

Bulk SMS Project

Project Overview

The Bulk SMS Project is an SMS messaging service designed to enable agents to send bulk SMS messages based on selected templates to the users. This system efficiently processes and sends messages without downtime, ensuring instant delivery while providing real-time updates on delivery status and response details.

Technologies Used

- **Backend:** C# (Worker Service)
- **SMS Gateway:** Sinch
- **Database:** Microsoft SQL Server (MSSQL)
- **Frontend:** C# and JavaScript
- **File Handling:** Excel for user data upload
- **Logs:** Serilog

Role and Responsibilities

- Designing and implementing the worker service to handle SMS processing.
- Integrating the Sinch SMS API for sending SMS messages.
- Developing the user interface to allow agents to upload user data.
- Ensuring seamless storage of uploaded data into the MSSQL database.
- Implementing functionality to trigger the worker service upon data arrival in the database.
- Logged all the exceptions and success calls & messages using Serilog for effective monitoring.

Key Features

- **Template Selection:** Users can choose from predefined SMS templates for sending messages.
- **Bulk SMS Sending:** Ability to send SMS messages to multiple recipients simultaneously without downtime.
- **Real-time Updates:** The system updates delivery times, responses, and other important details for each message sent.
- **Excel Upload:** Agents can easily upload an Excel file containing phone numbers, template IDs, and user names for bulk processing.
- **Database Integration:** Smooth integration with MSSQL for data storage and retrieval.

Challenges and Solutions

- **Challenge:** Managing high volumes of SMS messages to ensure timely delivery.
 - **Solution:** Implemented a robust worker service that efficiently processes incoming data and manages SMS dispatching in bulk.
- **Challenge:** Ensuring real-time updates on message delivery statuses.
 - **Solution:** Leveraged Sinch's capabilities to provide instant delivery reports and updates back to the system.

Project Outcomes and Impact

- Successfully processed and sent **1000s** of SMS messages within minutes.
- Enhanced user experience for agents by simplifying the process of bulk SMS sending through the intuitive UI.
- Reduced delivery time for SMS notifications, significantly improving operational efficiency.