**Name: Chitradevi Maruthavanan**

# CS 510: Voice Assistants Final Project

### Amazon Alexa Skill - Event Scheduler

**Step 1- Application Description**

The application is called Event Scheduler and it is used to help user schedule events in their calendar. It can do multiple functions such as

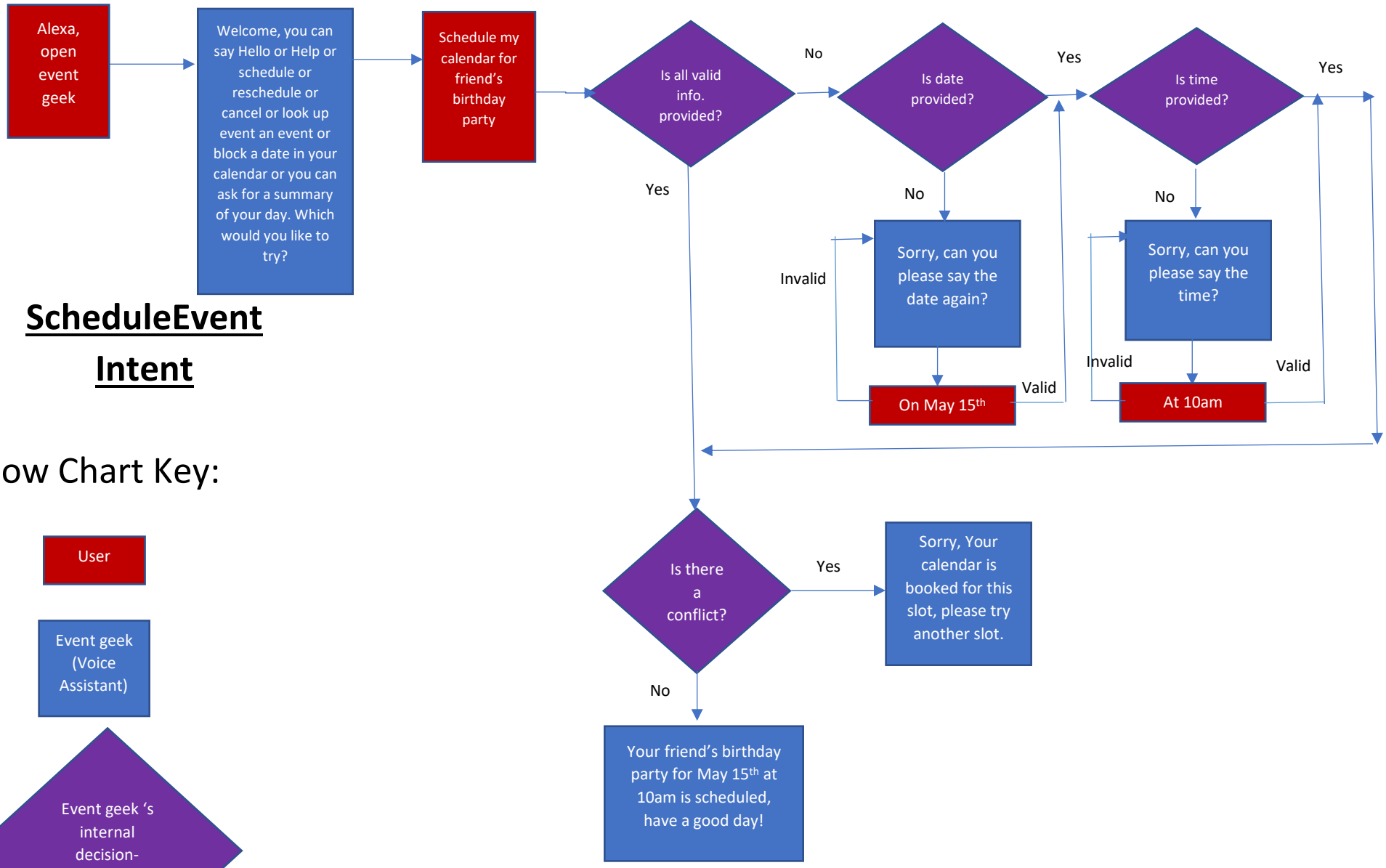
- Schedule an event
- Reschedule an event
- Cancel an event
- Look up an event
- Block calendar dates
- Provide summary of the day

**Skill name:** Event Scheduler

**Invocation name:** Event Geek

Event Scheduler is a very helpful tool for users that need to keep track of their events easily and effectively. This skill helps users stay updated with their upcoming events through an interactive and user-friendly VUI design. Though the skill currently has many tasks that a user would mostly need to keep track of their events, there are more tasks that I plan to add to make it more productive.

## Conversational Flow Diagrams:



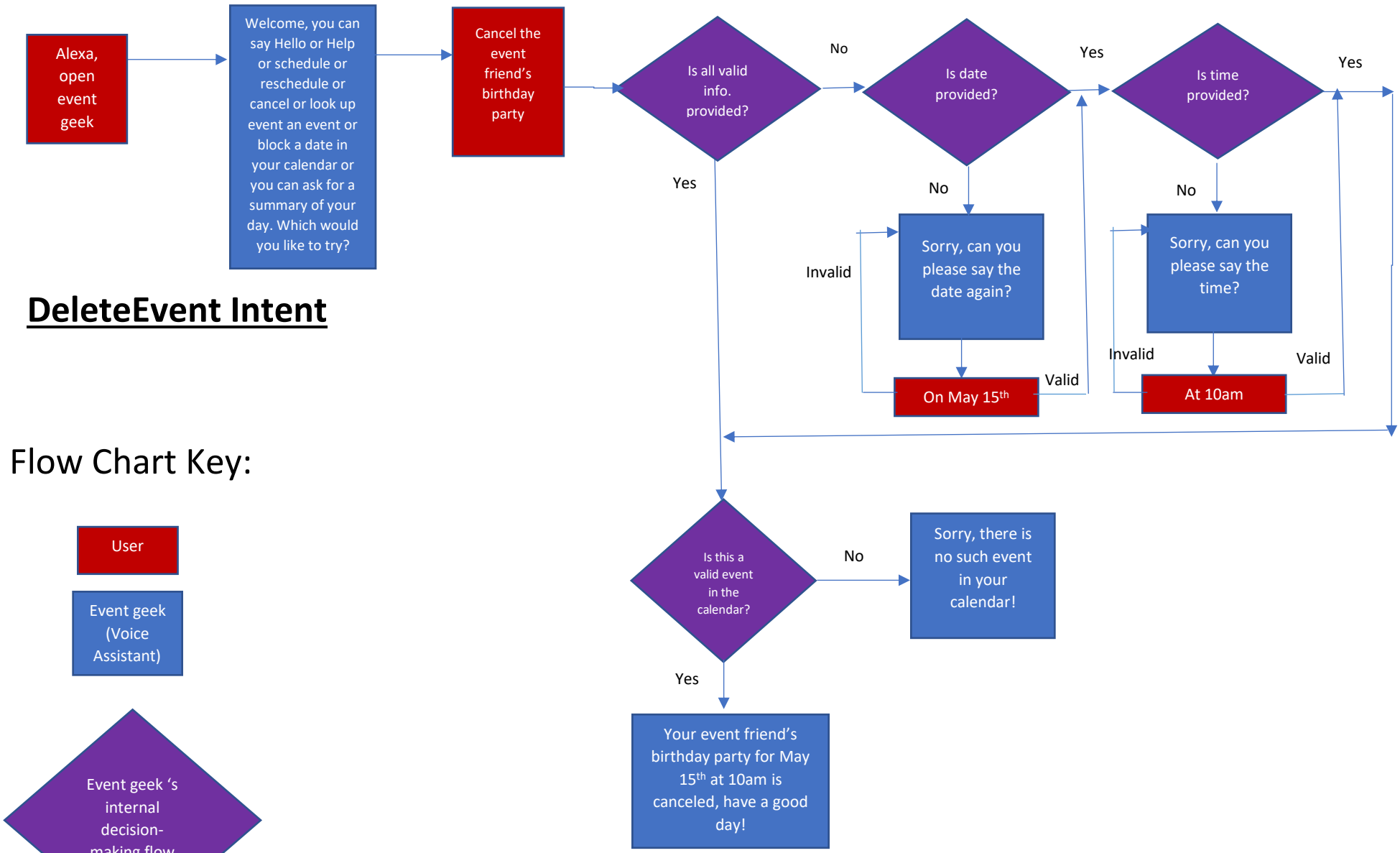

# ScheduleEvent Intent

## Flow Chart Key:

User

Event geek (Voice Assistant)

Event geek 's internal decision-making flow



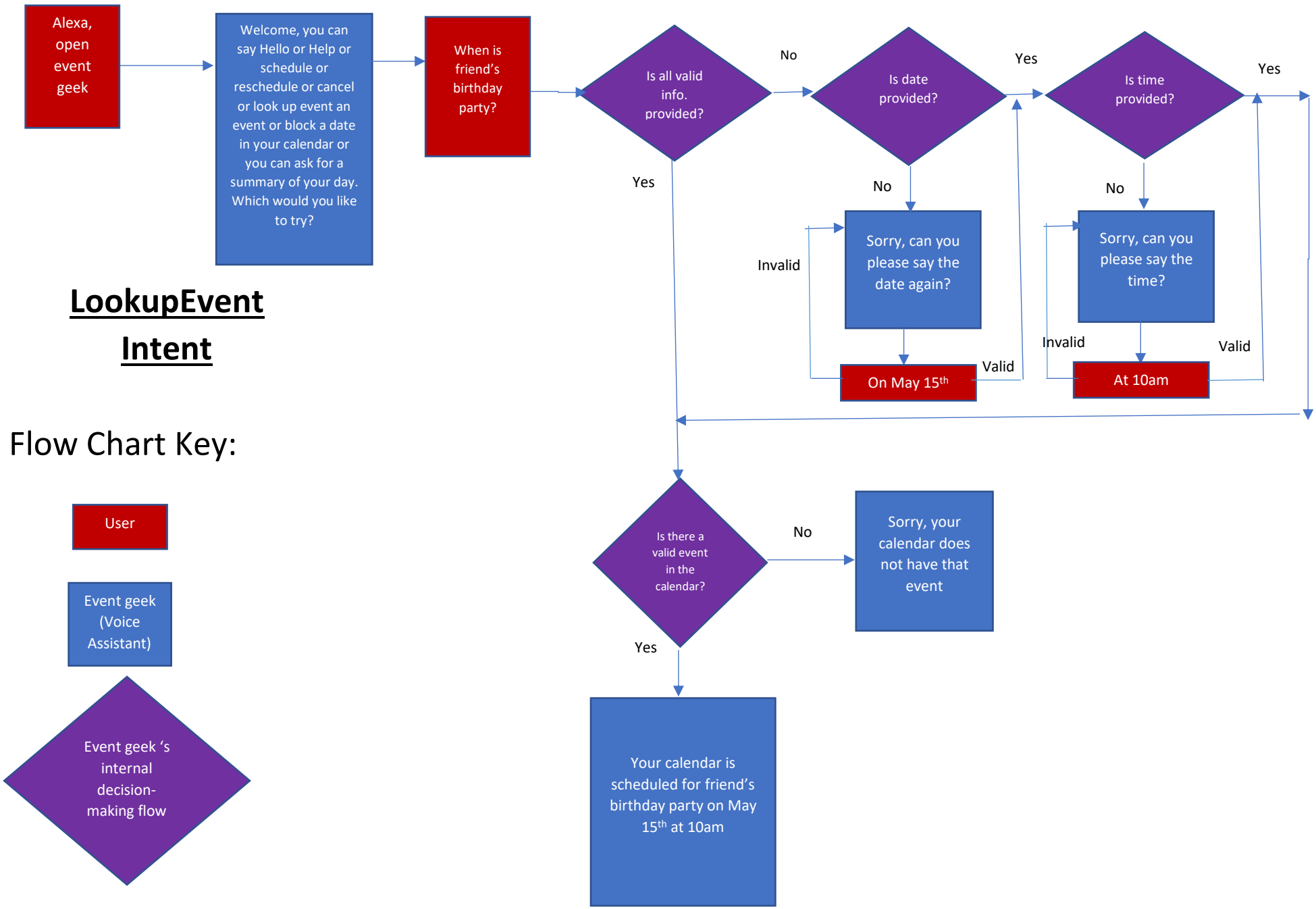

# DeleteEvent Intent

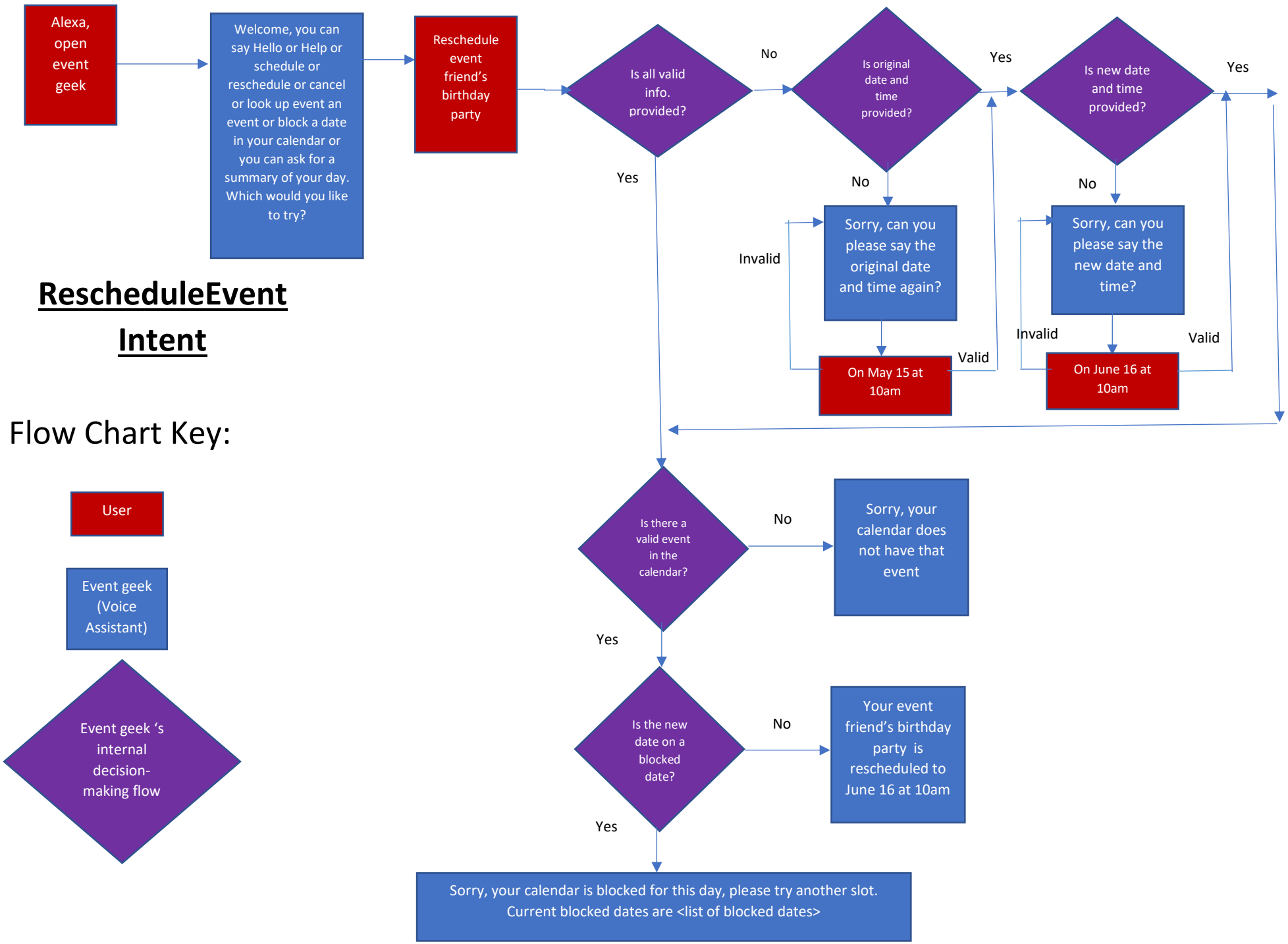
## Flow Chart Key:

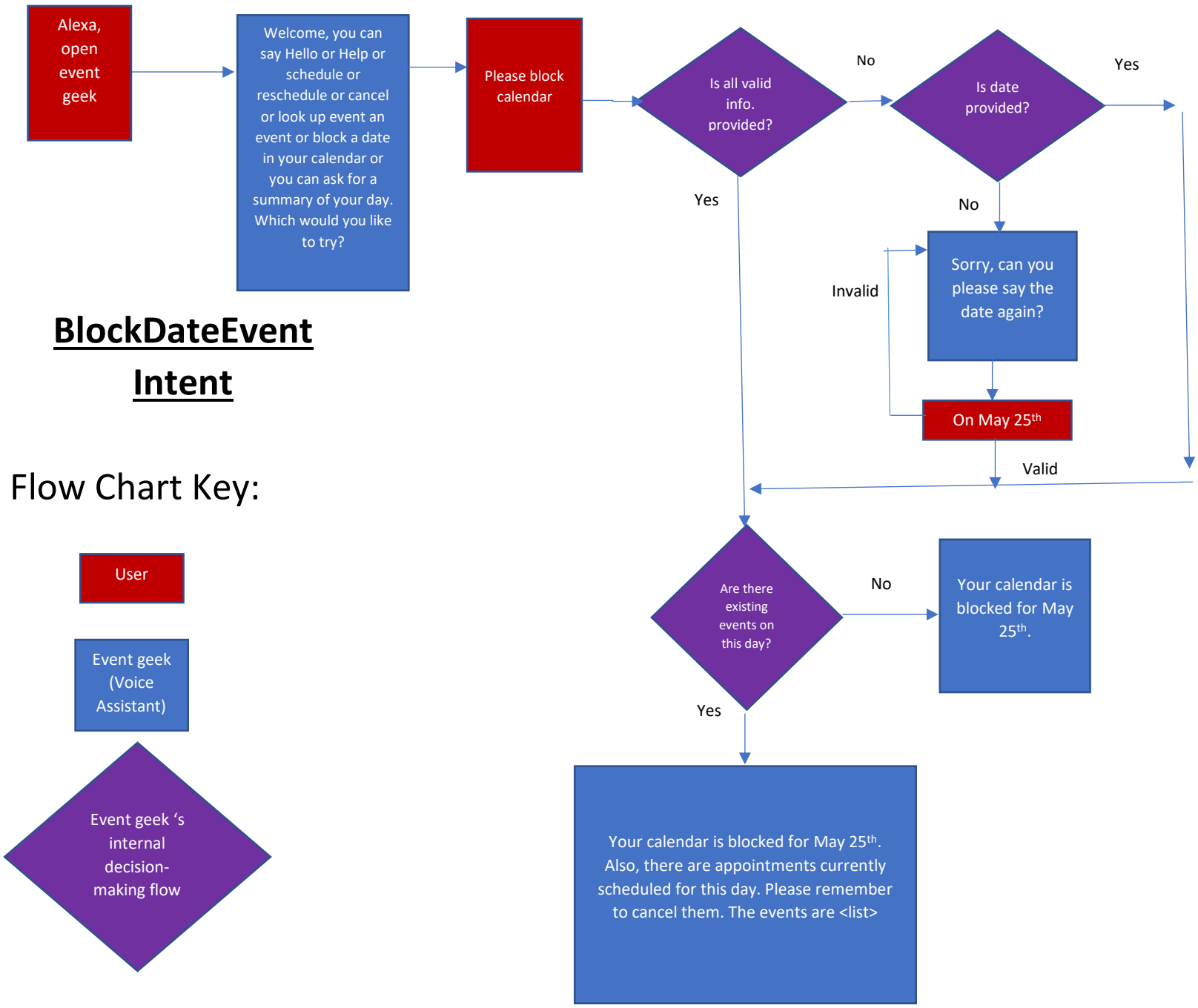
User

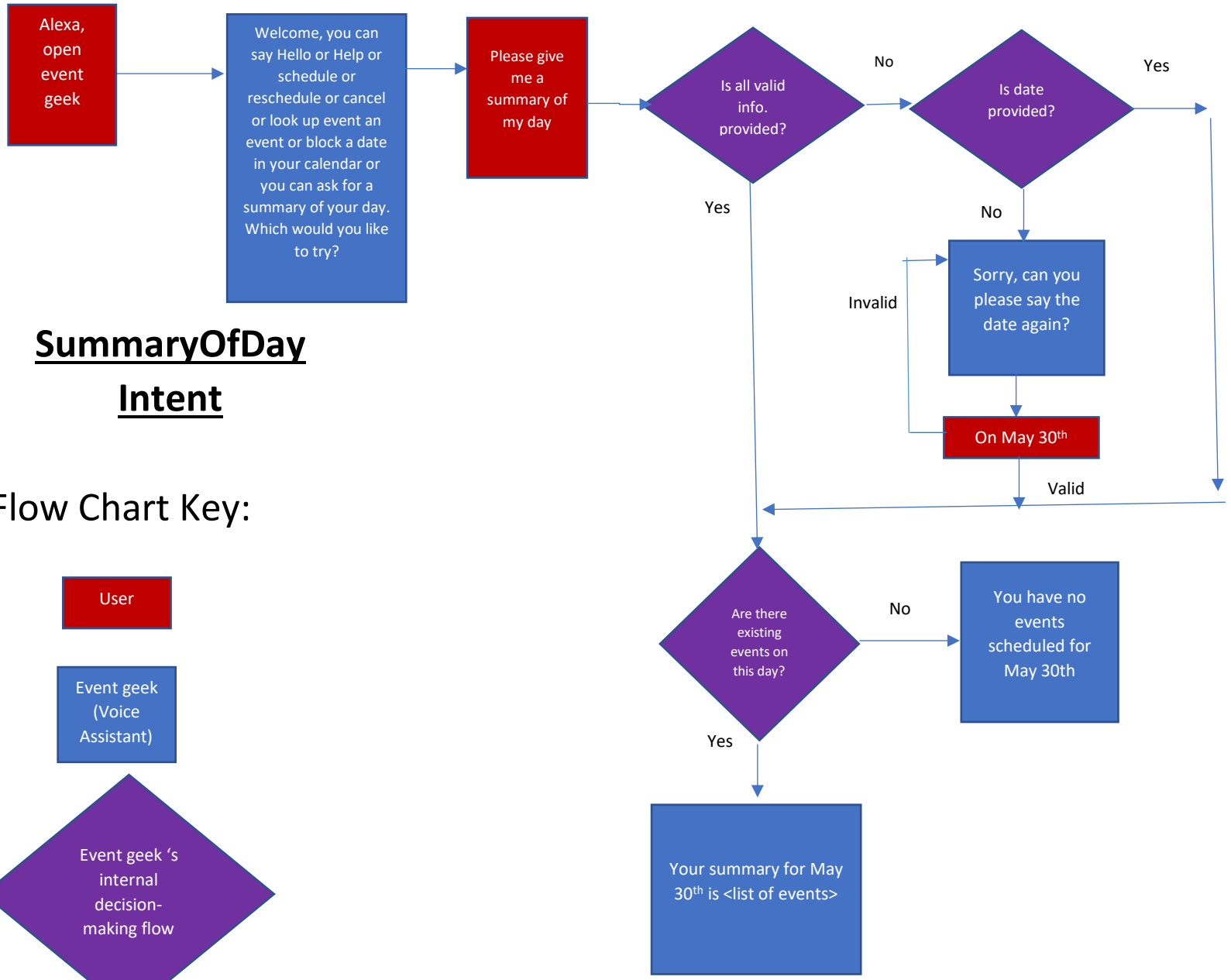
Event geek (Voice Assistant)

Event geek 's internal decision-making flow


Alexa, open event geek
Welcome, you can say Hello or Help or schedule or reschedule or cancel or look up event an event or block a date in your calendar or you can ask for a summary of your day. Which would you like to try?
When is friend's birthday party?
Is all valid info. provided?
No
Is date provided?
Yes
Is time provided?
Yes
Yes
No
No
Invalid
Sorry, can you please say the date again?
On May 15th
Valid
Invalid
Sorry, can you please say the time?
At 10am
Valid
LookupEvent Intent
Flow Chart Key:
User
Event geek (Voice Assistant)
Event geek 's internal decision-making flow
Is there a valid event in the calendar?
No
Sorry, your calendar does not have that event
Yes
Your calendar is scheduled for friend's birthday party on May 15th at 10am


Alexa, open event geek
Welcome, you can say Hello or Help or schedule or reschedule or cancel or look up event an event or block a date in your calendar or you can ask for a summary of your day. Which would you like to try?
Reschedule event friend's birthday party
Is all valid info. provided?
No
Is original date and time provided?
Yes
Is new date and time provided?
Yes
Yes
No
No
Invalid
Sorry, can you please say the original date and time again?
Valid
On May 15 at 10am
Sorry, can you please say the new date and time?
Invalid
Valid
On June 16 at 10am
ReschedulEvent Intent
Flow Chart Key:
User
Event geek (Voice Assistant)
Event geek 's internal decision-making flow
Is there a valid event in the calendar?
No
Sorry, your calendar does not have that event
Yes
Is the new date on a blocked date?
No
Your event friend's birthday party is rescheduled to June 16 at 10am
Yes
Sorry, your calendar is blocked for this day, please try another slot. Current blocked dates are <list of blocked dates>


Alexa, open event geek
Welcome, you can say Hello or Help or schedule or reschedule or cancel or look up event an event or block a date in your calendar or you can ask for a summary of your day. Which would you like to try?
Please block calendar
Is all valid info. provided?
No
Is date provided?
Yes
Yes
No
Invalid
Sorry, can you please say the date again?
On May 25th
Valid
Are there existing events on this day?
No
Your calendar is blocked for May 25th.
Yes
Your calendar is blocked for May 25th. Also, there are appointments currently scheduled for this day. Please remember to cancel them. The events are <list>
BlockDateEvent Intent
Flow Chart Key:
User
Event geek (Voice Assistant)
Event geek 's internal decision-making flow


Alexa, open event geek
Welcome, you can say Hello or Help or schedule or reschedule or cancel or look up event an event or block a date in your calendar or you can ask for a summary of your day. Which would you like to try?
Please give me a summary of my day
Is all valid info. provided?
No
Is date provided?
Yes
Yes
No
Invalid
Sorry, can you please say the date again?
On May 30th
Valid
Are there existing events on this day?
No
You have no events scheduled for May 30th
Yes
Your summary for May 30th is <list of events>
SummaryOfDay Intent
Flow Chart Key:
User
Event geek (Voice Assistant)
Event geek 's internal decision-making flow

**Step 2 – Interaction Model**

The model has 6 intents and 3 slots (2 built in and 1 custom). Each intent has 25 utterances defined.

**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.

3. **Intent:**

   LookupEventIntent

**Description:**

This intent will look up the user's calendar for the requested event and respond back with the date and time for the event. If there are multiple events scheduled under the same name, then dates and times for all of them will be provided.

4. **Intent:**

   RescheduleEventIntent

   **Description:**

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

5. **Intent:**

   BlockDateIntent

   **Description:**

   This intent will block a day on user's calendar by asking for a date. Users can block multiple dates on the calendar.

6. **Intent:**

   SummaryOfDayIntent

   **Description:**

   This intent will look up the user's calendar for the requested date and respond back with a summary of the event names and times for the events on that date.

## Utterances

### Intent 1

ScheduleEventIntent

### Utterances

1. Book {EventName} on {EventDate} at {EventTime}
2. Schedule {EventName} on {EventDate} at {EventTime}
3. Make a placeholder for {EventName} on {EventDate} at {EventTime}
4. I would like to make a {EventName} event for {EventDate} at {EventTime}
5. Please help to schedule an event on {EventDate} at {EventTime} for {EventName}
6. I am wanting to book my calendar for {EventName} on {EventDate} at {EventTime}
7. Please help to make an event for {EventName} on {EventDate} at {EventTime}
8. Can you please reserve my calendar at {EventTime} on {EventDate} for {EventName}
9. Can you please make a reservation for {EventName} on {EventDate} at {EventTime}
10. I would like to make a placeholder for {EventName} on {EventTime} at {EventDate}
11. Schedule my calendar for {EventName} on {EventDate} at {EventTime}
12. Can you please schedule my calendar for {EventName} on {EventDate} at {EventTime}
13. I would like to schedule my calendar for {EventName} on {EventDate} at {EventTime}
14. Please make an event on my calendar for {EventName} on {EventDate} at {EventTime}
15. I would like to make an event on my calendar for {EventName} on {EventDate} at {EventTime}
16. Schedule an event on my calendar for {EventName} on {EventTime} at {EventDate}

17. I want to go for a {EventName} on {EventDate} at {EventDate}
18. Please reserve my calendar for {EventName} on {EventDate} at {EventTime}
19. Can you please reserve my calendar for {EventName} on {EventDate} at {EventTime}
20. I would like to reserve my calendar for {EventName} on {EventDate} at {EventTime}
21. Can you book an event on my calendar for {EventName} on {EventDate} at {EventTime}
22. Please book an event on my calendar for {EventName} on {EventDate} at {EventTime}
23. Book an event for {EventName} on {EventDate} at {EventTime}
24. Make an event {EventName} on {EventDate} at {EventTime}
25. Schedule an event {EventName} on {EventDate} at {EventTime}

**Intent 2**

DeleteEventIntent

**Utterances**

1. Remove {EventName} on {EventDate} at {EventTime}
2. Delete {EventName} on {EventDate} at {EventTime}
3. Cancel {EventName} on {EventDate} at {EventTime}x`
4. Please cancel {EventName} on {EventDate} at {EventTime}
5. Please delete {EventName} on {EventDate} at {EventTime}
6. Can you delete the {EventName} I have on {EventDate} at {EventTime}
7. Can you cancel the {EventName} I have on {EventDate} at {EventTime}
8. Cancel the event for {EventName} on {EventDate} at {EventTime}

9. I would like to cancel the {EventName} on {EventDate} at {EventTime}
10. I need to delete the {EventName} on {EventDate} at {EventTime}
11. Please delete the {EventName} on {EventDate} at {EventTime}
12. Please remove the event {EventName} on {EventDate} at {EventTime}
13. Could you please delete the {EventName} on {EventDate} at {EventTime} from my calendar
14. Can you remove {EventName} on {EventDate} at {EventTime}
15. Can you please discard the {EventName} I have on {EventDate} at {EventTime}
16. Discard from my calendar the {EventName} I have on {EventDate} at {EventTime}
17. Please remove the event {EventName} I have on {EventDate} at {EventTime}
18. Delete the event {EventName} on {EventDate} at {EventTime}
19. Drop the event {EventName} on {EventDate} at {EventTime}
20. Drop {EventName} on {EventDate} at {EventTime}
21. Can you drop the event {EventName} on {EventDate} at {EventTime}
22. Would you please remove the event {EventName} I have on {EventDate} at {EventTime}
23. I want to drop {EventName} on {EventDate} at {EventTime}
24. Can you please delete the event {EventName} on {EventDate} at {EventTime}
25. Please discard the event {EventName} on {EventDate} at {EventTime}

**Intent 3**

LookupEventIntent

**Utterances**

1. Can you look up {EventName}
2. Can you lookup {EventName}
3. Please look up {EventName}
4. Please lookup {EventName}
5. When is the {EventName}
6. When does the {EventName} fall on
7. Can you tell me when the {EventName} is on
8. Please lookup the {EventName}
9. What date and time is the the {EventName} on
10. Check calendar for the {EventName}
11. Would you tell me when the {EventName} is on
12. Please check my calendar for the {EventName}
13. Tell me when the {EventName} is scheduled for
14. I am looking for when the {EventName} is scheduled
15. I am looking for when the {EventName} is scheduled for
16. When is this event {EventName} scheduled

17. Can you tell me when {EventName} is scheduled
18. Please lookup my calendar for {EventName}
19. Please look up my calendar for {EventName}
20. What is the date and time for {EventName}
21. In my calendar when is {EventName}
22. I am looking to find when {EventName} is on my calendar
23. Please respond with details of {EventName}
24. Respond with date and time of {EventName}
25. Let me know when the {EventName} happens

**Intent 4**

RescheduleEventIntent

**Utterances**

1. Reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
2. Please reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
3. Can you reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
4. I would like to reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
5. I am wanting to reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
6. Please update the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
7. I would like to change the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
8. Help me to reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}

9. Go ahead and reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
10. Go ahead and Please update the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
11. I want to update the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
12. I want to reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
13. Alright I want to update the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
14. I just decided to reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
15. It is confirmed go ahead and reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
16. I plan to reschedule the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
17. Change the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
18. I would like to change the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
19. Confirming the update of {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
20. Would like to confirm the reschedule of {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
21. Would like to confirm the update of {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
22. Move the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
23. I would like to move the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
24. Can you move the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}
25. Go ahead and move the {EventName} on {EventDate} at {EventTime} to {EventDateNew} at {EventTimeNew}

**Intent 5**

BlockDateIntent

**Utterances**

1. I am wanting to block my calendar on {EventDate}
2. I would like to keep my calendar blocked for {EventDate}
3. Block my calendar on {EventDate} for vacation
4. Keep my calendar blocked for {EventDate}
5. I would like to block my calendar on {EventDate}
6. Can you block my calendar on {EventDate}
7. Can you please block {EventDate}
8. Block the entire day {EventDate}
9. BLock {EventDate}
10. Please block {EventDate}
11. Can you block my calendar on {EventDate}
12. Would you block my calendar for {EventDate}
13. I would like you to block my calendar for {EventDate}
14. Wondering if you can block my calendar for {EventDate}
15. I have some new plans, please block my calendar for {EventDate}
16. I am planning a vacation, please block my calendar for {EventDate}

17. Can you block my schedule for {EventDate}
18. I would like to block my events for {EventDate}
19. Please go ahead and block calendar on {EventDate}
20. Keep my calendar blocked on {EventDate}
21. Help me block my schedule for {EventDate}
22. Help me block my calendar for {EventDate}
23. Go ahead and block {EventDate}
24. Go ahead and block calendar for {EventDate}
25. Vacation time block calendar for {EventDate}

**Intent 6**

SummaryOfDayIntent

**Utterances**

1. Please give me a summary of my day for {EventDate}
2. Can you summarize my day's activities for {EventDate}
3. Can you give me a summary of the {EventDate}
4. Please give me a summary of my day for {EventDate}
5. Can you summarize my day's activities for {EventDate}
6. Can you give me a summary of the {EventDate}
7. Report the summary of my day {EventDate}
8. Give me a synopsis of {EventDate}

9. Give me a synopsis of events on {EventDate}
10. Give me a synopsis of my calendar on {EventDate}
11. Provide me a synopsis of my calendar on {EventDate}
12. Synopsis of my day {EventDate}
13. Summary of my day {EventDate}
14. What is the synopsis of my day on {EventDate}
15. Give me a summary of events on {EventDate}
16. Give me a summary of calendar for {EventDate}
17. Summarize events on {EventDate}
18. Summarize events on {EventDate} for me
19. Please summarize events on {EventDate} for me
20. Wondering how my day looks like on {EventDate}
21. How is my calendar looking on {EventDate}
22. Brief me the events on my calendar for {EventDate}
23. Provide a brief summary of my day on {EventDate}
24. Provide a brief summary of my day {EventDate}
25. What events do i have on {EventDate}

## Slots and Slot types

### Built-in slots

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

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

### Custom slots

1. "name": "EventName"
   "type": " EventName"

   Example for Event Names:

   Haircut, Doctor's appointment, Birthday party, Friend's wedding, Kid's playdate, Baby shower

**Step 3 – Fulfillment (Back-end Logic for Intents)**

1. **Schedule Event**

```
If (CurrentEvent (EventDate & EventTime) == ExistingEvent (EventDate & EventTime)) {
        ‘ Your calendar is booked for this slot, please try another slot’
}
Else {
        Add CurrentEvent (EventDate & EventTime) to ExistingEvent(EventDate & EventTime))
        ‘ Your event is scheduled, Have a good day!’
}
```

2. **Cancel Event**

```
If (CurrentEvent (EventDate & EventTime) == ExistingEvent (EventDate & EventTime)){
        Remove CurrentEvent (EventDate & EventTime) to ExistingEvent(EventDate & EventTime))
        ‘ Your event is canceled, Have a good day!’
Else {
        ‘ There is no such event in your calendar!’
}
```

**3. Event Lookup**

If (LookupEventName == EventName (ExistingEvents)){

‘ Your calendar is scheduled for LookupEventName on EventDate at EventTime’

}

Else {

‘No, your calendar does not have that event’

}

**4. Block date**

Add CurrentDatetoBlock to BlockedDates[]

If CurrentDatetoBlock == EventDate (ExistingEvents ){

Add ExistingEvents (EventDate) to ConflictEvents[]

‘Your calendar is blocked for CurrentDatetoBlock. Also, there are appointments currently scheduled for this day.

Please remember to cancel them. The events are ConflictEvents[]`

}

Else {

`Your calendar is blocked for CurrentDatetoBlock`

}

5. **Reschedule Event**

```
If ((CurrentEvent (OriginalEventDate & OriginalEventTime) == ExistingEvents (EventDate & EventTime))   {

        if (CurrentEvent (NewEventDate) != BlockedDates[]) {

                CurrentEvent(EventDate,EventTime) = CurrentEvent(NewEventDate,NewEventTime)

                'Your event is rescheduled to newEventDate and newEventTime'

        }

        Else {

'               'Sorry your calendar is blocked for this date'

        }

}

Else {

        Sorry, there is no such event in your calendar

}
```

6. **Summary of my Day**

If SummaryLookupDate == EventDate(ExistingEvents) {

Add all of those ExistingEvents to SummaryofDay[]

'Your summary for SummaryLookupDate is SummaryofDay[]'

}

Else {

'You have no events scheduled for SummaryLookupDate'

}

**<u>Step 4 – User Testing</u>**

**User 1 – Akansha Jain**

**User 2 – Shyam Kunchithapathamð**

**Task Table (Completed by typing utterances into the Alexa testing tab):**

| Task | Completed | Time to complete (Self) | Time to complete (User 1) | Time to complete (User 2) |
|---|---|---|---|---|
| Task 1(Schedule an event) | Yes | 35 secs | 45 secs | 49 secs |
| Task 2 (Cancel an event) | Yes | 30 secs | 40 secs | 46 secs |
| Task 3(Look up an event) | Yes | 22 secs | 30 secs | 35 secs |
| Task 4(Reschedule an event) | Yes | 43 secs | 51 secs | 48 secs |
| Task 5(Summary of my day) | Yes | 25 secs | 36 secs | 40 secs |

**Likert Scale:**

**User 1:**

| Question | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| The system is easy to use | | | | | **X** |
| The system understands what I say | | | | | **X** |
| Sometimes the system gives an irrelevant response | **X** | | | | |
| The system is confusing | **X** | | | | |
| I find the system strange | **X** | | | | |
| It feels like I am having a conversation with someone | | | | | **X** |

| | | | | | |
|---|---|---|---|---|---|
| I like the idea of being able to interact with this | | | | | **X** |
| I would be happy to use this system again and again | | | | **X** | |
| I will try to avoid using this system in the future | **X** | | | | |
| I would recommend this system to others | | | | **X** | |

**User 2:**

| **Question** | **Strongly disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly agree** |
|---|---|---|---|---|---|
| The system is easy to use | | | | **X** | |
| The system understands what I say | | | | | **X** |
| Sometimes the system gives an irrelevant response | | **X** | | | |
| The system is confusing | **X** | | | | |
| I find the system strange | **X** | | | | |
| It feels like I am having a conversation with someone | | | | | **X** |
| I like the idea of being able to interact with this | | | | | **X** |
| I would be happy to use this system again and again | | | | **X** | |
| I will try to avoid using this system in the future | **X** | | | | |
| I would recommend this system to others | | | | | **X** |

**Open ended questions:**

1. What is you overall impression on this skill?
    a. User 1 response: The skill is easy to understand and interact with. I like the various features of this skill which will help me keep my schedule on track.
    b. User 2 response:  I really liked the various capabilities of this system, it felt very simple at the same time effective. It's capabilities can definitely be expanded more so it fulfills all of the user's intent, but it is very good in handling what it is capable of now.
2. How user friendly was this skill?
    a. User 1 response: I feel the skill to be friendly. It understood all my phrases and responded back correctly. The responses were human like as well.
    b. User 2 response: I had a pleasant experience interacting with this system. The system was effective in requesting the key values from me to accomplish my task. I felt like I was interacting with a real person.
3. What are your suggestions on future additions for the skill?
    a. User 1 response: It would be nice to link the skill to an online calendar in future so I can view the events status through the calendar as well.
    b. User 2 response: More capabilities such as deleting all events on a day and integrating with a calendar like google calendar or calendly would be great.

## Step 5 – Review and Reflection

I liked working on this the project overall. I was able to implement the project using Alexa developer console. I developed a total of six intents for this skill. I improvised the three intents that were developed earlier for homework assignments with updates to back-end logic and increased sample utterances. I developed three more new intents for the project which significantly expands the scope of the voice assistant. I selected the intents based on what the user would want typically from a scheduling assistant. After coming up with sample utterances for each intent I used the 'Evaluate model' tab to test sample utterances. Initially many of the utterances did not match to correct intent. But after adding more utterances and rebuilding model, the intents started to match. I liked this feature as it showed what intent got selected and what slot values got parsed from the utterance and if it got parsed in the right way. I really liked building the back-end logic. I have some level of experience with node.js and I was able to learn more and use concepts such as arrays, for loops and if else blocks to get all my logic working. Writing the pseudocode first and then coding the logic helped to get the code working quickly as I hashed out all the logic up front. I initially did not set auto delegation turned on in the intents. So, the intents were not completing properly after I gave inputs for the prompts for missing slot values. Then I realized I missed to turn on this feature. After that, the intents completed properly when responding to prompts.

I spent almost one week working on this project. The longest part was coding the back-end logic in node.js to get it working correctly for all intents. This was the most interesting and fun part also. I also redefined the intents multiple times to make it more user friendly and achievable within the project time frame. I liked the quicker deployment cycles in Alexa compared to Dialog flow which made me chose Alexa console for this project. Since I explored the coding during initial homework assignments, I felt that coding backend logic for the final project work was easier. Coming up with multiple utterances for each intent also consumed time. But fine tuning the same utterances to include realistic user utterance scenarios helped when I was having issues with utterances not matching the expected intents. Re-deploying the skill before testing each logic code change also was time consuming, so I used online JavaScript compilers to test my basic logic before I implemented it in Alexa console. This helped me save a lot of time.

Testing was the most important part in this project. I had testing going on from the beginning of the project, starting from defining intents and getting initial utterances recorded in interaction model. I liked the 'evaluate model' feature which helped to make sure utterances are properly decoded. I had challenges in getting the event name which is a custom slot to get properly decoded. After adding enough utterances in intents and properly placing the event name in the utterances helped get the event name matched. After evaluating the model and writing basic logic in fulfillment I started deploying the code and testing in the 'Test' tab of the console. I took care of usability testing in all phases of development to make sure skill is user friendly. I prioritized testing most common utterances by users. Then towards end I performed user testing of my skill with two users. I let them understand the capabilities of the skill and then asked them to perform few tasks to test the skill. Then I compared their time to complete the tasks and mine. The times were roughly in the ball park range of mine. I also obtained feedback for various areas such as usability, overall impressions and intended updates to the skill. My Likert scale score chart was written to test for accuracy, ease of use, authenticity, and likeability of the skill. I avoided ambiguous words in my test questions, and avoided negative words as well to make the

questions more effective to collect feedback. If I had more time, I would like to test with more users from different demographics such as varying age and varying technical acumen to see how my skill responds. I would continue to use the Liker scale score charts to get overall impressions and feedback on my skill.

in the future I would like to integrate the skill with a calendar such as google calendar for better user experience. This will help the user visually confirm the events and quickly confirm them by viewing. I also intend to expand skill to include personal and business calendars for users and calendars for multiple users in the family. This would make the skill more effective as a method to check for conflicts across family member's calendars while scheduling an event in any calendar. And currently the skill outputs the list of events in mm-dd-yyyy format like 11-30-2022, when asked for summary of day or to look up an event. I would like to make upgrades so that the skill will respond back to the user for these intents with date in month, day, and year format like November 30th 2022. I would also like to add the functionality to block multiple dates as part of the Block date intent. I would also like to add the feature to the schedule intent to schedule recurring appointments weekly or monthly or yearly. Same for cancellations – I would like to make bulk cancellation of multiple events and recurring events. Getting the summary of the events for the entire week is also something I like to add and giving events the priority status such as high, medium, and low so that to accordingly filter events when user needs to list events of certain priority. Along this implementation in the future, I would like to test the skill incrementally as and when new feature gets added so I can incorporate user feedback more effectively and accordingly fine tune the interaction model and back-end logic that go with it.

## Step 6 – Demo and Presentation

https://media.pdx.edu/media/t/1_hv0t0bkp/265484742