

ORACLE®

Oracle Digital Assistant

The Complete Training

Q&A



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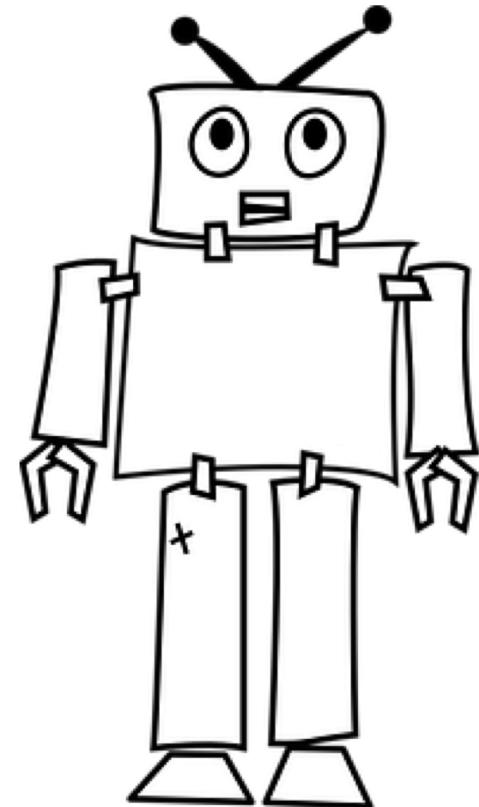
Topic agenda

- 1 ➤ Introducing Q&A
- 2 ➤ QnA and Digital Assistant
- 3 ➤ Reusable QnA skill

Topic agenda

- 1 ➤ Introducing Q&A
- 2 ➤ QnA and Digital Assistant
- 3 ➤ Reusable QnA skill

Sometimes a question is what it is;
a question



Q & A builder

- Intent resolution – sentence level resolution
 - Trying to establish meaning from a sentence
 - Meaning and structure are important
 - Maps to a single transaction/usecase
- QnA – word level resolution
 - Uses an intelligent search across questions and answers
 - Can be tuned to define Q&A terms and stop words
- “Lost my bank details, need to reset password”
- “Can I return these shoes”

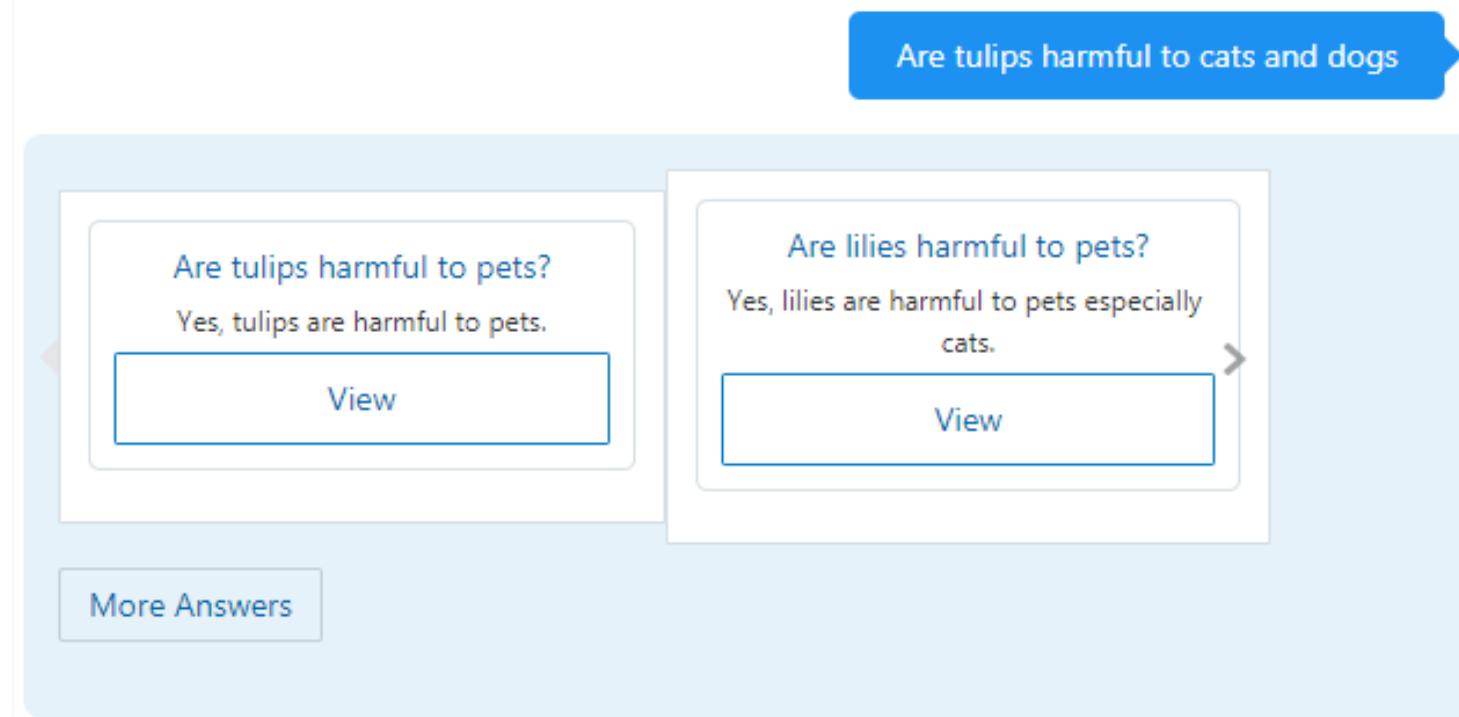
Q & A builder

- Q & A loaded from a CSV
 - Category, question, answer

	A	B	C
1	category_path	questions	content
2	After you order	How do I track my order?	You can return to the 24hrsflowers chatbot at anytime and track your order.
3	Care instructions	Are sunflowers harmful to pets?	No, sunflowers are not harmful to pets
4	Care instructions	What is the estimated lifespan of roses	Normally 7 - 12 days
5	Care instructions	Are peonies harmful to pets?	No, peonies are not harmful to pets.
6	Care instructions	What is the estimated lifespan of frees	Normally 7 days
7	Care instructions	Are Alstromeria harmful to pets?	Yes, Alstromeria are harmful to pets.
8	Care instructions	Are lilies harmful to pets?	Yes, lilies are harmful to pets especially cats.
9	Care instructions	What is the estimated lifespan of lilies	Normally 7 - 11 days
10	Product and packaging	How are the bouquets packaged?	24hrsflowers flowers are sent in branded cardboard boxes.
11	Care instructions	What is the estimated lifespan of Alstro	Normally 7 - 12 days
12	Care instructions	What is the estimated lifespan of sunfl	Normally 7 days

Q & A builder

- Q & A loaded from a CSV
 - Category, question, answer
 - Allows matching questions to be browsed



Q & A at runtime

- Intent resolved
- Q & A resolved
- Could be intent or Q & A

Testing Skill Reset

What is my balance?

For which account do you want your balance?

savings

checking

credit card

What is my balance? 🔗

Q & A at runtime

- Intent resolved
- Q & A resolved
- Could be intent or Q & A

Testing Skill Reset

[Can my points expire?](#)

[Can my points expire?](#)
Any points you earn will not expire.

[View](#)

[More Answers](#) | [Categories](#)

[Can my points expire?](#) Edit

Q & A at runtime

- Intent resolved
- Q & A resolved
- Could be intent or Q &A

Testing Skill

Reset

when are realtime balances available

Hey, I wasn't sure, do you want to...

Balances

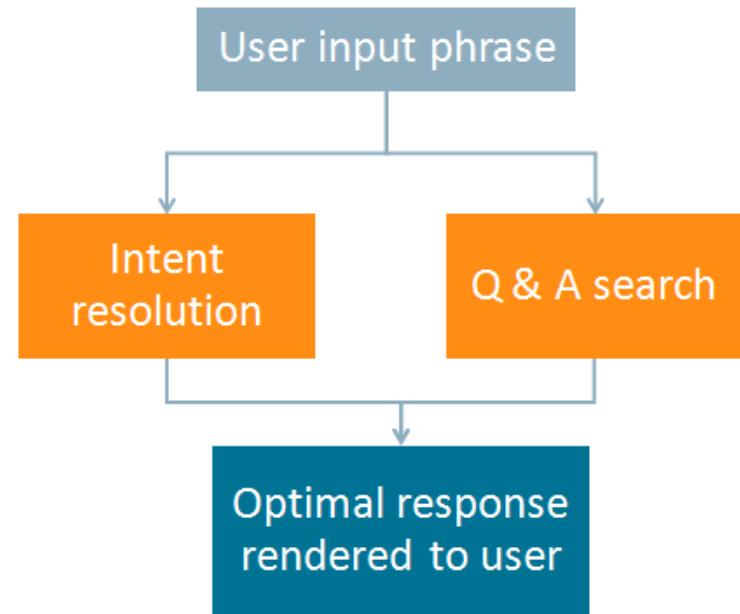
[Check our FAQ on this topic](#)

when are realtime balances available



Q & A routing is based on

- The results of intent and QnA matching
 - Intent resolution
 - Minimum match of QnA
- Use of imperative verbs assumes intent
 - “do”, “give” “cancel”
 - Platform understands the concept of imperative verbs
 - You can explicitly define your own
- More later...



Q & A routing is based on

- qnaMinimumMatch in System.Intent
- Defines % of tokens that must match
 - E.g. 50%, 25% means we first of all look for 50% of matches, if not, we look for 25% - thus trying to ensure we only drop to 25% if we can't resolve to a higher quality
- Token is not necessarily a word
 - Stop words are ignored
 - Tokens are generated for word pairs
 - "Balance in my checking account" and "Checking balance in my account", then search for "checking account" will return "Balance in my checking account"

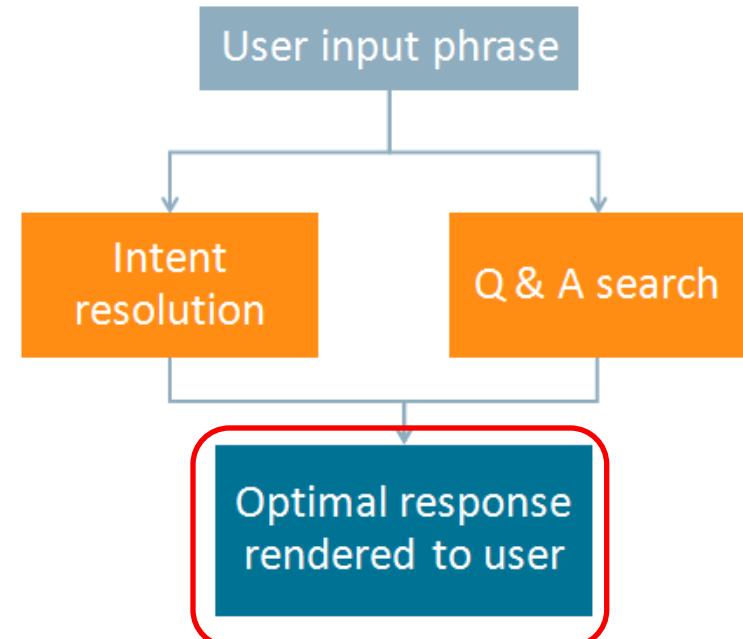
Q & A builder - how it works

- “Smart” logic to search/index
 - Automatically stems words when indexing
 - “festival”, “festive”, “festivity” all represented as the same stem
 - Ignores stop words (“a”, “of”, “are” etc)
 - Fuzzy matching (tolerant of one or two char differences)
 - Define synonyms and abbreviations

The screenshot illustrates the Oracle Q&A builder interface. On the left, the 'Language Config' tab is selected, showing configuration entries for 'Ignored words' and 'Synonym'. The 'Ignored words' section lists common stop words like 'a', 'about', 'all', etc., with a note that it was last updated 36 minutes ago. The 'Synonym' section contains a single entry: 'wife, spouse', which was last updated a few seconds ago. Red boxes highlight the 'wife, spouse' synonym entry and the 'wife' in the user query 'how do I add my wife for insurance'. On the right, the 'Bot' tab of the 'Test' interface shows a user message 'how do I add my wife for insurance' and a bot response: 'I have already taken a PA policy and renewing the same. Can I add my spouse in the current policy? You can add your spouse in the current policy and review your Capital Sum Insured at the time of renewal.' A red box highlights the 'View' button in the response card.

Q & A builder - how it works

```
intent:  
  component: "System.Intent"  
  properties:  
    variable: "iResult"  
    optionsQnaLabel: "Check our FAQ on this topic"  
    optionsPrompt: "Hey, I wasn't sure, do you want to..."  
    qnaSkipIfIntentFound: true  
    qnaEnable: true  
transitions:  
actions:  
  Balances: "startBalances"  
  Transactions: "startTxns"  
  Send Money: "startPayments"  
  Track Spending: "startTrackSpending"  
  Dispute: "setDate"  
  Reset Password: "resetPassword"  
  unresolvedIntent: "unresolved"  
  qna: "qna"
```



Q & A builder - how it works

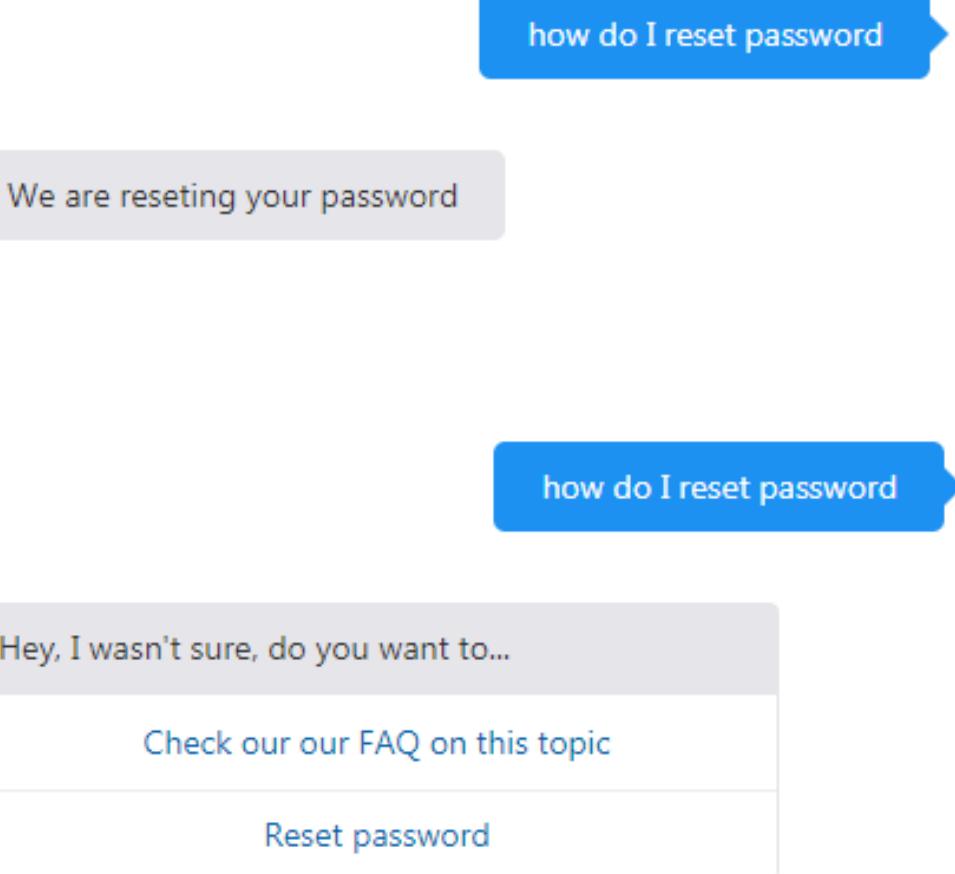
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  Reset Password: "resetPassword"  
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  qna: "qna"
```

how do I reset password

We are resetting your password

Q & A builder - how it works

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    Reset Password: "resetPassword"  
    unresolvedIntent: "unresolved"  
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  Track Spending: "startTrackSpending"  
  Dispute: "setDate"  
  Reset Password: "resetPassword"  
  unresolvedIntent: "unresolved"  
  qna: "qna"
```

We are reseting your password

how do I reset password

how do I reset password

Hey, I wasn't sure, do you want to...

Check our our FAQ on this topic

Reset password

Q & A builder - how it works

```
qna:  
  component: "System.QnA"  
  properties:  
    transitionOnTextReceived: true  
    categoryListLimit: 4  
    matchListLimit: 3  
    viewAnswerLabel: "Show me!"  
    moreAnswersLabel: "Show me more"  
    answersLabel: "Drill in here!"  
    categoriesLabel: "Browse FAQ"  
    exitLabel: "Exit Label"  
    keepTurn: true  
  transitions:  
  actions:  
    none: "unresolved"  
  next: "output"
```

How do I reset my password

In order to reset your password you need to call our call center on 555-1234 or send an email to x@y.com

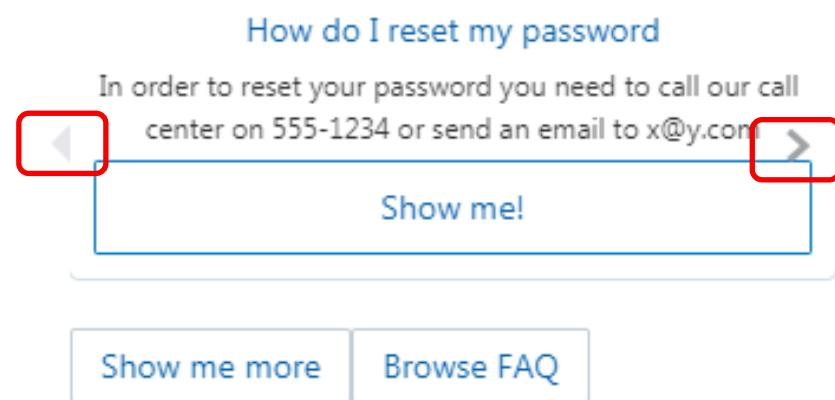
Show me!

Show me more

Browse FAQ

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How do I reset my password

In order to reset your password you need to call our call center on 555-1234 or send an email to x@y.com

Show me!

Show me more **Browse FAQ**

Q & A builder - how it works

```
qna:  
  component: "System.QnA"  
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    transitionOnTextReceived: true  
    categoryListLimit: 4  
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    exitLabel: "Exit Label"  
    keepTurn: true  
  transitions:  
  actions:  
    none: "unresolved"  
    next: "output"
```

What is Family Floater Plan?

Family floater plan is where the sum insured opted floats on the entire family and can be used by any or all the members.

Show me!

Show me more

Browse FAQ

Browse FAQ



Q & A builder - how it works

```
qna:  
  component: "System.QnA"  
  properties:  
    transitionOnTextReceived: true  
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```

What is Family Floater Plan?

Family floater plan is where the sum insured opted floats on the entire family and can be used by any or all the members.

Show me!

Show me more

Browse FAQ

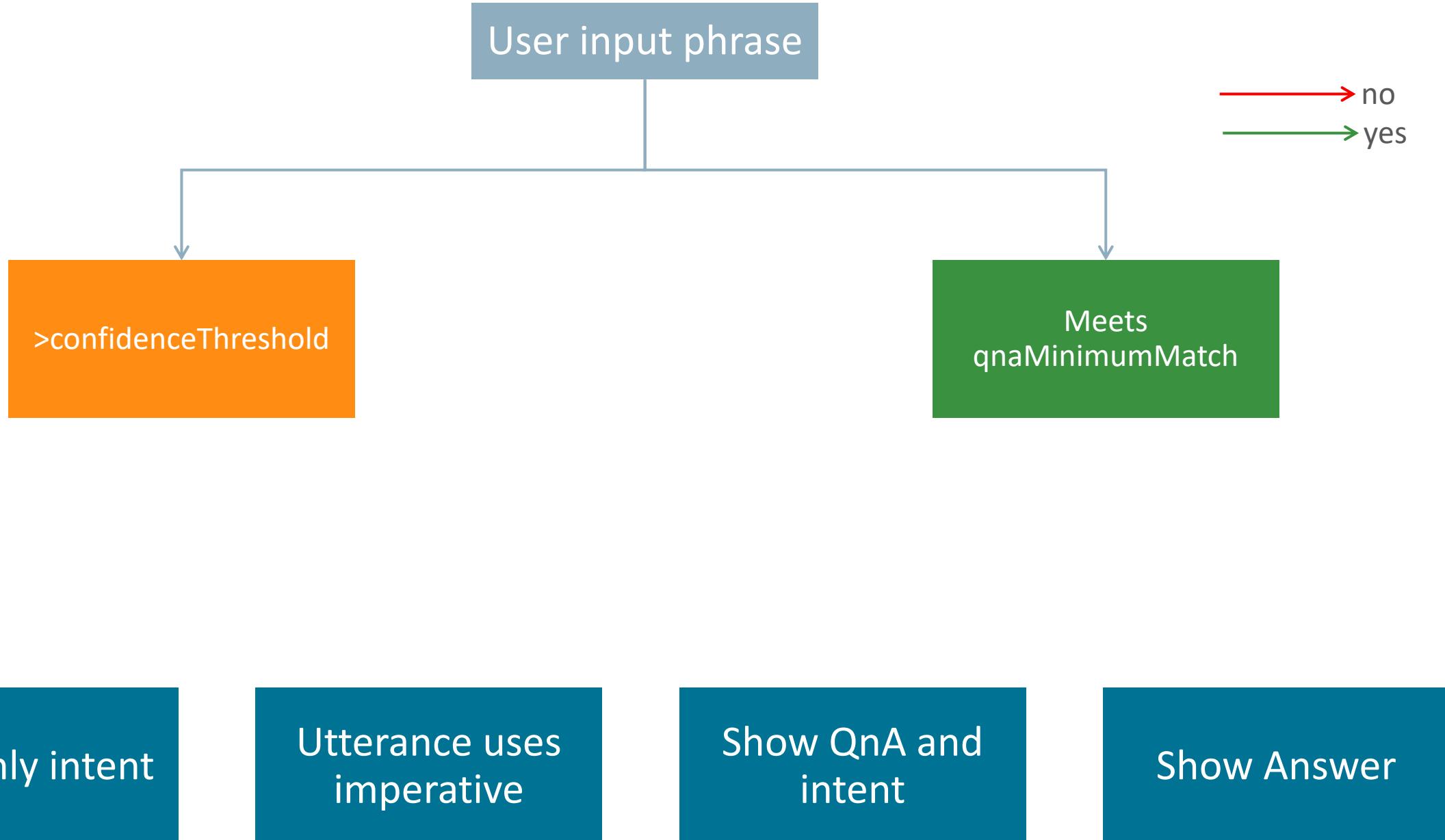
Browse FAQ

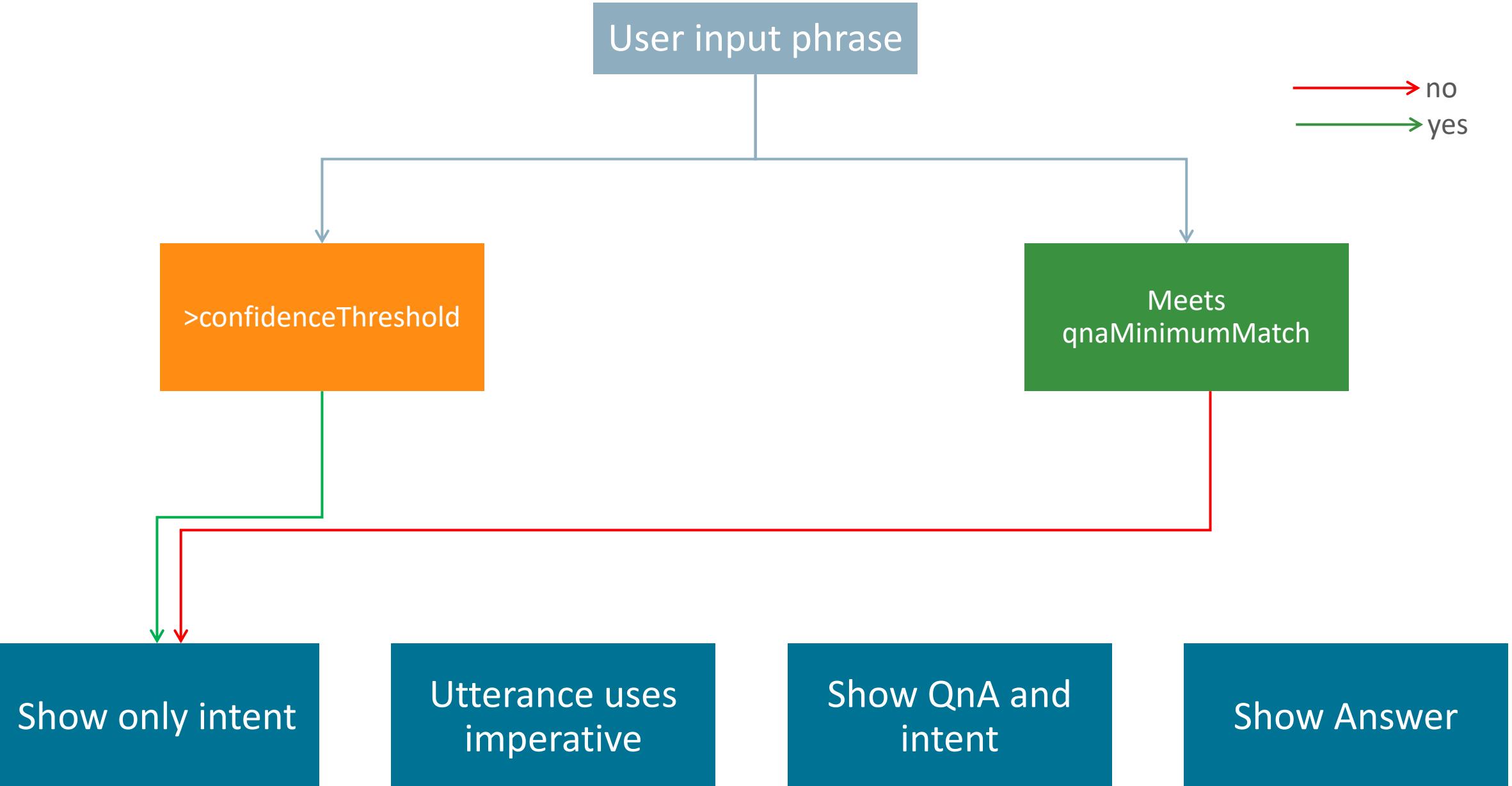
Trvl

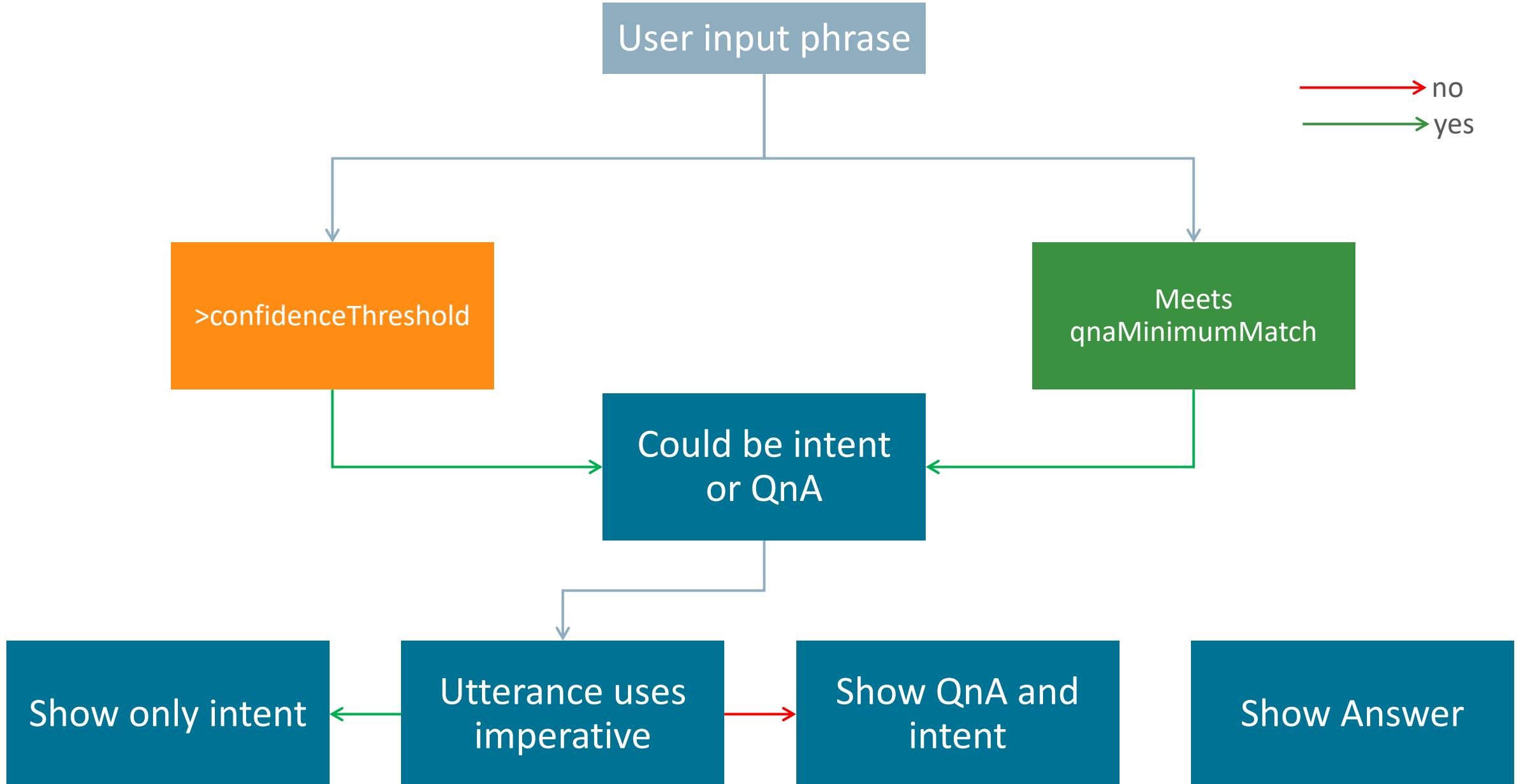
Drill in here!

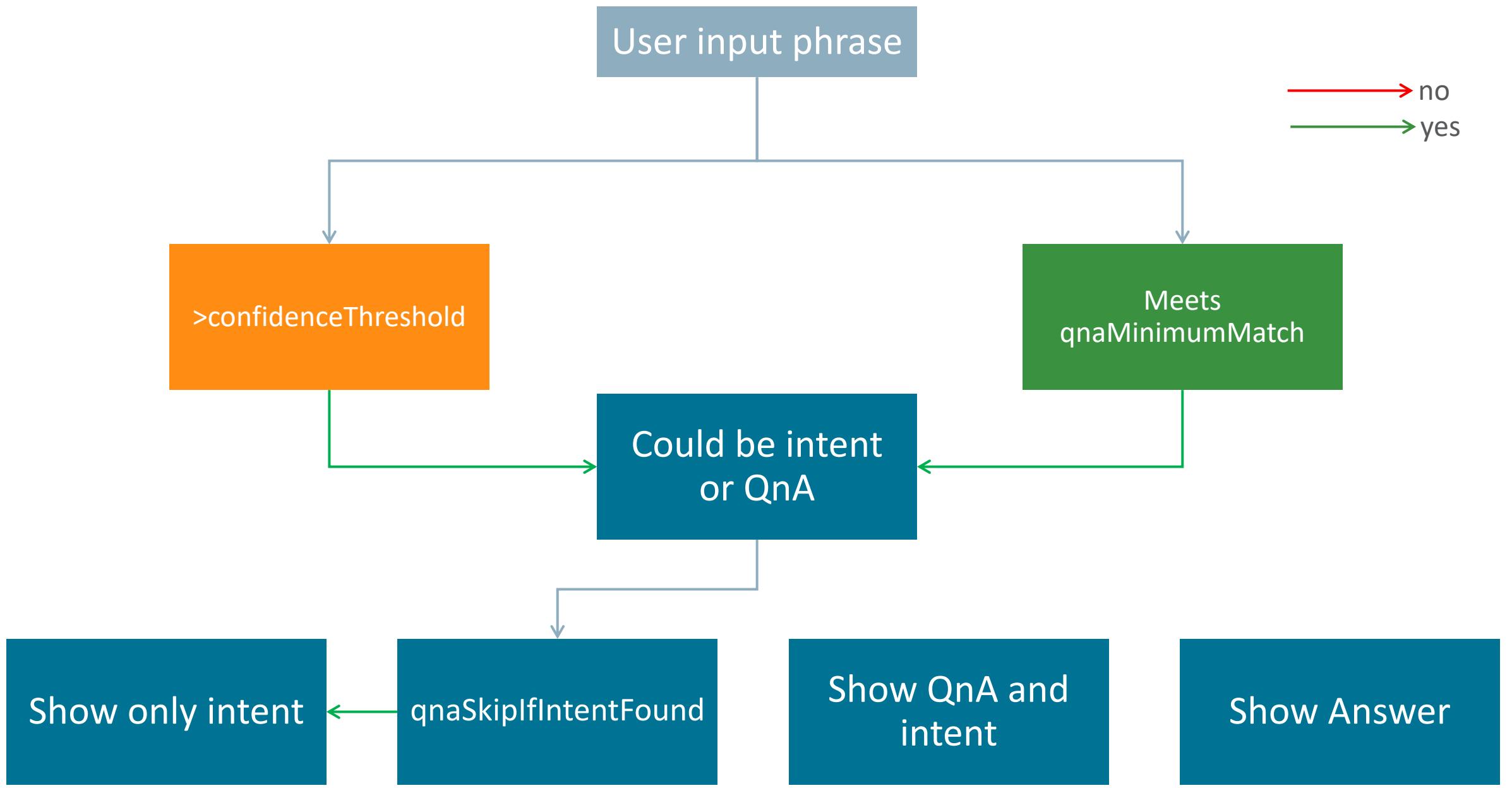
Pacc

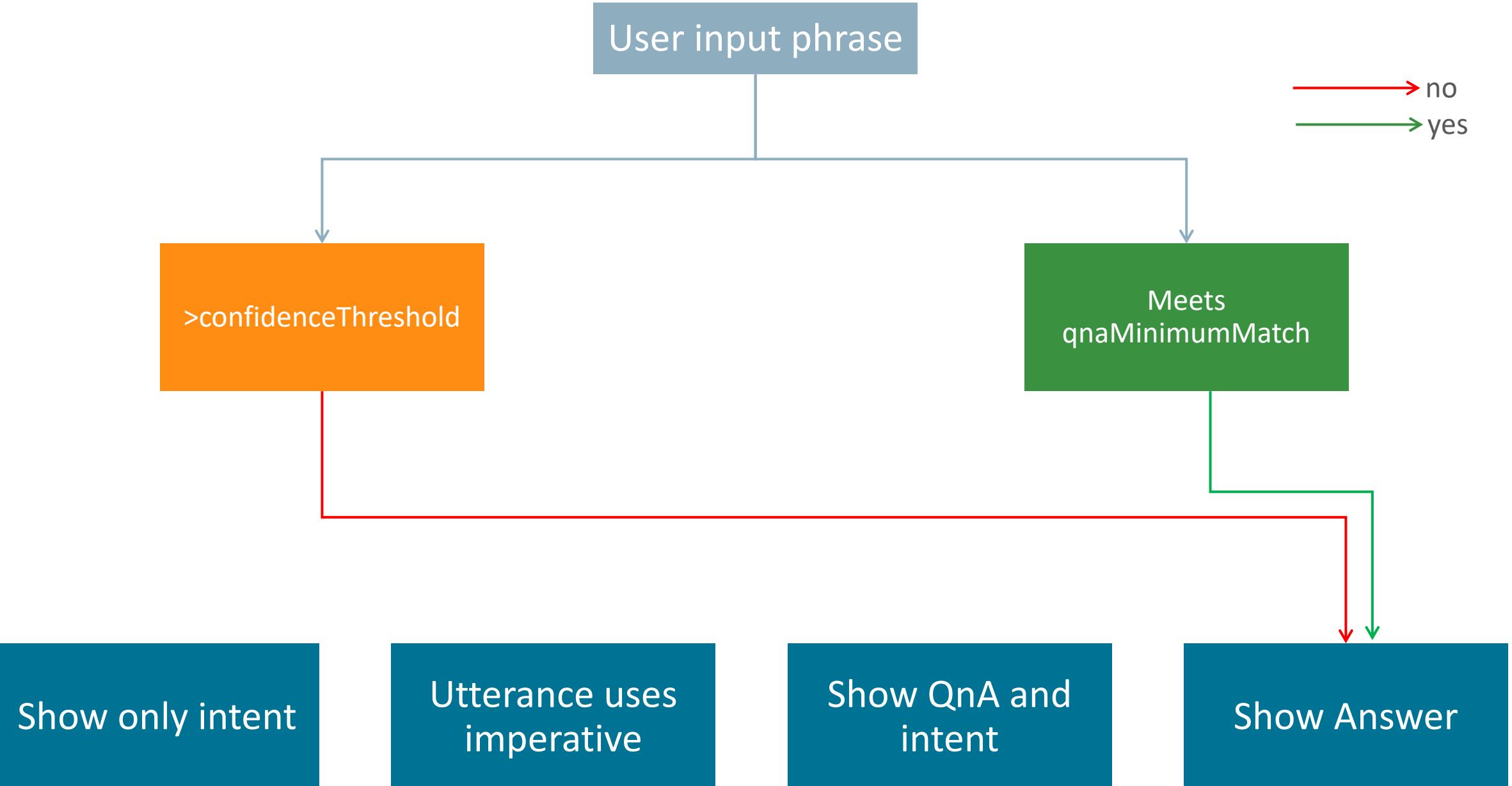
Drill in here!

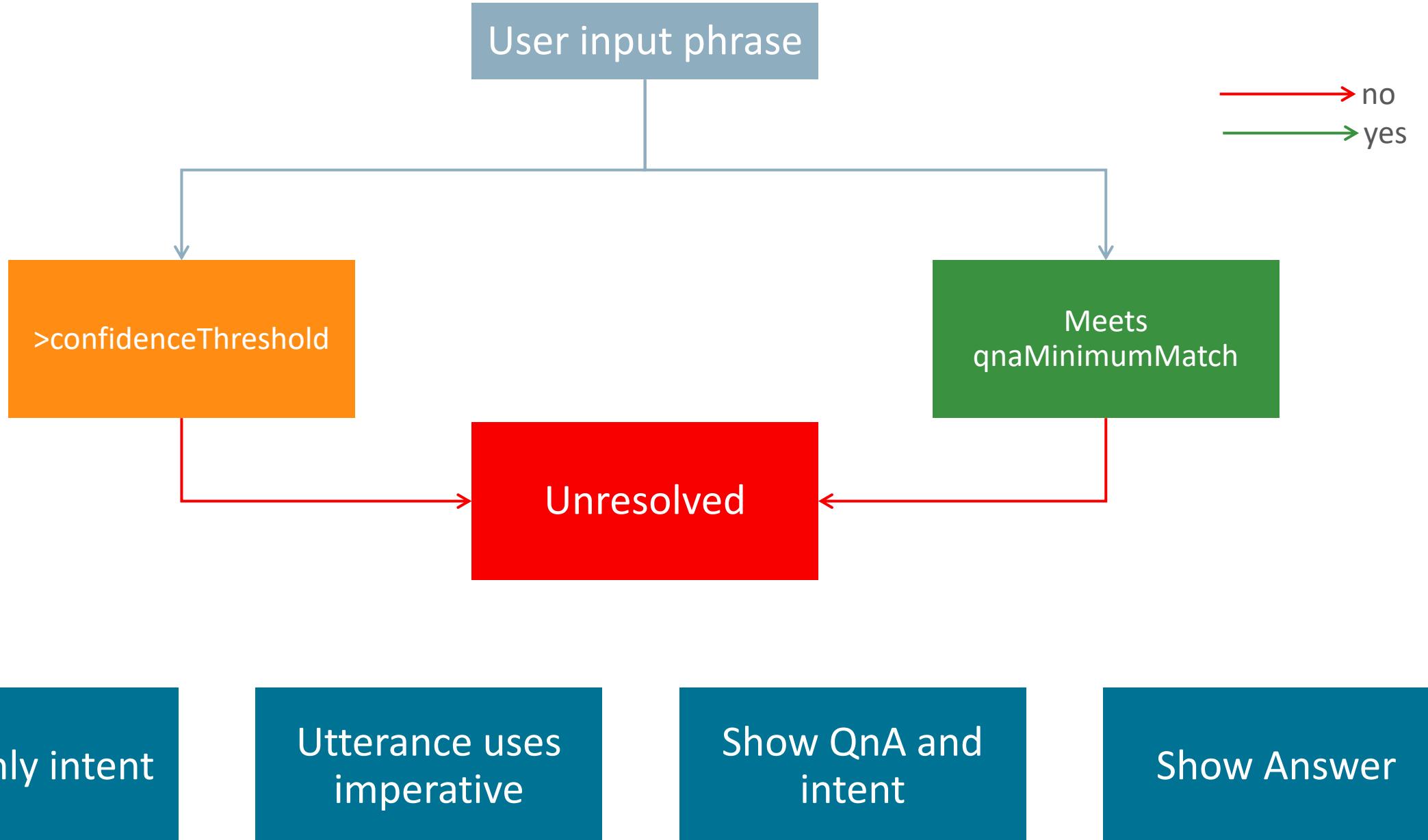












Q & A routing

- Transaction Config
 - Input is then treated as intent
- Question Config
 - Ensures QnA shown first in choice dialog

The screenshot shows the Oracle Digital Assistant configuration interface for Q&A Routing. It includes sections for Transaction Config and Question Config, each with various request verb expansions and prefixes. The Transaction Config section has a 'Language' dropdown set to 'en'. The Question Config section has a 'Reset to Defaults' button.

Transaction Config

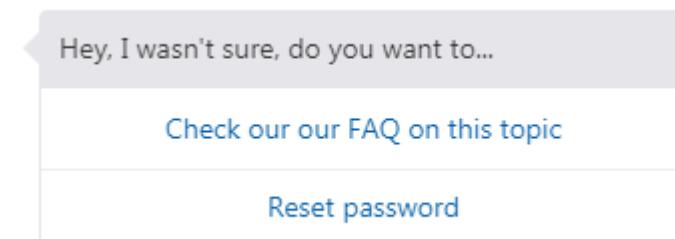
Additional Request Verbs: absolutely x

Request Verbs Expansion: re x, re- x, un x, dis x

Request Sentence Prefix: do not x, please do not x, don't x, please don't x, i don't want to x, i want you to x, i don't want you to x, i want u to x, i don't want u to x, what is my x, where is my x, when is my x, what are my x, where are my x, when are my x, what's my x, where's my x, when's my x

Question Config

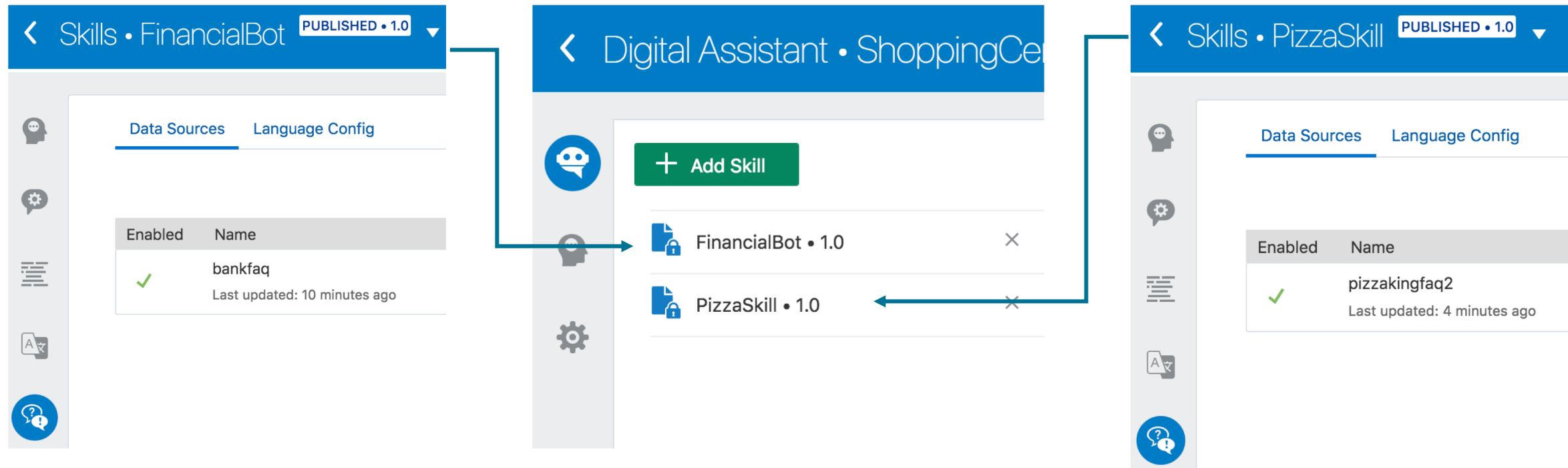
Question Verbs Prefix: why x, how to x, how do i x, do i x, how can x, what's the cause x, what is the cause x, what's the reason x, what is the reason x, show how x, show me how x, where can x



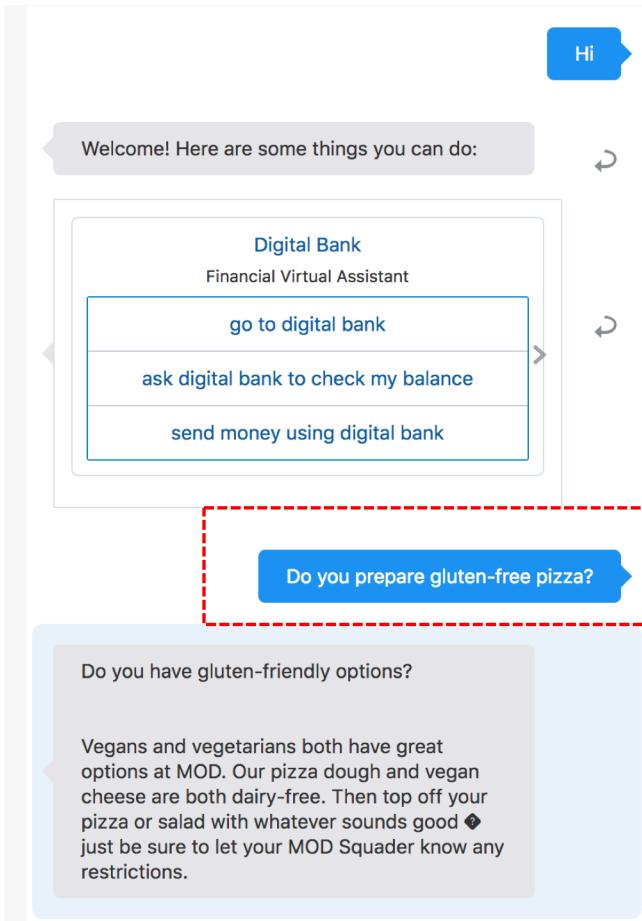
Topic agenda

- 1 ➤ Introducing Q&A
- 2 ➤ QnA and Digital Assistant
- 3 ➤ Reusable QnA skill

Evaluate routing behavior



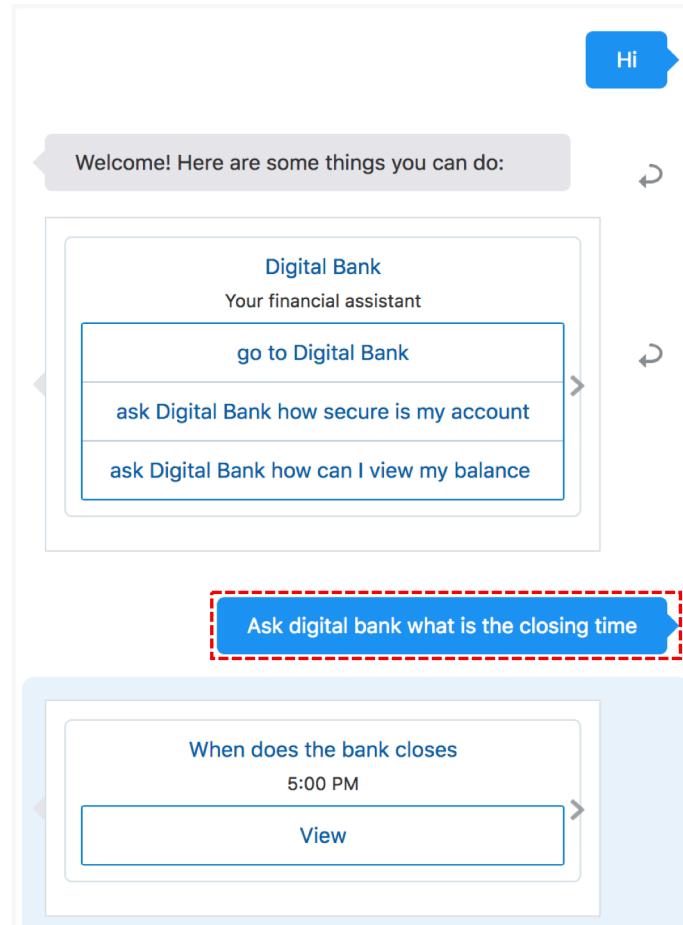
Implicit invocation



Routing

Action	Details
Router response	Skill: PizzaSkill Intent: Ask Question Score: 84.23%
Start routing user message	Sentence: Do you prepare gluten-free pizza? Reformed Sentence: Do you prepare gluten-free pizza?
Starting context-aware routing.	Conversation State: START_FIRST_FLOW

Explicit invocation



Routing

Action	Details	Payload
Router response	Skill: Digital Bank Intent: Ask Question	Score: 0% View JSON
Start routing user message	Sentence: Ask digital bank what is the closing time Reformed Sentence: Ask digital bank what is the closing time	View JSON
Starting context-aware routing.	Conversation State: START_FIRST_FLOW	View JSON

Rules

Details	Payload
Explicit invocation takes precedence over other flows in digital assistant context.	View JSON

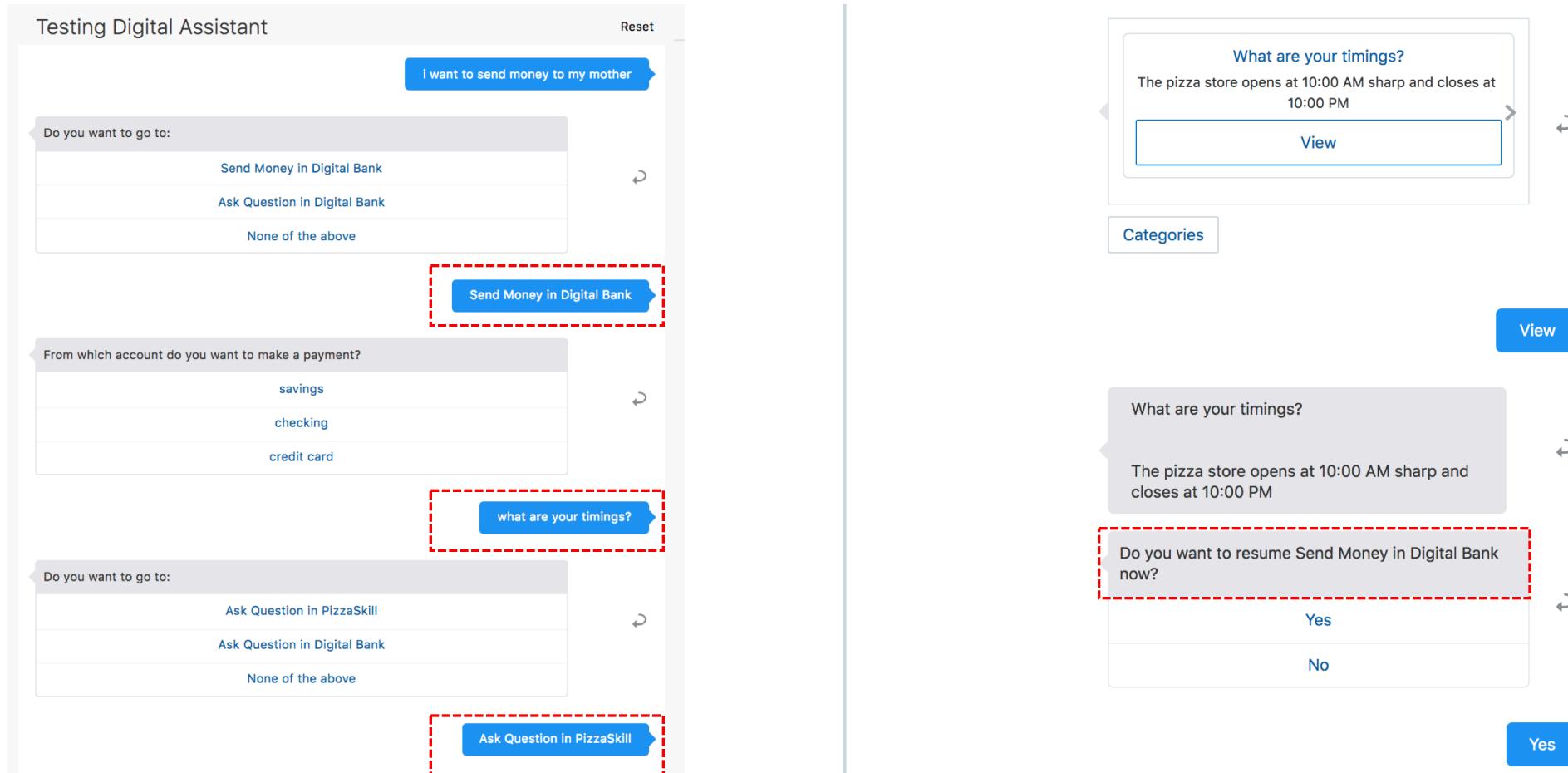
Ambiguous utterance

The image displays two side-by-side screenshots of a digital assistant interface titled "Testing Digital Assistant".

Left Screenshot: The user has typed "what are your timings" into the input field. Below the input field, a list of options is shown, with the first three items highlighted by a red dashed box: "Ask Question in PizzaSkill", "Ask Question in Digital Bank", and "None of the above". The fourth item, "Ask Question in Digital Bank", is also highlighted by a red dashed box. A blue button labeled "Ask Question in Digital Bank" is visible below the list.

Right Screenshot: The user has typed "what are your timings" into the input field. Below the input field, a list of options is shown, with the first three items highlighted by a red dashed box: "Ask Question in PizzaSkill", "Ask Question in Digital Bank", and "None of the above". The blue button labeled "Ask Question in PizzaSkill" is highlighted by a red dashed box. A blue button labeled "View" is visible below the list.

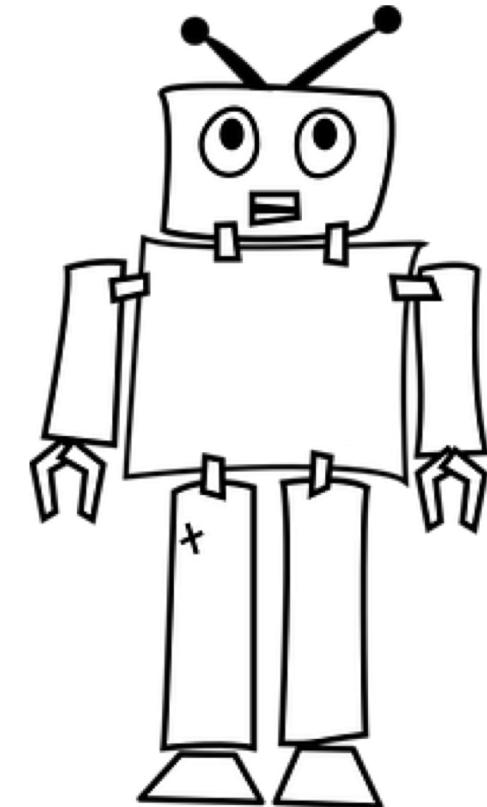
Non sequitur



Topic Agenda

- 1 ➤ Introducing Q&A
- 2 ➤ QnA and Digital Assistant
- 3 ➤ Reusable QnA skill

How might you **reuse** and use
multiple QnA within a digital
assistant?



Options for how you might use QnA

- Each skill has its own QnA as required
 - Modular and simplest option
- Calling QnA in a different skill
 - Route to a specific QnA based on conversation context
 - Using the botName and QnaBotName properties that belong to **System.Intent** and **System.Qna** component
- Separate QnA only skill used by the DA
 - FAQ (QnA skill) may be shown upfront in welcome message
 - QnA maintained in single place without impacting other skills

Approach 1: Calling QnA in a different skill

FinancialBot

```
qna:  
  component: "System.QnA"  
  properties:  
    botName: "CorpFinancialBot"  
    botVersion: "1.0"  
  transitions:  
  actions:  
    none: "unresolved"  
    next: "qna"  
unresolved:  
  
  component: "System.Output"  
  properties:  
    text: "Sorry I don't understand that question!"  
  transitions:  
    return: "unresolved"
```

CorpFinancialBot

```
1 metadata:  
2   platformVersion: "1.0"  
3 main: true  
4 name: "CorpFinancialBot"  
5 context:  
6   variables:  
7     greeting: "string"  
8     name: "string"  
9     terminateChoice: "string"  
10 states:  
11   qna:  
12     component: "System.QnA"  
13     transitions:  
14       actions:  
15         none: "unresolved"  
16         next: "qna"  
17   unresolved:  
18     component: "System.Output"  
19     properties:  
20       text: "Sorry, I did not find any match. Can you rephrase the question?"  
21     transitions:  
22       return: "done"
```

Demo – Calling QnA in a different skill

The screenshot shows the Oracle Cloud Skills interface. On the left, under 'Skills • FinancialBot' (DRAFT • 1.0), there is a message: 'You haven't defined Q&A for this skill bot. Q&A enables your skill bot to return sets of questions and answers.' Below this is a 'Tell me more' link and a green '+ Q&A' button. On the right, under 'Skills • CorpFinancialBot' (DRAFT • 1.0), there is a 'Data Sources' section with a table:

Enabled	Name	Type
✓	corfinance	CSV

The table shows one entry named 'corfinance' with a CSV type, updated 2 minutes ago.

The screenshot shows the 'FinancialBot Tester' interface. At the top, it says 'Testing Skill' and has a 'Reset' button. In the center, a blue speech bubble contains the question: 'Can I offer any banking facilities to my Channel Partners?'. This question is highlighted with a red rounded rectangle. Below it, a grey speech bubble contains the response: 'Yes. Your Channel Partners can transfer funds to your company's account from their Corporate Internet Banking login'.

Approach 2: Creating a separate QnA skill in DA

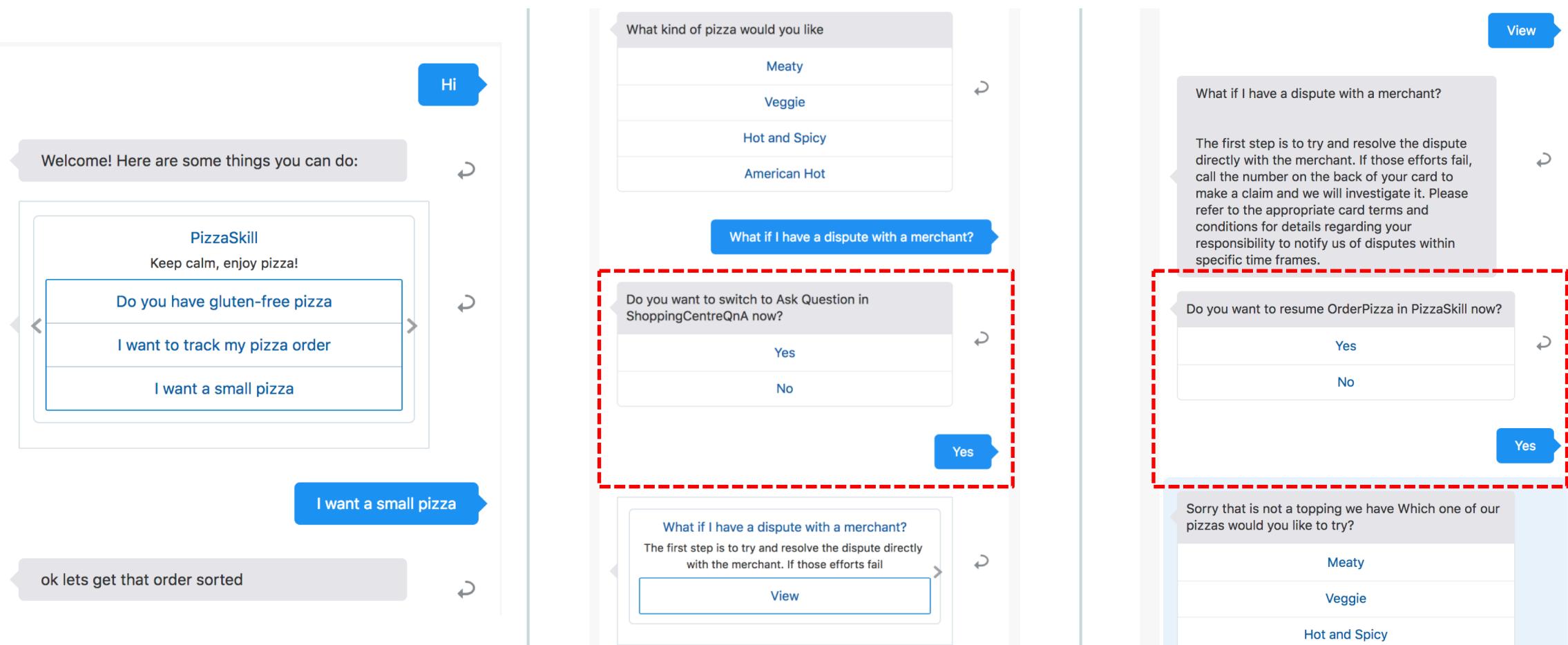
The screenshot shows the Oracle Digital Assistant interface. At the top, it says 'Digital Assistant • ShoppingCentreDA'. Below that is a list of skills:

- PizzaSkill • 1.0 (selected)
- FinancialBot • 1.0
- ShoppingCentreQnA • 1.0
- PizzaSkill • 1.0

A red dashed arrow points from the 'PizzaSkill • 1.0' entry to the right, labeled 'Digital Bank Skill'. Another red dashed arrow points from the 'ShoppingCentreQnA • 1.0' entry to the right, labeled 'Shopping center FAQs skill'. A red dashed arrow points down from the 'PizzaSkill • 1.0' entry to the bottom, labeled 'Pizza King skill'. To the right of the skill list is a table of FAQs:

Enabled	Name	Type
✓	DigitalBankFAQ	CSV
	Last updated: an hour ago	
✓	PizzaKingFAQ	CSV
	Last updated: an hour ago	

Demo – Having a separate QnA skill in DA



Which approach is better?

- Calling QnA in different Bot
 - **More Flexibility:** BotML coding required, hence more control to the user the way he/she wants to invoke QnA
- Creating separate QnA only skill and consuming in DA
 - QnA skill will be shown upfront in welcome message!
 - No additional code required since the routing will be managed by DA



Oracle Digital Assistant Hands-On

TBD

Integrated Cloud Applications & Platform Services

ORACLE®