Create a Chatbot in Python

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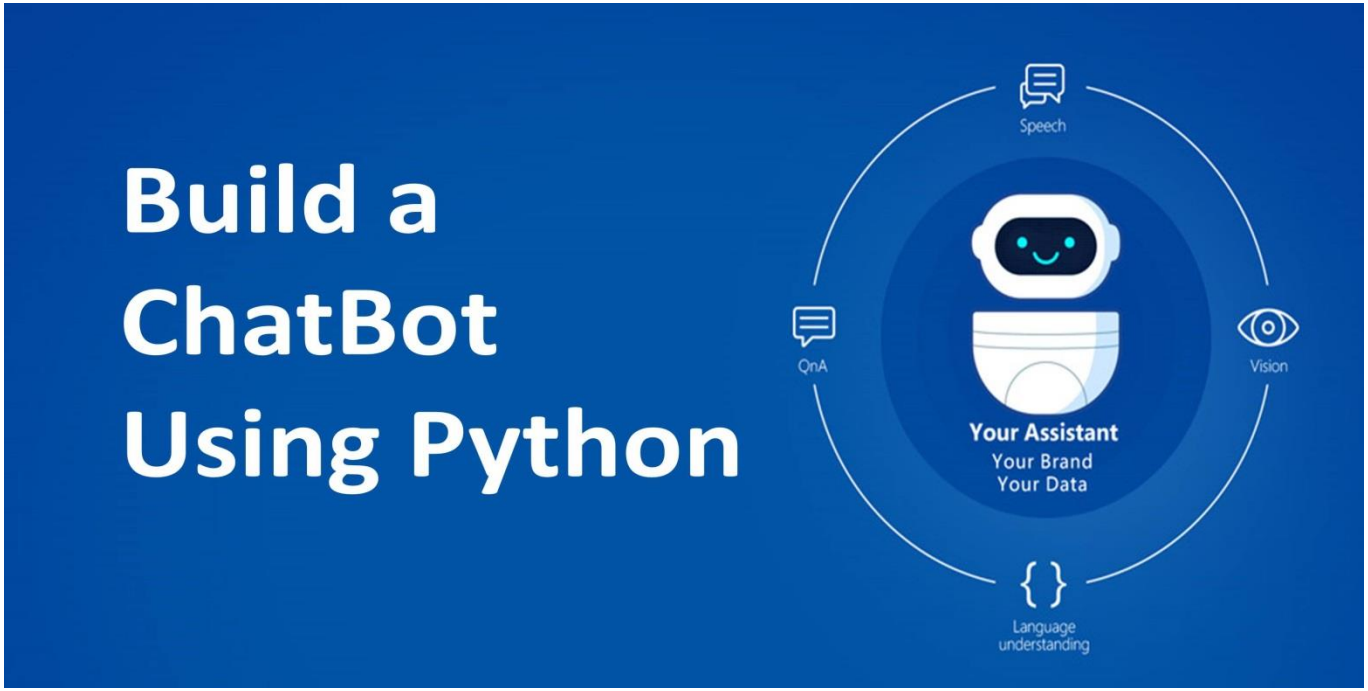
Phase-1 **Document submission**

*on basis of creating chatbot using python :-



OBJECTIVE: The problem is to build an AI-powered diabetes prediction system that uses machine learning algorithms to analyze medical data and predict the likelihood of an individual developing diabetes. The system aims to provide early risk assessment and personalized preventive measures, allowing individuals to take proactive actions to manage their health.

DATASETLINK: https://www.kaggle.com/datasets/grafstor/simple-dialogs-for-chatbot

In [7]:
```
data = pd.DataFrame({"question" : question ,"answer":answer})
data.head()
```

Out[7]:

	question	answer
0	hi, how are you doing?	i'm fine. how about yourself?
1	i'm fine. how about yourself?	i'm pretty good. thanks for asking.
2	i'm pretty good. thanks for asking.	no problem. so how have you been?
3	no problem. so how have you been?	i've been great. what about you?
4	i've been great. what about you?	i've been good. i'm in school right now.

1. Define Functionality:
•Identify the specific goals and objectives of the chatbot. What problems or tasks will it address?
•Determine the scope of the chatbot's abilities, including its primary functions and limitations.
•Consider the target audience and their needs.

2. User Interface Design:
•Decide where the chatbot will be integrated, such as a website or app.
•Design a user-friendly interface for interactions. Ensure that the chatbot's presence is intuitive and accessible.
•Create a conversational flowchart to visualize the user's journey when interacting with the chatbot.

3. Natural Language Processing (NLP):
•Implement NLP techniques to understand and process user input in a conversational manner.
•Choose an NLP library or framework (e.g., NLTK, spaCy, or Transformers) to help with language understanding.
•Define intents and entities that the chatbot will recognize, and set up a dialogue manager to handle conversations.

4. Responses Planning:
•Plan the responses that the chatbot will offer. These can include accurate answers, suggestions, and assistance.
•Create a database of frequently asked questions and their corresponding answers.
•Develop a knowledge base that the chatbot can reference for providing information.

5. Integration:
•Integrate the chatbot into the chosen platform (website, app).
•Ensure seamless communication between the chatbot and the platform's backend.
•Design the chatbot's user interface elements, such as chat bubbles or widgets.

6. Testing and Improvement:
•Conduct thorough testing to identify any issues or limitations in the chatbot's functionality and NLP capabilities.
•Collect user feedback and monitor user interactions to understand how users are using the chatbot.
•Continuously refine and improve the chatbot's responses and performance based on user feedback.
•Implement analytics to track user engagement and measure the chatbot's effectiveness in achieving its goals.

7. Iteration:
•Use an iterative approach to design and development, incorporating feedback and making incremental improvements.
•Be open to maof your audience. Design Thinking principles emphasize empathy, so always consider the user's perspective when making
•Improvements on chatbot.