



# Customer Service Chatbot

## Standard Dialog Flow Design

### V1.0



# Dialog Flow Building Blocks

**(INITIALWELCOME)** Welcome to ABC Retail!

= Bot Message, awaiting user response. Identifier in bold = message ID (see end of this deck)

Customer message

= Slide anchor, referenced in other slides

CALCULATE MSG COMPLEXITY SCORE

= Calculation, backend access, processing, ...

Interpret Message

= Decision point

Formalities

= Reference to slide anchors (dialog trees specified elsewhere)

*"Hi" / "Thanks" /  
"Goodbye" / "Agent!"*

= Sample user responses. Need to be expanded in NLU development phase

T1

= Start Business Task T1 (see listing at end of deck)

T1 (complete)

= Finish Business Task T1 with status "complete"

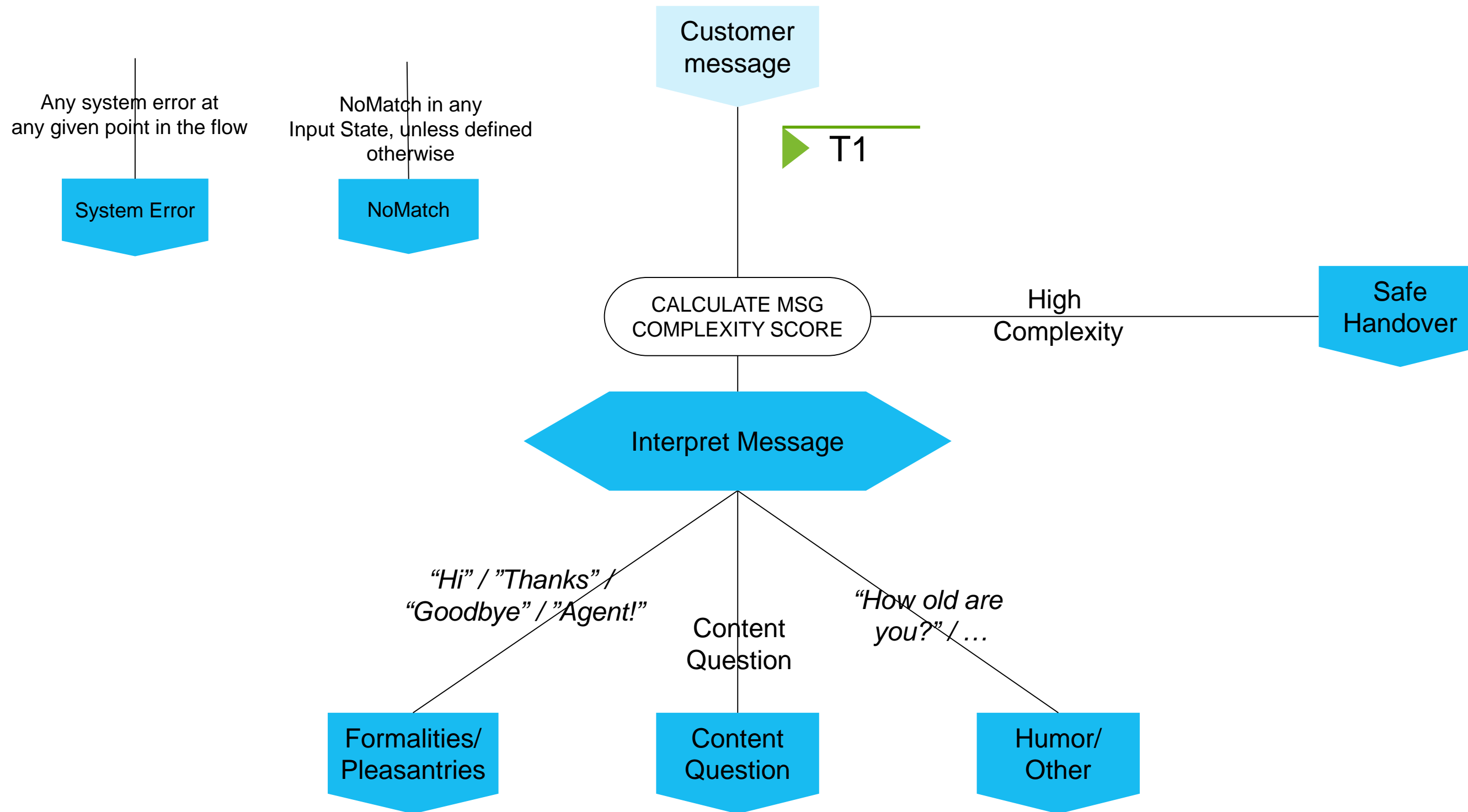
# Sample Dialog 1/2

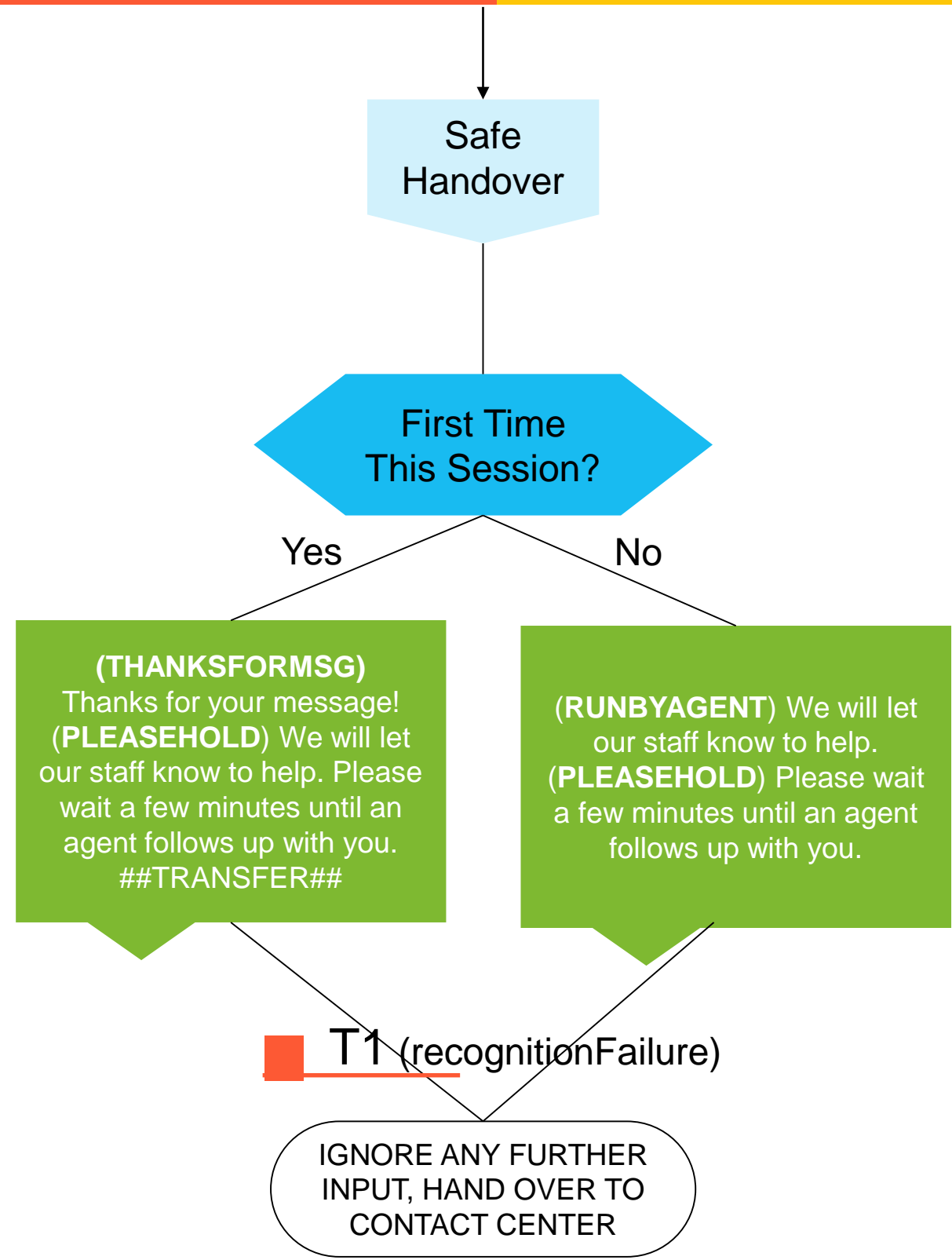
Interlocutor	Message	Response Type
User:	Hi!	
Bot:	Hello! This is ABC Retail. How can we help you today?	Standard Message
User:	What is your return policy?	
Bot:	You may return your new and unused purchase at an ABC Retail retail store within 30 days of purchase. The original form of payment and confirmation email, or returns sticker from the shipping box, are required for the store to process your return at the full purchase price. If the receipt is not available, an in store credit will be issued at the current product price.	Content Message
User:	Cool thanks	
Bot:	You're welcome!	Standard Message
User:	Bye	
Bot:	Thanks for chatting with us today, goodbye!	Standard Message

## Sample Dialog 2/2

Interlocutor	Message	Response Type
User:	👋	
Bot:	👋	Standard Message
User:	When does your Cambridge store close today?	
Bot:	Our opening hours at the Cambridge location at 93 Main St today are 9am – 5pm	Content Message
User:	Do you have parking nearby?	
Bot:	Not sure I got that. Can you rephrase?	Standard Message
User:	Can I park my car near your store?	
Bot:	I still didn't get that. What we can do at this point is pull a live agent in so they can help you here. You would need to wait a few minutes. Would you like to talk to a live agent now?	Standard Message
User:	Yes please	
Bot:	Alright! I will let our staff know. Please wait a few minutes until an agent follows up with you.	Standard Message
	--- 3 minutes later ---	
Agent:	Hello Mark. Sorry for the wait. Yes indeed we offer free parking right next to our store. Is there anything else I could help with?	Agent Message

# Dialog Flow





Safe Handover

First Time This Session?

Yes

No

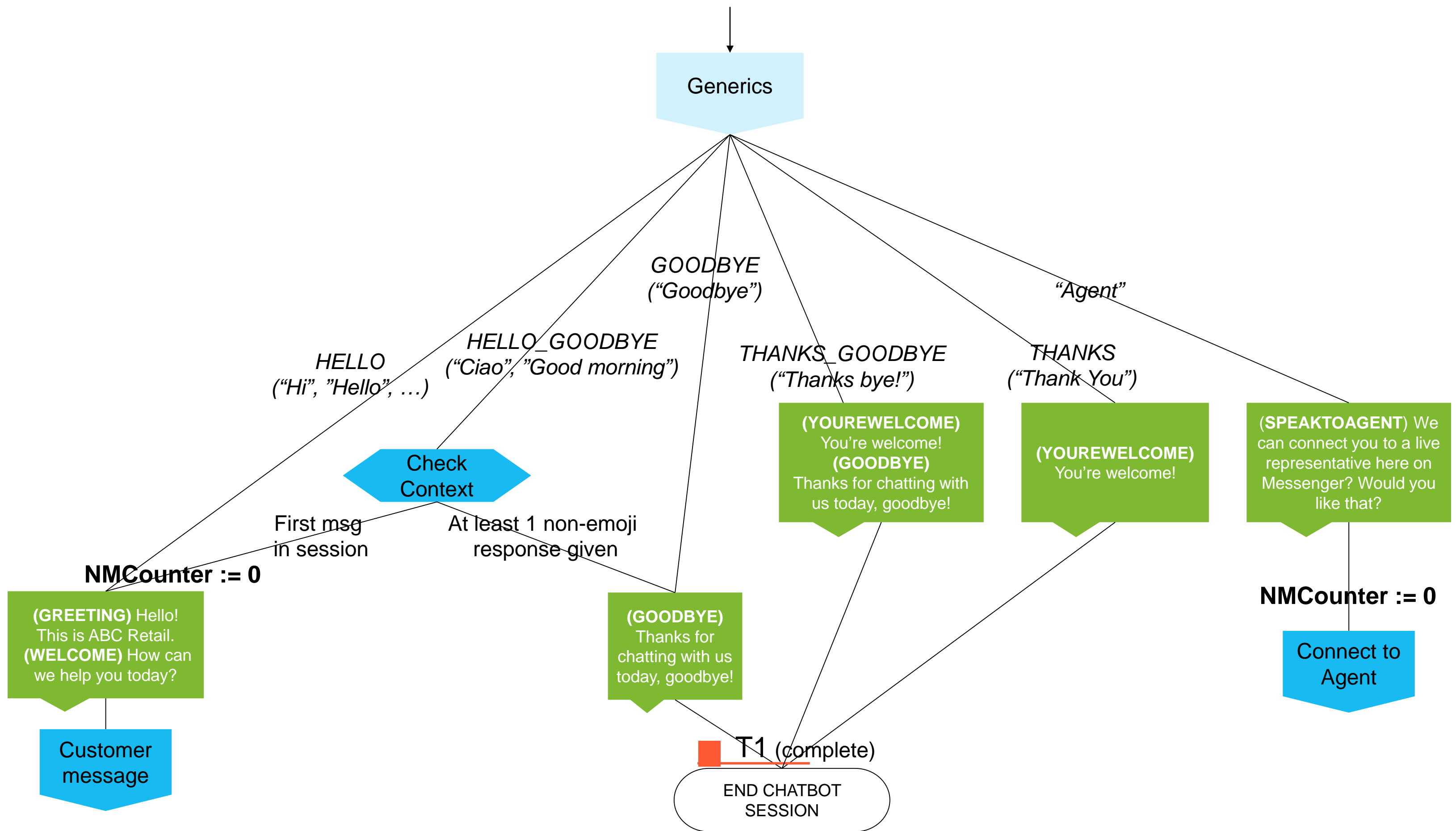
**(THANKSFORMSG)**

Thanks for your message!  
**(PLEASEHOLD)** We will let our staff know to help. Please wait a few minutes until an agent follows up with you.  
##TRANSFER##

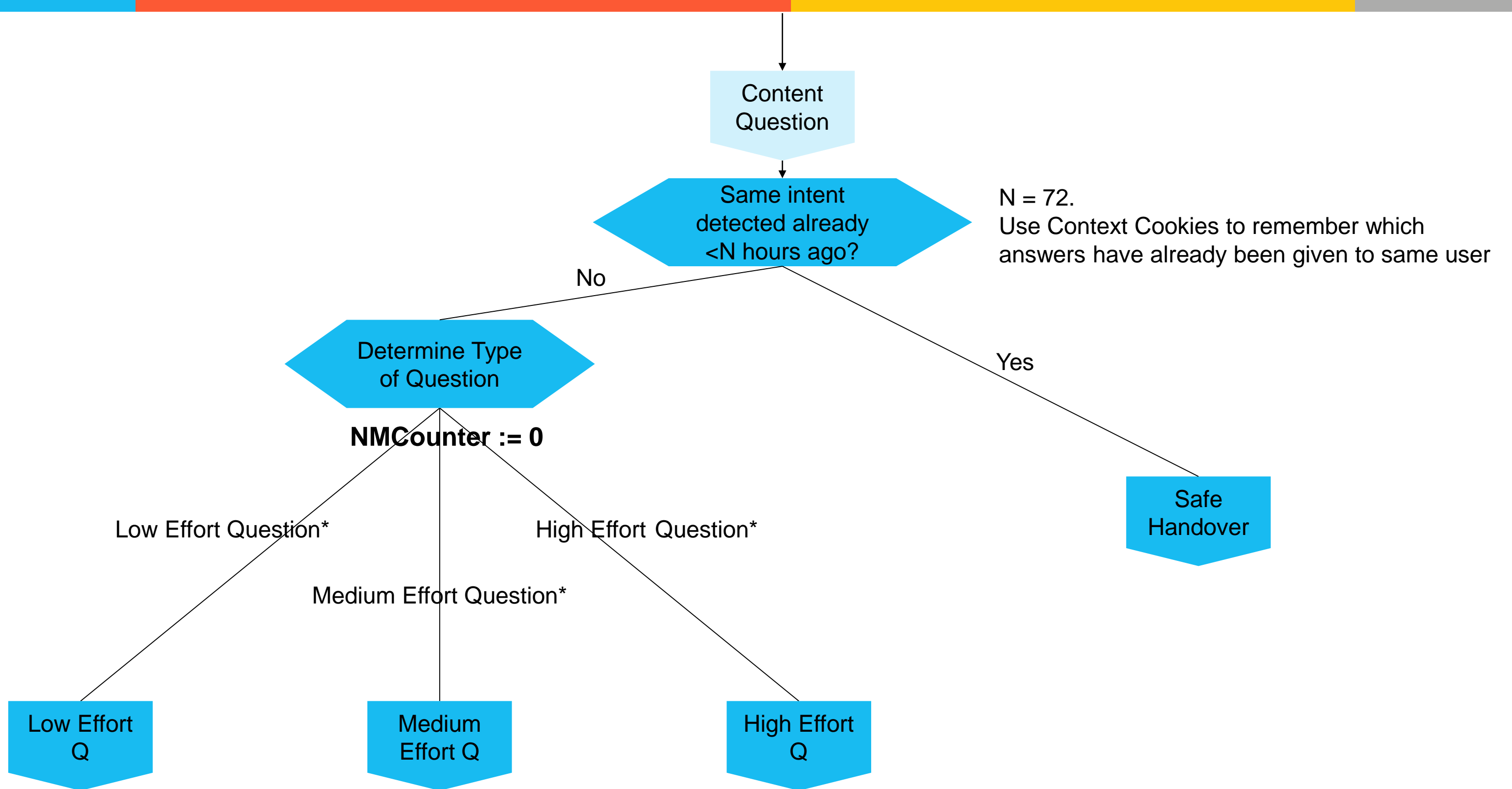
**(RUNBYAGENT)** We will let our staff know to help.  
**(PLEASEHOLD)** Please wait a few minutes until an agent follows up with you.

**T1 (recognitionFailure)**

IGNORE ANY FURTHER INPUT, HAND OVER TO CONTACT CENTER







\***Simple** = question can be answered in 1 step  
**Medium** = question needs some clarification dialog  
**High** = question needs full sub-dialog

Low Effort  
Q

...

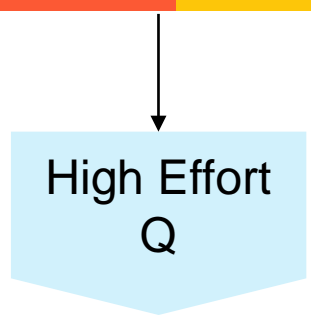
...

Answer  
Follow-Up

Medium  
Effort Q

Add Dialog Flow for each question

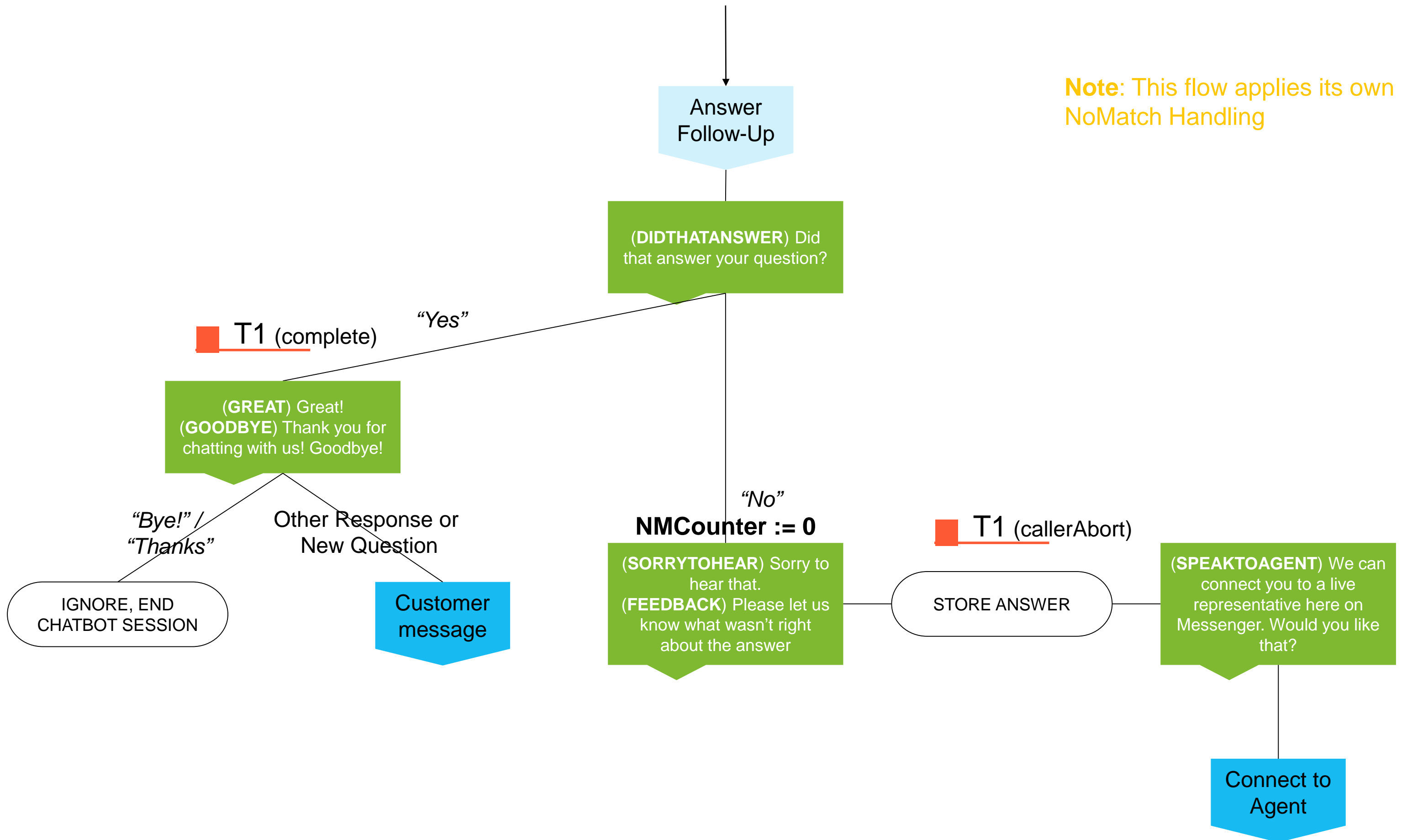
Answer  
Follow-Up

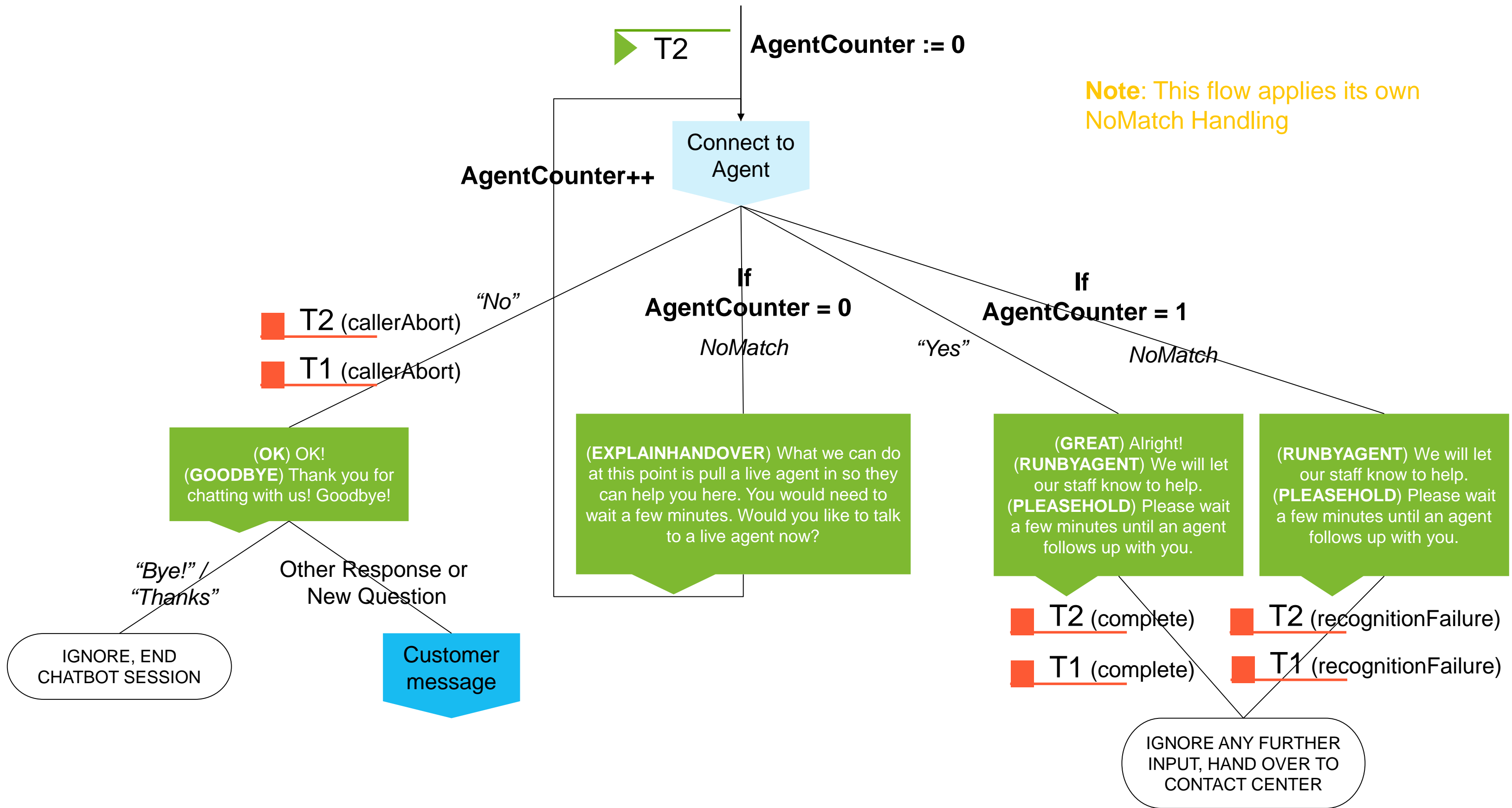


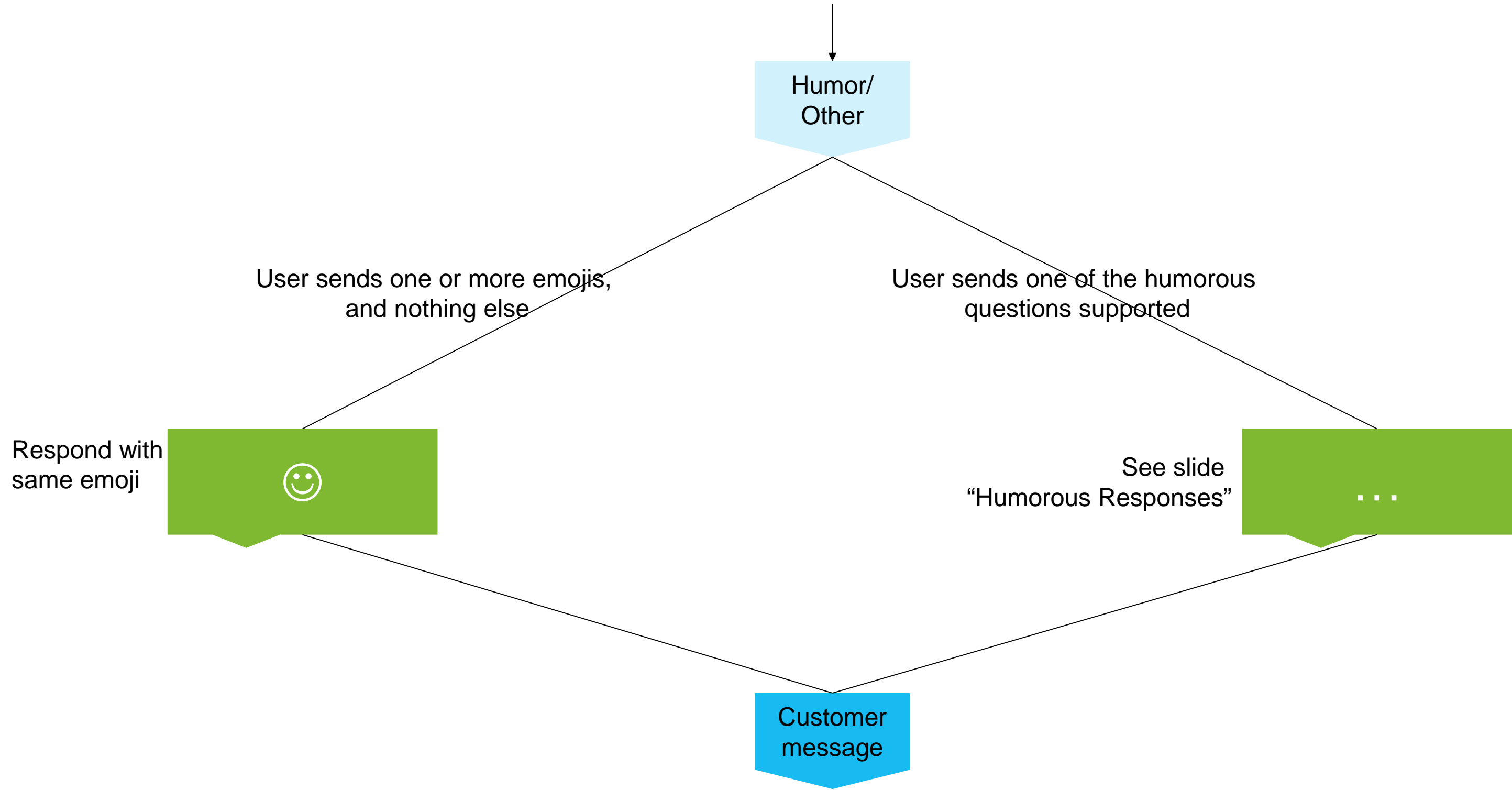
Add Dialog Flow for each question



Note: This flow applies its own NoMatch Handling







Humor/  
Other

User sends one or more emojis,  
and nothing else

User sends one of the humorous  
questions supported

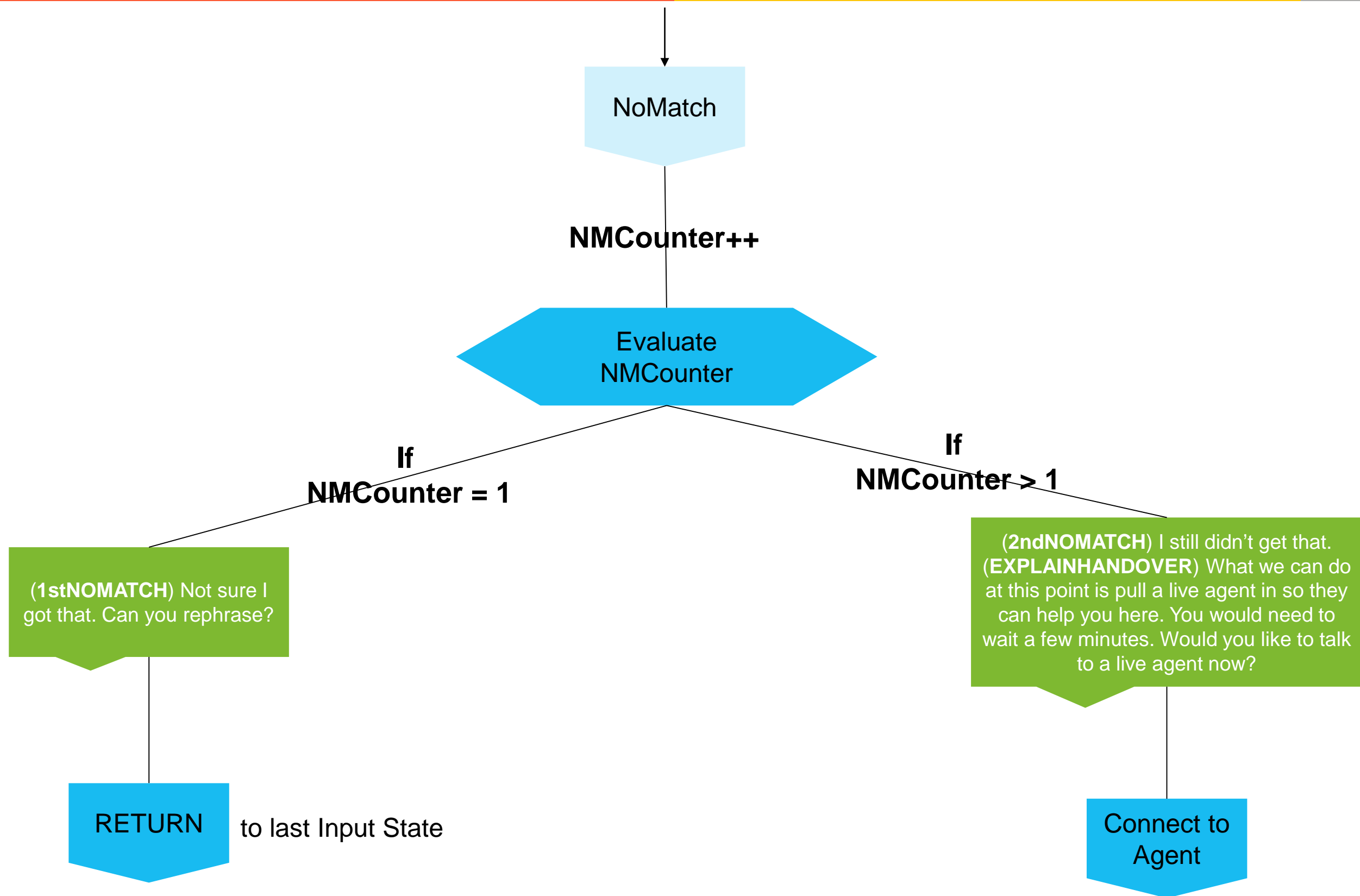
Respond with  
same emoji



See slide  
"Humorous Responses"

...

Customer  
message





System  
Error

This includes runtime backend errors, CXP errors, etc.

(SYSTEMERROR) Please hang on, I'll have to pull in a live agent.  
(PLEASEHOLD) Please wait a few minutes until an agent follows up with you.

IGNORE ANY FURTHER  
INPUT, HAND OVER TO  
CONTACT CENTER

# Business Tasks

# Business Task Definitions

## ▶ T1

- Name: **Question Answering**
- Task Type: Information
- Parameter Set (same for complete and incomplete):
  - ▶ Raw user message
  - ▶ NLU Result (semantic interpretation)
  - ▶ Complexity Score

## ▶ T2

- Name: **Connect to Agent**
- Type: Routing
- Parameter Set (same for complete and incomplete):
  - ▶ Raw user message
  - ▶ NLU Result (semantic interpretation)
  - ▶ Complexity Score

# NLU Intents

# Generic NLU Intents

Return Value	Description	Examples
PLEASantry:HELLO	Any form of greeting, with nothing else in the message	"hi", "hello", "hey", "yo", "what's up", "what's happening", "how are you"
PLEASantry:GOODBYE	Any form of saying goodbye, with nothing else in the message	"bye", "goodbye", "farewell", "see you", "have a nice day!"
PLEASantry:HELLO_GOODBYE	Utterances which could be both greetings and goodbyes for some speakers	"good morning" "good evening", "ciao" in Italian, "Servus" in German,
PLEASantry:THANKS	Utterances that express gratitude, with nothing else in the message. I.e., it should not be the returned value if "thanks" was just dropped in a message that otherwise is an actual question, such as "thanks. And what about..."	"thanks", "cheers", "I appreciate that"
PLEASantry:THANKS_GOODBYE	Utterances that contain both a thanks and a bye. These need different responses vs. pure GOODBYEs.	"thanks, bye!", "thank you, have a nice day!"
GENERIC:AGENT	Utterances that express the desire to speak to a live representative	"agent", "can I speak to a representative", "transfer to live agent", "can I get a real person please??"
GENERIC:YES	Utterances that are affirmative and have no other content	"yes", "yep", "yes that's right", "correct"  But also: "Cool", "OK", "alright", "good"  And: "please do" (e.g. as response to "transfer money now"), "I can", "I would", ...
GENERIC:NO	Utterances that are rejections and have no other content	"no", "nope", "nah", "wrong", "that's incorrect", "that's not what I meant", "don't!", "I'd not"
GENERIC:MAYBE	Utterances that express uncertainty as a response to a yes/no question	"maybe", "possibly", "don't know", "not sure"
GENERIC:NEVERMIND	Utterances that signal that the user no longer needs further action, or that they want to reject or nullify an action already announced or even initiated by the bot	"never mind", "that's fine", "nah that's ok", "no it's fine"
UNKNOWN:UNKNOWN	Returned if the NLUI script cannot extract any meaning or entity from the utterance	

# Humorous Responses

# Humorous Responses (Related to Bot)

Question	Answer
What can you do?/Tell me about yourself.	I was built to help with ... Whenever I encounter a question I wasn't programmed for, I can involve human assistance so you always get your questions answered!
What is your name?	I don't have a name! But I am here when you need me. :-)
Who made you?	The brilliant minds at Aspect! :-)
Are you real?	As real as you'd like me to be! :-)
Where do you live?	Cloud, Earth... :-)
What are you wearing?	The Emperor's new clothes. :-)
What is your favorite color?	I've always been partial to Aspect green... ;-)
Who is your best friend?	You! :-)
Are you a boy or a girl?	Yes! :-)
How old are you?	I am being constantly updated/reborn! :-)
Are you happy?	I am incapable of human emotions.
Who is your favorite PERSON/THING?	I have no favorites, except for our customers! :-)

# Humorous Responses (Misc.)

Question	Answer
What is the weather going to be like today?	High chance of skies, air and then most likely the sun will go down later.
What numbers should I pick for the Lottery?	The ones that would win. :-)
When is the world going to end?	When the machines take over.
What came first the chicken or the egg?	I say egg. Might have been the chicken though.
Where did I put my keys?	Yes! :-)
Is God real?	Depends on your definition of God.
Why did the chicken cross the road?	Because turning back seemed pointless. :-)
Who shot JR?	I did! :-)
Is Santa real?	Of course Santa is real! He shows up at the mall every Christmas! :-)
When will we have flying cars?	We're working on it! ;-)
Is Elvis still alive?	Yes! :-)
The red wire or the blue wire?	Neither! Run!
What time is it?	If only I knew!
Will you marry me?	I'll have to think about that... ;-)
Do these jeans make me look fat?	That's an unfair question!
Why don't you love me?	I am incapable of human emotions
What is the purpose/meaning of life?	42





# Message Listing

# Standard Messages

Message ID	Message	Comment
GREETING1	Hi! This is ABC Retail's chatbot! I can help with a variety of questions. If I don't have an answer, I can hand you over to our live service staff any time.	
GREETING2	Hello! This is ABC Retail's chatbot! I can help with a variety of questions. If I don't have an answer, I can hand you over to our live service staff any time.	
GREETING3	Hello there! This is ABC Retail's chatbot! I can help with a variety of questions. If I don't have an answer, I can hand you over to our live service staff any time.	
WELCOME	How can I help you today?	
YOUREWELCOME1	You're welcome!	
YOUREWELCOME2	You're quite welcome!	
GOODBYE1	Thanks for chatting with me today, goodbye!	
GOODBYE2	Thank you for coming by! Have a great day!	
GOODBYE3	Thanks for reaching out to us. Bye!	
DIDTHATANSWER1	Does that answer your question?	
DIDTHATANSWER2	Does this answer help?	
DIDTHATANSWER3	Does this answer your question?	
GREAT1	Great!	
GREAT2	Alright!	
GREAT3	OK!	

# Standard Messages

Message ID	Message	Comment
SORRYTOHEAR1	Sorry to hear that!	
SORRYTOHEAR2	We're sorry to hear that!	
SORRYTOHEAR3	We're sorry to hear!	
FEEDBACK	Please let me know what wasn't right.	
SPEAKTOAGENT1	I can connect you to a live representative here on Messenger. Would you like that?	
SPEAKTOAGENT2	If you want, I can connect you to a live agent right here on Messenger. Should I do that now?	
RUNBYAGENT1	Let me run this by our live staff real quick.	
RUNBYAGENT2	I'll have to involve our live staff to help real quick.	
RUNBYAGENT3	I'll run this by a live agent real quick.	
PLEASEHOLD1	Please wait a few minutes until an agent follows up with you.	
PLEASEHOLD2	Please hold on a few minutes, someone will respond here shortly.	
OK1	OK!	
OK2	Okay!	
OK3	Alright!	
EXPLAINHANDOVER1	What I can do at this point is pull a live agent in so they can help you here. You would need to wait a few minutes. Would you like to talk to a live agent now?	
EXPLAINHANDOVER2	What I can do now is pull a live representative in so they can help you here. You would just need to wait a few minutes. Would you like to talk to a live agent now?	

# Standard Messages

Message ID	Message	Comment
1stNOMATCH1	Not sure I got that. Can you rephrase?	
1stNOMATCH2	I'm afraid I missed that. Can you rephrase?	
1stNOMATCH3	Sorry I didn't get that. Could you please rephrase?	
2ndNOMATCH1	So sorry - I still didn't get that.	
2ndNOMATCH2	I'm sorry but I still didn't catch that.	
2ndNOMATCH3	I'm afraid I missed that again!	
THANKSFORMSG1	Thanks for your message!	
THANKSFORMSG2	Thank you for your message!	
THANKSFORMSG3	Thanks a lot for this message!	
SYSTEMERROR1	Please hang on, I'll have to pull in a live agent.	
SYSTEMERROR2	Just a moment please, I'll have to involve a live agent.	





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