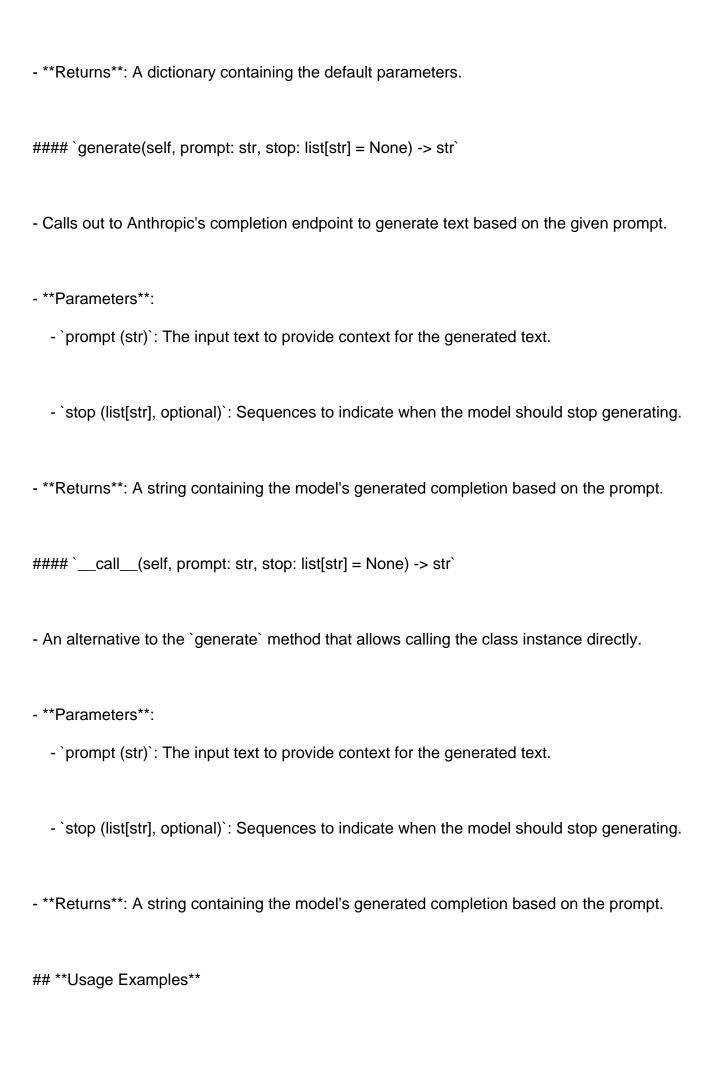
Documentation for the `Anthropic` Class ## **Overview and Introduction** The `Anthropic` class provides an interface to interact with the Anthropic large language models. This class encapsulates the necessary functionality to request completions from the Anthropic API based on a provided prompt and other configurable parameters. ### **Key Concepts and Terminology** - **Anthropic**: A large language model, akin to GPT-3 and its successors. - **Prompt**: A piece of text that serves as the starting point for model completions. - **Stop Sequences**: Specific tokens or sequences to indicate when the model should stop generating. - **Tokens**: Discrete pieces of information in a text. For example, in English, a token can be as short as one character or as long as one word. ## **Class Definition** ### `Anthropic` ```python class Anthropic: """Anthropic large language models."""

Parameters:

- `model (str)`: The name of the model to use for completions. Default is "claude-2". - `max tokens to sample (int)`: Maximum number of tokens to generate in the output. Default is 256. - `temperature (float, optional)`: Sampling temperature. A higher value will make the output more random, while a lower value will make it more deterministic. - `top_k (int, optional)`: Sample from the top-k most probable next tokens. Setting this parameter can reduce randomness in the output. - `top_p (float, optional)`: Sample from the smallest set of tokens such that their cumulative probability exceeds the specified value. Used in nucleus sampling to provide a balance between randomness and determinism. - `streaming (bool)`: Whether to stream the output or not. Default is False. - 'default request timeout (int, optional)': Default timeout in seconds for API requests. Default is 600. ### **Methods and their Functionality** #### `_default_params(self) -> dict` - Provides the default parameters for calling the Anthropic API.



```
```python
Import necessary modules and classes
from swarm_models import Anthropic
Initialize an instance of the Anthropic class
model = Anthropic(anthropic_api_key="")
Using the run method
completion_1 = model.run("What is the capital of France?")
print(completion_1)
Using the __call__ method
completion_2 = model("How far is the moon from the earth?", stop=["miles", "km"])
print(completion_2)
Mathematical Formula
The underlying operations of the `Anthropic` class involve probabilistic sampling based on token
logits from the Anthropic model. Mathematically, the process of generating a token \(t \) from the
given logits \(I \) can be described by the softmax function:
\Gamma(t) = \frac{e^{I_t}}{\sum_{i=1}^{t}} e^{I_i} \
```

Where:

