Top 3 States with the Highest Number of COVID Deaths per Month

I have started the code by installing the **slack_sdk** package, which is necessary for sending messages to Slack. It then imports the required libraries and modules, including the time module for time-related operations and the **WebClient** class from the slack_sdk package.

The Slack API token is set using the **slack_token** variable. This token is generated from the Slack API and allows the code to access your Slack workspace. The **channel_id** variable is set to specify the channel or user ID where the messages will be sent.

An instance of the Slack **WebClient** is created using the provided API token, which will be used for communication with the Slack API. The send_slack_message function is defined to facilitate sending messages to Slack using the WebClient.

Next, the code reads the dataset from the **"covid-19-state-level-data (1).xlsx"** file using the read_excel function from the pandas library. The 'date' column in the dataset is converted to datetime format using the to_datetime function.

The code then extracts the month from the 'date' column and adds a new 'Month' column to the dataset using the dt.month_name() function.

The data is grouped by month and state, and the total deaths for each state in each month are calculated. This is achieved by grouping the data based on the 'Month' and 'state' columns and summing up the 'deaths' column using the groupby and sum functions from pandas.

The grouped data is sorted in descending order based on the month and deaths using the sort_values function. This sorted data will be used to identify the top 3 states with the highest number of deaths for each month.

Using the sorted data, the code creates a new DataFrame, top_states_per_month, by selecting the top 3 rows for each month using the groupby and head functions.

Unique months are extracted from the top_states_per_month DataFrame using the index.get_level_values function.

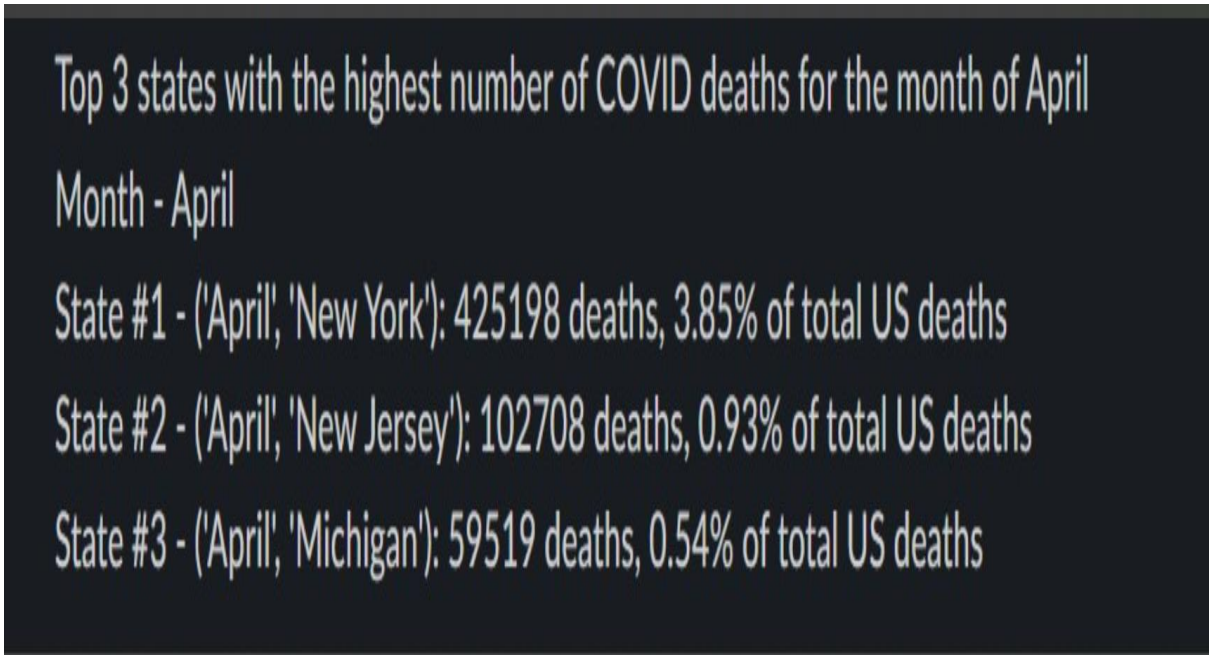
The code then enters a loop to iterate over the months. For each month, it retrieves the data from the top_states_per_month DataFrame for the current month iteration.

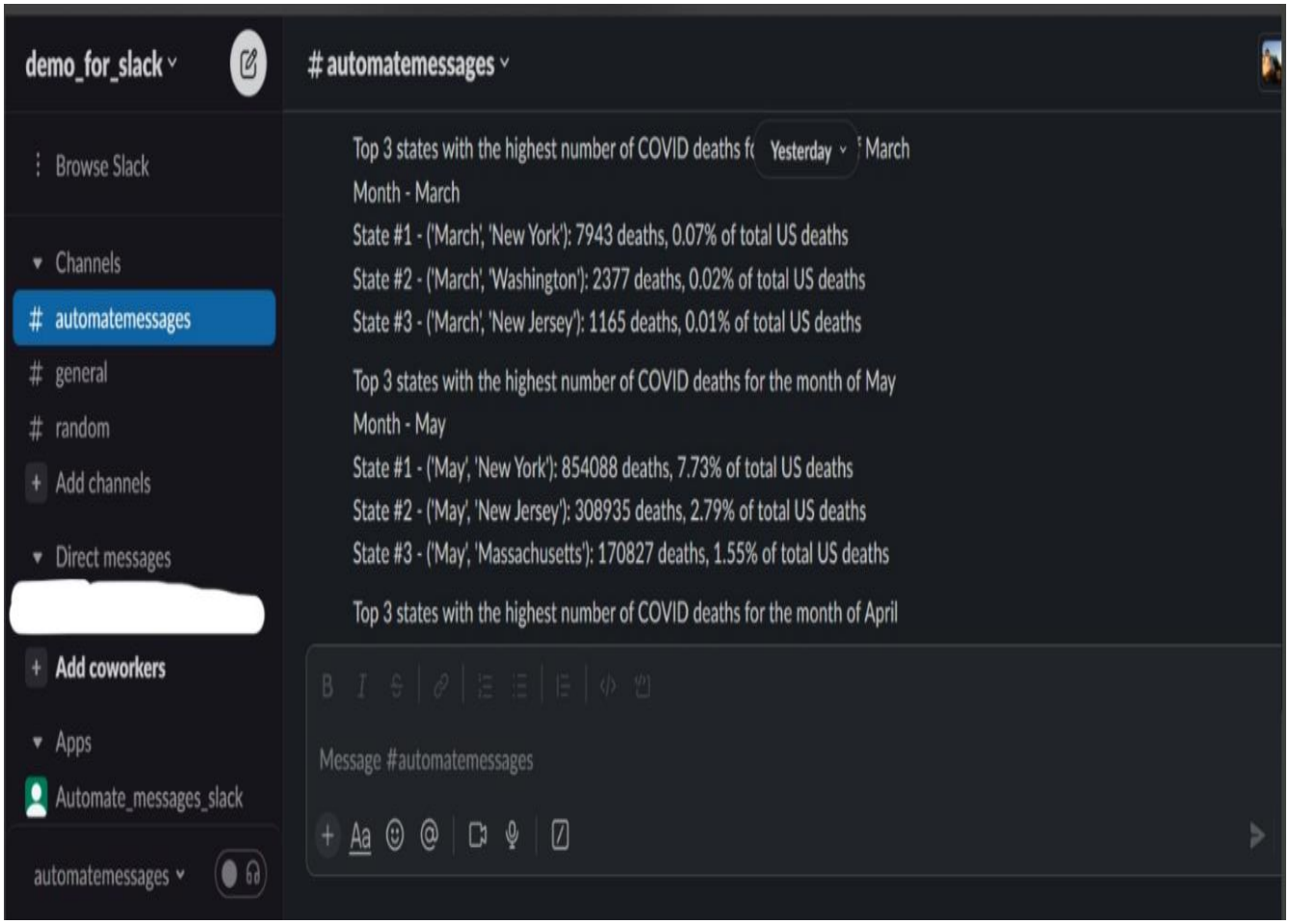
The message content is constructed by appending the necessary information, such as the top 3 states with the highest number of COVID deaths for the month, to the message variable.

The constructed message is sent to the specified Slack channel or user ID using the send_slack_message function.

Finally, the code calculates the time to wait until the first day of the next month and uses the time.sleep function to pause the execution until then. This ensures that the messages are sent at the specified interval, which is 30 days (1 month) in this code.

The process repeats for each subsequent month, sending the updated top 3 states with the highest number of deaths for each month to the Slack channel or user ID.




demo_for_slack
automatemessages
Browse Slack
Channels
automatemessages
general
random
Add channels
Direct messages
Add coworkers
Apps
Automate_messages_slack
automatemessages
Top 3 states with the highest number of COVID deaths f(Yesterday March
Month - March
State #1 - ('March', 'New York'): 7943 deaths, 0.07% of total US deaths
State #2 - ('March', 'Washington'): 2377 deaths, 0.02% of total US deaths
State #3 - ('March', 'New Jersey'): 1165 deaths, 0.01% of total US deaths
Top 3 states with the highest number of COVID deaths for the month of May
Month - May
State #1 - ('May', 'New York'): 854088 deaths, 7.73% of total US deaths
State #2 - ('May', 'New Jersey'): 308935 deaths, 2.79% of total US deaths
State #3 - ('May', 'Massachusetts'): 170827 deaths, 1.55% of total US deaths
Top 3 states with the highest number of COVID deaths for the month of April
Message #automatemessages
Aa