

- (1) describe how you created your knowledge base, include screen shots of the knowledge base, and indicate your top 10 terms

I created my knowledge base using 10 values from the 40 most frequent words [1]. When selecting the words, I tried to pick the broadest words that would encompass all aspects of the sport. I think I did pretty efficiently and I am not worried that the chatbot would miss part of it. The knowledge base is stored as a dictionary with each term as a key and then a list of the sentences as the value [2].

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freq_terms = (list: 40) [(('car'), 316), (('one'), 305), (('schumacher'), 305), (('formula'), 292), (('the'), 290), (('team'), 283), (('race'), 280), (('first'), 255), (('driver'), 205), (('montoya'), 181), ...]

knowledge_base = (dict: 10) {'car': ["Formula One (also known as Formula 1 or F1) is the highest class of international racing for open-wheel single-seater formula racing cars sanctioned by the Fédération Internationale de l'Automobile (FIA). The most prominent races are the 24 Hours of Le Mans, the Monaco Grand Prix, the British Grand Prix, and the Abu Dhabi Grand Prix. The sport is known for its high speeds, technical challenges, and the risk of injury to drivers and spectators."], 'one': ["The number one is the highest ranking in a series of races, known as Grands Prix, which take place worldwide on both purpose-built circuits and closed public roads."], 'schumacher': ["Michael Schumacher is a German racing driver who won seven Formula One World Championships between 1994 and 2004. He is widely regarded as one of the greatest drivers in the history of the sport."], 'formula': ["Formula One is a type of open-wheel single-seater formula racing car that is used in the most prestigious form of motorsport, Formula One. It is the highest class of international racing for open-wheel single-seater formula racing cars sanctioned by the Fédération Internationale de l'Automobile (FIA). The most prominent races are the 24 Hours of Le Mans, the Monaco Grand Prix, the British Grand Prix, and the Abu Dhabi Grand Prix. The sport is known for its high speeds, technical challenges, and the risk of injury to drivers and spectators."], 'the': ["The Formula One World Championship is the highest class of international racing for open-wheel single-seater formula racing cars sanctioned by the Fédération Internationale de l'Automobile (FIA). The most prominent races are the 24 Hours of Le Mans, the Monaco Grand Prix, the British Grand Prix, and the Abu Dhabi Grand Prix. The sport is known for its high speeds, technical challenges, and the risk of injury to drivers and spectators."], 'team': ["The average annual cost of running a team – designing, building, and maintaining cars, pay, transport – being approximately US$265 million, [5] its financial success is largely determined by the amount of sponsorship it can attract. The most successful teams are the Red Bull Racing, Mercedes-AMG Petronas Formula One Team, and Ferrari."], 'race': ["A Formula One season consists of a series of races, known as Grands Prix, which take place worldwide on both purpose-built circuits and closed public roads. Each race is held over a weekend, with the first day of the race being a practice session, followed by a qualifying session, and then the race itself. The race is held over a distance of approximately 305 kilometers (190 miles). The driver who finishes the race in first place is declared the winner of the race."], 'driver': ["A points system is used at Grands Prix to determine two annual World Championships: one for drivers, the other for constructors. Each driver must hold a valid FIA International Driving License (IDL) to be eligible to compete in a Grand Prix. The driver who finishes the race in first place is declared the winner of the race."], 'season': ["The World Drivers' Championship, which became the FIA Formula One World Championship in 1981, has been one of the premier forms of racing around the world since its inception in 1950. It is the highest class of international racing for open-wheel single-seater formula racing cars sanctioned by the Fédération Internationale de l'Automobile (FIA). The most prominent races are the 24 Hours of Le Mans, the Monaco Grand Prix, the British Grand Prix, and the Abu Dhabi Grand Prix. The sport is known for its high speeds, technical challenges, and the risk of injury to drivers and spectators."], 'lap': ["A 'tyre war' between suppliers Michelin and Bridgestone saw lap times fall, although, at the 2005 United States Grand Prix at Indianapolis, seven out of ten teams used Bridgestone tyres. The race was won by Michael Schumacher, driving for Ferrari."], 'point': ["A points system is used at Grands Prix to determine two annual World Championships: one for drivers, the other for constructors. Other changes include the introduction of a new safety car, the use of a new race format, and the introduction of a new safety protocol."], 'championship': ["Formula One was a new formula agreed upon during 1946 with the first non-championship races taking place that year. A number of Grand Prix races were held, but none were considered to be part of the championship."], 'safety': ["The FIA worked to improve the sport's safety standards since that weekend, during which Roland Ratzenberger also died in an accident during Saturday qualifying. The FIA introduced a number of safety measures, including the use of a safety car, the use of a new race format, and the introduction of a new safety protocol."]}

len_ = (int) 10
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[2] Knowledge Base

[1] 40 Most Frequent Words

- (2) Write up a sample dialog you would like to create with a chatbot based on your knowledge base

What is formula one?

Formula One is the highest form of motorsport.

How many teams are there?

There are 10 teams.

When was the first formula one championship race?

In 1950 at Silverstone in the United Kingdom