**Bluticks.com**

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**DOCUMENTATION**

**Automate WhatsApp Script Documentation**

**1. Overview**

This script automates the process of sending messages via WhatsApp Web. It reads customer data from an Excel file and sends a customized message to each contact using Selenium WebDriver to control a Chrome browser. The script also generates a report of unsent messages in another Excel file.

**2. Project Details**

* **Project Mentor**: Mansi Mehta Ma'am
* **Team members**: Niket Thakkar, Parshva Patel, Karan Brahmbhatt, Samip Shah

**3. Dependencies**

The script requires the following libraries:

* **openpyxl**: For reading and writing data in Excel files.
* **translate**: For translating text (from the translate module).
* **selenium**: For automating web browser interaction.
* **webdriver-manager**: To automatically manage and install the appropriate WebDriver for the browser.

**4. Files and Variables**

**Files**

* **USER\_EXCEL\_FILE**: Path to the Excel file containing customer data.
* **REPORT\_EXCEL\_FILE**: Path to the Excel file for storing unsent message data.
* **ENGLISH\_MESSAGE\_FILE**: Path to the text file containing the English message template.

**Global Variables**

* **CURRENT\_DATE**: Stores the current date and time.
* **DAY, MONTH, YEAR**: Extracts the day, month, and year from CURRENT\_DATE.
* **DAY\_NAME, MONTH\_NAME**: Stores the day and month names as strings.
* **CUSTOMER\_DATA**: Dictionary to store customer data extracted from the Excel file.
* **REPORT**: List to store details of messages that couldn't be sent.
* **ENGLISH\_MESSAGE**: String to store the English message template.

**5. Functions**

**translate(text, source\_language, target\_language)**

* **Purpose**: Translates a given text from the source language to the target language.
* **Parameters**:
  + text (str): The text to be translated.
  + source\_language (str): The source language code (e.g., 'en' for English).
  + target\_language (str): The target language code (e.g., 'hi' for Hindi).
* **Returns**: The translated text.

**excel\_sheet\_formatting()**

* **Purpose**: Reads and extracts customer data from the specified Excel file.
* **Process**:
  + Loads the workbook and selects the active sheet.
  + Identifies the columns for names, numbers, policy numbers, and premium amounts based on predefined headers.
  + Extracts data from the identified columns and stores it in the CUSTOMER\_DATA dictionary.
* **Parameters**: None.
* **Returns**: None.

**read\_message()**

* **Purpose**: Reads the message template from the specified text file and stores it in the ENGLISH\_MESSAGE variable.
* **Process**:
  + Opens and reads the text file.
  + Removes unnecessary spaces around curly braces in the message template.
* **Parameters**: None.
* **Returns**: None.

**chat\_bot(sender\_number)**

* **Purpose**: Automates the process of sending a message to each contact in the CUSTOMER\_DATA dictionary.
* **Parameters**:
  + sender\_number (str): The sender's WhatsApp number.
* **Process**:
  + Opens a new Chrome browser instance and navigates to WhatsApp Web.
  + Waits for the user to scan the QR code to log in.
  + Searches for each receiver's number, formats the message using the template, and sends it.
  + Handles errors if a message cannot be sent.
* **Returns**: None.

**loading\_unsend\_data()**

* **Purpose**: Loads data of unsent messages into the REPORT\_EXCEL\_FILE.
* **Process**:
  + Clears any existing data in the report file.
  + Writes the headers "Name" and "Phone No.".
  + Writes the data of unsent messages from the REPORT list.
* **Parameters**: None.
* **Returns**: None.

**main()**

* **Purpose**: Main function to run the script.
* **Process**:
  + Calls excel\_sheet\_formatting() to extract customer data.
  + Calls read\_message() to read the message template.
  + Calls chat\_bot() to send messages to each contact.
  + Calls loading\_unsend\_data() to save the data of unsent messages.
* **Parameters**: None.
* **Returns**: None.

**6. Workflow**

1. **Initialization**: The script sets up global variables and file paths.
2. **Reading Data**: It reads customer data from the Excel file using the excel\_sheet\_formatting() function.
3. **Reading Message**: It reads the message template from the text file using the read\_message() function.
4. **Sending Messages**: It sends messages to each contact using the chat\_bot() function.
5. **Error Handling**: If a message cannot be sent, the contact's information is stored in the REPORT list.
6. **Saving Report**: It saves the data of unsent messages to the report Excel file using the loading\_unsend\_data() function.
7. **Termination**: The script completes its execution and prints the report.

**7. Limitations and Considerations**

* **Manual QR Code Scanning**: The script requires manual QR code scanning to authenticate the WhatsApp Web session.
* **Delays**: The script includes several delays to ensure the browser has enough time to load elements **Web Browser**: The script is designed to work with the Chrome browser.
* **Time** and prevent errors.
* **Selenium WebDriver**: Keep the Chrome WebDriver updated to avoid compatibility issues.
* **Translation Accuracy**: The translation accuracy depends on the translate library used.

**8. Enhancements and Future Improvements**

* **Custom Messages**: Modify the script to send personalized messages based on the contact's information from the Excel sheet.
* **Error Logging**: Implement detailed logging to capture errors and exceptions for future troubleshooting.
* **GUI Interface**: Consider adding a graphical user interface (GUI) for easier use and configuration of the script.
* **Multi-language Support**: Enhance the script to support multiple languages for the message template.