

# Structured Conversation Flow

## Project Overview:

This project is an AI-powered, NLP-integrated web-based chatbot built using HTML, CSS, and JavaScript, designed to assist prospective students with nursing college admissions. It simulates a real-time human-like conversation using lightweight Natural Language Processing (NLP) techniques to understand user intent in both English and Hindi.

The chatbot intelligently handles:

- Eligibility queries
- Program details
- Fee structure
- Hostel & training facilities
- College location & recognition
- Clinical training centers
- Scholarships
- Admission guidance

NLP functionality is implemented via rule-based keyword recognition, enabling the chatbot to understand user responses such as "yes", "haan", "nahi", "biology", "fee", etc., and respond accordingly. It also gracefully handles unknown or unclear input by prompting the user to rephrase, making the interaction more natural

"To make the conversation more natural, I added a typing delay feature using `setTimeout`. When the bot is about to respond, it first displays a temporary 'Typing...' message, then replaces it with the actual reply. This makes the interaction more human-like and improves the user experience."

## Lightweight NLP Implementation:

- Rule-based NLP using:
  - `toLowerCase()` and `.includes()` for intent recognition
  - Keyword matching: ["yes", "haan", "biology", "fee", "hostel", "no", "nahi", ...]
- Intent Detection:
  - Positive: yes, haan, tell, ok, fee      Negative: no, nahi, exit, stop
  - Domain-specific: biology, hostel, scholarship, apply
- Handles unknown input:
  - If input is unclear (random letters or unknown phrases), bot replies: "I'm not clear on what you're saying. Could you please rephrase?"

## Step 1: Initial Greeting

**Bot:**

*Welcome to LiaPlus Nursing College! Are you interested in admission?*

**User Response:**

- *Yes / Haan / Batao / Kya hai* → Proceed to Step 2
- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care! →*

**Conversation Ends**

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**Step 2: Eligibility Check – Subject Studied**

**Bot:**

*Great! Did you study Biology in your 12th grade? (Type 'biology' or mention your subject)* **User**

**Response:**

- *Biology* → Proceed to Step 3
- *Any other subject* →

**Bot:** *B.Sc Nursing mein admission ke liye Biology avashyak hai.*

**→ Conversation Ends**

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**Step 3: Program Details**

**Bot:**

*You're eligible! B.Sc Nursing is a 4-year full-time program. Would you like more details about the program?*

**User Response:**

- *Yes / Haan / Kya hai / Batao* → Proceed to Step 4
- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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**Step 4: Fee Structure**

**Bot:**

*The program includes theory classes and hospital training with real patients. Would you like to know about the fee structure?*

**User Response:**

- *Yes / Haan / Kya hai / Batao* → **Bot:**

*Fee Details:*

○ Tuition Fee: ₹60,000 ○

Bus Fee: ₹10,000

**Total:** ₹70,000

*Installments:*

₹30,000 (at admission)

₹20,000 (after 1st semester)

₹20,000 (after 2nd semester)

*Shall I tell you about hostel and training facilities?*

→ Proceed to Step 5

- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### **Step 5: Hostel & Training Facilities User**

**Response:**

- *Yes / Haan / Kya hai / Batao* → **Bot:**

*Hostel Facilities:* ○ 24x7 water

& electricity ○ CCTV

security

On-site warden

*Training included: Students work with real patients.*

*Would you like to know the college location?*

→ Proceed to Step 6

- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### **Step 6: College Location User**

**Response:**

- *Yes / Haan / Kya hai / Batao* → **Bot:** *The college is located in Delhi.*

*Do you want more information about the area?*

→ Proceed to Step 7

- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### Step 7: Area Info User

#### Response:

- *Yes / Haan / Kya hai / Batao* → **Bot:**

*The area is well connected and safe with public transport available.*

*Shall I tell you about recognition and approvals?*

→ Proceed to Step 8

- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### Step 8: Accreditation User

#### Response:

- *Yes / Haan / Kya hai / Batao* → **Bot:**

*Our college is recognized by the Indian Nursing Council (INC), New Delhi.*

*Would you like to know the clinical training locations?*

→ Proceed to Step 9

- *No / Nahi* →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### Step 9: Clinical Training Locations User

#### Response:

- *Yes / Haan / Kya hai / Batao* → **Bot:** *Clinical Training Locations:*

District Hospital (Backundpur)

Community Health Centers

Regional Hospital (Chartha)

Ranchi Neurosurgery Hospital (Jharkhand)

*Do you want to know about scholarship options?*

→ Proceed to Step 10

- *No / Nahi →*

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### Step 10: Scholarships User

#### Response:

- *Yes / Haan / Kya hai / Batao → Bot:* *Scholarships Available:*

- Govt Post-Matric: ₹18k–₹23k
- Labour Ministry: ₹40k–₹48k (requires Labour Registration)  
*There are 60 total seats. Want to know the eligibility criteria again? →*  
Proceed to Step 11

- *No / Nahi →*

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### Step 11: Admission Eligibility User

#### Response:

- *Yes / Haan / Kya hai / Batao → Bot:*

*Eligibility Criteria:*

✓ Biology in 12th grade

✓ Passed PNT Exam

✓ Age between 17 and 35 years *Would you like help applying?*

→ Proceed to Step 12

- *No / Nahi →*

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

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### Step 12: Application Help User

#### Response:

- *Yes / Haan / Kya hai / Batao → Bot:*

*You can apply online or contact our admissions team directly.*

*Thanks for chatting with us. All the best!*

→ End of Conversation

- No / Nahi →

**Bot:** *Alright, no worries. Feel free to ask again anytime. Take care!*

*SCROLL DOWN*

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graph TD
    Start([Start]) --> Q1[Bot: Welcome to Liaplus Nursing College. Are you interested in admission?]
    Q1 -- Yes --> Q2[Great! Did you study Biology in your 12th grade?]
    Q1 -- No --> A1[Alright, no worries. Feel free to ask again anytime. Take Care!]
    Q2 -- Biology --> Q3[You're eligible! B.Sc Nursing is a 4-year full-time program. Would you like more details about the program?]
    Q2 -- Any other subject --> A2[B.Sc Nursing mein admission ke liye Biology mandatory hai.]
    Q3 -- Yes/Haan/kyahai/Batao --> End([End])
    Q3 -- No/Nahi --> End
  
```











