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NLP and the Web - Lecture 12 Q&A Session

Use your phone / tablet / second screen to participate

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Agenda for today

- Quick recap
- Quizzes
- Discussion
- Questions

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Question Answering

- Find answers to natural language questions
- Different types of questions
- Applications in chat bots, search engines...

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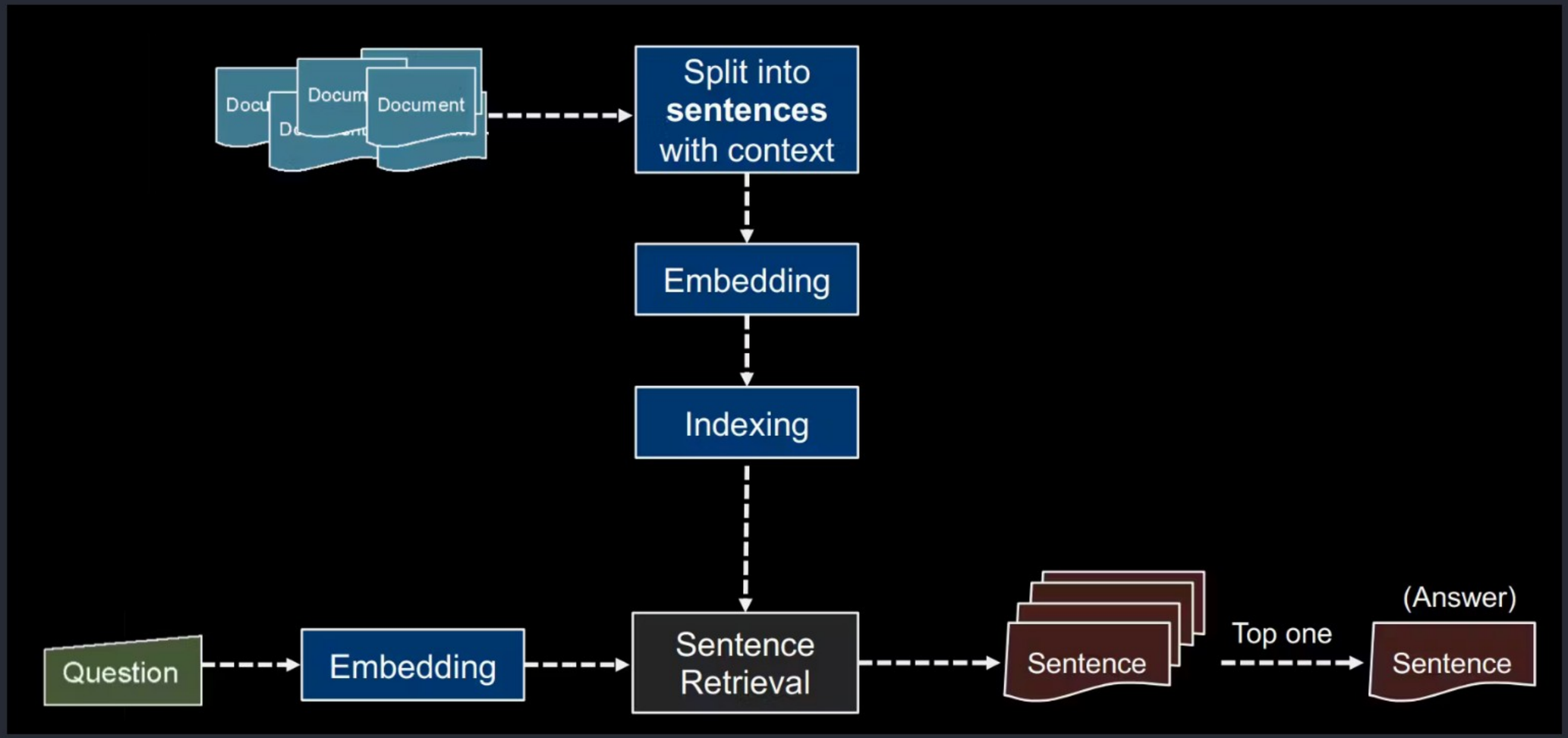

Retrieval-based QA

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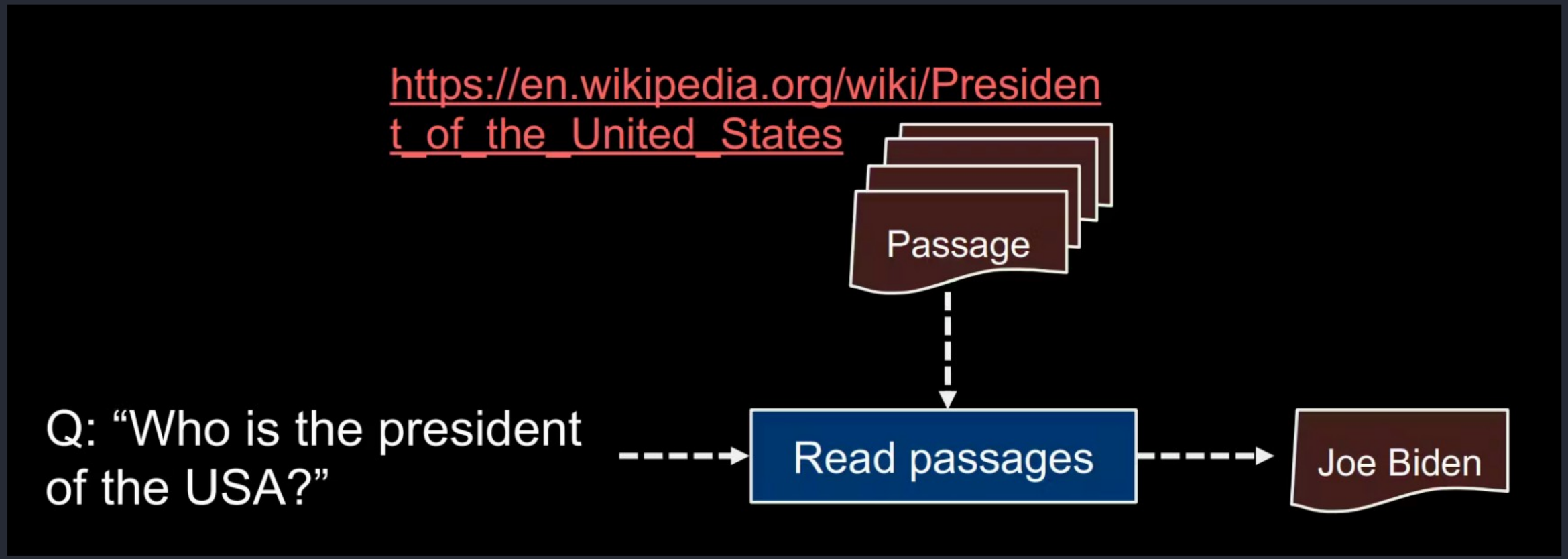

Machine Reading Comprehesion

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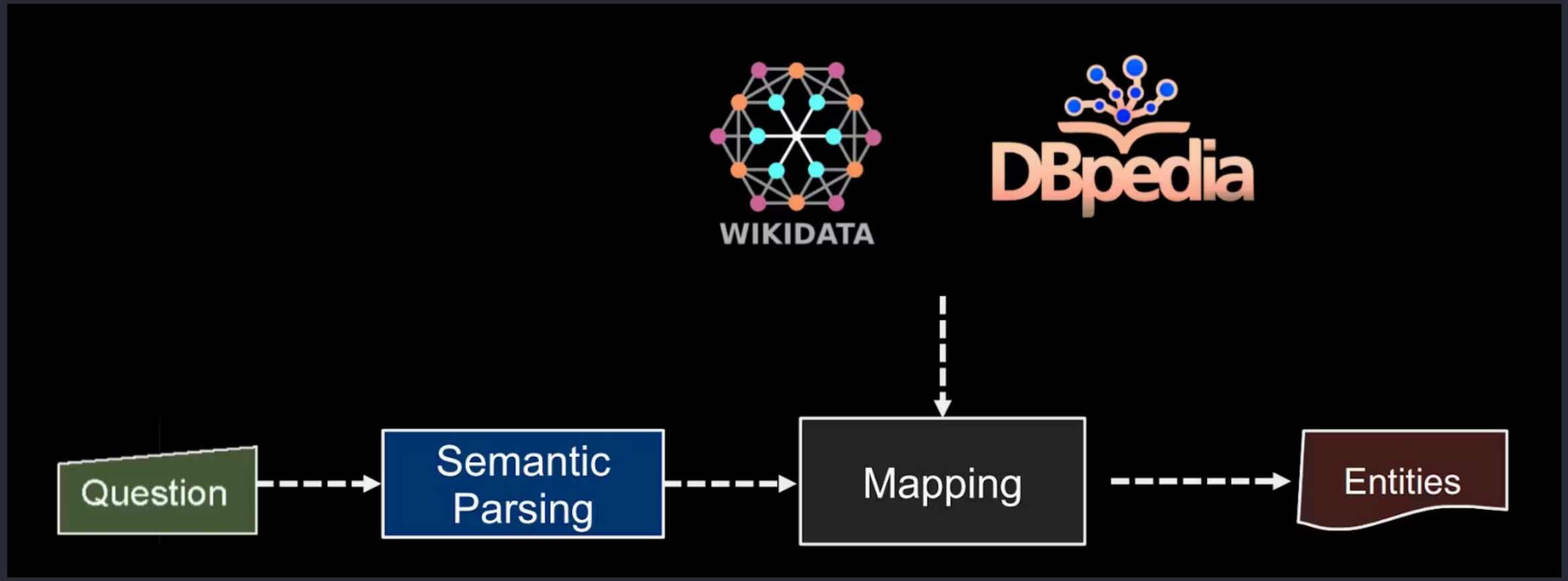

Knowledge Base QA

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Any questions?

3 questions
0 upvotes

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Please enter the quiz on www.menti.com

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Question 1

The earth is once again in great danger. An army of android attackers has landed, ready to conquer humanity once and for all. Only Peter Quill aka. Starlord, a hero from the mighty Avengers, is there to save the day. Before the epic battle, his friend Gamora gives him secret information about the enemy:

"Peter! The enemies are, in fact, not Androids, but FACTOIDS!"

"Oh yeah! Let's shoot NON-FACTOID questions!"

Which of the following questions is a NON-FACTOID question?

1

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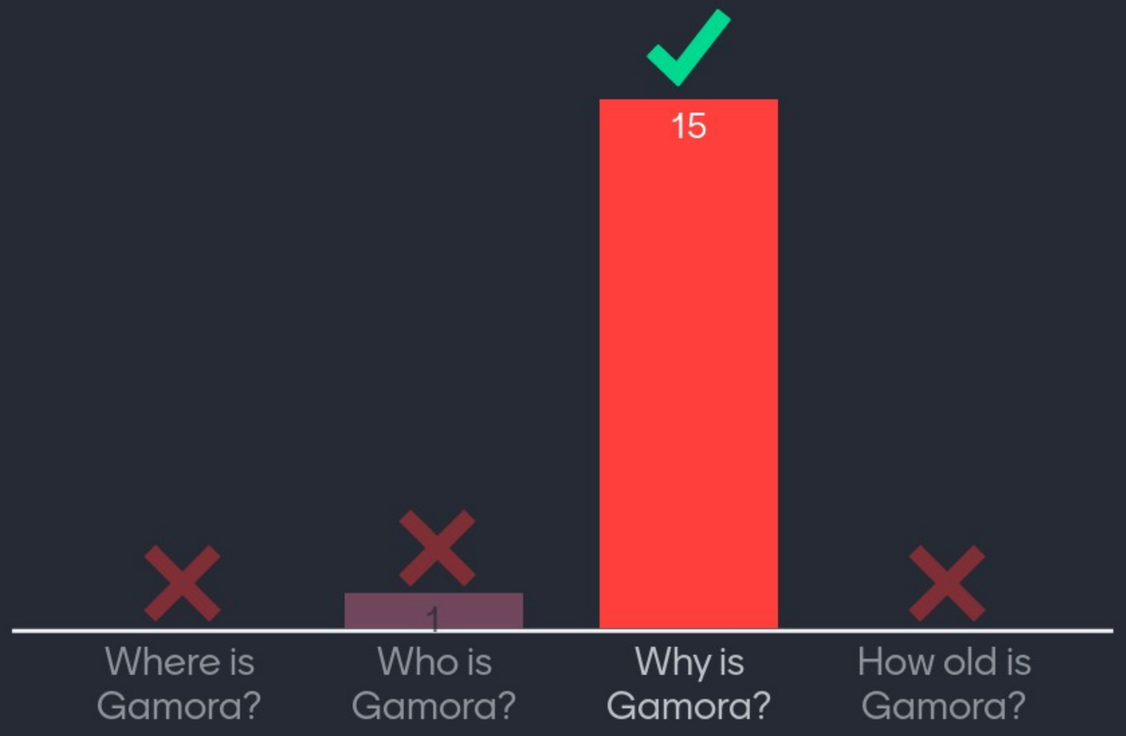
Which of the following questions is a NON-FACTOID question?



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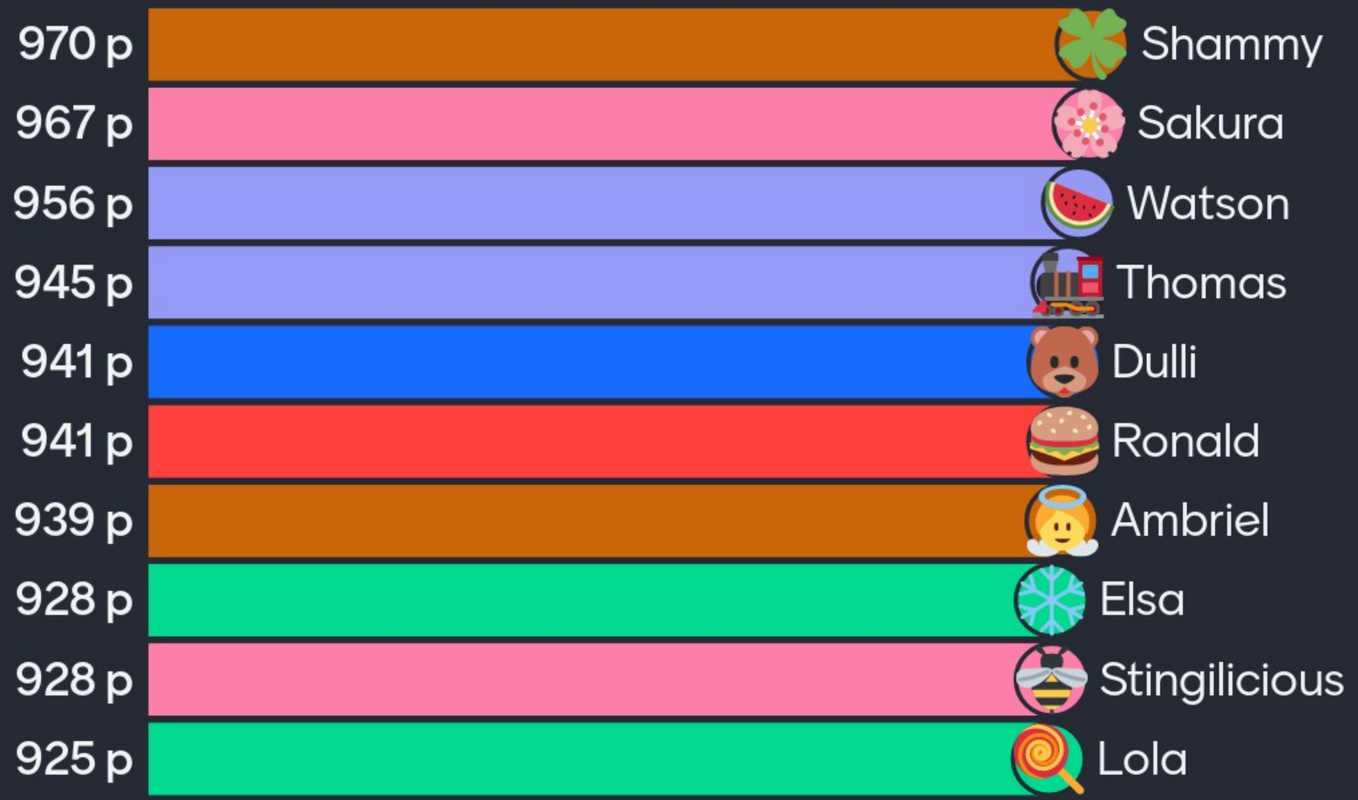
Leaderboard



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Question 2

In her search for the answer to the Ultimate Question of Life, the Universe, and Everything, the famous engineer Douglasia Adamus has built the second most powerful computer ever!

Finally, it retrieves the ultimate answer: 42!

Douglasia fails to understand how the machine got to this answer (or what the actual question is), she at least wants to narrow down the question-answering approach that could lead to this answer.

Which QA approach can return a numeric answer like "42"?

2

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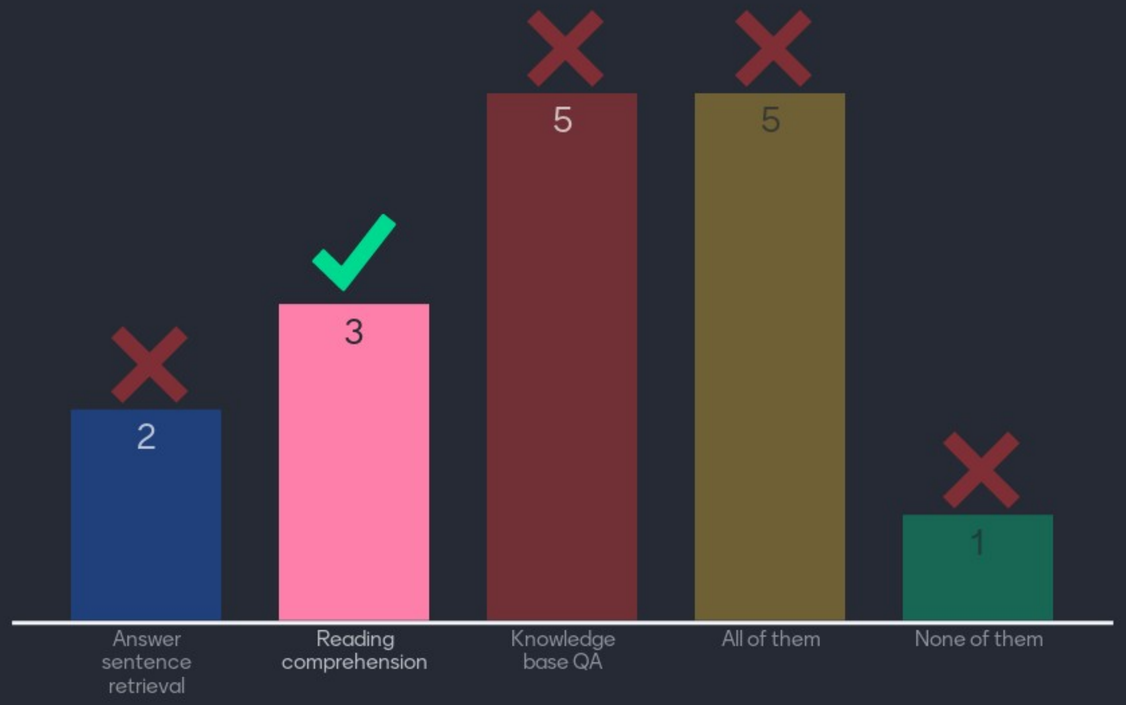
Which QA approach can return a numeric answer like "42"?



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Leaderboard

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Question 3

In yet another section of the universe, Captain Jean-Luc Picard tries to communicate with a foreign, alien species.

"Pa Ta Pon Don!" shouts the alien leader.

Captain Picard takes out his PONs dictionary and carefully constructs a reply sentence.

The alien leader shouts back: "What? Our greeting contained all four gold standard answers. Do you even know what Recall measure your pathetic reply has?

(Given that "Pa, Ta, Pon, Don" are all correct answers, calculate the Recall of the following returned answer.s)

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Recall? All Correct answers: Pa, Ta, Pon, Don Returned answers: Ra, Da, Ta, Ka, Chi, Bi, Pon

0.5 ✓	2/7 ✗	1/7 ✗
4/7 ✗	0,75 ✗	Chi ✗
0.33 ✗	ra, ka, pon, chi ✗	1/2 ✗

The correct answer is: 0.5

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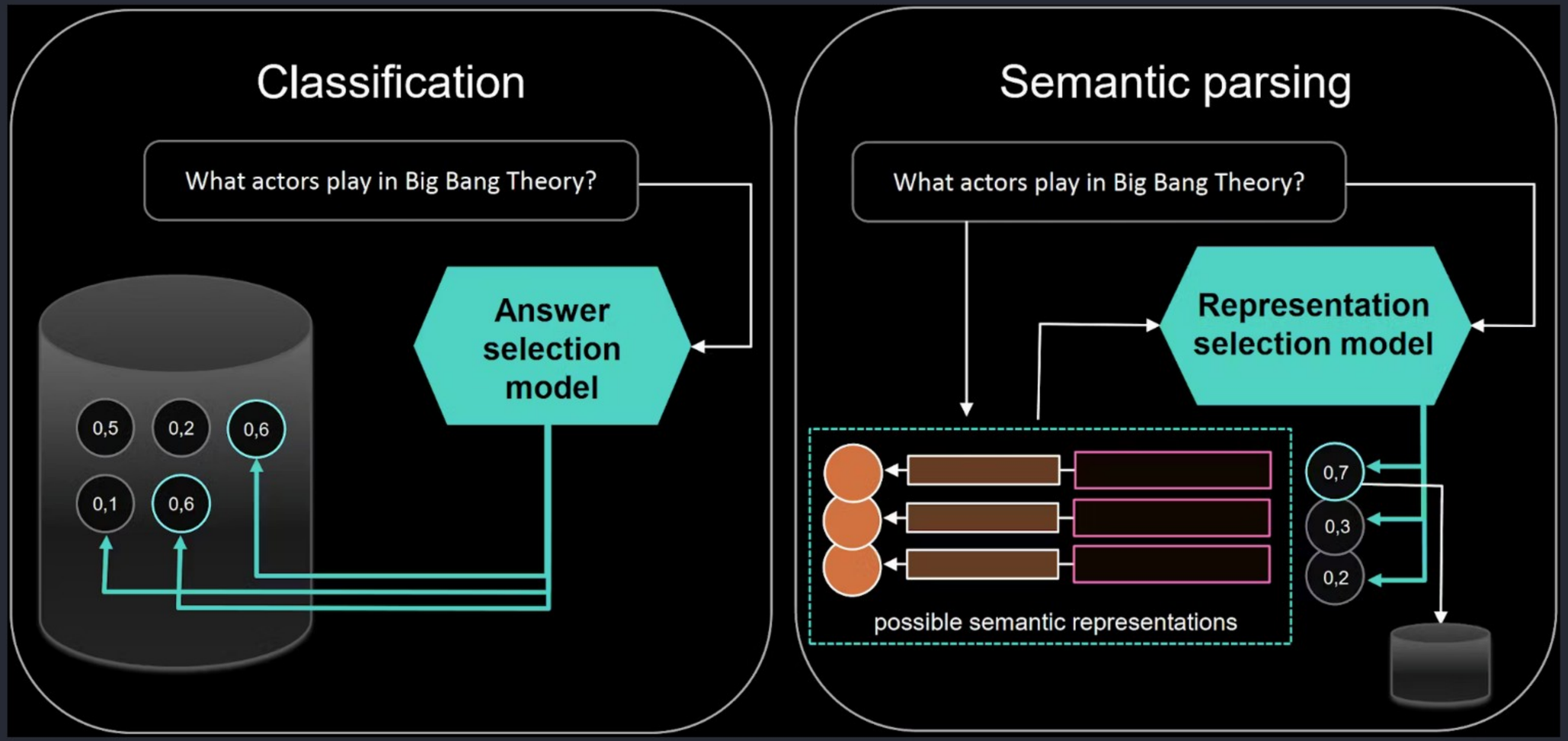

Knowledge Base Questions answering approaches

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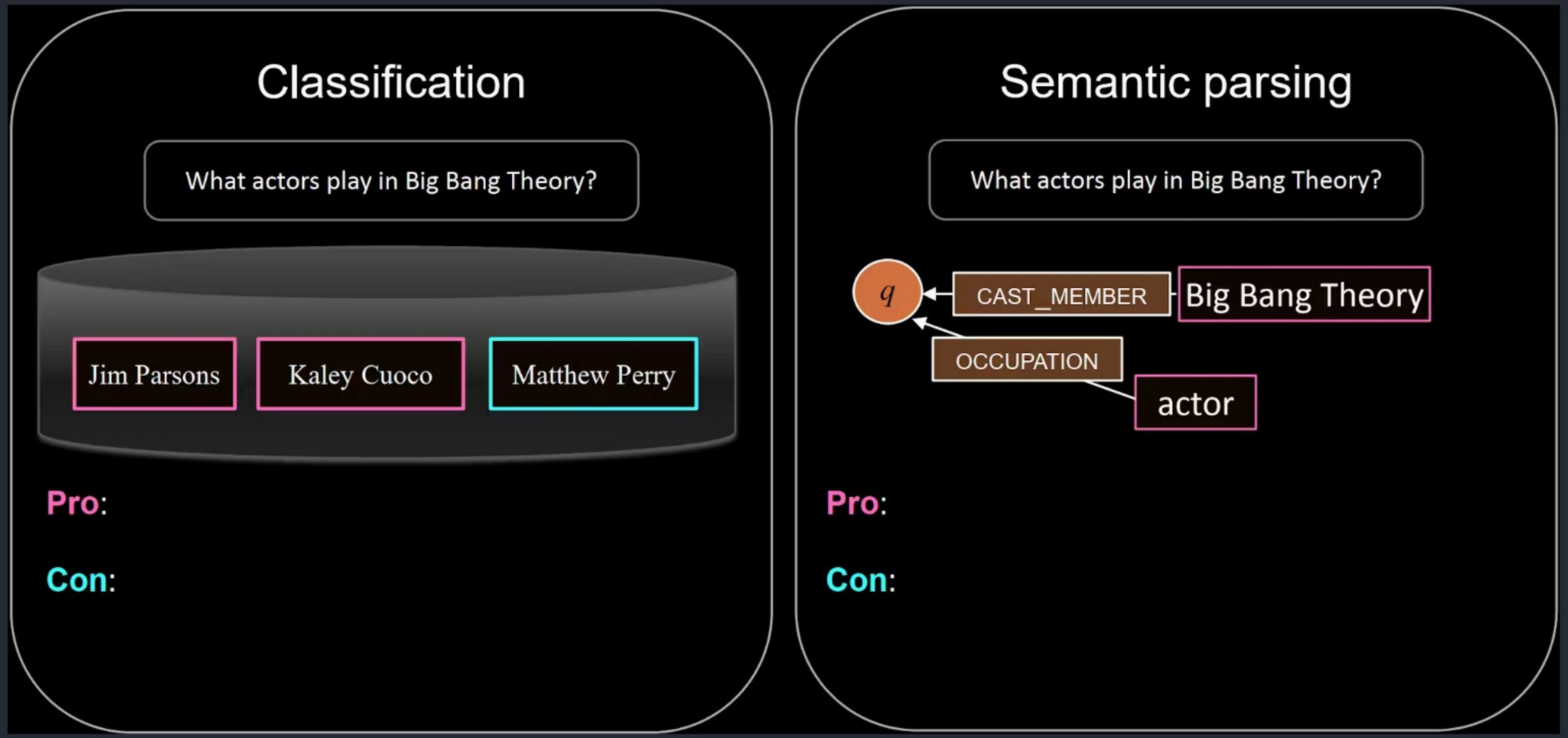

Knowledge Base Questions answering approaches

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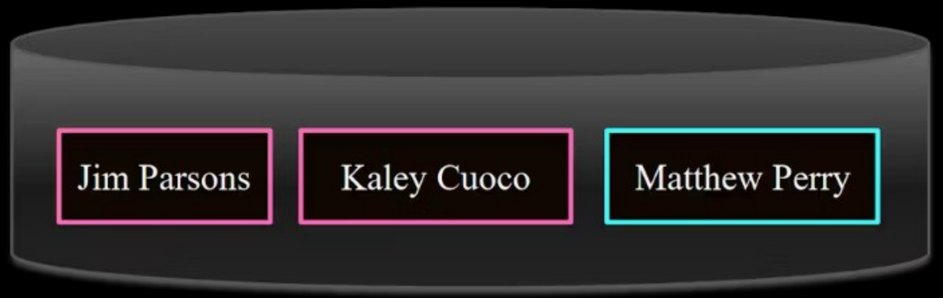
Classification

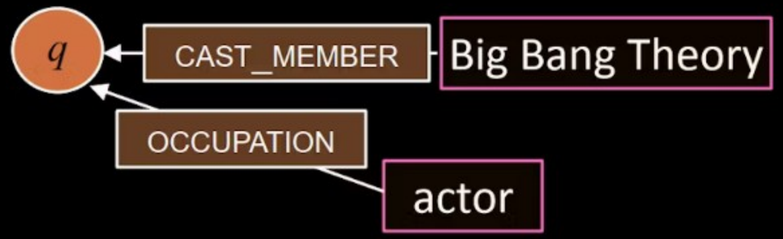
What actors play in Big Bang Theory?



Pro: No middle man, the model directly considers questions and potential answers
Con: Each answer has to be classified as correct/incorrect individually. It is hard to get all correct answers

Semantic parsing

What actors play in Big Bang Theory?



Pro: One correct representation delivers all correct answers
Con: Representation is a middle man that introduces error propagation

Knowledge Base Questions answering approaches

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Next week: Quesion Answering II

Q&A (Zoom)

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Any final words / feedback?