('Doc92', [7])]
debt->      [('Doc19', [26]), ('Doc28', [0]), ('Doc29', [1]), ('Doc30', [2, 3, 3]), ('Doc36',
[3]), ('Doc37', [4]), ('Doc52', [5]), ('Doc58', [6]), ('Doc59', [7]), ('Doc60', [8, 9, 9]),
('Doc90', [9])]
even->      [('Doc30', [22]), ('Doc60', [0])]
fail->      [('Doc30', [28]), ('Doc60', [0])]
expect->     [('Doc30', [37]), ('Doc60', [0]), ('Doc63', [1]), ('Doc68', [2])]

Unique keywords in the document: 25
Magnitude of the document vector: 7.221
Similarity score: 0.321
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DID: Doc30

top 5 keywords

losse->     [('Doc30', [6, 0]), ('Doc59', [0]), ('Doc60', [1])]
debt->      [('Doc19', [26]), ('Doc28', [0]), ('Doc29', [1]), ('Doc30', [2, 3, 3]), ('Doc36',
[3]), ('Doc37', [4]), ('Doc52', [5]), ('Doc58', [6]), ('Doc59', [7]), ('Doc60', [8, 9, 9]),
('Doc90', [9])]
bank->      [('Doc20', [33]), ('Doc30', [0, 1]), ('Doc53', [1]), ('Doc60', [2, 3]), ('Doc73',
[3]), ('Doc84', [4, 5, 5]), ('Doc89', [5]), ('Doc90', [6]), ('Doc92', [7])]
however->    [('Doc30', [2]), ('Doc59', [0])]
potential->  [('Doc30', [5]), ('Doc59', [0]), ('Doc95', [1])]

Unique keywords in the document: 33
Magnitude of the document vector: 8.834
Similarity score: 0.262
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*****
query: ['stock', 'banking']

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DID: Doc50

top 5 keywords

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quickly->      [('Doc17', [8]), ('Doc50', [0])]
poor->      [('Doc17', [26]), ('Doc50', [0])]
performance->  [('Doc17', [27]), ('Doc50', [0]), ('Doc66', [1])]
pressure->      [('Doc17', [5]), ('Doc20', [0]), ('Doc50', [1]), ('Doc53', [2])]
proposed->      [('Doc17', [11]), ('Doc34', [0]), ('Doc50', [1])]
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Unique keywords in the document: 19

Magnitude of the document vector: 15.238

Similarity score: 0.284

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DID: Doc17

top 5 keywords

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bankamerica->  [('Doc17', [0]), ('Doc18', [0]), ('Doc19', [1]), ('Doc20', [2]), ('Doc21', [3]), ('Doc22', [4]), ('Doc23', [5, 6]), ('Doc25', [6]), ('Doc26', [7]), ('Doc27', [8]), ('Doc29', [9]), ('Doc30', [10]), ('Doc50', [11]), ('Doc51', [12]), ('Doc52', [13]), ('Doc53', [14]), ('Doc54', [15, 16]), ('Doc55', [16, 17]), ('Doc56', [17]), ('Doc57', [18, 19]), ('Doc59', [19]), ('Doc60', [20])]
corp->      [('Doc17', [1]), ('Doc36', [0]), ('Doc49', [1]), ('Doc50', [2]), ('Doc69', [3]), ('Doc75', [4, 5]), ('Doc77', [5])]
pressure->      [('Doc17', [5]), ('Doc20', [0]), ('Doc50', [1]), ('Doc53', [2])]
quickly->      [('Doc17', [8]), ('Doc50', [0])]
proposed->      [('Doc17', [11]), ('Doc34', [0]), ('Doc50', [1])]
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Unique keywords in the document: 19

Magnitude of the document vector: 16.430

Similarity score: 0.263

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DID: Doc19

top 5 keywords

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thi->      [('Doc4', [8]), ('Doc19', [0, 1, 1]), ('Doc46', [1]), ('Doc52', [2, 3, 3]), ('Doc86', [3])]
new->      [('Doc19', [12, 0]), ('Doc52', [0, 1])]
stock->      [('Doc17', [24]), ('Doc19', [0, 1]), ('Doc20', [1]), ('Doc26', [2]), ('Doc27', [3, 4]), ('Doc36', [4]), ('Doc38', [5, 6]), ('Doc39', [6]), ('Doc40', [7]), ('Doc41', [8]), ('Doc45', [9]), ('Doc50', [10]), ('Doc52', [11, 12]), ('Doc53', [12]), ('Doc57', [13, 14, 14]), ('Doc78', [14])]
week->      [('Doc1', [4]), ('Doc2', [0]), ('Doc4', [1]), ('Doc19', [2, 3]), ('Doc28', [3]), ('Doc52', [4, 5]), ('Doc58', [5])]
fell->      [('Doc19', [2]), ('Doc52', [0])]
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Unique keywords in the document: 28

Magnitude of the document vector: 8.089

Similarity score: 0.255

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query: ['the', 'company', 'share']
DID: Doc65

top 5 keywords

```
share->      [('Doc38', [15, 0]), ('Doc39', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]), ('Doc44',
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[3]), ('Doc63', [4]), ('Doc65', [5, 6]), ('Doc66', [6]), ('Doc79', [7, 8]), ('Doc80', [8]),
('Doc81', [9, 10, 10]), ('Doc95', [10]))
repeated->      [('Doc65', [1])]
projection->     [('Doc65', [5])]
thirdquarter->   [('Doc65', [7])]
probably->        [('Doc65', [10])]
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Unique keywords in the document: 17
Magnitude of the document vector: 10.033
Similarity score: 0.258

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DID: Doc40

top 5 keywords

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computer->      [('Doc39', [0]), ('Doc40', [0, 1]), ('Doc42', [1]), ('Doc43', [2, 3])]
terminal->       [('Doc39', [1]), ('Doc40', [0, 1]), ('Doc42', [1]), ('Doc43', [2, 3])]
company->        [('Doc37', [1]), ('Doc38', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]),
('Doc43', [3]), ('Doc45', [4]), ('Doc49', [5, 6]), ('Doc61', [6]), ('Doc65', [7]), ('Doc68',
[8, 9, 9, 9]), ('Doc71', [9]), ('Doc76', [10]), ('Doc78', [11]), ('Doc79', [12, 13]))
share->          [('Doc38', [15, 0]), ('Doc39', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]), ('Doc44',
[3]), ('Doc63', [4]), ('Doc65', [5, 6]), ('Doc66', [6]), ('Doc79', [7, 8]), ('Doc80', [8]),
('Doc81', [9, 10, 10]), ('Doc95', [10])]
exercisable->    [('Doc40', [6]), ('Doc41', [0])]
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Unique keywords in the document: 28
Magnitude of the document vector: 13.304
Similarity score: 0.256

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DID: Doc81

top 5 keywords

```
share->          [('Doc38', [15, 0]), ('Doc39', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]), ('Doc44',
[3]), ('Doc63', [4]), ('Doc65', [5, 6]), ('Doc66', [6]), ('Doc79', [7, 8]), ('Doc80', [8]),
('Doc81', [9, 10, 10]), ('Doc95', [10])]
dlr->            [('Doc5', [21]), ('Doc6', [0, 1, 1, 1]), ('Doc7', [1, 2, 2]), ('Doc10', [2, 3, 3]),
('Doc11', [3, 4, 4]), ('Doc29', [4, 5, 5]), ('Doc36', [5, 6]), ('Doc39', [6]), ('Doc40',
[7]), ('Doc41', [8]), ('Doc42', [9]), ('Doc44', [10]), ('Doc46', [11]), ('Doc59', [12, 13,
13]), ('Doc64', [13, 14]), ('Doc66', [14]), ('Doc68', [15]), ('Doc71', [16]), ('Doc80', [17,
18]), ('Doc81', [18, 19, 19, 19]), ('Doc84', [19, 20]), ('Doc98', [20])]
nine->           [('Doc81', [3])]
declined->        [('Doc81', [6]), ('Doc85', [0])]
second->          [('Doc81', [33])]
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Unique keywords in the document: 18
Magnitude of the document vector: 5.801
Similarity score: 0.228

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query: ['company', 'benefit', 'shares']
DID: Doc68

top 5 keywords

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benefit->        [('Doc68', [26, 0])]
blender->         [('Doc68', [56, 0])]
company->         [('Doc37', [1]), ('Doc38', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]),
('Doc43', [3]), ('Doc45', [4]), ('Doc49', [5, 6]), ('Doc61', [6]), ('Doc65', [7]), ('Doc68',
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[8, 9, 9, 9]], ('Doc71', [9]), ('Doc76', [10]), ('Doc78', [11]), ('Doc79', [12, 13]))
dean-> [('Doc63', [0]), ('Doc67', [0]), ('Doc68', [1, 2])]
acquisition-> [('Doc35', [21]), ('Doc45', [0]), ('Doc46', [1]), ('Doc47', [2]), ('Doc68',
[3, 4]), ('Doc82', [4]), ('Doc83', [5])]
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Unique keywords in the document: 42
Magnitude of the document vector: 10.051
Similarity score: 0.354

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DID: Doc40

top 5 keywords

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computer-> [('Doc39', [0]), ('Doc40', [0, 1]), ('Doc42', [1]), ('Doc43', [2, 3])]
terminal-> [('Doc39', [1]), ('Doc40', [0, 1]), ('Doc42', [1]), ('Doc43', [2, 3])]
company-> [('Doc37', [1]), ('Doc38', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]),
('Doc43', [3]), ('Doc45', [4]), ('Doc49', [5, 6]), ('Doc61', [6]), ('Doc65', [7]), ('Doc68',
[8, 9, 9, 9]), ('Doc71', [9]), ('Doc76', [10]), ('Doc78', [11]), ('Doc79', [12, 13])]
share-> [('Doc38', [15, 0]), ('Doc39', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]), ('Doc44',
[3]), ('Doc63', [4]), ('Doc65', [5, 6]), ('Doc66', [6]), ('Doc79', [7, 8]), ('Doc80', [8]),
('Doc81', [9, 10, 10]), ('Doc95', [10])]
exercisable-> [('Doc40', [6]), ('Doc41', [0])]
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Unique keywords in the document: 28
Magnitude of the document vector: 13.304
Similarity score: 0.123

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DID: Doc38

top 5 keywords

```
share-> [('Doc38', [15, 0]), ('Doc39', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]), ('Doc44',
[3]), ('Doc63', [4]), ('Doc65', [5, 6]), ('Doc66', [6]), ('Doc79', [7, 8]), ('Doc80', [8]),
('Doc81', [9, 10, 10]), ('Doc95', [10])]
shareholder-> [('Doc38', [17, 0]), ('Doc68', [0])]
april-> [('Doc38', [22, 0]), ('Doc46', [0]), ('Doc71', [1]), ('Doc79', [2]), ('Doc94', [3])]
company-> [('Doc37', [1]), ('Doc38', [0, 1]), ('Doc40', [1, 2]), ('Doc41', [2]),
('Doc43', [3]), ('Doc45', [4]), ('Doc49', [5, 6]), ('Doc61', [6]), ('Doc65', [7]), ('Doc68',
[8, 9, 9, 9]), ('Doc71', [9]), ('Doc76', [10]), ('Doc78', [11]), ('Doc79', [12, 13])]
board-> [('Doc33', [2]), ('Doc38', [0, 1]), ('Doc78', [1])]
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Unique keywords in the document: 24
Magnitude of the document vector: 15.187
Similarity score: 0.108

query: ['brown', 'forman']
DID: Doc82

top 5 keywords

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brown-> [('Doc78', [0, 0]), ('Doc79', [0]), ('Doc80', [1]), ('Doc81', [2]), ('Doc82', [3, 4,
4]), ('Doc83', [4])]
forman-> [('Doc78', [1, 0]), ('Doc79', [0]), ('Doc80', [1]), ('Doc81', [2]),
('Doc82', [3, 4, 4]), ('Doc83', [4])]
corporate-> [('Doc82', [4])]
shearson-> [('Doc82', [24])]
lehman-> [('Doc82', [25])]
```

Unique keywords in the document: 29
Magnitude of the document vector: 10.798
Similarity score: 0.532

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DID: Doc78

top 5 keywords

```
brown-> [('Doc78', [0, 0]), ('Doc79', [0]), ('Doc80', [1]), ('Doc81', [2]), ('Doc82', [3, 4, 4]), ('Doc83', [4])]
forman->      [('Doc78', [1, 0]), ('Doc79', [0]), ('Doc80', [1]), ('Doc81', [2]), ('Doc82', [3, 4, 4]), ('Doc83', [4])]
cash->      [('Doc78', [20, 0]), ('Doc79', [0]), ('Doc82', [1])]
dividend->   [('Doc78', [21, 0]), ('Doc79', [0])]
threefortwo-> [('Doc78', [9])]
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Unique keywords in the document: 21
Magnitude of the document vector: 16.296
Similarity score: 0.352

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DID: Doc83

top 5 keywords

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formerly->      [('Doc83', [4])]
inc->      [('Doc16', [3]), ('Doc83', [0])]
merger->      [('Doc82', [45]), ('Doc83', [0])]
stearn->      [('Doc75', [12]), ('Doc82', [0]), ('Doc83', [1])]
merrill->      [('Doc24', [15]), ('Doc56', [0]), ('Doc83', [1])]
```

Unique keywords in the document: 15
Magnitude of the document vector: 17.373
Similarity score: 0.330

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CSIT 6000I: Search Engines and Applications Homework 2 - Done by - Supriya Parthiban - 20567171

In [4]: