

**Algorithms:** POS tagging, NER, word stemming, Cosine Similarity

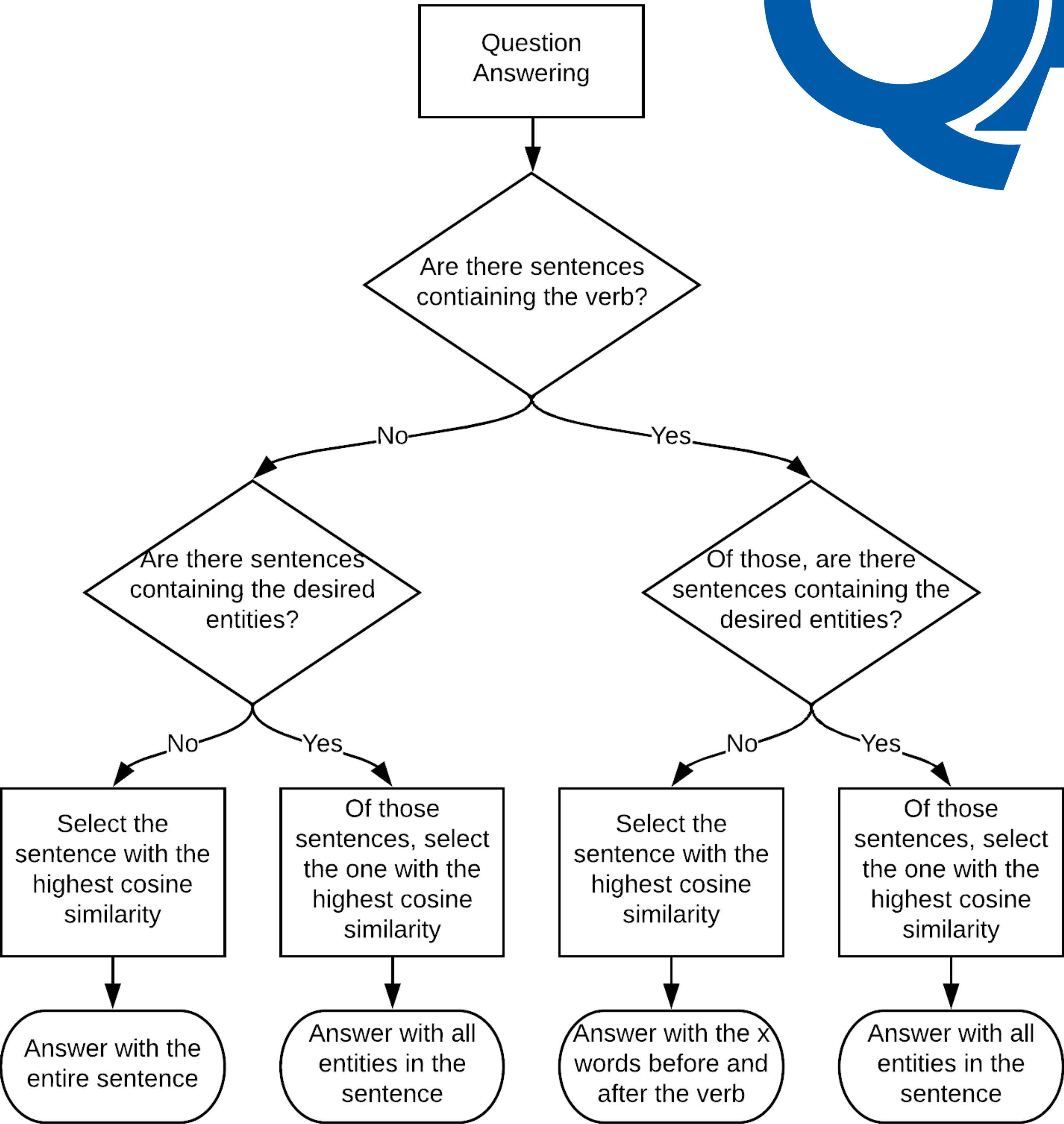
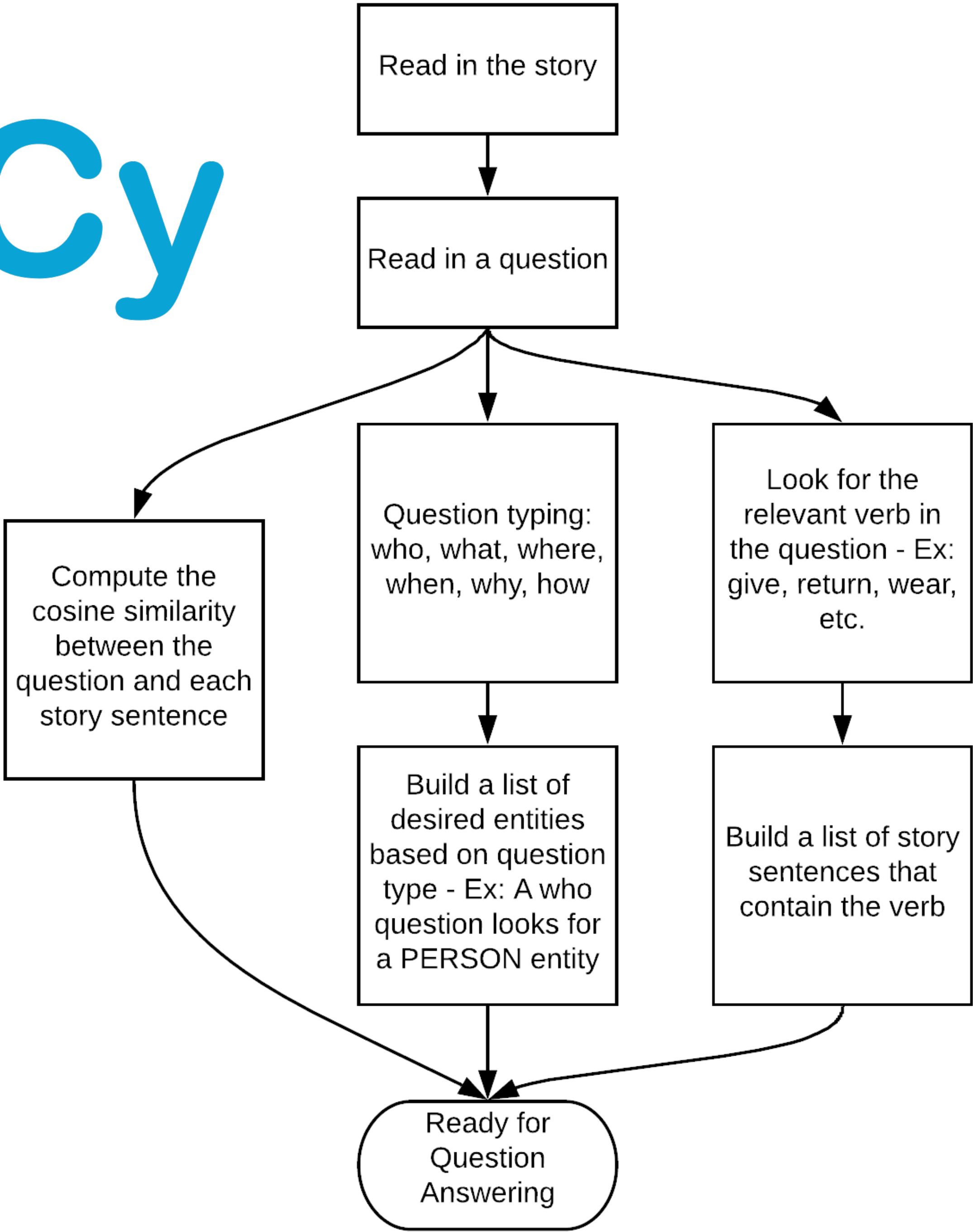
**Contributions:** Spacy – Eric  
Question typing – Eric, Jonathan  
Verb typing – Jonathan, Eric  
Cosine Similarity – Jonathan

**External Resources:** Spacy library – <https://spacy.io>

**Emphasis:** The cornerstone of our system was originally question typing; we later added cosine similarity and what we call ‘verb typing’ – matching a verb in the question with verbs in the story.

To handle “what” questions, our system performs cosine similarity on the portion of the question after the relevant verb.

**Performance:** We achieved an F-score of 0.32, with .38 recall and .28 precision. Our system did well with ‘who’ questions and questions asking for numbers.



**Regrets:** Limiting the response to 7 words before and after a verb didn’t work well. It returned the correct answer in some cases, but hurt recall more than it helped precision.

**Successes:** Using question typing and NER in combination with cosine similarity was very successful, helping the system find likely answers depending on the question text.

**Lessons Learned:** It’s hard to build a system that can understand language and answer even the simplest of questions.