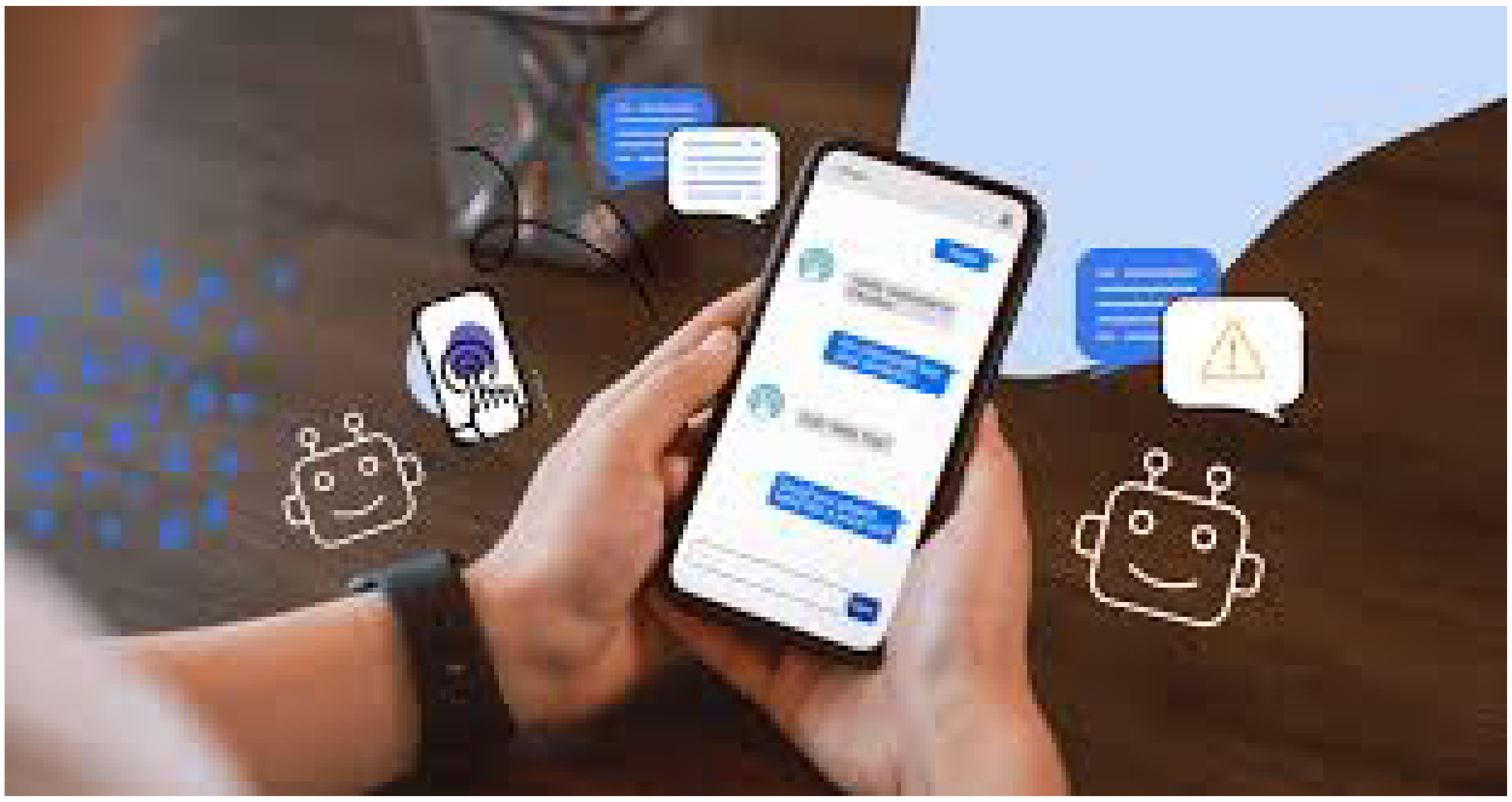
CLOUD APPLICATION DEVELOPMENT

CHATBOT

DEVELOPMENT PHASE 4



By

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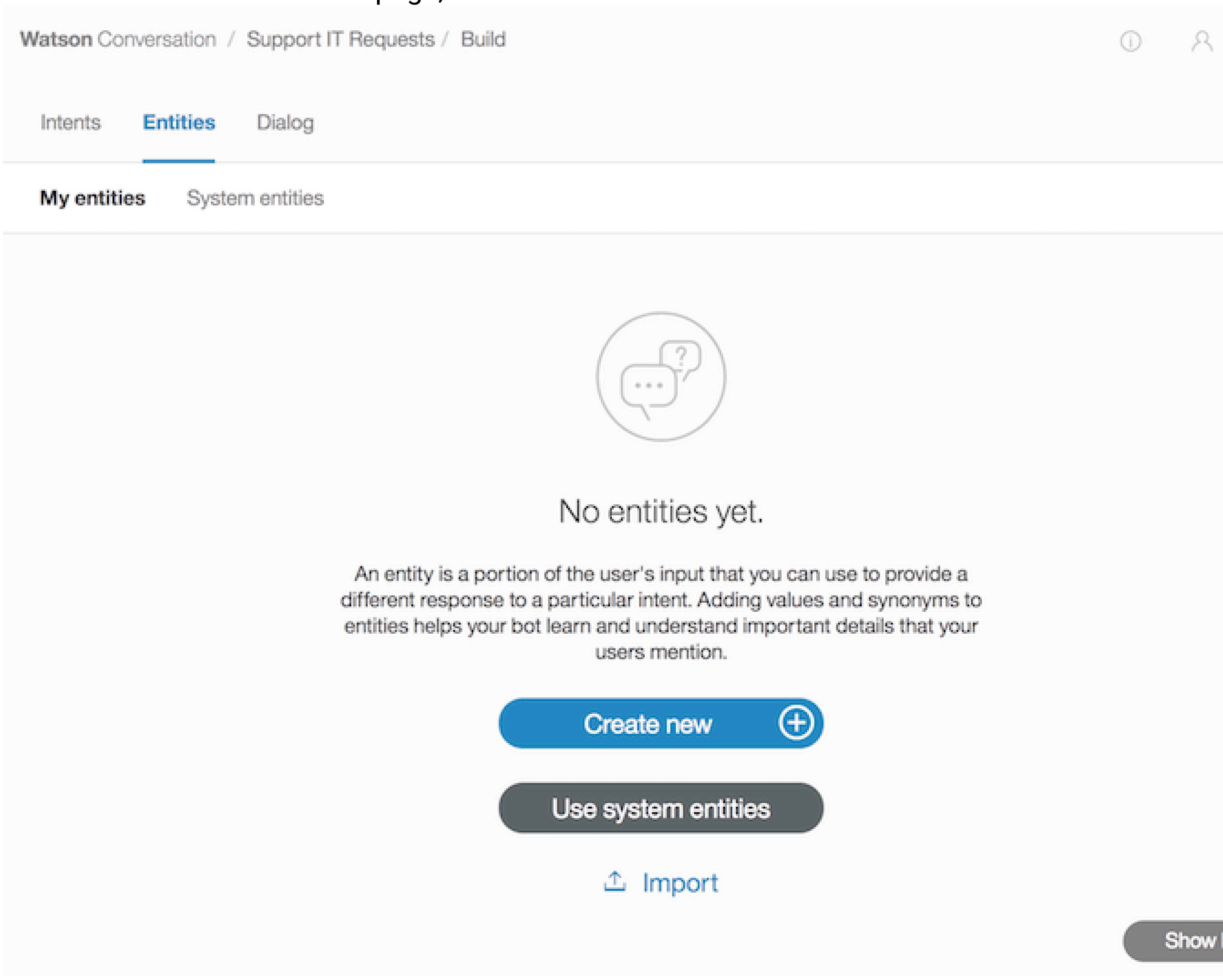
4)M.nandhini. 5)V.Abisha

DEVELOPMENT PHASE 4

Task 5: Add entities

An *ENTITY* is a portion of the user's input that you can use to provide a different response to a particular intent.

1. Click **Entities**. On the Entities page, click **Create new**.



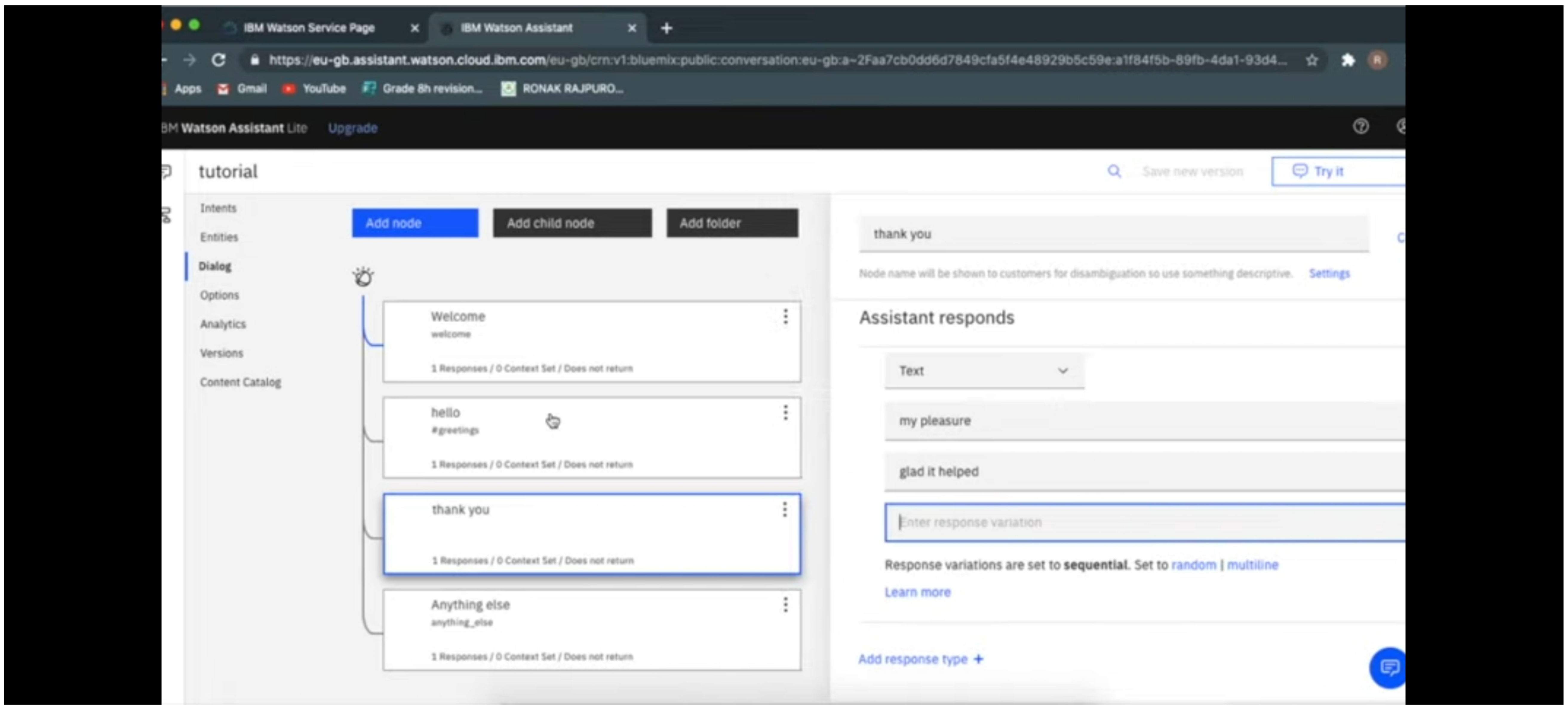
No entities yet.

An entity is a portion of the user's input that you can use to provide a different response to a particular intent. Adding values and synonyms to entities helps your bot learn and understand important details that your users mention.

Adding values and synonyms to entities helps your chatbot learn important details that your users might mention.

Each entity definition includes a set of specific entity values that can be used to trigger different responses. Each value can have multiple synonyms that define different ways that the same value can be specified in user input.

2. Create entities to represent to the application what the user wants to access.


IBM Watson Service Page
IBM Watson Assistant
https://eu-gb.assistant.watson.cloud.ibm.com/eu-gb/crn:v1:bluemix:public:conversation:eu-gb:a~2Faa7cb0dd6d7849cfa5f4e48929b5c59e:a1f84f5b-89fb-4da1-93d4...
Apps
Gmail
YouTube
Grade 8h revision...
RONAK RAJPURO...
IBM Watson Assistant Lite
Upgrade
tutorial
Intents
Entities
Dialog
Options
Analytics
Versions
Content Catalog
Add node
Add child node
Add folder
Save new version
Try it
Welcome
welcome
1 Responses / 0 Context Set / Does not return
hello
#greetings
1 Responses / 0 Context Set / Does not return
thank you
1 Responses / 0 Context Set / Does not return
Anything else
anything_else
1 Responses / 0 Context Set / Does not return
Node name will be shown to customers for disambiguation so use something descriptive.
Settings
Assistant responds
Text
Enter response variation
Learn more
Add response type +

thank you

my pleasure

glad it helped

Response variations are set to **sequential**. Set to random | multiline

FUZZY LOGIC is a feature that allows Watson Assistant to accept misspelled words. You can enable this feature at the entity level.
As you did for intents, you can reuse entities' definitions through the export and import capabilities. Import the `wcs-workspace/chatbot-Entities.csv` file.

3. If you click the **Ask Watson** icon immediately after you import the entities, the `Watson is training` message is displayed. Watson Assistant classifies the entities. You can unit-test the entities by entering `I want to access application AbC`. The following figure shows both the intent and entity (@application:AbC) extracted by Watson Assistant:

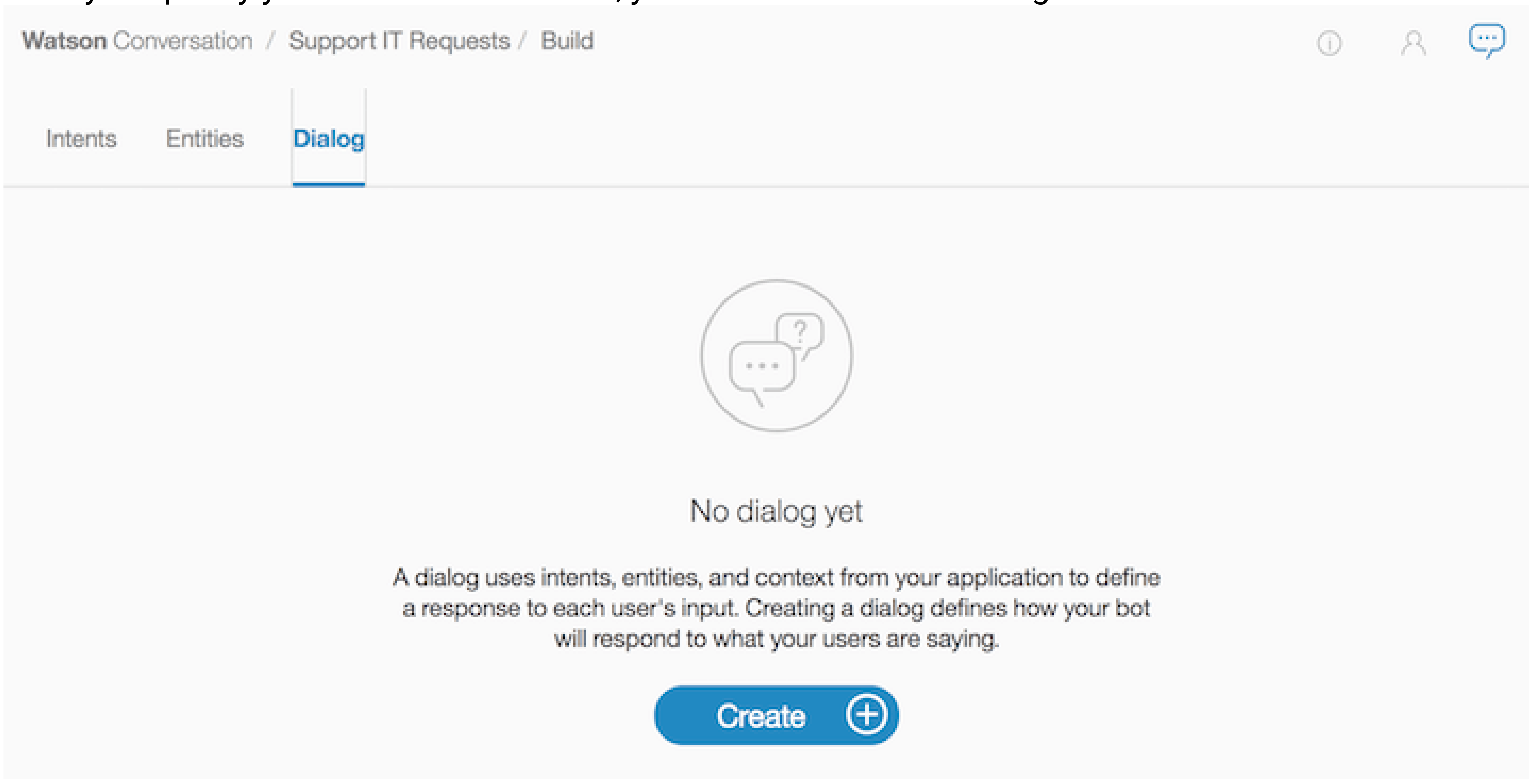
You are now ready to create the dialog flow.

How easy or difficult was it to create the entities?

Add comments ...

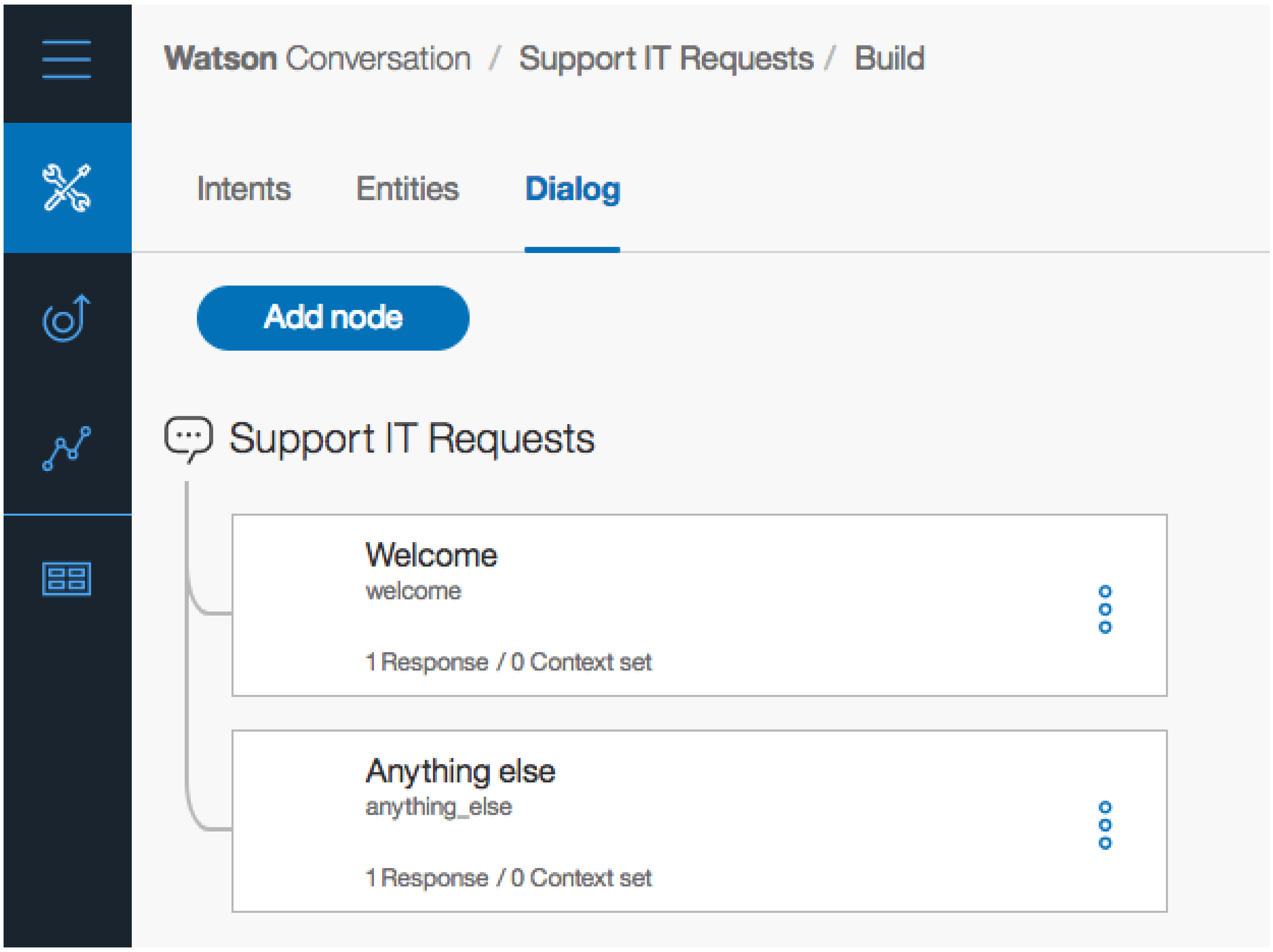
Task 6: Build the dialog

After you specify your intents and entities, you can construct the dialog flow.



A dialog uses intents, entities, and context from your application to define a response to each user's input. Creating a dialog defines how your bot will respond to what your users are saying.

A dialog is made up of nodes that define steps in the conversation.

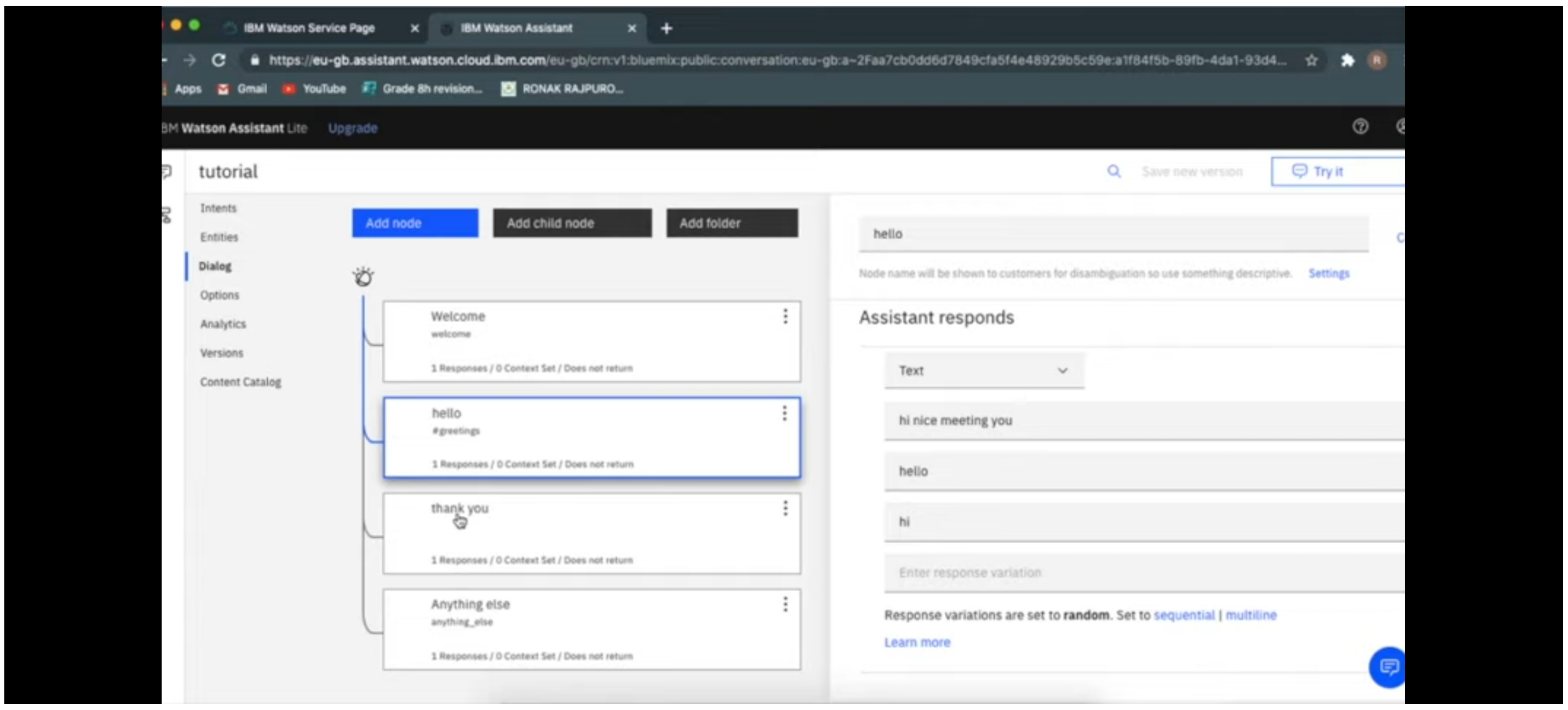

Watson Conversation / Support IT Requests / Build
Intents
Entities
Dialog
Add node
Support IT Requests
Welcome
welcome
1 Response / 0 Context set
Anything else
anything_else
1 Response / 0 Context set

In the previous image, two dialog nodes are shown. The first node is the standard welcome message. The other node is a catch-all node named "Anything else." Dialog nodes are chained in a tree structure to create an interactive conversation with the user. The evaluation starts at the top, so the welcome node is assessed before the "Anything else" node.

If you click the welcome node, the standard Watson response is "Hello. How can I help you?" To validate how the flow works, you can click the **Ask Watson** icon.

Define the greetings node

1. The first node addresses greetings in a response to a query such as "hello." Click the welcome node and click **Add node below**:


IBM Watson Service Page
IBM Watson Assistant
https://eu-gb.assistant.watson.cloud.ibm.com/eu-gb/crn:v1:bluemix:public:conversation:eu-gb:a~2Faa7cb0dd6d7849cfa5f4e48929b5c59e:a1f84f5b-89fb-4da1-93d4...
Apps
Gmail
YouTube
Grade 8h revision...
RONAK RAJPURO...
IBM Watson Assistant Lite
Upgrade
tutorial
Save new version
Try it
Intents
Entities
Dialog
Options
Analytics
Versions
Content Catalog
Add node
Add child node
Add folder
Welcome
welcome
1 Responses / 0 Context Set / Does not return
hello
#greetings
1 Responses / 0 Context Set / Does not return
thank you
1 Responses / 0 Context Set / Does not return
Anything else
anything_else
1 Responses / 0 Context Set / Does not return

hello

Node name will be shown to customers for disambiguation so use something descriptive. Settings

Assistant responds

Text

hi nice meeting you

hello

hi

Enter response variation

Response variations are set to **random**. Set to sequential | multiline

Learn more

A new node is added between the welcome and "Anything else" nodes. At each node level, you can expand the conversation by adding nodes. If you add nodes at the same level, the flows are parallel. Adding a child node creates a dependent track of conversation, and the conversation branches out into a tree structure.

2. Name the new node `Handle Greetings`. In the **If bot recognizes** field, change the value to `#Greetings`. The number sign (#) represents a prefix for intent. The condition is triggered when the Watson natural language classifier classifies the query as a `greeting` intent.
3. Add these responses:

   The previous image also illustrates how to use the multiple responses pattern to avoid being repetitive. The bot can present different answers to the same query. You can allow the system to randomly select an answer from the list of potential responses.
4. Unit-test your dialog by clicking the **Ask Watson** icon:

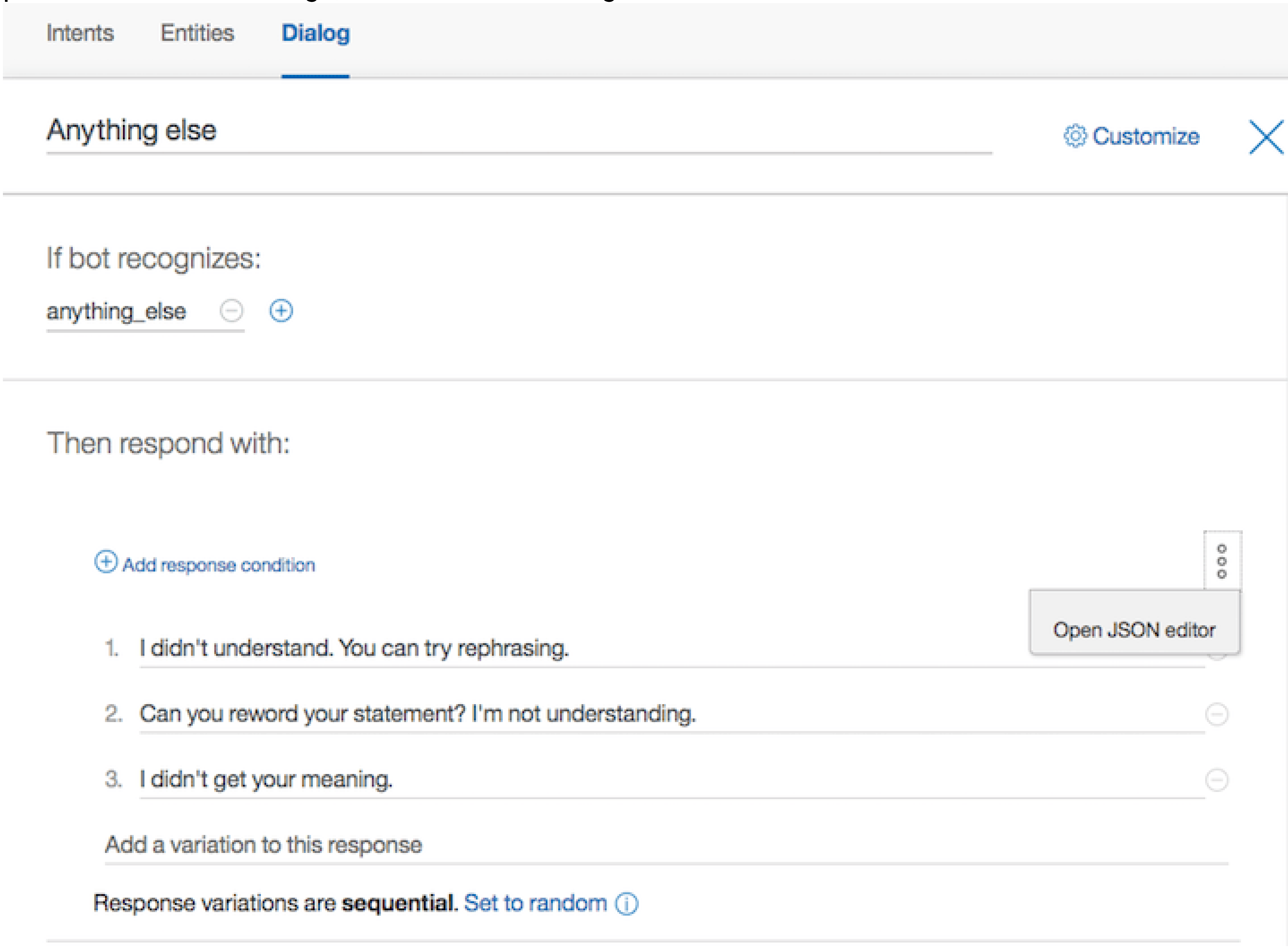
   At the beginning of each conversation, the evaluation starts at the top level of dialog nodes.

How easy or difficult was it to define the greetings node?

Add comments ...

Manage the "Anything else" use case

The bottom node is used when none of the defined intents are matched. It can provide a default message, as shown in this image:



Anything else

If bot recognizes:

anything_else

Then respond with:

Add response condition

1. I didn't understand. You can try rephrasing.
2. Can you reword your statement? I'm not understanding.
3. I didn't get your meaning.

Add a variation to this response

Response variations are **sequential.** Set to random

From the menu on the right side of the response area, you can open the JSON editor and assess the data that is returned as part of the conversation interaction. The JSON document includes an output JSON object with text with different values. To the output, add an attribute, name it Missing case, and set it to true. When you persist the conversation flow into a document oriented database , you can search the queries that were not addressed by the dialog nodes so that you can add more cases later, if needed.

Task 8: Use the API

To use the API, you need the service credentials and the tool to perform an HTTP request. For detailed instructions, see Use Watson Assistant API.

Task 9 : Create actions using ibm cloud functions. For the chatbot to be defined what to do .

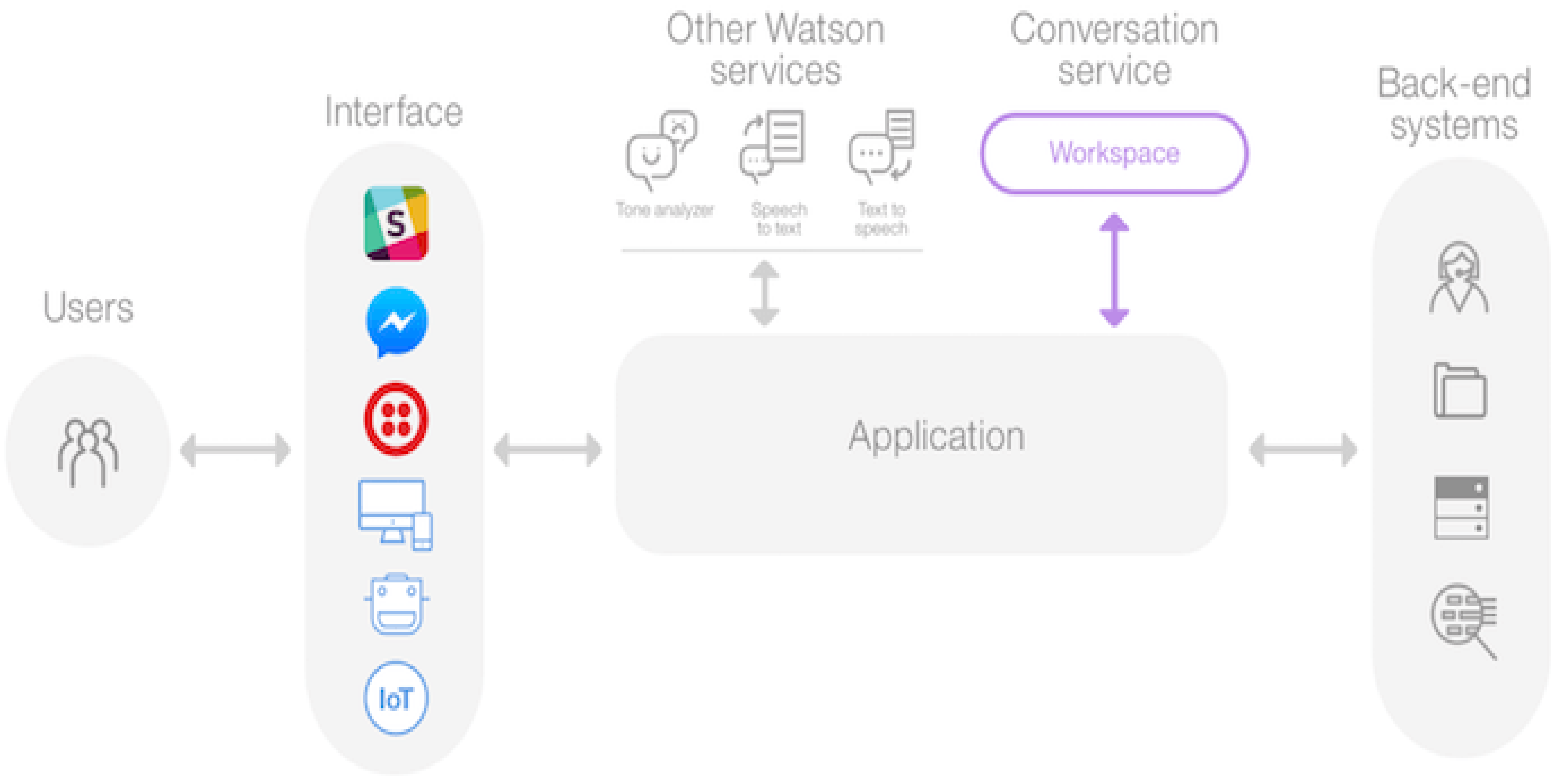
CODE :

```
/**
 *
 * main() will be run when you invoke this action
 *
 * @param Cloud Functions actions accept a single parameter, which must be a JSON object.
 *
 * @return The output of this action, which must be a JSON object.
 *
 */
Function main(params) {
  returnString = ‘’;

  airline = params.airline;
  flightNum = params.flightNumber;
  fullQual= airline + flightNum;

  //This section could be an API call, database call, etc.
  Switch(fullQual){
    Case ‘AA456’:
      returnString = ‘AA456 is 10 minutes ahead of schedule.’;
      break;
    case ‘AA123’:
      returnString = ‘AA123 is on time.’;
      break;
    case ‘DL123’:
      returnString = ‘DL123 is on time.’;
      break;
    case ‘UA789’:
      returnString = ‘UA789 is 5 minutes behind schedule.’;
      break;
    default:
      returnString = ‘**An error has occurred.**’;
  }
  //

  Let finalString = “ → “ + returnString + “ ← “;
          Return { message: finalString };
}
```

Use the below link to view the code :

https://github.com/Abisha422421106002/Abisha422421106002/blob/main/function(Action).txt

IBM Watson® Assistant is a question-and-answer system that provides a dialog interaction between the conversation system and users. This style of interaction is commonly called a *CHATBOT*.


Users
Interface
Other Watson services
Tone analyzer
Speech to text
Text to speech
Conversation service
Workspace
Application
Back-end systems
IoT