Chatbot Deployment with IBM Cloud Watson Assistant

Project: Educational Chatbot

Phase 3: Development Part - I

Educational Chatbot:

Educational chatbot provides the students with the notes for their enhanced learning. This chatbot is designed to assist the students with educational notes should be a valuable tool that supports their learning journey, fosters engagement, and ensures they have access to high-quality and relevant educational materials.

In this phase we are going to start the development of the chatbot using IBM Cloud Watson Assistant.

In IBM Watson Assistant, which is a cloud-based conversational AI platform, entities, intents, and dialogs are key components used to build and train chatbots or virtual assistants. Here's a brief explanation of each:

In IBM Watson Assistant, these terms have specific meanings related to building and configuring conversational applications:

- **Entity:**

  An entity represents a specific piece of information that the chatbot should recognize and extract from user input. For example, if you're building a chatbot for a pizza delivery service, you might define entities like "pizza size," "topping," and "delivery address." Entities help the chatbot understand and process user requests by identifying key information.

- **Intents:**

  Intents are used to classify the overall purpose or goal of a user's input. They help the chatbot determine what the user is trying to achieve. In the pizza delivery chatbot, you could define intents like "order pizza," "check delivery status," and "cancel order." Intents guide the chatbot in choosing the appropriate responses.

❖ **Dialogs:**

Dialogs in IBM Watson Assistant refer to the conversational flow and logic of your chatbot. You create and configure dialogs to define how the chatbot responds to user inputs based on intents and entities. Dialogs can include nodes that represent specific actions or responses, and you can use conditions and context variables to control the conversation's flow.

By using entities, intents, and dialogs, you can design a chatbot that understands user requests, determines their intent, extracts relevant information (entities), and engages in a dynamic conversation (dialogs) to provide appropriate responses or take actions. These components are essential for building effective conversational applications using IBM Watson Assistant.

The typical workflow in Watson Assistant involves defining entities and intents, building dialog nodes to handle different conversation paths, and training the assistant using historical data or sample conversations. This training helps the assistant understand user input better, recognize intents and entities accurately, and respond appropriately.

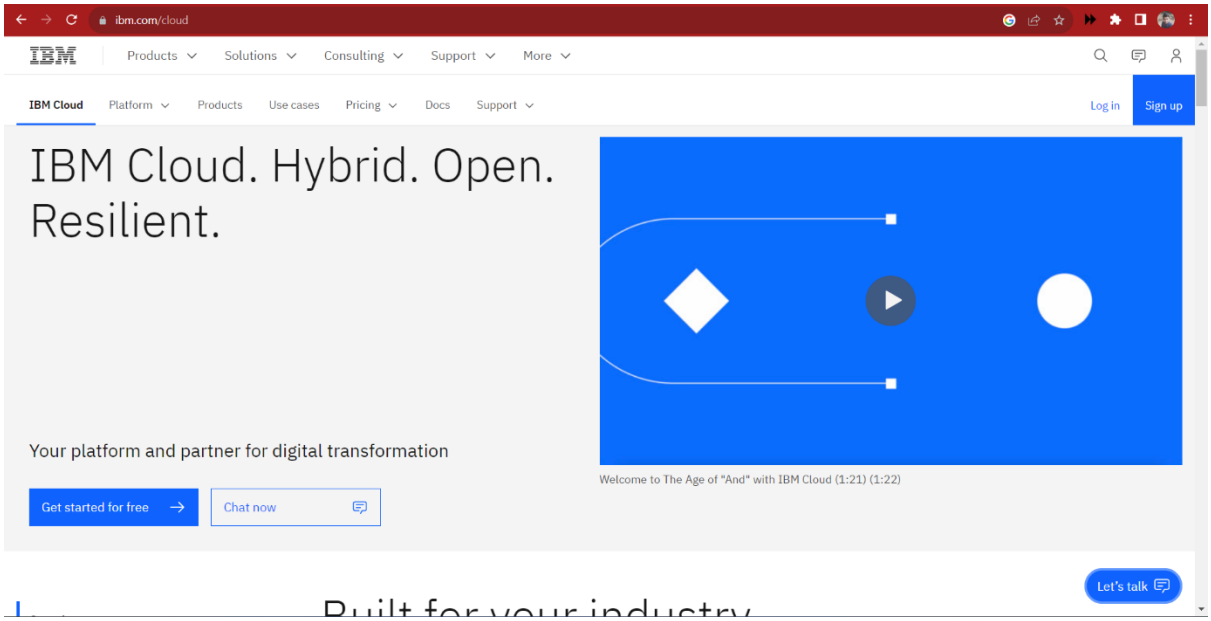
Entities, intents, and dialogs work together to enable natural and context-aware conversations between users and your chatbot or virtual assistant built with IBM Watson Assistant. By correctly defining and configuring these components, you can create effective and intelligent conversational interfaces.

Now we are going to create the chatbot for that we will do the primary steps now.

To access IBM Cloud Watson Assistant, we have to **create an IBM Cloud account**. To create it follow the below steps.

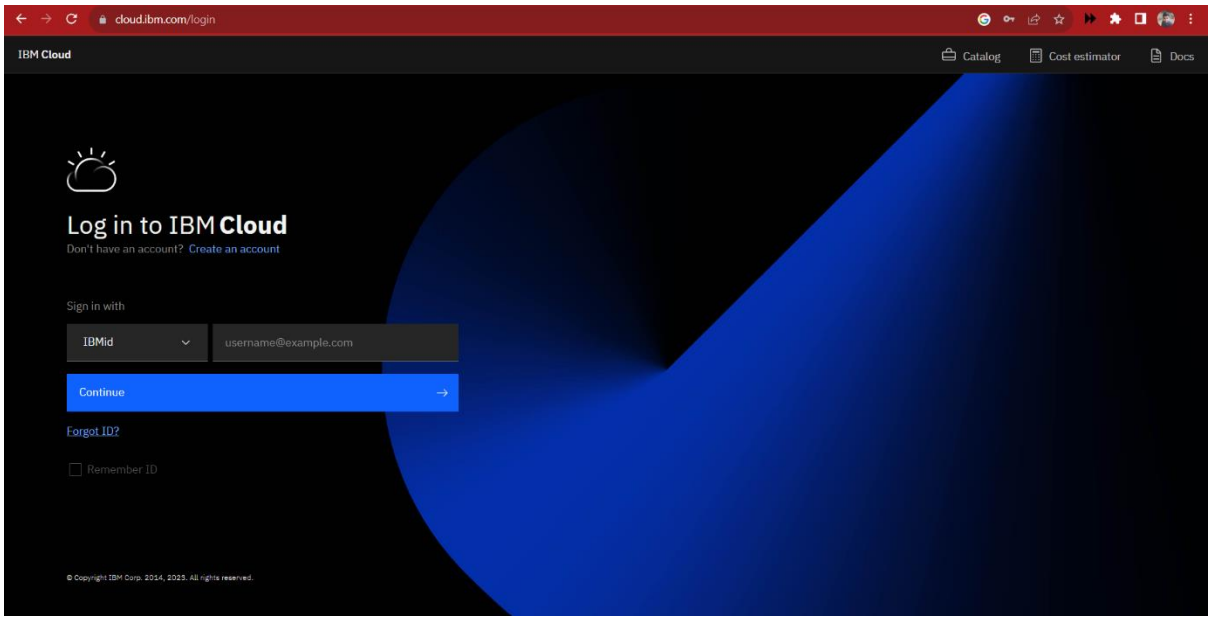
1. **Go to the IBM Cloud website:**

   Visit the IBM Cloud website at https://cloud.ibm.com/.



2. **Sign up or log in:**

   If you don't already have an IBM Cloud account, click "Sign Up" to create one. If you have an account, log in with your credentials.



3. **Navigate to Watson Assistant:**

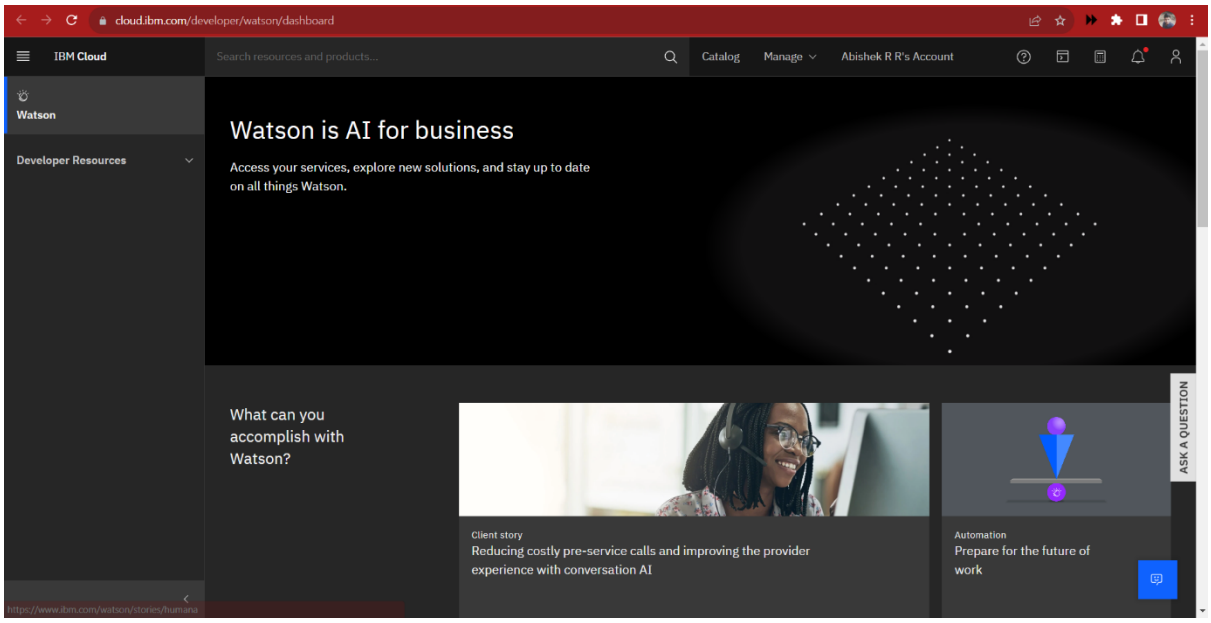
   Once logged in, you'll be taken to the IBM Cloud dashboard. In the top menu, click on "Catalog."

4. **Search for Watson Assistant:**

   In the catalog, you can use the search bar to find "Watson Assistant" or browse through the services to locate it.

5. **Create a Watson Assistant service:**

   Click on the Watson Assistant service to access its details. Then, click the "Create" button to set up a new Watson Assistant instance.

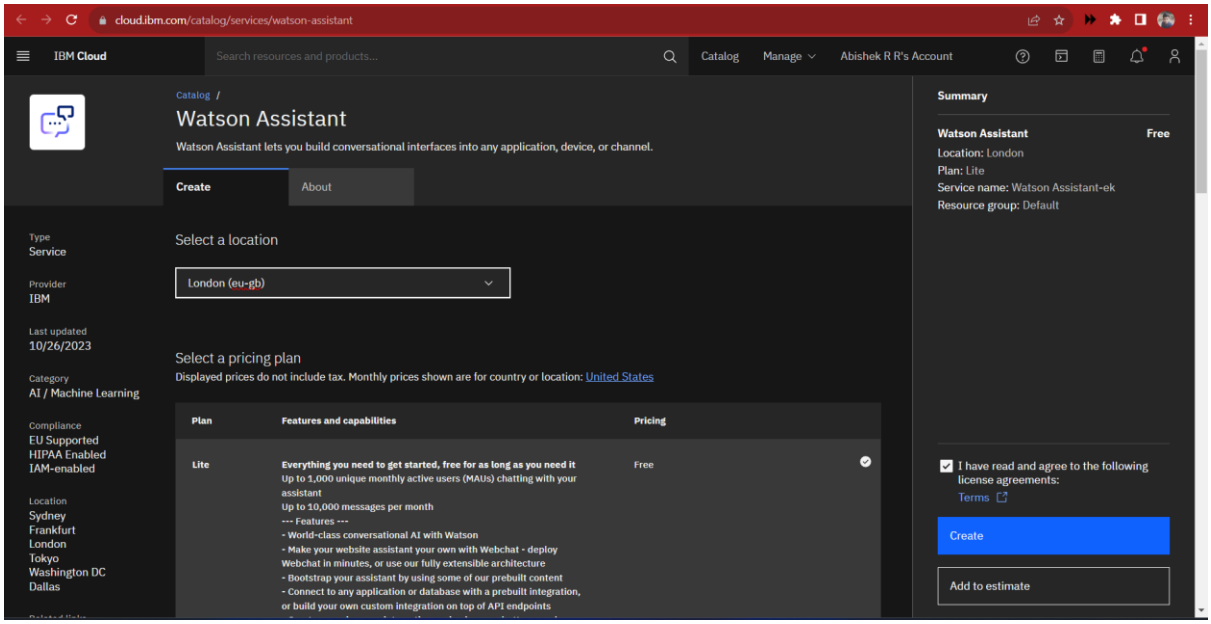


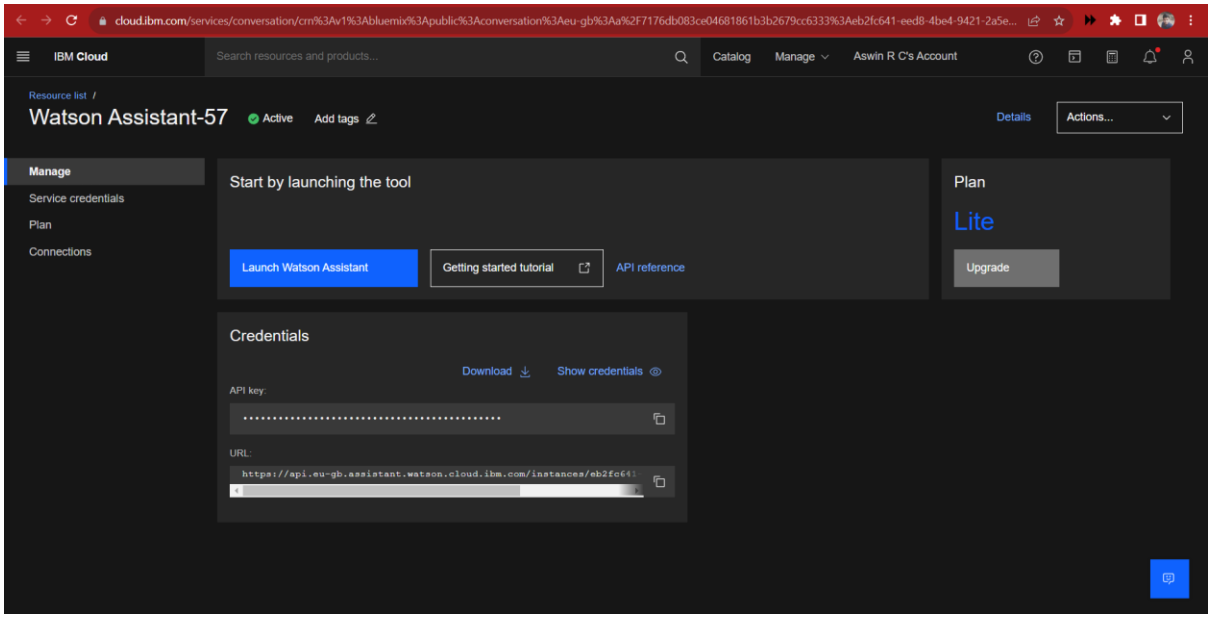
6. **Configure your Watson Assistant service:**

   You'll need to provide some basic information for your Watson Assistant service, such as a name, region, and resource group. You can also choose the pricing plan that suits your needs.

7. **Create the service:**

   After configuring the service, click the "Create" button to create your Watson Assistant instance.





8. **Access your Watson Assistant instance:**

   Once your service is created, you can access it from the IBM Cloud dashboard.

Now you have an IBM Cloud Watson Assistant account ready for building chatbots and virtual assistants. You can start creating and managing your Watson Assistant instances and chatbots from there.

To **Create a Chatbot with IBM Cloud Watson Assistant**, follow the below steps.

1. **Create a Watson Assistant instance**:

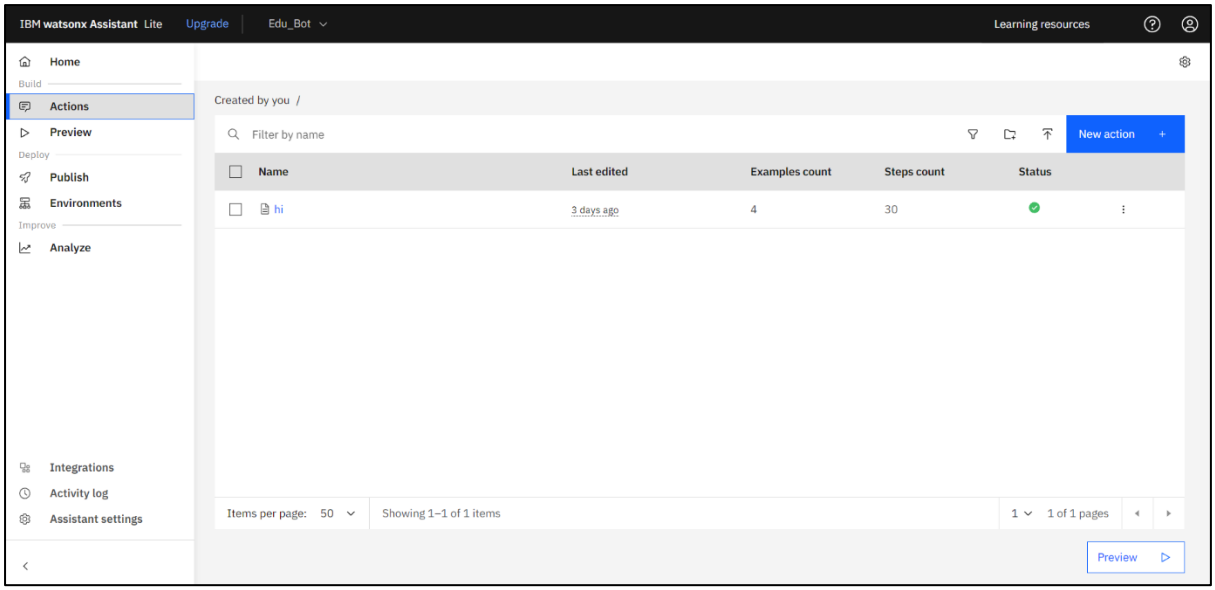
   If you haven't already, follow the steps in the above steps to create an IBM Cloud Watson Assistant instance.
2. **Launch the Watson Assistant:**

   After creating the IBM Cloud Watson Assistant, launch the Watson Assistant.
3. **Setup your chatbot:**

   After launching, setup your chatbot and give a name and language.
4. **Add action to the bot:**

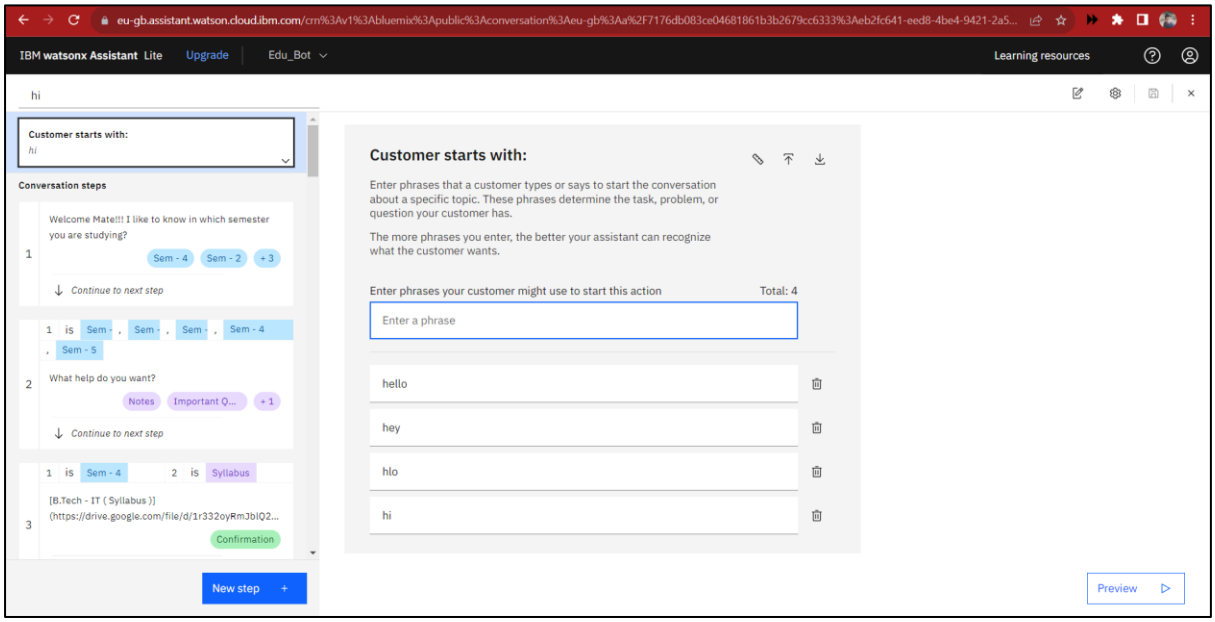
   Add the different actions to your chatbot that should be done while the user is interacting with your bot.

   Here I have created an action named “Hi”



5. **Test your chatbot:**

   After adding the required actions, click the "Preview" button in the upper-right corner to preview your chatbot. This will allow you to interact with your chatbot and ensure it responds as expected.



6. **Train your chatbot:**

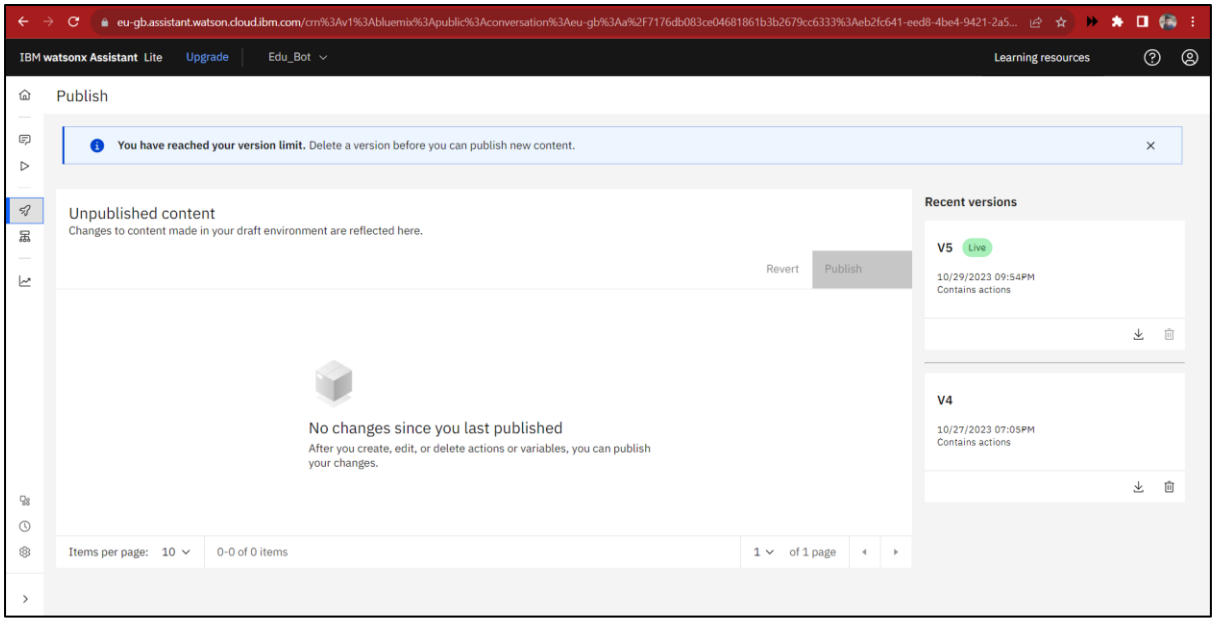
   Watson Assistant uses machine learning to understand user inputs better. You can improve the chatbot's accuracy by training it with additional examples.

7. **Integrate your chatbot:**

   Once you're satisfied with your chatbot's performance, you can integrate it into your application or website using the provided integration options.

8. **Deploy your chatbot:**

Deploy your chatbot so that it's accessible to users. You can do this by publishing your skill.



9. **Monitor and maintain:**

Keep an eye on how your chatbot performs and make necessary adjustments as you gather more user data and feedback.