

## **Chatbot using IBM Watson Assistant:**

Building a medical chatbot using IBM Watson Assistant to help users find information about common medical symptoms:

### **Step 1: Defining the Chatbot's Persona**

- Chatbot Name: MediBot
- Persona: Informative, empathetic, and professional.

### **Step 2: Designing the Conversation Flow**

- Chatbot asks the user to describe about the symptoms their feeling
- User starts the conversation and asks about a specific medical symptom.
- Chatbot provides general information about the symptom.
- Chatbot asks the user if they would like to know more about causes, treatments, or when to see a doctor.
- User selects a specific topic (causes, treatments, or when to see a doctor).
- Chatbot provides detailed information based on the user's choice.
- If it's a superficial minor symptoms, then the chatbot recommends home remedy else it advises to prescribe doctor's consult

### **Step 3: Setting Up an IBM Cloud Account**

- Sign up for an IBM Cloud account and create a Watson Assistant service.

### **Step 4: Creating a Watson Assistant Service**

- Create a Watson Assistant service in IBM Cloud. Get the API keys and service credentials.

### **Step 5: Configure Intents and Entities**

- Create Intents:
  - InquireSymptom: To recognize when a user asks about a medical symptom.
  - Greeting: To recognize when a user greets the chatbot.
- Create Entities:
  - Medical-symptom: A custom entity to recognize medical symptoms, like "headache," "fever," or "cough."
- Configure training data for these intents and entities.

### **Step 6: Create Dialog Nodes**

- Creating dialog nodes to define the conversation flow:
  - "Greeting" Node: Responds to user greetings.
  - "InquireSymptom" Node: Provides information about the specified symptom.
  - "SpecifyTopic" Node: Asks the user to choose a topic (causes, treatments, or when to see a doctor).
  - "ProvideInfo" Node: Offers detailed information based on the user's choice.

### **Step 7: Train the Chatbot**

- Train the chatbot by adding examples of user inputs for the "InquireSymptom" intent, such as "What are the symptoms of a fever?" and "Tell me about coughing."

### **Step 8: Test the Chatbot**

- Test the chatbot within the Watson Assistant interface. Ensure it understands user inputs and provides accurate responses. For instance, test with a question like, "What are the causes of a headache?"

### **Step 9: Integration**

- Integrate your MediBot with a medical website or healthcare app where users can access information about common symptoms.

### **Step 10: Monitor and Improve**

- After deployment, monitor user interactions and gather feedback. Continuously improve your chatbot by adding more intents, entities, and expanding the medical knowledge base to handle various medical queries.