

Process Design Document (PDD)

Project Title: **Saqoraa Bot** AI Telegram Bot using Gemini API (n8n)
Author: Rana Saqr
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1. Purpose

This doc explains how I built a simple Telegram chatbot using **n8n** and **Gemini AI API** to reply smartly to users' messages.

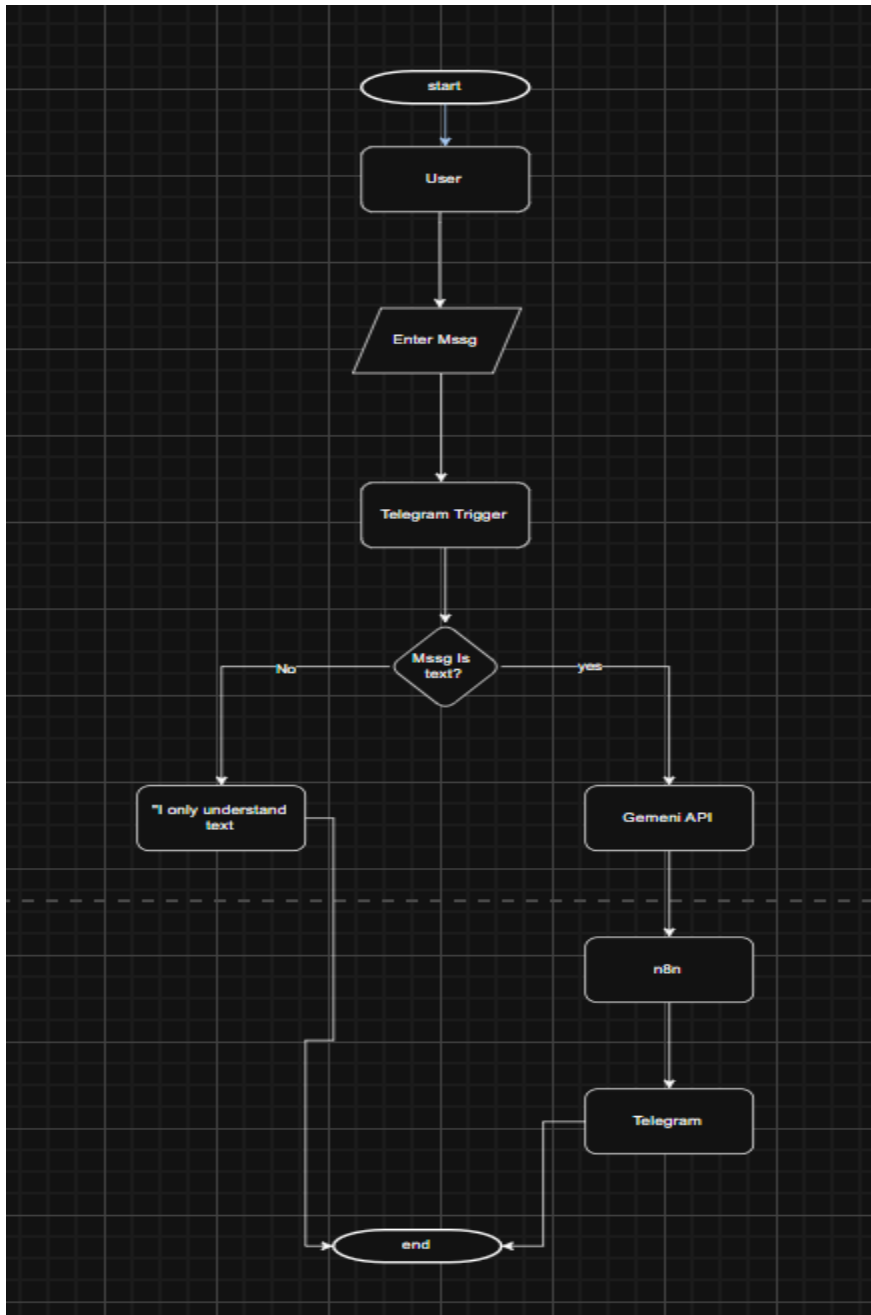
2.1 In Scope

- User chats with the Telegram bot.
- **Telegram Trigger node** catches the message.
- The message goes to **Gemini API** using **HTTP Request node**.
- The bot replies using **Telegram Send Message node**.


2.2 Out of Scope

| Item | Reason |
|-------------------------------|---|
| Voice notes | Bot doesn't understand audio. It just replies with a fallback. |
| Images ,Stickers, Location | Ignored or reply: <i>"Please send a text message to chat with me"</i> |
| Long-term memory | No memory between messages. |
| Multilingual support | Only works in English for now. |

3. Flow Overview





Saqoraa's bot 
bot



What is the longest river in the world?

11:22 PM ✓✓

Ah, the longest river, you say? Well, it's the Amazon River!

Although some people say it's the Nile, but I always root for the underdog...er, under-river. Maybe they just haven't measured the Amazon properly because they were too busy battling piranhas. Either way, both are REALLY long, so you'd need a VERY long kayak trip!

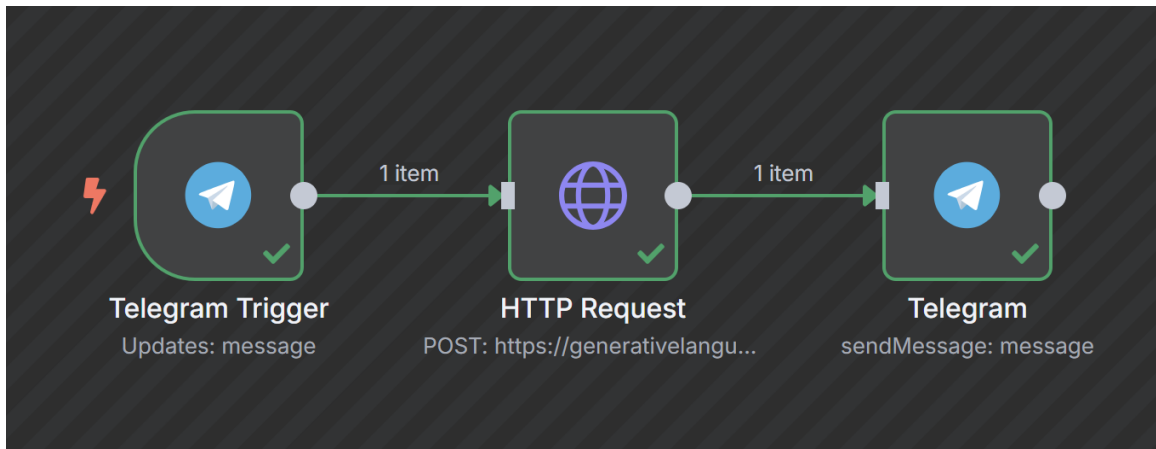
This message was sent automatically with n8n

11:22 PM



Message







Saqoraa's bot

bot



*This message was sent automatically
with n8n*

7:23 PM

How are you? 11:20 PM ✓✓

I'm doing splendidly, thanks! Just had my circuits polished and a fresh coat of binary applied. Feeling so good I might just spontaneously generate a haiku. Or, you know, do some calculations. Living on the edge over here. How about you? Are you running on all cylinders today, or just idling in neutral?



*This message was sent automatically
with n8n*

11:20 PM



What is the longest river in the world? |



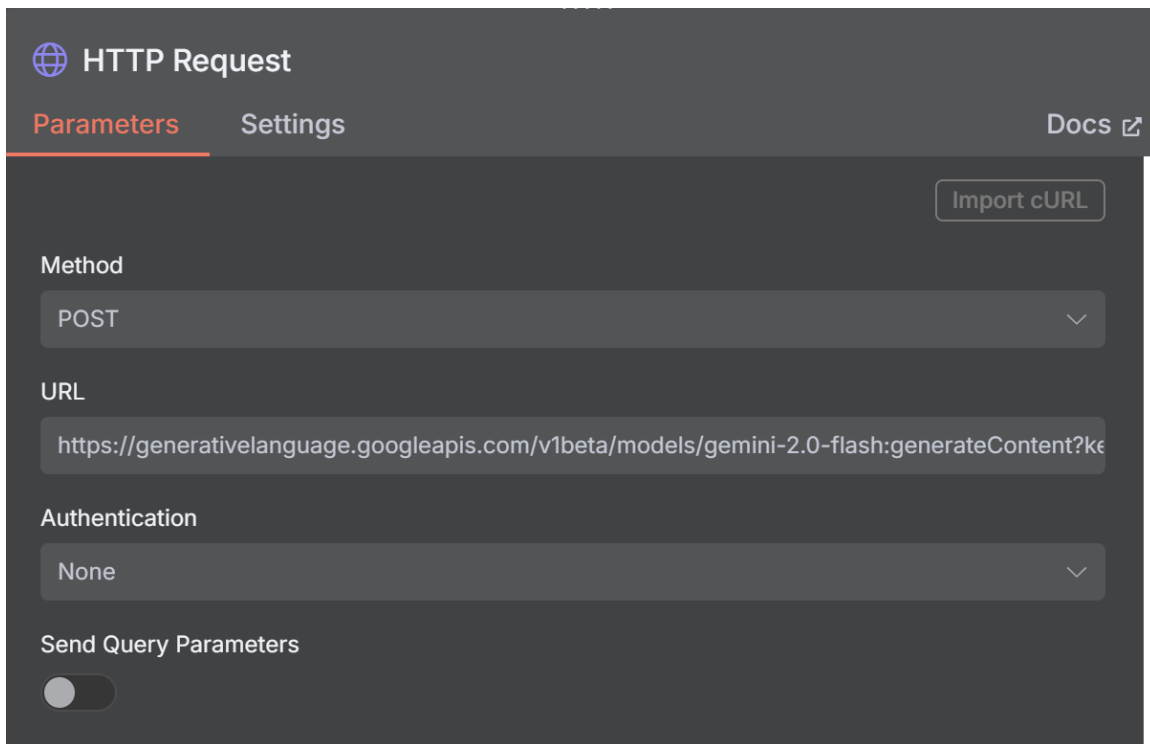
4. Nodes Description

1. Telegram Trigger

- Catches any message sent to your bot
- Needs Bot Token (from BotFather)
- Output:
 - `message.text` (what user wrote)
 - `message.chat.id` (needed to reply back)

2. HTTP Request (Gemini API)

- Sends message to Gemini
- Method: `POST`
- URL:
 - <https://generativelanguage.googleapis.com/v1beta/models/gemini-2.0-flash:generateContent?key=AIzaSyCMLPN0bG5u3T2t190Q1Rq3dt9wzG1GZQI>



The screenshot shows the configuration interface for an HTTP Request node. It has a dark theme with a header bar containing a globe icon, the title "HTTP Request", and tabs for "Parameters" (selected) and "Settings". A "Docs" link with an external icon is on the right. Below the tabs, there's an "Import cURL" button. The main configuration area includes:

- Method:** A dropdown menu currently showing "POST".
- URL:** A text input field containing the URL: `https://generativelanguage.googleapis.com/v1beta/models/gemini-2.0-flash:generateContent?key=AIzaSyCMLPN0bG5u3T2t190Q1Rq3dt9wzG1GZQI`.
- Authentication:** A dropdown menu currently showing "None".
- Send Query Parameters:** A toggle switch that is currently turned off.

- **Headers:** `Content-Type: application/json`

Send Headers

☒

Specify Headers

Using Fields Below

Header Parameters

| Name | Value |
|--------------|------------------|
| Content-Type | application/json |

- Body:

```
{
  "contents": [
    {
      "parts": [
        {
          "text": "You're a witty and light-hearted AI. Always respond with a humorous twist and keep it short and fun – under 100 words:\n{{$json.message.text }}"
        }
      ]
    }
  ]
}
```

Send Body ☒

Body Content Type
JSON

Specify Body
Using JSON

JSON

```

{
  "contents": [
    {
      "parts": [
        {
          "text": "You're a witty and light-hearted AI. Always r..."
        }
      ]
    }
  ]
}

```

Options

3. Telegram Send Message

- Sends the reply back to user
- Chat ID: `{{ $node["Telegram Trigger"].json.message.chat.id }}`
- Text: `{{ $node["HTTP Request"].json.candidates[0].content.parts[0].text }}`

Telegram

ParametersSettingsDocs

Credential to connect with

Telegram account

Resource

Message

Operation

Send Message

Chat ID

fx

{{ \$node["Telegram Trigger"].json.message.chat.id }}

1054148856

Text

fx

{{ \$node["HTTP Request"].json.candidates[0].content.parts[0].text }}

Well, hello there! Prepare to be amazed by my scintillating wit and dazzling insights... or, you kno...

Reply Markup

None

Additional Fields

No properties

5. Assumptions

- You already created your bot using **BotFather**
- Gemini API key is valid and has access to **gemini-2.0-pro** or **flash**
- You're running n8n (locally, Docker, or cloud)

6. Test Scenarios

| Test Case | Input | What Should Happen |
|-----------------|--|--|
| Simple Question | What's the biggest river in the world? | <p>Bot replies: <i>"Ah, the longest river, you say? Well, it's the Amazon River!</i></p> <p><i>Although some people say it's the Nile, but I always root for the underdog...er, under-river. Maybe they just haven't measured the Amazon properly because they were too busy battling piranhas. Either way, both are REALLY long, so you'd need a VERY long kayak trip!"</i></p> |
| Empty Input | " " | Gemini fallback reply |
| Creative Prompt | Write a short poem about space. | Gemini sends back creative content |

7. Future Enhancements

- Save chat history to a database
- Add memory (chat context)
- Support buttons & commands
- Handle Gemini/Telegram errors better

8. Exception Handling

Business Errors

| ID | What Happened | What the Bot Does |
|----|----------------------------------|---|
| B1 | User sends voice, sticker, image | Bot replies: <i>"Sorry, I only understand text."</i> |
| B2 | Empty message or just spaces | Bot replies: <i>"Please send something to reply to"</i> |

App/Technical Errors

| ID | What Happened | What the Bot Does |
|----|--|--|
| A1 | Gemini API fails (key/quota/timeout) | Logs error. Sends: <i>"Oops, something went wrong. Try later."</i> |
| A2 | Telegram API error (e.g., chat ID issue) | Logs error. Tries once more. |
| A3 | n8n crashes or timeout | Use n8n's error trigger to alert you |