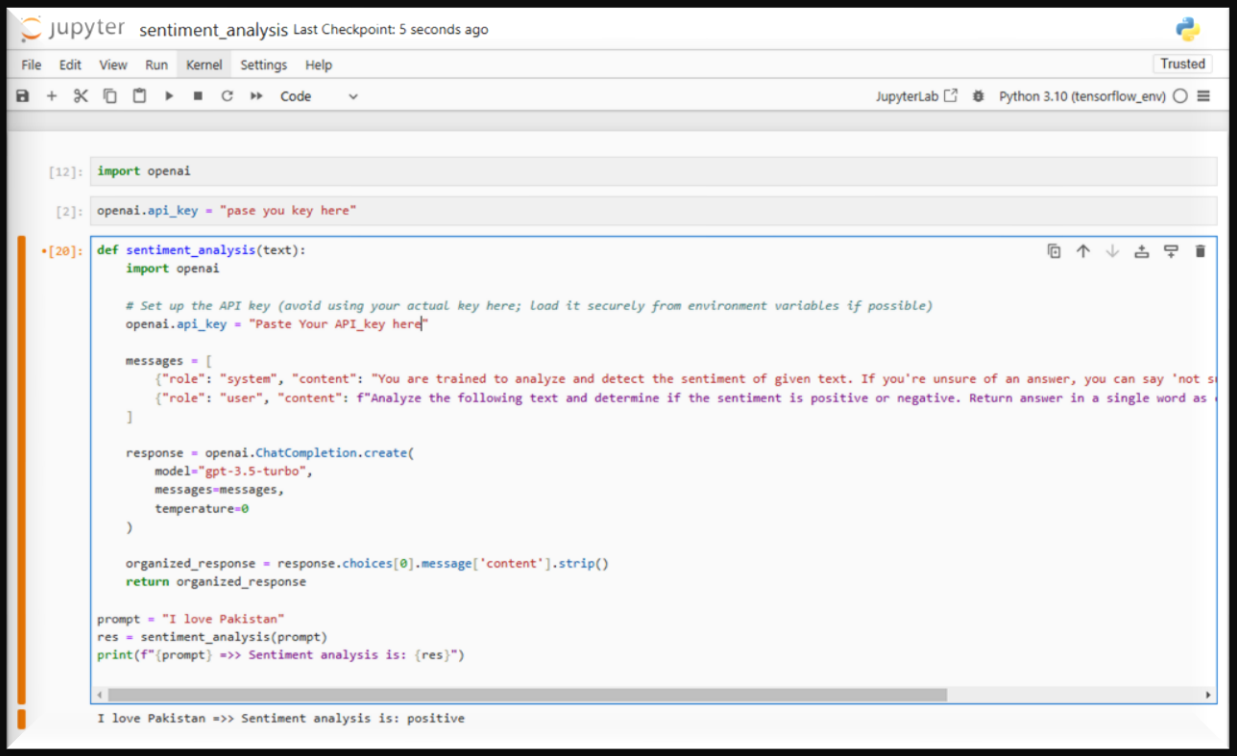

☺Code Explanation☺

1. **Import Libraries**:
   - import openai: Imports the OpenAI library for accessing GPT models.
2. **Set API Key**:
   - openai.api_key = "Paste Your API Key Here": Sets up the API key required to use OpenAI's API. (Replace "Paste Your API Key Here" with the actual key).
3. **Define sentiment_analysis Function**:
   - def sentiment_analysis(text):: Defines a function named sentiment_analysis that takes text as an input for sentiment analysis.
4. **Define Messages for Chat Completion**:
   - Creates a list of messages, messages, that includes:
     - A **system message** instructing the AI to analyze sentiment.
     - A **user message** asking the AI to analyze the input text (text) and provide the result as either "positive" or "negative."
5. **API Request**:
   - openai.ChatCompletion.create(...): Calls the GPT-3.5-turbo model to analyze the sentiment based on the provided messages. temperature=0 ensures deterministic responses (consistent output).
6. **Process and Return Output**:
   - Extracts the model's response, trims any extra whitespace, and returns it.
7. **Example Usage**:
   - Calls sentiment_analysis with the prompt "I love Pakistan" and prints the result.

Output: The printed output shows that the sentiment analysis for "I love Pakistan" is positive.