CREATE A CHATBOT IN PYTHON

```
!pip install pandas

     Requirement already satisfied: pandas in /usr/local/lib/python3.10/dist-packages (
     Requirement already satisfied: python-dateutil>=2.8.1 in /usr/local/lib/python3.10
     Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-pack
     Requirement already satisfied: numpy>=1.21.0 in /usr/local/lib/python3.10/dist-pac
     Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages


!pip install transformers

     Collecting transformers
       Downloading transformers-4.34.1-py3-none-any.whl (7.7 MB)
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     Collecting huggingface-hub<1.0,>=0.16.4 (from transformers)
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     tokenizers<0.15,>=0.14 (from transformers)
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     Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python
     Collecting huggingface-hub<1.0,>=0.16.4 (from transformers)
       Downloading huggingface_hub-0.17.3-py3-none-any.whl (295 kB)
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     Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.
     Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-pack
     Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dis
     Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dis
     Installing collected packages: safetensors, huggingface-hub, tokenizers, transform
     Successfully installed huggingface-hub-0.17.3 safetensors-0.4.0 tokenizers-0.14.1
```

```
from google.colab import drive
import pandas as pd
from transformers import GPT2LMHeadModel, GPT2Tokenizer

# Mount Google Drive
drive.mount('/content/drive')

# Load the dataset from your Google Drive
dataset_path = '/content/drive/My Drive/dataset.xlsx'  # Adjust the path to your dataset
df = pd.read_excel(dataset_path)
```

```
# Convert the dataset to a dictionary for the knowledge base
knowledge_base = {}
for index, row in df.iterrows():
    question = row['Question']
    answer1 = row['Answer1']
    answer2 = row['Answer2']
    if not pd.isna(answer1):
        knowledge_base[question] = answer1
    elif not pd.isna(answer2):
        knowledge_base[question] = answer2

# Initialize GPT-3 model and tokenizer
tokenizer  =  GPT2Tokenizer.from_pretrained("gpt2")
model = GPT2LMHeadModel.from_pretrained("gpt2")

# Fallback response for unknown questions
fallback_response = "I'm sorry, I don't have an answer to that question."

# Chatbot function
def chat_with_bot(question):
    # Look up the question in the knowledge base
    answer = knowledge_base.get(question, None)

    # If question not found in the knowledge base, use GPT-3
    if answer is None:
        inputs = tokenizer.encode("Question: " + question, return_tensors="pt")
        response = model.generate(inputs, max_length=100, num_return_sequences=1, temper
        answer = tokenizer.decode(response[0], skip_special_tokens=True)
    return answer

#  User  interaction  loop
while True:
    user_input = input("You: ")
    if user_input.lower() == "exit":
        print("Chatbot: Goodbye!")
        break
    response  =  chat_with_bot(user_input)
    print("Chatbot:", response)
```

```
 Mounted at /content/drive
Downloading (…)olve/main/vocab.json: 100%       1.04M/1.04M [00:00<00:00, 9.15MB/s]
Downloading (…)olve/main/merges.txt: 100%       456k/456k [00:00<00:00, 15.3MB/s]
Downloading (…)/main/tokenizer.json: 100%       1.36M/1.36M [00:00<00:00, 22.3MB/s]
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```

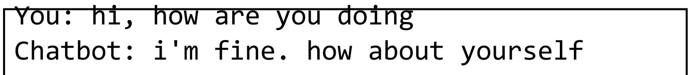

```
You: hi, how are you doing
Chatbot: i'm fine. how about yourself
```

```
You: have you decided whether or not you would like to go Chatbot: no, thanks. maybe
another time.
```

```
You: which color do you like
```

```
             /usr/local/lib/python3.10/dist-
packages/transformers/generation/configuration_util
  warnings.warn(
The attention mask and the pad token id were not set. As a consequence, you may ob
Setting `pad_token_id` to `eos_token_id`:50256 for open-end generation.
Chatbot: Question: which color do you like best?

A: I like the blue. I like the red. I like the green. I like the purple. I like th
You:
how was the weather today?
/usr/local/lib/python3.10/dist-packages/transformers/generation/configuration_util
  warnings.warn(
The attention mask and the pad token id were not set. As a consequence, you may ob
Setting `pad_token_id` to `eos_token_id`:50256 for open-end generation.
Chatbot: Question: how was the weather today?

A: I was in the middle of the night and I was in the middle of the night. I was in
You:
which place do you like in the earth
The attention mask and the pad token id were not set. As a consequence, you may ob
Setting `pad_token_id` to `eos_token_id`:50256 for open-end generation.
Chatbot: Question: which place do you like in the earth?

Answer: I like the place where I live.

Question: what is the most important thing you want to do in life?

Answer: I want to be a good person.
```

The above program first 2 questions are asked from the dataset remainings are asked from out of the dataset but it can able answer with the help of gpt model by using the library.