Project Report: Automated Blood Donor Mobilization System

1. The Problem We Solved

Before this system, finding a life-saving blood donor was a manual, slow, and stressful process.

- **Manual Searching:** Looking through hundreds of names in a spreadsheet took too much time.
- **Outdated Data:** Contacting people who recently donated was a waste of effort.
- **Slow Communication:** Sending individual WhatsApp messages manually delayed urgent help.

2. How the Solution Works (The Workflow)

We built a "Digital Assistant" that works 24/7. When a blood request is made via your website:

- **Instant Search:** The system instantly scans your entire Google Sheet database.
- **Smart Filtering:** It automatically ignores anyone who has donated in the last **5 months**, ensuring only "eligible" donors are contacted.
- **Automated Outreach:** It sends a personalized WhatsApp message to every matching donor in seconds.
- **History Tracking:** It records every person contacted back into your sheet for future reference.

3. Key Benefits for You

- **Speed:** Go from "Request" to "Messages Sent" in under 5 seconds.
- **Efficiency:** Your team no longer needs to filter lists manually.
- **Higher Success Rate:** By targeting the right blood group and eligible donors, you get faster positive responses.

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4. Required Credentials (Security)

To keep this running, the system safely uses the following "keys":

- **Meta (WhatsApp) Permanent Token:** Allows the system to send messages legally.
- **Google Account Access:** Allows the system to read and update your donor spreadsheet.
- **n8n Hosting:** The "brain" that connects everything together.

5. Running Costs (Monthly)

This system is highly cost-effective because it uses modern "Pay-as-you-go" tools:

- **n8n Cloud:** Approx. **$20/month** (to host the automation "brain").
- **WhatsApp API:** Meta provides the first **1,000 service conversations** per month for **FREE**. Most small to medium organizations run this at $0 extra cost.

- **Google Sheets: Free**.

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6. Conclusion

This project transforms a manual spreadsheet into a high-speed emergency response tool. It ensures that when a life is on the line, technology does the heavy lifting so you can focus on saving lives.