Customize States and Flows for Retail Use Case

NetApp Solutions

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You can customize States and Flows of Dialog Manager for your specific use cases. In our retail example, we have the following four yaml files to direct the conversation according to different intents.

Se the following list of file names and description of each file:

- `main_flow.yml`: Defines the main conversation flows and states and directs the flow to the other three yaml files when necessary.
- `retail_flow.yml`: Contains states related to retail or points-of-interest questions. The system either provides the information of the nearest store, or the price of a given item.
- `weather_flow.yml`: Contains states related to weather questions. If the location cannot be determined, the system asks a follow up question to clarify.
- `error_flow.yml`: Handles cases where user intents do not fall into the above three yaml files. After displaying an error message, the system re-routes back to accepting user questions.The following sections contain the detailed definitions for these yaml files.

main_flow.yml

```
name: JarvisRetail
intent_transitions:
  jarvis_error: error
  price_check: retail_price_check
  inventory_check: retail_inventory_check
  store_location: retail_store_location
  weather.weather: weather
  weather.temperature: temperature
  weather.sunny: sunny
  weather.cloudy: cloudy
  weather.snow: snow
  weather.rainfall: rain
  weather.snow_yes_no: snowfall
  weather.rainfall_yes_no: rainfall
  weather.temperature_yes_no: tempyesno
  weather.humidity: humidity
  weather.humidity_yes_no: humidity
  navigation.startnavigationpoi: retail # Transitions should be context
and slot based. Redirecting for now.
  navigation.geteta: retail
  navigation.showdirection: retail
  navigation.showmappoi: idk_what_you_talkin_about
  nomatch.none: idk_what_you_talkin_about
states:
  init:
```

```
    type: message_text
    properties:
      text: "Hi, welcome to NARA retail and weather service. How can I
help you?"
  input_intent:
    type: input_context
    properties:
      nlp_type: jarvis
      entities:
        intent: dontcare
# This state is executed if the intent was not understood
  dont_get_the intent:
    type: message_text_random
    properties:
      responses:
        - "Sorry I didn't get that! Please come again."
        - "I beg your pardon! Say that again?"
        - "Are we talking about weather? What would you like to know?"
        - "Sorry I know only about the weather"
        - "You can ask me about the weather, the rainfall, the
temperature, I don't know much more"
      delay: 0
    transitions:
      next_state: input_intent
  idk_what_you_talkin_about:
    type: message_text_random
    properties:
      responses:
        - "Sorry I didn't get that! Please come again."
        - "I beg your pardon! Say that again?"
        - "Are we talking about retail or weather? What would you like to
know?"
        - "Sorry I know only about retail and the weather"
        - "You can ask me about retail information or the weather, the
rainfall, the temperature. I don't know much more."
      delay: 0
    transitions:
      next_state: input_intent
  error:
    type: change_context
    properties:
        update_keys:
           intent: 'error'
    transitions:
        flow: error_flow
  retail_inventory_check:
```

```
    type: change_context
    properties:
        update_keys:
           intent: 'retail_inventory_check'
    transitions:
        flow: retail_flow
  retail_price_check:
    type: change_context
    properties:
        update_keys:
           intent: 'check_item_price'
    transitions:
        flow: retail_flow
  retail_store_location:
    type: change_context
    properties:
        update_keys:
           intent: 'find_the_store'
    transitions:
        flow: retail_flow
  weather:
    type: change_context
    properties:
        update_keys:
           intent: 'weather'
    transitions:
        flow: weather_flow
  temperature:
    type: change_context
    properties:
        update_keys:
           intent: 'temperature'
    transitions:
        flow: weather_flow
  rainfall:
    type: change_context
    properties:
        update_keys:
           intent: 'rainfall'
    transitions:
        flow: weather_flow
  sunny:
    type: change_context
    properties:
        update_keys:
           intent: 'sunny'
```

```
  transitions:
      flow: weather_flow
cloudy:
  type: change_context
  properties:
      update_keys:
         intent: 'cloudy'
  transitions:
      flow: weather_flow
snow:
  type: change_context
  properties:
      update_keys:
         intent: 'snow'
  transitions:
      flow: weather_flow
rain:
  type: change_context
  properties:
      update_keys:
         intent: 'rain'
  transitions:
      flow: weather_flow
snowfall:
    type: change_context
    properties:
        update_keys:
           intent: 'snowfall'
    transitions:
        flow: weather_flow
tempyesno:
    type: change_context
    properties:
        update_keys:
           intent: 'tempyesno'
    transitions:
        flow: weather_flow
humidity:
    type: change_context
    properties:
        update_keys:
           intent: 'humidity'
    transitions:
        flow: weather_flow
end_state:
  type: reset
```

```
    transitions:
      next_state: init
```

retail_flow.yml

```
name: retail_flow
states:
  store_location:
    type: conditional_exists
    properties:
      key: '{{location}}'
    transitions:
      exists: retail_state
      notexists: ask_retail_location
  retail_state:
    type: Retail
    properties:
    transitions:
      next_state: output_retail
  output_retail:
      type: message_text
      properties:
        text: '{{retail_status}}'
      transitions:
        next_state: input_intent
  ask_retail_location:
    type: message_text
    properties:
      text: "For which location? I can find the closest store near you."
    transitions:
      next_state: input_retail_location
  input_retail_location:
    type: input_user
    properties:
      nlp_type: jarvis
      entities:
        slot: location
      require_match: true
    transitions:
      match: retail_state
      notmatch: check_retail_jarvis_error
  output_retail_acknowledge:
    type: message_text_random
    properties:
      responses:
```

```
        - 'ok in {{location}}'
        - 'the store in {{location}}'
        - 'I always wanted to shop in {{location}}'
      delay: 0
    transitions:
      next_state: retail_state
  output_retail_notlocation:
    type: message_text
    properties:
      text: "I did not understand the location. Can you please repeat?"
    transitions:
      next_state: input_intent
  check_rerail_jarvis_error:
    type: conditional_exists
    properties:
      key: '{{jarvis_error}}'
    transitions:
      exists: show_retail_jarvis_api_error
      notexists: output_retail_notlocation
  show_retail_jarvis_api_error:
    type: message_text
    properties:
      text: "I am having troubled understanding right now. Come again on
that?"
    transitions:
      next_state: input_intent
```

weather_flow.yml

```
name: weather_flow
states:
  check_weather_location:
    type: conditional_exists
    properties:
      key: '{{location}}'
    transitions:
      exists: weather_state
      notexists: ask_weather_location
  weather_state:
    type: Weather
    properties:
    transitions:
      next_state: output_weather
  output_weather:
      type: message_text
```

```
    properties:
      text: '{{weather_status}}'
    transitions:
      next_state: input_intent
ask_weather_location:
  type: message_text
  properties:
    text: "For which location?"
  transitions:
    next_state: input_weather_location
input_weather_location:
  type: input_user
  properties:
    nlp_type: jarvis
    entities:
      slot: location
    require_match: true
  transitions:
    match: weather_state
    notmatch: check_jarvis_error
output_weather_acknowledge:
  type: message_text_random
  properties:
    responses:
      - 'ok in {{location}}'
      - 'the weather in {{location}}'
      - 'I always wanted to go in {{location}}'
    delay: 0
  transitions:
    next_state: weather_state
output_weather_notlocation:
  type: message_text
  properties:
    text: "I did not understand the location, can you please repeat?"
  transitions:
    next_state: input_intent
check_jarvis_error:
  type: conditional_exists
  properties:
    key: '{{jarvis_error}}'
  transitions:
    exists: show_jarvis_api_error
    notexists: output_weather_notlocation
show_jarvis_api_error:
  type: message_text
  properties:
```

```
      text: "I am having troubled understanding right now. Come again on
that, else check jarvis services?"
    transitions:
      next_state: input_intent
```

error_flow.yml

```
name: error_flow
states:
  error_state:
    type: message_text_random
    properties:
      responses:
        - "Sorry I didn't get that!"
        - "Are we talking about retail or weather? What would you like to
know?"
        - "Sorry I know only about retail information or the weather"
        - "You can ask me about retail information or the weather, the
rainfall, the temperature. I don't know much more"
        - "Let's talk about retail or the weather!"
      delay: 0
    transitions:
      next_state: input_intent
```

Next: Connect to Third-Party APIs as Fulfillment Engine