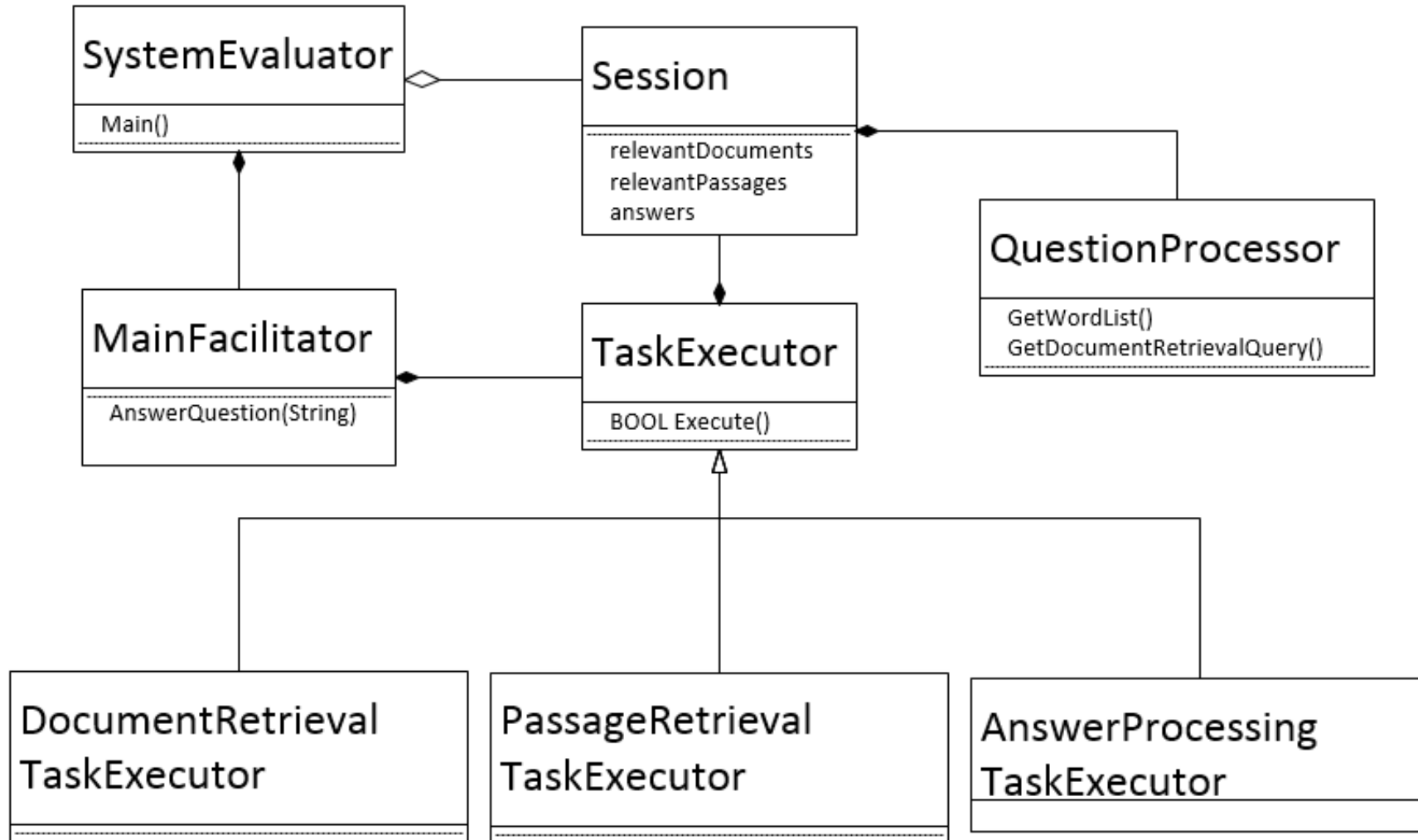# MIM QA System: D2

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About MIM

- Mímir (Old Norse "The rememberer, the wise one")[1] or Mim is a figure in Norse mythology renowned for his knowledge and wisdom who is beheaded during the Æsir-Vanir War. Afterward, the god Odin carries around Mímir's head and it recites secret knowledge and counsel to him.

- In the future, it will probably look like

System Architecture

Task Executor

- Our information retrieval system processes queries and retrieves answers in 3 steps:
  - Document Retrieval
  - Passage Retrieval
  - Answer Processing

- Each of these steps are encapsulated in their own class and derives from the TaskExecutor class.

- The Session object is used to pass information between these tasks.

MainFacilitator

- The implementation of these TaskExecutor(s) is completely transparent to the MainFacilitator.

- Its job is to simply run the TaskExecutor(s) in the correct order and pass a Session object between them.

Question Processor

- Any of the TaskExecutor(s) may need to access the query in different forms, such as as a list of words, expanded queries, etc.

- To ensure this, we have created the QuestionProcessor class, which is embedded in the Session object and contains methods to access the user query.

System Evaluator

- The SystemEvaluator reads in all the question from the data set and calls MainFacilitator's AnswerQuestion() function. It then reads the answer from the returned Session object and writes to the output file.

Implementation details

- QuestionProcessor: removes *wh-* words

- DocumentRetrievalTaskExecutor: performs document retrieval using *Whoosh 2.7*

- PassageRetrievalTaskExecutor: breaks document into 250-character chunks, ranks them by keyword density

- AnswerProcessingTaskExecutor: returns top 3 scored passages

Results

- Aggregate score of:
  - 0.0466 under the Strict evaluation scheme
  - 0.0595 under the Lenient evaluation scheme
- A major reason for low scores is that we did not use the text attribute in the parent node of the questions (the target node) which contains the main subject of the questions.

- 141.1 D2 NYT19990922.0518 receivers on every play. A professional at his position who knows what
141.2 D2 NYT19981017.0063 Asked about the play this week, Moon said, ``I don't remember
141.3 D2 NYT19990111.0260 Sen. Strom Thurmon was born. And our moon has figured in some
141.4 D2 NYT19981214.0039 fast.''   Warren Moon was so concerned he greeted
141.5 D2 APW19990219.0105 DIEGO (AP) -- Free agent quarterback Warren Moon will visit   the Cleveland