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CS 510: Voice Assistants

Homework 2

Alexa Skills- Event Scheduler

Step 1- Invocation Name

Event Geek

Step 2 – Intents

1. Intent:

ScheduleEventIntent

Description:

This intent will help with scheduling any event on the calendar for the user by asking the details such as date, time, and name of the event

2. Intent:

CancelEventIntent

Description:

This intent will cancel an existing event that the user might have on his/her calendar by asking for the date, time, and name of the event

Step 3 – Sample Utterances

1. Intent:

ScheduleEventIntent

Utterances:

1. Schedule my calendar for {EventName} on {EventDate} at {EventTime}
2. Please schedule my calendar for {EventTime} {EventDate}
3. I would like to schedule my calendar for {EventName} on {EventDate} at {EventTime}
4. Please make an appointment on my calendar for {EventName} on {EventDate} at {EventTime}
5. I would like to make an appointment on my calendar for {EventName} on {EventDate} at {EventTime}
6. Schedule an appointment on my calendar for {EventName} on {EventTime} at {EventDate}
7. I want to go for a {EventName} on {EventDate} at {EventDate}
8. Please reserve my calendar for {EventName} on {EventDate} at {EventTime}
9. Can you please reserve my calendar for {EventName} on {EventDate} at {EventTime}
10. I would like to reserve my calendar for {EventName} on {EventDate} at {EventTime}
11. Can you book an appointment on my calendar for {EventName} on {EventDate} at {EventTime}

12. Please book an appointment on my calendar for {EventName} on {EventDate} at {EventTime}

2. Intent:

CancelEventIntent

Utterances:

1. Can you delete the {EventName} I have on {EventDate} at {EventTime}
2. Can you cancel the {EventName} I have on {EventDate} at {EventTime}
3. Cancel the appointment for {EventName} on {EventDate} at {EventTime}
4. I would like to cancel the {EventName} on {EventDate} at {EventTime}
5. I need to delete the {EventName} on {EventDate} at {EventTime}
6. Please delete the {EventName} on {EventDate} at {EventTime}
7. Please remove the event {EventName} on {EventDate} at {EventTime}
8. Could you please delete the {EventName} on {EventDate} at {EventTime} from my calendar
9. Can you remove {EventName} on {EventDate} at {EventTime}
10. Can you please discard the {EventName} I have on {EventDate} at {EventTime}
11. Discard from my calendar the {EventName} I have on {EventDate} at {EventTime}

Step 4 – Slots and Slot Types

1. "name": "EventDate"
"type": "AMAZON.DATE"

2. "name": "EventTime"
"type": "AMAZON.TIME"

3. "name": "EventName"
"type": "EventName"

Example for Event Names:

Haircut, Doctor's appointment, Birthday party, Friend's wedding

Step 5 – Logic for Each Intent

1. Schedule Event

If (CurrentEvent (EventDate & EventTime) == BusyDatesTimes (EventDate & EventTime))

{

‘ Your calendar is booked for this slot, please try another slot’

Else

‘ Your event is scheduled, Have a good day!’

}

2. Cancel Event

```
If (CurrentEvent (EventDate & EventTime) == ExistingEvent (EventDate &
EventTime))

{

    ' Your event is canceled, Have a good day!'

Else

    ' There is no such event in your calendar!'

}
```

Step 6:

Enclosed the zip file for interaction model and fulfilment.

Step 7 – Test the Alexa skill:

Sample List of Phrases:

1. Can you schedule a cleaning event at 10 am on May 10th
2. Please make an appointment for pest control on August 25th at noon
3. Make an appointment for dental cleaning on August 15th at 6pm
4. Create an event for birthday party on July 23rd at 6pm
5. Delete the appointment for pest control on May15th at noon
6. Cancel the cleaning event on May10th at 10am
7. Book my calendar for doctor's appointment on September 10th at 10am
8. Cancel my doctor's appointment on September 10th at 10am
9. Schedule an appointment for car service on October 12th at noon
10. Cancel the car service appointment on October12th at noon

Step 8 – Review and Reflection:

The overall impression of building the Alexa skill console was both refreshing and challenging. It was refreshing because I was able to build out a skill myself using the developer console and test it real time. The process itself was straightforward given the good presentation in the lecture videos and AWS developer docs forum. But when it came to trying to find answers for complex questions such as trying to use the calendar object in your existing intent it became challenging. This was because there are no external references on google outside the AWS developer docs. Once I figured my logic, the hardest part was getting the syntax right in javascript for multi-dimensional array access to delete events based on user's request. I created a multi-dimensional array to store the date and time for every event. Also, the other challenging part was not being able to use the print statement and only relying on 'speakOutput' to verify variable values etc. Using an online compiler on the side to verify if the equivalent javascript code was working helped me quicken my debug on the Alexa platform. The most enjoyable part was getting the logic working incrementally and finally achieving the end goal as visualized.

The skill as it is today does a good job of capturing an event request from the users and checking it against a multi-dimensional array of current stored events in the users' calendar. If there is no conflict found then it adds the event to the same array of events. Next time when user schedules the above slot Alexa indicates that the slot is booked. And for the event deletion intent, I check for the user's request from the array of events, if a valid event is found then I remove the event from the array and indicate to user that the event is removed from their calendar. If not,

Alexa will prompt that there is no such event in the user's calendar. In future this skill can be made to access the calendar object for accessing the real calendar.

Along, the development process I spent enough time testing the skill with various test cases. The skill seemed to work okay with various keywords for scheduling and canceling. In rare cases when keywords such as appointment and event repeated in the sentence then the right event name was not parsed. I brainstormed the various ways the user might make the request and accordingly populated my list of test phrases and overall, the skill handled most to all of them correctly.