ORACLE

Building better action menus

Agenda

1 About action menus

2 Building a basic action menu declaratively

3 Building an entity-based action menu

4 Best practices

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1 **About action menus**

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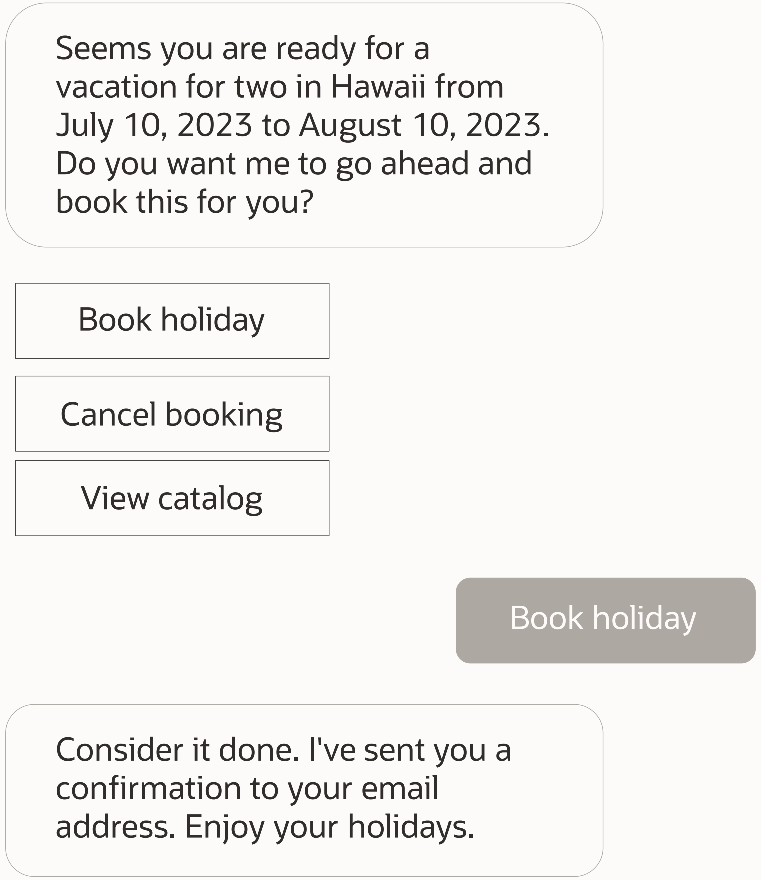
About action menus

Like value lists, just for navigation

Each choice has a label and an associated action

- Action is mapped to a next dialog flow state using a transition



Seems you are ready for a vacation for two in Hawaii from July 10, 2023 to August 10, 2023. Do you want me to go ahead and book this for you?

Consider it done. I've sent you a confirmation to your email address. Enjoy your holidays.

> User errors that originate at design time are pilot errors

- Assuming users always press buttons
- Not handling user choices that are not in the list
- Thinking that users can guess keywords

About action menus

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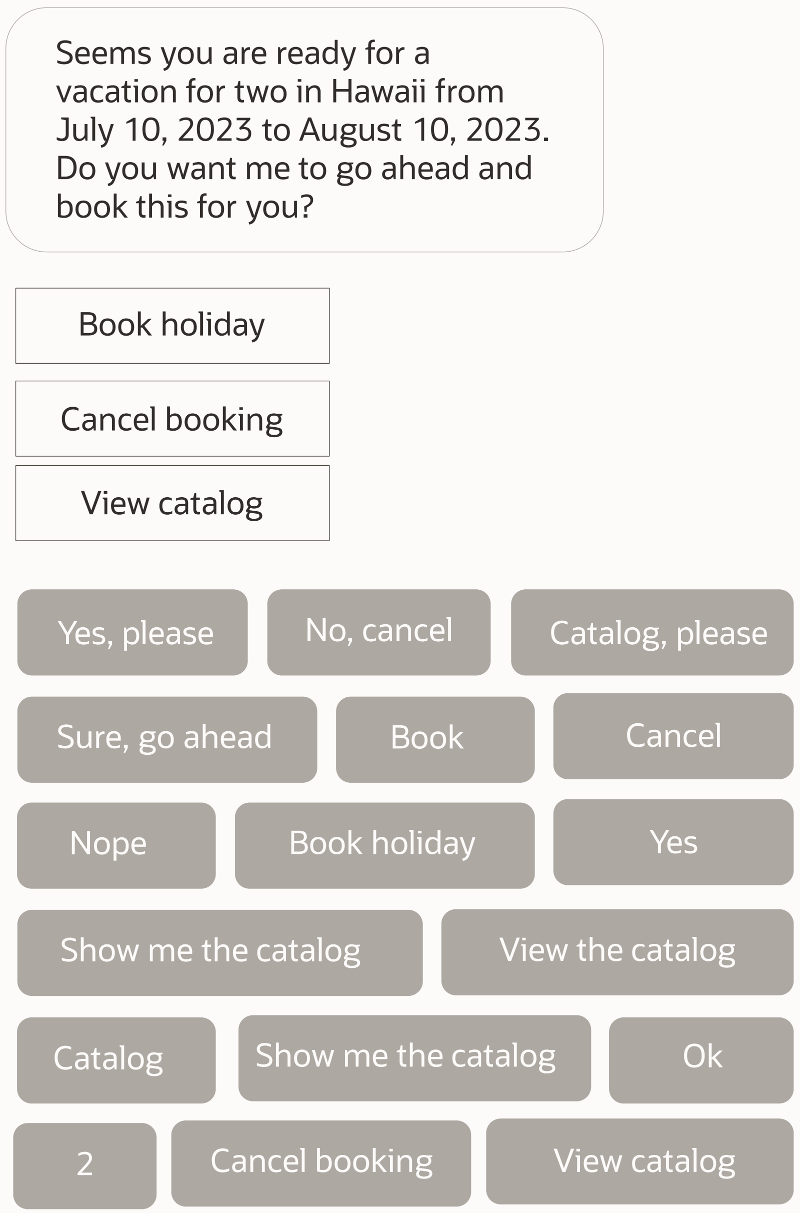
Each choice has a label and an associated action

- Action is mapped to a next dialog flow state using a transition

Action menus don't need to understand every user message, but shouldn't fail if they don't



Seems you are ready for a vacation for two in Hawaii from July 10, 2023 to August 10, 2023. Do you want me to go ahead and book this for you?

What you should consider

Users are users and behave like users

- Users are not robotic but conversational
  - Not good in using single keywords
  - Mess up with case sensitivity
  - Send ambiguous messages

Menus should guide users and not confuse them

- Help users to make the right choice
- Be forgiving
  - Allow surrounding text with keywords
  - Handle user input case insensitive

Expect users using speech

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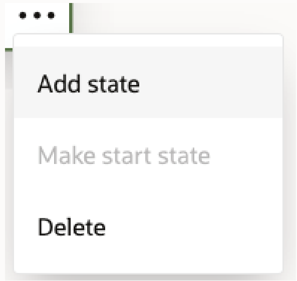
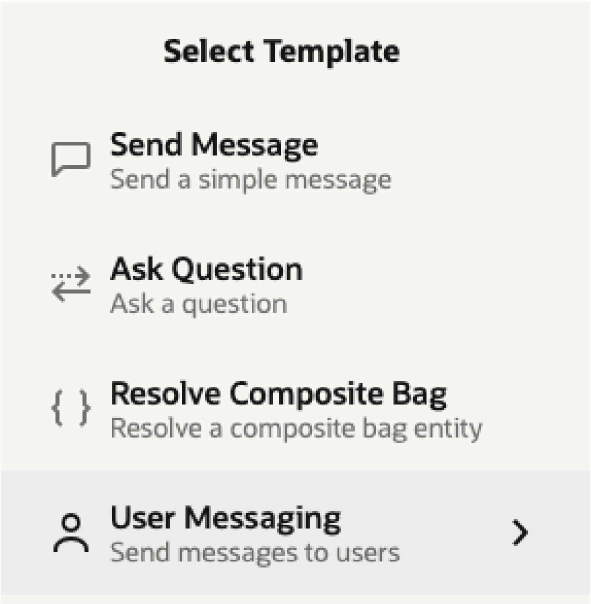
Creating a basic action menu in Visual Flow Designer



Add state

Make start state

Delete



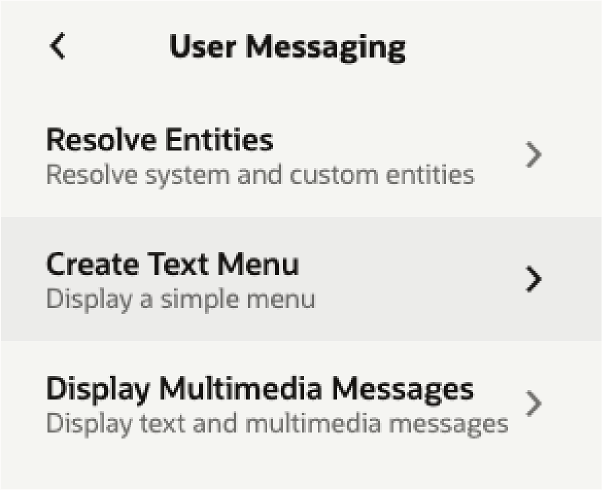
Select Template

Send Message
Send a simple message

Ask Question
Ask a question

Resolve Composite Bag
Resolve a composite bag entity

User Messaging
Send messages to users

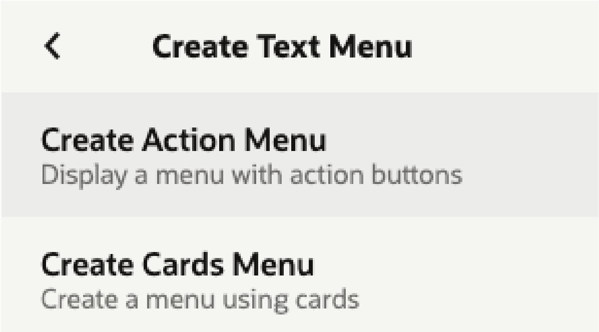


User Messaging

Resolve Entities
Resolve system and custom entities

Create Text Menu
Display a simple menu

Display Multimedia Messages
Display text and multimedia messages

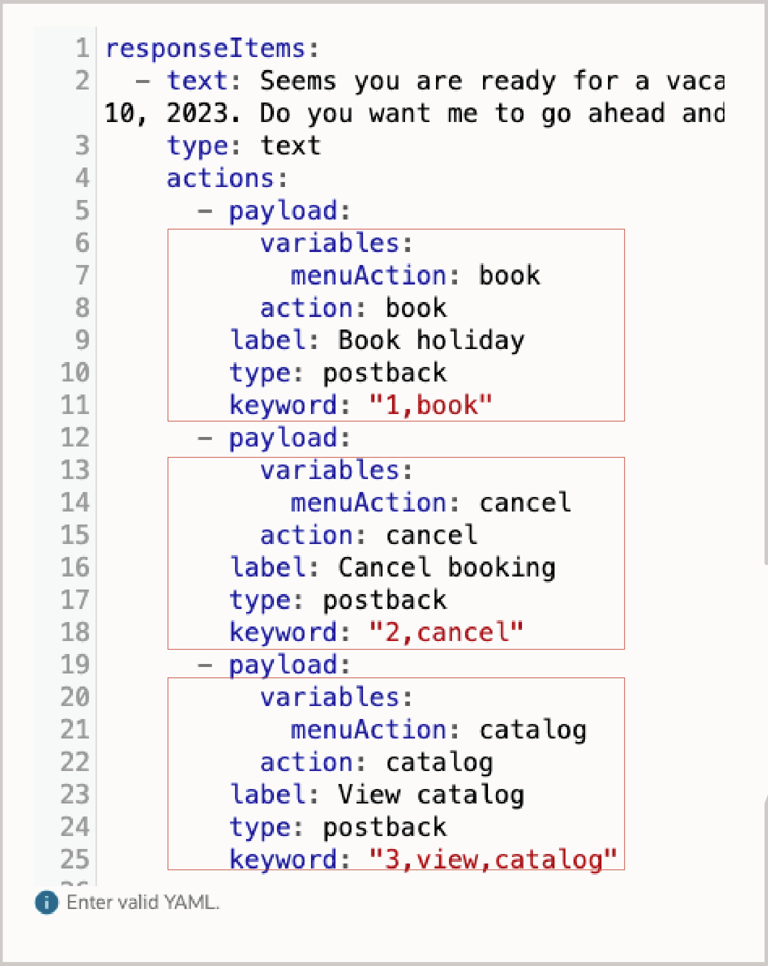


Create Text Menu

Create Action Menu
Display a menu with action buttons

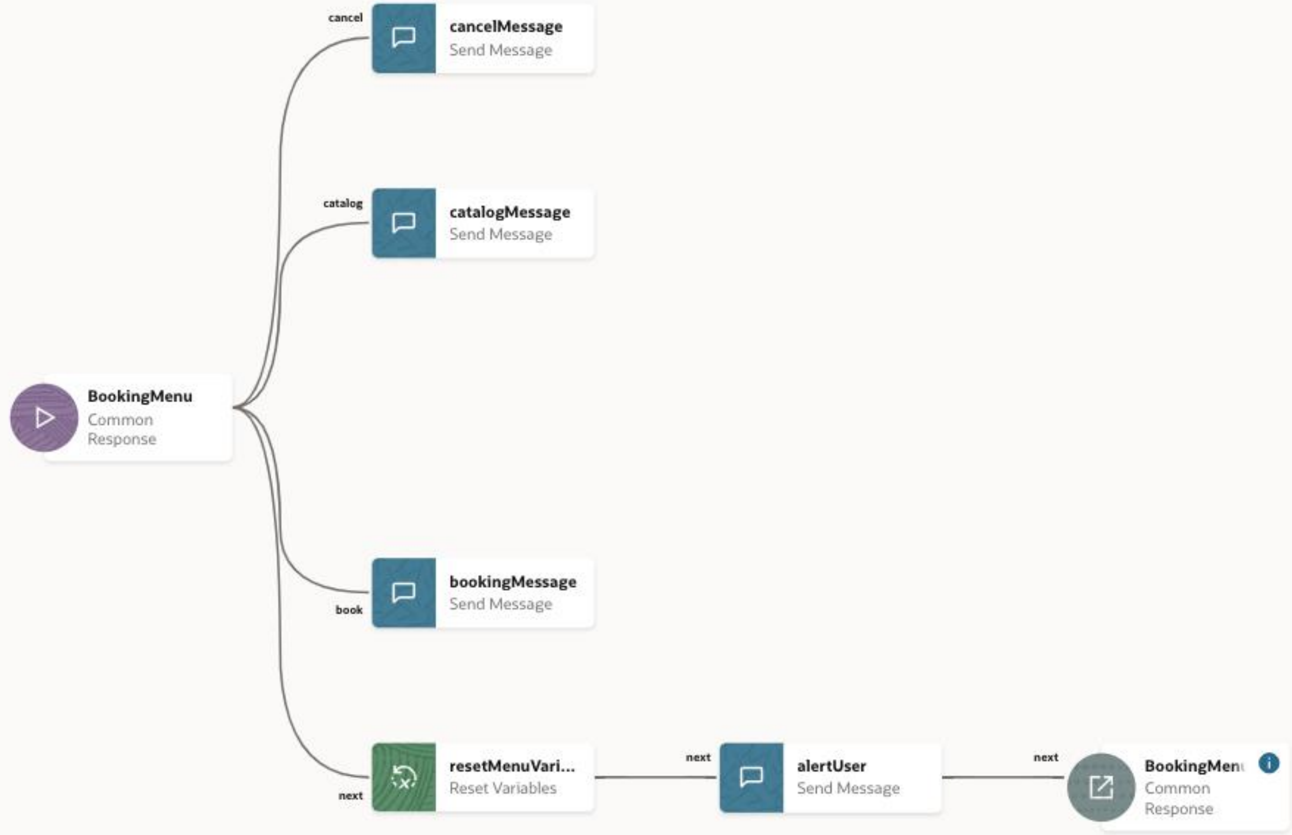
Create Cards Menu
Create a menu using cards

Menu definition and transitions



```yaml
responseItems:
  - text: Seems you are ready for a vaca
10, 2023. Do you want me to go ahead and
    type: text
    actions:
      - payload:
          variables:
            menuAction: book
          action: book
        label: Book holiday
        type: postback
        keyword: "1,book"
      - payload:
          variables:
            menuAction: cancel
          action: cancel
        label: Cancel booking
        type: postback
        keyword: "2,cancel"
      - payload:
          variables:
            menuAction: catalog
          action: catalog
        label: View catalog
        type: postback
        keyword: "3,view,catalog"
```

Enter valid YAML.

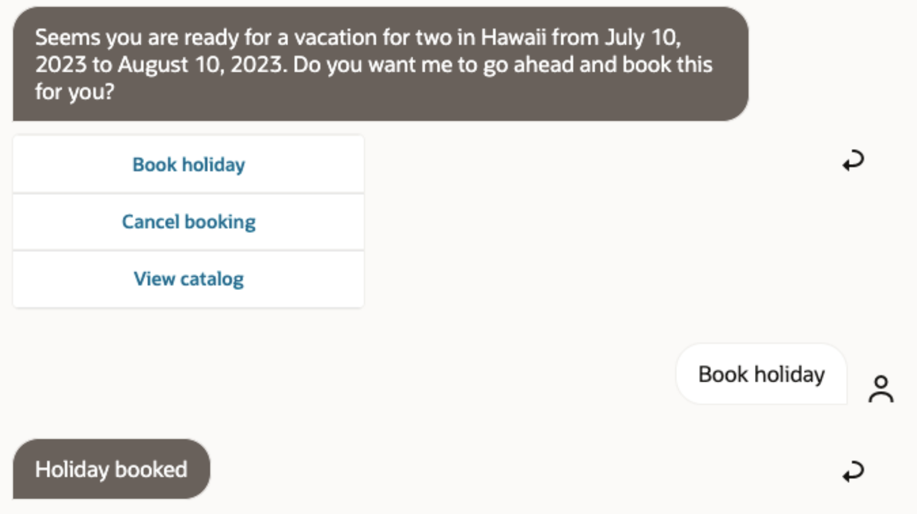


What does work well

List rendered using buttons

Keyword property allow synonyms to be used

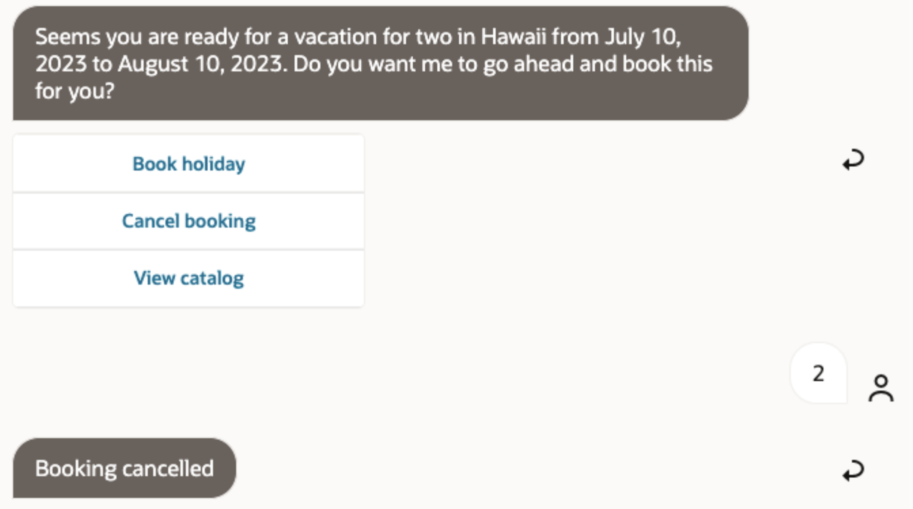
- The keyword property can reference a resource bundle with keywords separated by commas to support multilingual digital assistants



Seems you are ready for a vacation for two in Hawaii from July 10, 2023 to August 10, 2023. Do you want me to go ahead and book this for you?

Book holiday

Holiday booked



Seems you are ready for a vacation for two in Hawaii from July 10, 2023 to August 10, 2023. Do you want me to go ahead and book this for you?

2

Booking cancelled

What does not work so well

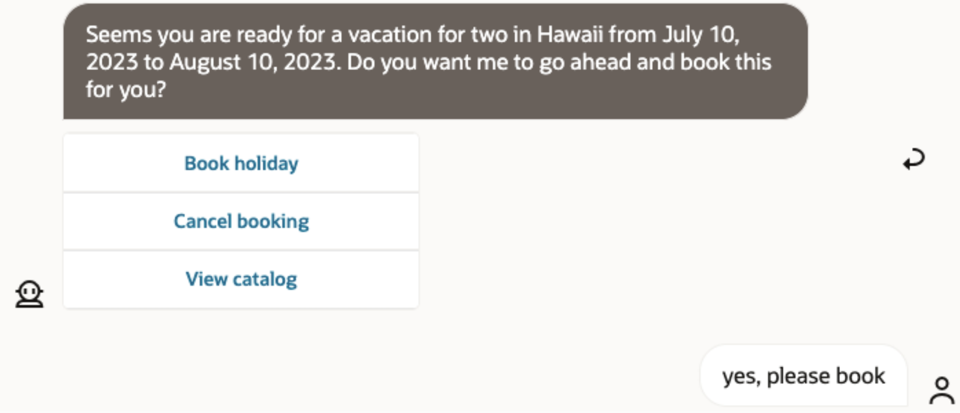
Synonyms must be used as defined using the keyword property. Any use within a sentence fails

Because action menu is not validated, the navigation continues to the next dialog flow state

- If you set next transition to point to the action menu state without resetting the variable, the conversation enters into an infinite loop

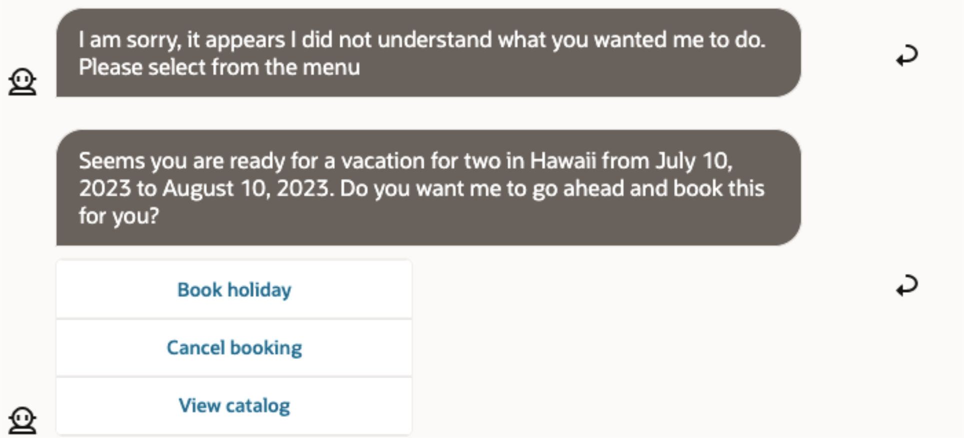
Non-sequitur routing, which is the digital assistant's ability to interrupt a conversation for another, does not work with this setup

- A validation marked as failed is required



Seems you are ready for a vacation for two in Hawaii from July 10, 2023 to August 10, 2023. Do you want me to go ahead and book this for you?

yes, please book



I am sorry, it appears I did not understand what you wanted me to do. Please select from the menu

Seems you are ready for a vacation for two in Hawaii from July 10, 2023 to August 10, 2023. Do you want me to go ahead and book this for you?

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> Define action menus as value list entities

- Alternating prompts
- User input disambiguation
- Use synonyms as keywords
- User input error handling
- Non-sequitur navigation

How to create entity-based action menus: The value list entity

Create a value-list entity

- Define value as the action to trigger
- Use synonyms as keywords

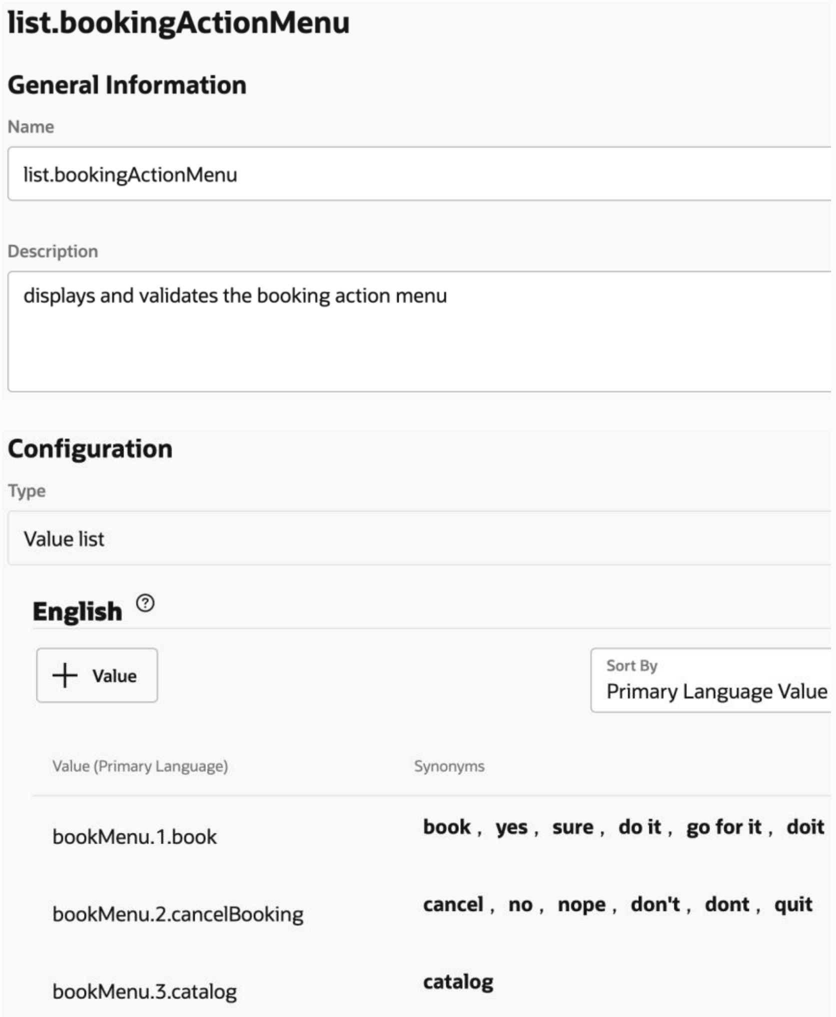
Define prompts and messages

- Error, disambiguation, prompt
- Use resource bundles

Optional: define list values as metadata and use resource bundle entries for each value

- Allow you to determine order in which items are displayed

Important: don't associate the entity with an intent



list.bookingActionMenu

General Information

Name: list.bookingActionMenu

Description: displays and validates the booking action menu

Configuration

Type: Value list

English

Sort By: Primary Language Value

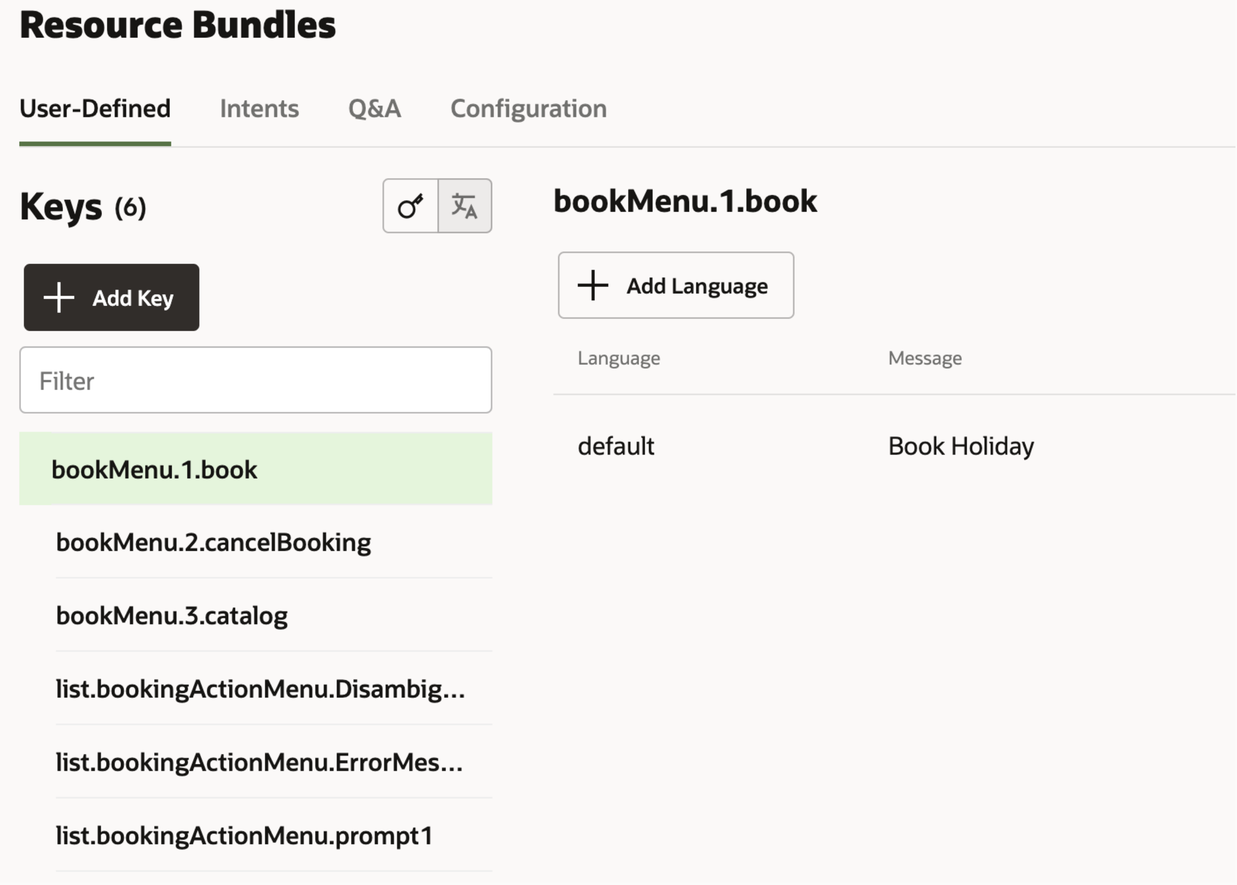
Value (Primary Language)	Synonyms
bookMenu.1.book	book , yes , sure , do it , go for it , doit
bookMenu.2.cancelBooking	cancel , no , nope , don't , dont , quit
bookMenu.3.catalog	catalog

Resource bundles

Bundles defined for all messages and prompts

List values defined as bundles if value cannot be displayed as an action button label

- In case of artificial value used like in previous screen shot



Resource Bundles

bookMenu.1.book
bookMenu.2.cancelBooking
bookMenu.3.catalog
list.bookingActionMenu.Disambig...
list.bookingActionMenu.ErrorMes...
list.bookingActionMenu.prompt1

bookMenu.1.book

Language	Message
default	Book Holiday

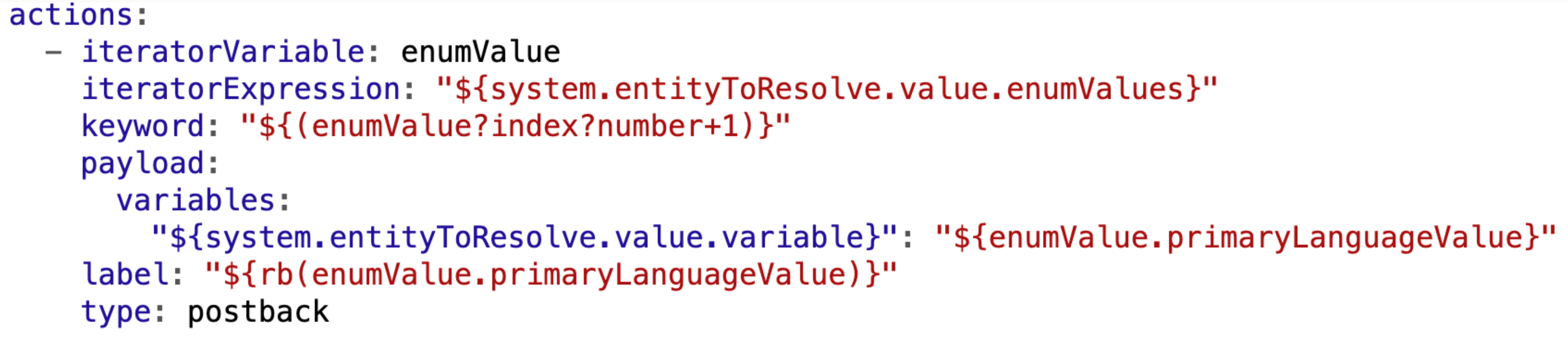
How to create entity-based action menus: The dialog flow state

Create a dialog flow state

- User Messaging | Resolve Entities | Resolve Declarative Entity

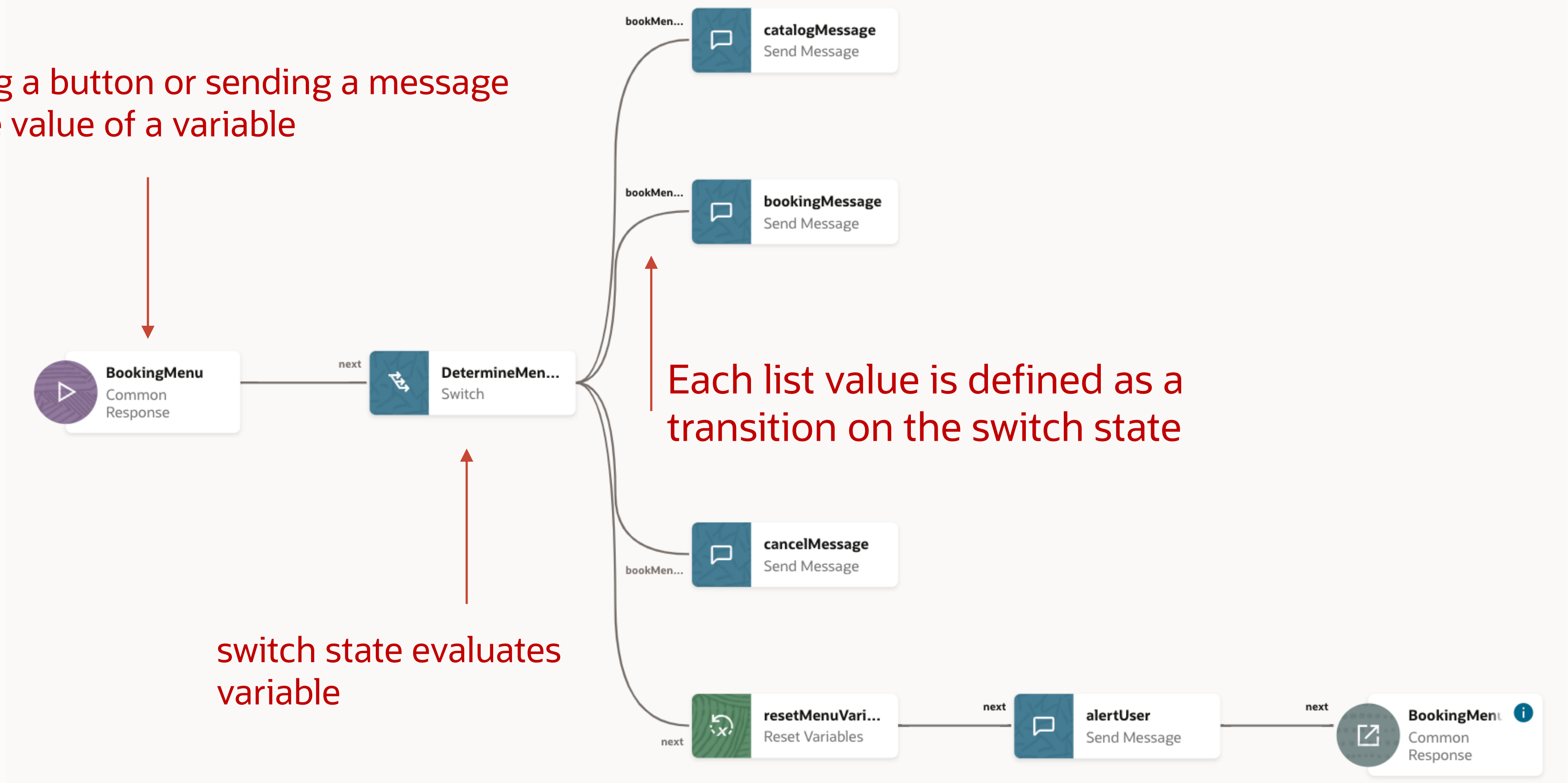
Edit dialog flow state properties

- Create flow variable pointing to list entity
- Edit response items property to use primaryLanguageValue



```
actions:
  - iteratorVariable: enumValue
    iteratorExpression: "${system.entityToResolve.value.enumValues}"
    keyword: "${(enumValue?index?number+1)}"
    payload:
      variables:
        "${system.entityToResolve.value.variable}": "${enumValue.primaryLanguageValue}"
    label: "${rb(enumValue.primaryLanguageValue)}"
    type: postback
```

Action menu flow



pressing a button or sending a message sets the value of a variable

Each list value is defined as a transition on the switch state

switch state evaluates variable

fallback in case of a value not mapped to a state

Entity-based action menus at runtime

Action menu displays as before

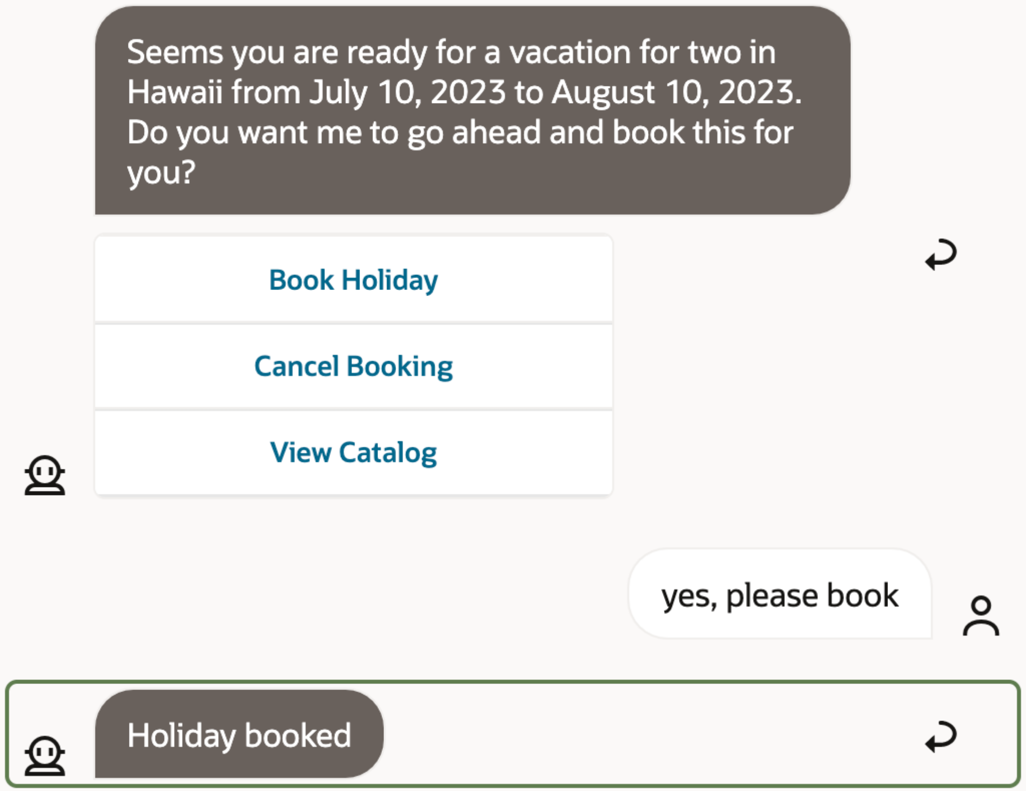
Value list entity value determines order in which action buttons show in the list, e.g.

- bookMenu.1.book
- bookMenu.2.cancelBooking

Synonyms make keywords and work even if used as part of a longer user message

User input is validated against values and synonyms.

- If user message does not match, then the error message defined on the value list is displayed and the user is re-prompted



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yes, please book

Holiday booked

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Best practices

Use action menus that are resolved from value list entities or composite bag entities

- All messages should be read from resource bundles
  - Define multiple entities prompts for displaying alternating messages
  - Define error messages and disambiguation messages
- Define entity values as metadata values to control the order in which a value appears in the menu and to ensure unique values

If not using entities

- Prompt, labels and keywords from resource bundles
- In case of an invalid user input, navigate to a dialog flow state to print a user message, reset the action menu variable and redirect to the action menu

Image courtesy of pixabay.com

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