

# Cloudio - Virtual Agent Reference

This document is a reference for “Cloudio”, the virtual agent for a fictional Cloud Audio online service provider. The Cloudio narrative is the basis for everything built in this CCAI curriculum. Why did we choose this? Because by far the most common use of virtual agents is for the purpose of customer service and this use case can show all of the common functionality you’ll need for your business.

Name of company	Cloud Audio
Name of bot	Cloudio
Industry	Online audio retailer, digital music, and audio service
User persona	Uses the Cloud Audio service to listen to songs and podcasts but needs some help

Things the virtual agent handles in the first phase of development:

- **speak to person**  
This is for when the user cannot get their request filled by the virtual agent. It can happen based on your business strategy (e.g., always send unsubscribe requests to a live person) or the user showing dissatisfaction with the capability of the virtual agent.
- **subscribe** to the service
- **unsubscribe** from the service  
In this case, we’ll send the user to a human agent.
- **list the most played audio file** in a specified musical genre
- **change tier** to silver, gold, or platinum level
- **change last name**
- **change first name**
- **change pin**
- **change phone number**  
This could also be an email address, for example, but we chose phone number for this course.) We’ll send the user to a human agent since the phone number is used for the unique account id.

Words and phrases	song, file, audio, unsubscribe
What constitutes the end of the conversation	when the user doesn’t respond to the “anything else?” question or answers “No”.

Design decisions:

Through the analysis of contact center metrics and past conversations with customers, many decisions were made in the design of Cloudio. Below are the key discoveries and outcomes that the business determined would provide a great customer experience and focus human agent resources.

Discovery	Design Decision
59% of inquiries into the Contact Center are for the following reasons: login/pin issues, updating account info, changing the tier of service, and getting the title or composer of an audio file	Replace IVR with Cloudio to provide user-friendly customer service which can be automated and reserve live agents for more complex or delicate matters
73% of users who wanted to change information on their account used the term “update” or “change” but didn’t provide the item they wanted changed on first contact (i.e., didn’t need to be prompted for the entity to update).	NLU is trained to match <b>change</b> and prompt for the entity when utterance includes “update” or “change” but no other details
48% of users who wanted a new last name on their account gave their last name on first contact.	NLU is trained to match <b>change-last-name</b> (no prompt needed to get the name).

Sample conversations:

1. speak-to-person

Who	Utterance
User	I’m frustrated. Can I get a rep?
Cloudio	OK, I’ll transfer you to the next available agent.

2. subscribe

Who	Utterance
User	Sign me up
Cloudio	What’s your phone number?
User	4155551212
Cloudio	What’s your first name?
User	Nozomi
Cloudio	What’s your last name?

User	Hernandez
Cloudio	Which tier would you like? We have silver, gold, and platinum.
User	I'll take silver
Cloudio	What would you like your pin to be?
User	1111
Cloudio	You're all set, <given-name>. Anything else today?

### 3. unsubscribe

Who	Utterance
User	I'm gonna need to discontinue service
Cloudio	OK, please give me a moment to transfer you to the next available agent who will be happy to help you.

### 4. list-most-played

Who	Utterance
User	What's the most popular song in Rock?
Cloudio	The most played song in Rock is "Stairway to Heaven" by Led Zeppelin. Anything else?
User	What about Classical?
Cloudio	The most played song in Classical is "Serenade No 13 for strings in G major" by Wolfgang Mozart. Anything else?
User	What about Pop?
Cloudio	The most played song in Pop is "See You Again" by Wiz Khalifa. Anything else?
User	Nah

### 5. change-last-name

Who	Utterance
User	My last name has changed and I want to update it on my account
Cloudio	OK, what should it be changed to?

User	Faraday
Cloudio	Got it. Last name on the account is now Faraday. Anything else I can assist you with today?
User	Nope

#### 6. change-first-name

Who	Utterance
User	My first name has changed and I want to update it on my account
Cloudio	OK, what should it be changed to?
User	Nozomi
Cloudio	Got it. First name on the account is now Nozomi. Anything else I can assist you with today?
User	No

#### 7. change-pin

Who	Utterance
User	I want to update the pin on my account
Cloudio	OK, what should it be changed to?
User	1234
Cloudio	Got it. Your pin has been updated to 1234. Anything else I can assist you with today?
User	No

#### 8. change-tier

Who	Utterance
User	Can you give me the extra service for my account?
Cloudio	Which tier would you like? We offer silver, gold, and platinum where silver is the lowest and platinum is the highest level of service.
User	Silver should be good.
Cloudio	Got it. Your account is now set for the silver tier of service.

9. more-help

Who	Utterance
User	I need some help
Cloudio	I can tell you the most popular songs in a genre and make changes to your account info such as change pin. What would you like?

10. survey-yes

Who	Utterance
Cloudio	You can take our survey or let me know what else I can help you with (such as change your pin, list most played song)
User	Sure, I'll take the survey
Cloudio	Great!

11. survey-no

Who	Utterance
Cloudio	You can take our survey or let me know what else I can help you with (such as change your pin, list most played song)
User	Nah I'm good
Cloudio	No problem. Is there anything else I can help you with today?

## Configuration in Dialogflow:

Intent	Sample Training Phrases	Parameters	Parameter Prompt(s)	Response
Speak-to-person	"is there a customer service rep i can talk to?" "please put me through to a live agent" "you aren't understanding me" "i need to speak to a human" "representative please" "can i talk to a real person?" "this is frustrating"	n/a	n/a	"Please stand by while I connect you with a customer service representative."
subscribe	"sign me up" "i want to subscribe" "i'd like a subscription" "how can i create a new account?" "i'd like to start a subscription"	phone-number  last-name  first-name  tier  pin	"What is the phone number that should be associated to your account?" "What is the last name that should be associated to your account?" "What is the first name that should be associated to your account?" "What tier would you like? We have silver, gold, and platinum." "What pin would you like associated to your account?"	"The account for <last-name> with phone number <phone-number> at tier level <tier> and <pin> has been created. Enjoy!"
unsubscribe	"can i cancel?" "i no longer can afford this" "i'd like to unsubscribe" "what needs to be done to stop my plan?" "how do i discontinue my account" "i need to cancel my subscription" "i'm gonna need to stop service" "i'd like to cancel my subscription"	phone-number (optional)	n/a	"Please stand by while I connect you with a customer service representative."
change-tier	"I'm gonna go with your most affordable option" "Please give me your medium priced package" "I'd like your best service" "Can I get the platinum tier" "I want to change to a different service tier" "Can I upgrade to the premium service?"	phone-number  tier	"What is the phone number on your account?" "What should your tier be changed to?"	"Your tier has been updated to <tier>."
list-most-played	"What's the most played song in Rock?"	genre	"For which genre?"	"The most played file in <genre> is x."
change-first-name	"My first name has changed so I need to update it"	phone-number  first-name	"What is the phone number on your account?" "What should your first name be changed to?"	"Your first name has been updated to <first-name>."

change-last-name	"my last name has changed to Wang" "i'd like to update the last name on my account" "please update my last name to Dhali" "My last name has changed so I need to update it"	phone-number last-name	"What is the phone number on your account?" "What should your last name be changed to?"	"Your last name has been updated to <last-name>."
change-pin	"i need to change my pin" "can you update my password to 3344?" "i want my new passcode to be 2525" "i want to change my pin" "I want to change the pin on my account"	phone-number pin	"What is the phone number on your account?" "What should the new pin on your account be?"	"Your pin has been updated to <pin>."
yes	"yes" "yeh" "yep" "yes please" "yes i need more help"	n/a	n/a	"What can I help you with?"
survey-yes	i can do the survey, the survey would be alright, sure i'll take your survey	n/a	n/a	"Great! Let's pretend you just took our survey. What else can I assist with?"
survey-no	no thanks on the survey, not interested in that, nah i don't want to take any survey	n/a	n/a	"No problem. What else can I help you with?"

Entity	Entity Elements	Synonyms	Regex entity
pin		[0-9]{4}	✓
tier	silver	silver, cheapest, lowest level, basic, standard, first tier, lowest, level one, affordable	
	gold	gold, mid tier, middle, medium priced, next step up, next level up, mid level, level two	
	platinum	platinum, highest level, best, top tier, top level, premium, advanced, highest package, level three	
genre	pop	pop	
	rock	rock, rock & roll	
	classical	classical, opera	
	jazz	jazz, jazz fusion	

## Configuration specific to Dialogflow ES:

Intent	Training Phrases	Parameters	Input context	Output context	Response
followup-list-files	"What about Rock?"	playlist	list-files		"The files names in \$playlist are x."
followup-most-played	"What about Rock?"	music-genre	most-played		"The most played file in \$genre is x."

## Test Cases:

Intent	Sample Training Phrases	Parameters	Parameter Prompt(s)	Response
speaking-to-person	"is there a customer service rep i can talk to?" "please put me through to a live agent" "you aren't understanding me" "i need to speak to a human" "representative please" "can i talk to a real person?" "this is frustrating"	n/a	n/a	"Please stand by while I connect you with a customer service representative."
subscribe	"sign me up" "i want to subscribe" "i'd like a subscription" "how can i create a new account?" "i'd like to start a subscription"	phone-number  last-name  first-name  tier  pin	"What is the phone number that should be associated to your account?" "What is the last name that should be associated to your account?" "What is the first name that should be associated to your account?" "What tier would you like? We have silver, gold, and platinum." "What pin would you like associated to your account?"	"The account for <last-name> with phone number <phone-number> at tier level <tier> and <pin> has been created. Enjoy!"
unsubscribe	"can i cancel?" "i no longer can afford this" "i'd like to unsubscribe" "what needs to be done to stop my plan?"	phone-number (optional)	n/a	"Please stand by while I connect you with a customer service representative."



	"how do i discontinue my account" "i need to cancel my subscription" "i'm gonna need to stop service" "i'd like to cancel my subscription"			
change-tier	"I'm gonna go with your most affordable option" "Please give me your medium priced package" "I'd like your best service" "Can I get the platinum tier" "I want to change to a different service tier" "Can I upgrade to the premium service?"	phone-number  tier	"What is the phone number on your account?" "What should your tier be changed to?"	"Your tier has been updated to <tier>."
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change-first-name	"My first name has changed so I need to update it"	phone-number  first-name	"What is the phone number on your account?" "What should your first name be changed to?"	"Your first name has been updated to <first-name>."
change-last-name	"my last name has changed to Wang" "i'd like to update the last name on my account" "please update my last name to Dhali" "My last name has changed so I need to update it"	phone-number  last-name	"What is the phone number on your account?" "What should your last name be changed to?"	"Your last name has been updated to <last-name>."
change-pin	"i need to change my pin" "can you update my password to 3344?" "i want my new passcode to be 2525" "i want to change my pin" "I want to change the pin on my account"	phone-number  pin	"What is the phone number on your account?" "What should the new pin on your account be?"	"Your pin has been updated to <pin>."
more-help	"I could use some assistance" "Yeh help" "Yep i'm gonna need more" "yes please help me" "i need more help" "yes"	n/a	n/a	"What can I help you with?"
survey-yes	"i can do the survey" "the survey would be alright" "sure i'll take your survey"	n/a	n/a	"Great! Let's pretend you just took our survey. What else can I assist with?"
survey-no	"no thanks on the survey" "not interested in that" "nah i don't want to take any survey"	n/a	n/a	"No problem. What else can I help you with?"