

Given two sentences that are known to be paraphrases, pick the phrases that are similar and contribute to their overall similarity:

Example 1:

Charlie Chan is off the case for the Fox Movie Channel.

The Fox Movie Channel has banned Charlie Chan.

Answer:

Banned, off the case
Charlie Chan, Charlie Chan
Fox Movie Channel, Fox Movie Channel

Example 2:

Feelings about current business conditions improved substantially from the first quarter, jumping from 40 to 55.

Assessment of current business conditions improved substantially, the Conference Board said, jumping to 55 from 40 in the first quarter.

Answer:

Feelings about current business conditions, Assessment of current business conditions
jumping from 40 to 55, jumping to 55 from 40
from the first quarter, in the first quarter
improved substantially, improved substantially

Rules:

1. You can use spacy, Stanford CoreNLP or google NLP parser for dependency parsing
2. The phrases above are representative and it is OK to have different phrases as long as they are meaningful
3. Word and sentence distance measures based embeddings such as Glove or Contextual Embeddings are allowed/recommended
4. Incomplete solutions are OK as long as you explain your methodology
5. 1-4 are only recommendations, any other solution not using those methods are also welcome
6. Submit your code as a Python Notebook
7. To get more examples:

Download Microsoft Research Paraphrase Corpus (MRPC) here to get examples of sentences that are paraphrases:

<https://www.microsoft.com/en-us/download/details.aspx?id=52398>