

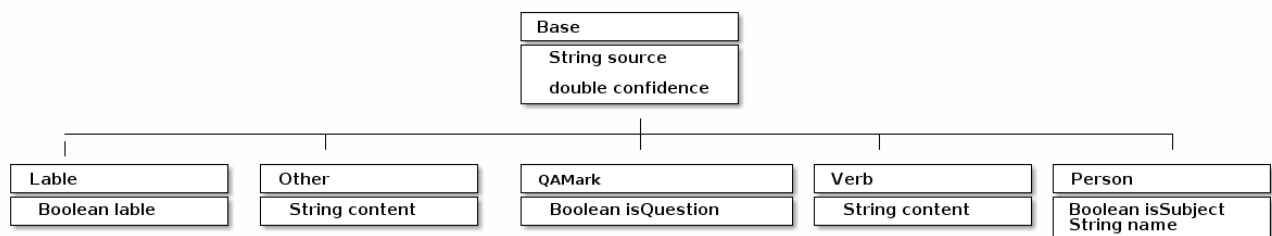
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Requirement analysis:

For homework #1, the task is to build a type system that properly represent given input. The input consists of question, in <subject> <verb> <object> format, and set of answers, in “A <isCorrect> <answer>” format.

Design of type system:

The design of the type system is a hierarchical structure that can be clearly represented by the UML diagram below:



The type Base is used to track where each annotation comes from and record the confidence score associated with that source. The type Lable is used to track the <isCorrect> part in each answer. The type QAMark is used to represent the A/Q symbol at the beginning in every line of input file. The type Verb is used to represent the verb part in each question and answer. The type Person is used to represent the subject and object in each question and answer. And the rest of the text will be type Other.

This type system has the ability to assign type to every segment of input text, with Base representing both the input (the source feature) and the output (the confidence feature).