

# Technical Assignment (With Plivo API)

## Position Overview

We are seeking a Forward Deployed Engineer (FDE) to join our team to build communication-forward applications using APIs like Plivo. This assignment evaluates your ability to integrate APIs, handle call logic, and design a multi-level IVR.

## Technical Assignment

### Scenario

InspireWorks wants a demo IVR system that demonstrates Plivo's voice API capabilities. The system should:

1. Make an outbound call to a given phone number.
2. Upon answer, present a multi-level IVR menu:
  - a. Level 1: Language selection
    - i. Press 1 for English
    - ii. Press 2 for Spanish
  - b. Level 2 (after language selection):
    - i. Press 1 to play a short audio message
    - ii. Press 2 to connect to a live associate (use a placeholder number)

The goal is to demonstrate basic voice interaction, branching logic, and Plivo API integration.

## Implementation Requirements

1. **Outbound Call**
  - o Build an endpoint or script to initiate an outbound call using Plivo's API.
  - o Target phone number can be provided via a simple UI or configuration variable.
2. **IVR Menu**
  - o Level 1: Prompt caller to select a language (English / Spanish).
  - o Level 2: Depending on language choice:
    - Press 1 → Play an audio file (e.g., MP3 hosted publicly).
    - Press 2 → Forward call to an associate (can be a placeholder number).

- Use Plivo XML (or equivalent JSON API) for call flow.

### 3. Multi-level Flow Handling

- Correctly handle DTMF input for multiple levels.
- Implement branching logic based on user input.
- Handle invalid inputs gracefully (e.g., repeat the menu).

### 4. Optional Frontend

- Simple web page or CLI to trigger the outbound call.
- Not required, but helpful for demonstration.

## Deliverables

### 1. Working Application

- Script / web app that triggers outbound calls and supports IVR.
- Demonstrate Level 1 and Level 2 interactions.

### 2. Code Repository

- GitHub or zip file with source code.
- Include README with:
  - Setup instructions
  - Required Plivo credentials (Auth ID / Auth Token)
  - Steps to run and test

### 3. Short Demo Video (3-5 min)

- Show a call being made
- Navigate Level 1 → Level 2 menus
- Demonstrate audio playback and call forwarding

## Evaluation Criteria

## Notes / Tips

- For audio playback, use a publicly accessible MP3 file or Plivo's default audio.
- The live associate number can be a placeholder or your own test number.