# Final Project Write Up: Software Engineer Final Project Team 15

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**Git repository URL:**
https://github.com/Mengda/hw5-team15
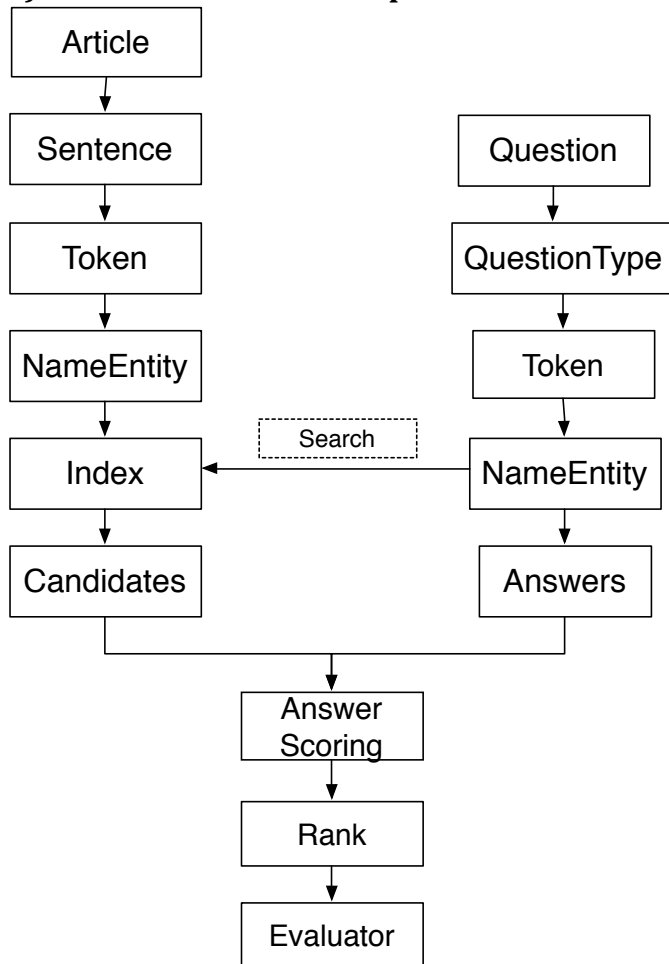
**1) Initial pipeline/workflow design**
1. The pipeline first process the articles and parse into sentences and then tokens. In parallel, the question and answer are annotated and parse into tokens.

2. NameEntity annotation: this annotation will be applied to both QAsentences and article sentences. Multiple technics can be added here in the future to help the following match process.

3. Match the question in the article to find multiple candidate sentences. Score the answers corresponding to the question by the matchness of the answer and the candidate sentences in the article.

4. Using AnswerScore for ranking and compare to goldenAnswer to get the rank and evaluation.

**2) Initial type-system design**

- SourceDocument: sentenceList(Sentence)

- TestDocument: qaList(QuestionAnswerList)

- Sentence: dependencyList(Dependency)

- Question: tokenlist(Token) nounList(NounPhrase) nerList(NER) dependencies(Dependency)

- Answer: synonyms(Synonym) nounPhraseList(NounPhrase)

- nerlist (NER) tokenList(Token) dependencyList(Dependency)

- QuestionAnswerSet: answerList(Answer) candidateSentenceList(CandidateSentence)

- CandidateSentence: candAnswerList(CandidateAnswer)

- CandidateAnswer

- Token

- Synonym:

- NounPhrase: synonyms(Synonym)

- NER: synonyms(Synonym)

- Dependency:

## 3) Baseline methods to implement

```
      Article
         │
         ▼
      Sentence                    Question
         │                           │
         ▼                           ▼
       Token                    QuestionType
         │                           │
         ▼                           ▼
     NameEntity                    Token
         │                           │
         │        Search            ▼
         ▼    ◄──────────        NameEntity
       Index                        │
         │                          ▼
         ▼                       Answers
     Candidates                     │
         └───────────┬──────────────┘
                     ▼
              Answer
              Scoring
                     │
                     ▼
                   Rank
                     │
                     ▼
               Evaluator
```

## 4) Initial division of work among team-members
Shen Wu: AnswerScoring
Mengda Yang:  Question/Answer Annotation
Yi Song: NameEntity Annotation
Qiwen Zhu: Evaluator, meeting notes
Ying Sheng: NameEntity Search