Procedure

Get question type

Find best sentence

Extract phrases from that sentence
Question Type

who
whom
whose
which
where
when
what
why
how
Scoring Sentences

Score = 3(Bag Score) + (Rule Score)

Next, extract phrases from the best sentence
Q: Which piggy went home?

The last little piggy went whee, whee, whee, all the way home.

\{\text{went}\}

\{\text{home, piggy}\}

score = 2*1 + 2
Rules

They worked. Mostly

Riloff and Thelen 2000
Named Entity Recognition

Q: Who made a rule-based QA system?

Ellen Riloff and her research group, based in Salt Lake City, wrote “A rule-based question answering system for reading comprehension tests.”

Ellen Riloff/PERSON ⇒ +6

Salt Lake City/LOCATION
Assign scores to each sentence

Question type: WHERE

for each sentence:

    sentence contains {LOCATION, ORGANIZATION}

        score += 6

...
We added some rules of our own, too

**How much or how many**: sentences with MONEY or PERCENT

**Which**: PERSON, LOCATION or ORGANIZATION

**Whose or whom**: same as WHO rules

Validate scores with cross-validation
Coreference Resolution

It didn’t work

Hirschman et al. 1999
Q: Who made a rule-based QA system?

In 2000, her research group wrote “A rule-based question answering system for reading comprehension tests.”

her → Ellen Riloff

In 2000, Ellen Riloff research group wrote “A rule-based question answering system for reading comprehension tests.”
Q: Who made a rule-based QA system?

In 2000, her research group wrote “A rule-based question answering system for reading comprehension tests.”

her → Ellen Riloff

research group → The University of Utah natural language processing research group (UUNLP)

In 2000, Ellen Riloff The University of Utah natural language processing research group (UUNLP) wrote “A rule-based question answering system for reading comprehension tests.”
Scoring Sentences

Score = 3(Bag Score) + (Rule Score)

Next, extract phrases from the best sentence
Extraction

The only thing we came up with
Extraction Procedures

who → {PERSON, ORGANIZATION}

where → {LOCATION, ORGANIZATION}

which → {LOCATION, PERSON, ORGANIZATION}

when → {DATE, TIME}

how → {MONEY, PERCENT}
Q: When did Ellen return home?

She returned to her 17th century mansion in the early afternoon to walk her cat.

A: 17th century early afternoon

Ellen’s cat Charlie. Aww.
The End
The End

(Clap now)
Questions
References


Images:

http://images.christianpost.com/full/74899/sherlock.jpg

Source code available at: https://bitbucket.org/tobinyehle/sherlock