```
import openai
from datetime import datetime, timedelta
import json

# Initialize OpenAI API with your API key
openai.api_key = 'your_openai_api_key'

def process_query(query):
    # Call OpenAI API to process user query with a history length of 4 messages
    response = openai.Completion.create(
        engine="text-davinci-002",
        prompt=query,
        max_tokens=100,
        temperature=0.7,
        stop=None,
        n=1,
        stream=False,
        logprobs=None,
        echo=False,
        history=["User: " + query for query in query_history[-4:]]  # Use last 4 user queries as history
    )

    # Extract relevant information from OpenAI response
    parsed_response = response['choices'][0]['text'].strip()
    parsed_lines = parsed_response.split('\n')

    entities = []
    parameters = []
    start_dates = []
    end_dates = []
```

```
for line in parsed_lines:
    parts = line.split(':')
    if len(parts) == 2:
        key, value = parts[0].strip(), parts[1].strip()
        if key == 'Entity':
            entities.append(value)
        elif key == 'Parameter':
            parameters.append(value)
        elif key == 'Start Date':
            start_dates.append(value)
        elif key == 'End Date':
            end_dates.append(value)

# If start date or end date not extracted, set defaults
if not start_dates:
    start_dates = [(datetime.today() - timedelta(days=365)).strftime('%Y-%m-%d')]
if not end_dates:
    end_dates = [datetime.today().strftime('%Y-%m-%d')]

# Construct JSON objects
json_objects = []
for entity, parameter, start_date, end_date in zip(entities, parameters, start_dates, end_dates):
    json_object = {
        "entity": entity,
        "parameter": parameter,
        "start_date": start_date,
        "end_date": end_date
    }
    json_objects.append(json_object)

return json_objects
```

```
def convert_to_json(query):
    # Process user query
    data = process_query(query)

    # Convert data to JSON format
    json_data = json.dumps(data, indent=4)

    return json_data

# Example user queries
query_history = ["What is the revenue of Amazon?", "Show me the GMV of Flipkart from last year to now."]
user_query = "Compare the revenue of Amazon and Flipkart."

# Convert user queries to JSON
result = convert_to_json(user_query)
print(result)
```