

**The non-disclosure agreements (NDAs) associated with this proof-of-concept (POC) project have long since expired, allowing me to finally share these designs. While they offer a glimpse into the complexity of the UI and technology, they represent only a small portion of the extensive research, documentation, and design work undertaken. Unfortunately, due to these NDAs and the nature of the project, I wasn't able to retain most of these assets after my departure.**

## **Pact.AI Chatbot Creator: A UX Case Study in Rapid Prototyping**

This project chronicles my design journey in crafting a Proof-of-Concept (POC) for Pact.AI's revolutionary Chatbot Builder tool. It's a testament to the power of design thinking process applied under tight deadlines and intense technical learning curves.

### **Mission: Disrupt the Chatbot Landscape**

Our objective was audacious: secure funding for a tool that not only rivaled established players like IBM Watson, Amazon Lex, Google Dialogflow, and Microsoft Bot, but also offered an edge – the ability to leverage any AI Cloud service (including our own, Pact.AI) within a user-friendly interface. This POC would be presented to global leadership, influencing the company's direction for the coming year. With only six weeks, the pressure was on.

### **Understanding: Deep Dive into Chatbot Nirvana**

The initial phase was a whirlwind of learning. Extensive discussions with the development team and product manager (PM) were coupled with a crash course in our competitors' offerings. I devoured everything about entities, intents, dialogues, actions, and utterances – the building blocks of chatbot conversations. It wasn't just understanding the mechanics; it was about envisioning a superior user experience that would set Pact.AI apart.

### **Exploration: Collaborative Prototyping in Warp Speed**

Daily meetings and workshops became the norm. The PM and developers were my constant companions as we explored workflows, relentlessly iterating on wireframes. Time constraints demanded an in-house approach, and while the focus was firmly on feasibility, the seeds of a user-centric design were meticulously planted.

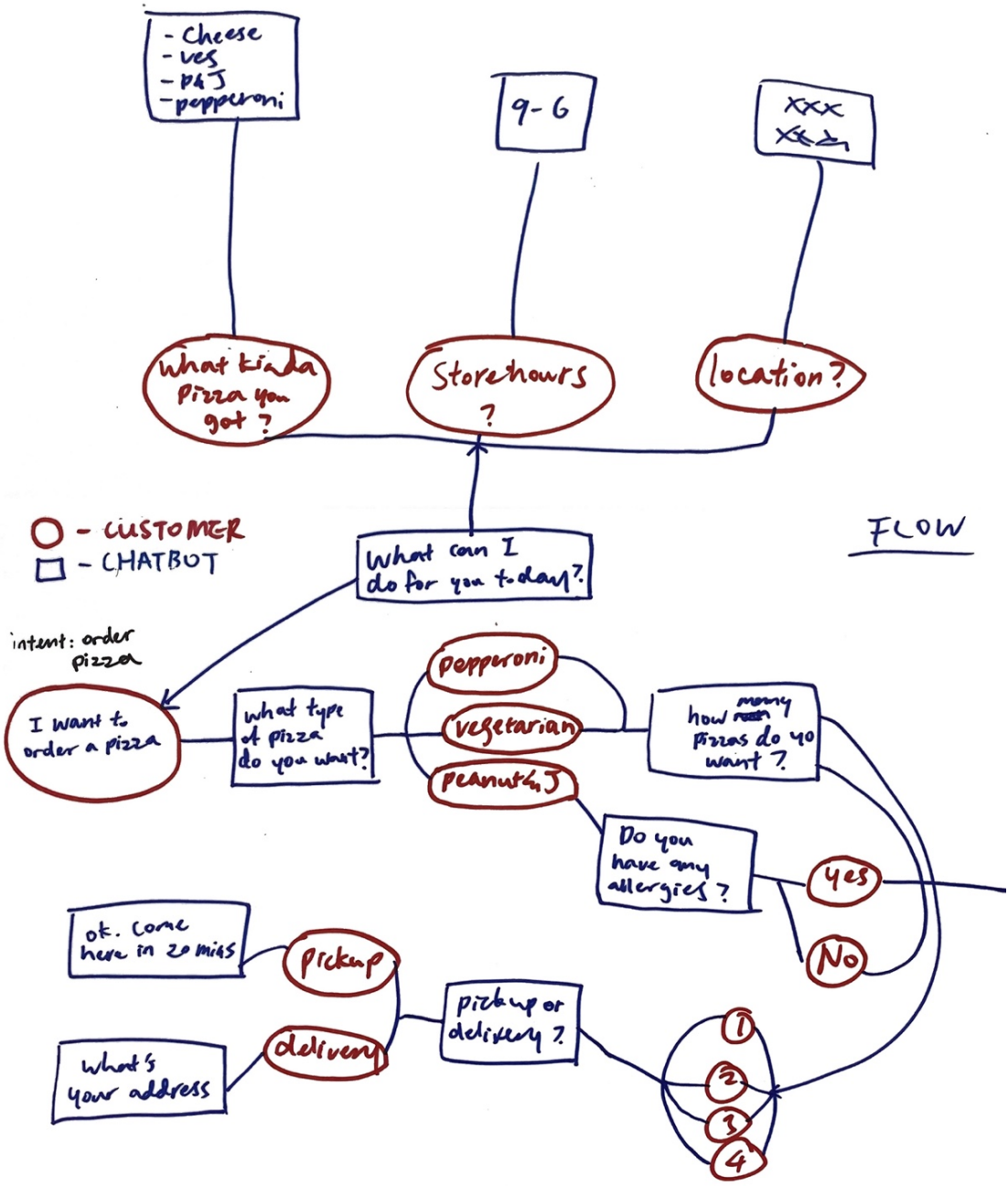
### **Materialization: Taking the Vision to the Finish Line**

The culmination of this intense period was a fully functional wireframe prototype, meticulously crafted and jointly approved by the PM and development team. Together, we presented the POC to leadership, showcasing the potential of Pact.AI's Chatbot Builder.

### **Result: Funding Secured, But the Journey Continues**

The presentation was a success! Funding was greenlit for the next design phase. However, new opportunities beckoned, and I made the difficult decision to pursue them shortly thereafter. While I wasn't there to witness the full realization of the project, the experience serves as a powerful testament to the transformative power of rapid prototyping and user-centered design.

QnA  
AKA. search & keywords



### Mom & Pop Pizza Bot (Intents)

Intents   Entities   Dialogs

Intents	Example utterances that imply this intent:
Greeting	Can I order a <b>pepperoni pizza</b> ? I would like to place an order. I need a large pizza. I want to get some pasta delivered.
<b>Order</b>	
Order Pizza	
Order Pasta	
Order Salad	
Hours	
Location	

### Mom & Pop Pizza Bot (Entities)

Intents   Entities   Dialogs

Entities	Values
<b>Food</b>	pizza
Pizza Type	pasta
Pasta Type	salad

### Mom & Pop Pizza Bot (Defining Entities Inside An Intent)

Intents   Entities   Dialogs

Intents	Example utterances that imply this intent:
Greeting	Can I order a <b>pepperoni pizza</b> ? I would like to place I need a large pizza. I want to get some p
<b>Order</b>	
Order Pizza	
Order Pata	
Order Salad	
Hours	
Location	

Select an entity

Food

Food Type

## Mom & Pop Pizza Bot (Intents)

Intents Entities Dialogs

Intents

- Greeting
- Order**
- Order Pizza
- Order Pasta
- Order Salad
- Hours
- Location

Example utterances that imply this intent:

Can I order a pepperoni pizza?

I would like to place an order.

I need a large pizza.

I want to get some pasta delivered.

## Mom & Pop Pizza Bot (Entities)

Intents Entities Dialogs

Entities

- Food**
- Pizza Type
- Pasta Type
- Salad Type
- Number

Values

pizza

pasta

salad

## Mom & Pop Pizza Bot (Defining Entities Inside An Intent)

Intents Entities Dialogs

Intents

- Greeting
- Order**
- Order Pizza
- Order Pasta
- Order Salad
- Hours
- Location

Example utterances that imply this intent:

Can I order a pepperoni pizza?

I would like to place

I need a large pizza.

I want to get some p

Select an entity

- Food
- Food
- Food Type

## Mom & Pop Pizza Bot (Dialogs)

Intents Entities Dialogs

Dialog Flows

Greeting

Hours

Order Pizza

Order

Order Pasta

Done

Location

Order Salad

If bot recognizes GREETING then

Add Action

Action 1:

respond with the following text

Hello, I'm Bobo the Pizza Bot! I can do things like place orders, provide our location, and give you our store hours. What can I do for you?

Final Action:

Waiting for user input

Intents Entities Dialogs

Dialog Flows

Greeting

Hours

Order

Location

Done

Add Pizza

Add Pasta

Add Salad

Entities

Question

What would you like to add to your order?

Quantity

How many would you like to order?

If bot recognizes ORDER

Add Action

Action 1:

check utterance for entities

Entities

If not present, ask

Food

What food would you like to add to your order?

Quantity

How many would you like to order?

Action 2:

if entity has a value of

Food = Pizza go to intent Order Pizza

Food = Pasta go to intent Order Pasta

Food = Salad go to intent Order Salad

Final Action:

Waiting for user input

Food = Pasta go to intent Add Pasta

Food = Salad go to intent Add Salad

### Mom & Pop Pizza Bot (Intents)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

Example utterances that imply this intent

Hello  
Good day  
Good evening  
Good morning  
Hey how are you doing?

**Dialog Maker** Add Action

**Action 1:**  
respond with the following text

Hello, I'm Bobo the Pizza Bot! I can do things like place orders, provide our location, and give you our store hours. What can I do for you?

**Final Action:**  
Waiting for user input

### Mom & Pop Pizza Bot (Entities)

Intents Entities

Entities Values

Food  
Pizza Type  
Pasta Type  
Salad Type  
Crust Type  
Shape  
Number

pizza  
pasta  
salad

### Mom & Pop Pizza Bot (Intents)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

Example utterances that imply this intent

Can I order a thin crust pepperoni pizza?  
I would like to place an order.  
I need a large pizza.  
I want to get some pasta delivered.

**Dialog Maker** Add Action

**Action 1:**  
check utterance for entities

**Entities** **If not present, ask**

Food What food would you like to add to your order?  
Quantity How many would you like to order?

**Action 2:**  
if entity has a value of

Food = Pizza go to intent Order Pizza  
Food = Pasta go to intent Order Pasta  
Food = Salad go to intent Order Salad

**Action 3:**  
respond with the following text

Can I order you anything else?

**Final Action:**  
Waiting for user input

### Mom & Pop Pizza Bot (Intents)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

Example utterances that imply this intent

Can I order a thin crust pepperoni pizza?  
I would like to place  
I need a large pizza.  
I want to get some p

Select an entity  
Food  
Food  
Pizza Type  
Pasta Type  
Salad Type

**Dialog Maker** Add Action

**Action 1:**  
check utterance for entities

**Entities** **If not present, ask**

Food What food would you like to add to your order?  
Quantity How many would you like to order?

**Action 2:**  
if entity has a value of

Food = Pizza go to intent Order Pizza  
Food = Pasta go to intent Order Pasta  
Food = Salad go to intent Order Salad

**Action 3:**  
respond with the following text

Can I order you anything else?

**Final Action:**  
Waiting for user input

### Mom & Pop Pizza Bot (Sub-Intent)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

This intent is a child intent

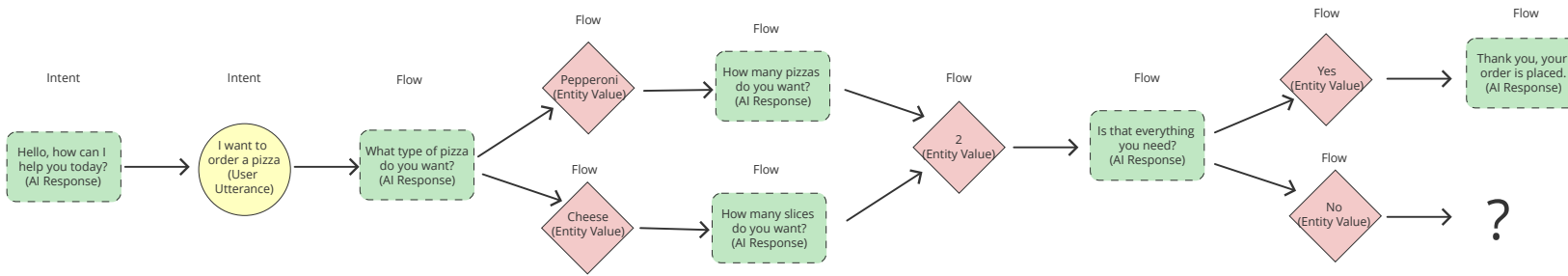
**Dialog Maker** Add Action

**Action 1:**  
check utterance for entities

**Entities** **If not present, ask**

Crust Type What crust would you like? Pan, Thin, or Regular?  
Shape What shape would you like? Square or Round?

**Final Action:**  
Return to parent Intent



What about sharing entities and their values (U.S. States for example)?  
Book Trip Example: Book Car, Book Hotel, Book Flight

Why example Questions in the flow? Intents have all the question variations in them?

### Mom & Pop Pizza Bot (Intents)

Intents Entities Dialogs

Intents	Example utterances that imply this intent:
Greeting	
Order	Can I order a pepperoni pizza?
Order Pizza	I would like to place an order.
Order Pasta	I need a large pizza.
Order Salad	I want to get some pasta delivered.
Hours	
Location	

### Mom & Pop Pizza Bot (Entities)

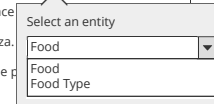
Intents Entities Dialogs

Entities	Values
Food	pizza
Pizza Type	pasta
Pasta Type	salad
Salad Type	
Number	

### Mom & Pop Pizza Bot (Defining Entities Inside An Intent)

Intents Entities Dialogs

Intents	Example utterances that imply this intent:
Greeting	
Order	Can I order a pepperoni pizza?
Order Pizza	I would like to place
Order Pata	I need a large pizza.
Order Salad	I want to get some p
Hours	
Location	



### Mom & Pop Pizza Bot (Dialogs)

Intents Entities Dialogs



ID	Node	intent	Entity	Entity Value
1	Hi how can I help you today?	hello		
2	I want to order a pizza	order		
3	What type of pizza would you like?	order		
4	Pick Pepperoni	order	Pizza Type	Pepperoni
5	Pick Cheese	order	Pizza Type	Cheese
6	How many pizzas do you want?	order	Pizza Type	Pepperoni
7	How many slices do you want	order	Pizza Type	Cheese
8	Is that everything you need?	order	Quantity	
9	Thank you. Your order is placed.	confirm		

1. Put Intents in a list
2. Add Utternaces to Intents
3. Create Entities AND add values to them
4. Assign entities to to Intent Utternaces
5. Dialog Flows shows Q/A
6. Flow is in order
7. If 'Entity Value' has a value, it flows to the next 'Entity Value' with the same value. If no value, it goes to the next node.

## Mom & Pop Pizza Bot (Intents)

Intents	Entities	Dialogs
Greeting <b>Order</b> Order Pizza Order Pasta Order Salad Hours Location	Example utterances that imply this intent: Can I order a <b>pepperoni pizza</b> ? I would like to place an order. I need a large pizza. I want to get some pasta delivered.	

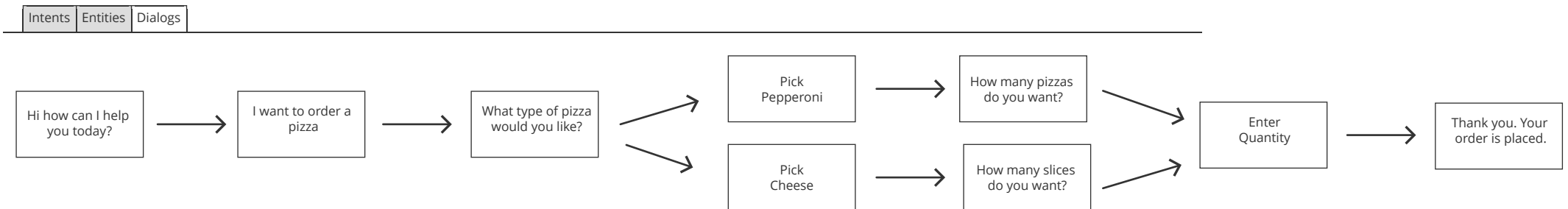
## Mom & Pop Pizza Bot (Entities)

Intents	Entities	Dialogs
	Food Pizza Type Pasta Type Salad Type Number	Values pizza pasta salad

## Mom & Pop Pizza Bot (Defining Entities Inside An Intent)

Intents	Entities	Dialogs
Greeting <b>Order</b> Order Pizza Order Pata Order Salad Hours Location	Example utterances that imply this intent: Can I order a <b>pepperoni pizza</b> ? I would like to place I need a large pizza. I want to get some p	

## Mom & Pop Pizza Bot (Dialogs)



ID	Node	Intent	Entity	Entity Value
1	Hi how can I help you today?	hello		
2	I want to order a pizza	order		
3	What type of pizza would you like?	order		
4	Pick Pepperoni	order	Pizza Type	Pepperoni
5	Pick Cheese	order	Pizza Type	Cheese
6	How many pizzas do you want?	order	Pizza Type	Pepperoni
7	How many slices do you want	order	Pizza Type	Cheese
8	Is that everything you need?	order	Quantity	
9	Thank you. Your order is placed.	confirm		

1. Put Intents in a list
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5. Dialog Flows shows Q/A
6. Flow is in order
7. If 'Entity Value' has a value, it flows to the next 'Entity Value' with the same value. If no value, it goes to the next node.

## Mom & Pop Pizza Bot (Intents)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

Example utterances that imply this intent

Hello  
Good day  
Good evening  
Good morning  
Hey how are you doing?

**Dialog Maker** Add Action

**Action 1:**  
respond with the following text

Hello, I'm Bobo the Pizza Bot! I can do things like place orders, provide our location, and give you our store hours. What can I do for you?

**Final Action:**  
Waiting for user input

## Mom & Pop Pizza Bot (Entities)

Intents Entities

Entities Values

Food  
Pizza Type  
Pasta Type  
Salad Type  
Crust Type  
Shape  
Number

pizza  
pasta  
salad

## Mom & Pop Pizza Bot (Intents)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

Example utterances that imply this intent

Can I order a **thin crust** **pepperoni** pizza?  
I would like to place  
I need a large pizza.  
I want to get some p

Select an entity  
Food  
Food  
Pizza Type  
Pasta Type  
Salad Type

**Dialog Maker** Add Action

**Action 1:**  
check utterance for entities

Entities If not present, ask

Food What food would you like to add to your order?  
Quantity How many would you like to order?

**Action 2:**  
if entity has a value of

Food = Pizza go to intent Order Pizza  
Food = Pasta go to intent Order Pasta  
Food = Salad go to intent Order Salad

**Action 3:**  
respond with the following text

Can I order you anything else?

**Final Action:**  
Waiting for user input

## Mom & Pop Pizza Bot (Sub-Intent)

Intents Entities

Intents

Greeting  
Order  
Order Pizza  
Order Pasta  
Order Salad  
Hours  
Location

This intent is a child intent

**Dialog Maker** Add Action

**Action 1:**  
check utterance for entities

Entities If not present, ask

Crust Type What crust would you like? Pan, Thin, or Regular?  
Shape What shape would you like? Square or Round?

**Final Action:**  
Return to parent Intent



### Mom & Pop Pizza Bot (Intents)

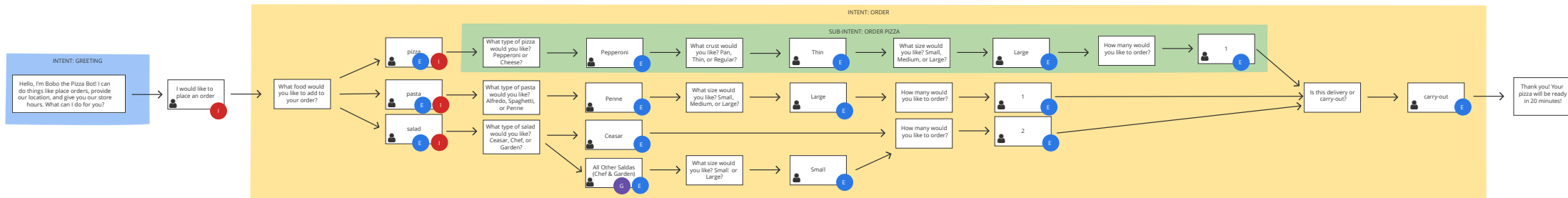
Intents	Entities	Dialogs
<p>Intents</p> <ul style="list-style-type: none"> <li>Greeting</li> <li>Order</li> <li>Order Pizza</li> <li>Order Pasta</li> <li>Order Salad</li> <li>Hours</li> <li>Location</li> </ul>	<p>Example utterances that imply this intent:</p> <ul style="list-style-type: none"> <li>Can I order a <b>pepperoni</b> pizza?</li> <li>I would like to place an order.</li> <li>I need a large <b>pizza</b>.</li> </ul>	<p>Select an entity</p> <ul style="list-style-type: none"> <li>Food Type</li> <li>Pizza Type</li> <li>Pizza Crust</li> <li>Size</li> <li>Quantity</li> </ul>

### Mom & Pop Pizza Bot (Entities)

Intents	Entities	Dialogs
	<p>Entities</p> <ul style="list-style-type: none"> <li>Food Type</li> <li>Pizza Type</li> <li>Pizza Crust</li> <li>Size</li> <li>Quantity</li> <li>Pasta Type</li> <li>Salad Type</li> </ul>	<p>Values</p> <ul style="list-style-type: none"> <li>pizza</li> <li>pasta</li> <li>salad</li> </ul>

### Mom & Pop Pizza Bot Dialog Flow

- Example Reply By User
- Invokes An INTENT
- Answers To An ENTITY
- Grouping Option For Entities?



### Dialog Maker Forms (Colors reflect which INTENT form will appear when a node above is clicked)

**Dialog Maker: Greeting Intent** Add Action

---

**Action 1:**

respond with the following text

Hello, I'm Bobo the Pizza Bot! I can do things like place orders, provide our location, and give you our store hours. What can I do for you?

**Final Action:**

Waiting for user input

**Dialog Maker: Order Intent** Add Action

---

**Action 1:**

check utterance for entities

Entities if not present, ask

Food  What food would you like to add to your order?

Delivery  Is this delivery or carry-out?

**Action 2:**

if entity has a value of

Food   go to intent  Order Pizza

Food   go to intent  Order Pasta

Food   go to intent  Order Salad

**Action 3:**

respond with the following text

Can I order you anything else?

**Final Action:**

Waiting for user input

**Dialog Maker: Order Pizza Intent** Add Action

---

**Action 1:**

check utterance for entities

Entities if not present, ask

Pizza Type  What type of pizza would you like? Pepperoni or Cheese?

Crust Type  What crust would you like? Pan, Thin, or Regular?

Size  What size would you like? Small, Medium, or Large?

Quantity  How many would you like to order?

**Final Action:**

Return to parent Intent

## Your Bots

Show 10 bots

Search: 

Bot ID	Bot Name	Create Time	Last Modified	Type	Service	Status
2	Test Bot 1	4/2/2019 - 9:29 AM	4/16/2019 - 9:27 AM	Flow	MsLuis	Saved
3	Test bot	4/12/2019 - 5:39 AM	4/12/2019 - 5:39 AM	QnA	MsAzureSearch	Test
8	qna bot 3	4/22/2019 - 4:19 AM	4/22/2019 - 4:19 AM	QnA	MsAzureSearch	NotReady
9	Test bot	4/22/2019 - 8:10 AM	4/22/2019 - 8:10 AM	Flow	MsLuis	NotReady
11	test	4/23/2019 - 9:06 AM	4/23/2019 - 9:06 AM	Flow	MsLuis	NotReady
12	abc	4/23/2019 - 9:27 AM	4/23/2019 - 10:05 AM	Flow	MsLuis	NotReady
13	test1	4/23/2019 - 5:13 PM	4/23/2019 - 5:13 PM	Flow	MsLuis	NotReady
14	testb	4/23/2019 - 10:14 AM	4/23/2019 - 10:15 AM	Flow	MsLuis	NotReady
16	abcdefg	4/24/2019 - 4:33 AM	4/24/2019 - 4:33 AM	Flow	MsLuis	NotReady
17	abc	4/24/2019 - 11:41 AM	4/26/2019 - 10:14 AM	Flow	MsLuis	NotReady

Showing 1 to 10 of 21 bots

[Previous](#) [1](#) [2](#) [3](#) [Next](#)

## Create your bot

pact.AI enables anyone to build conversational chatbots quickly and easily. With pact.AI, no technical background or deep learning expertise is required. You just map out the basic conversational flow directly from the flowchart, and then further specify the content of the conversation including the intents and entities. To get started, you can choose one of the template bots provided or build a new custom bot

Create your own

Build from template

Custom bot

OrderPizza

WineShop

CoffeeShop

FlowerShop

Bot name

Language

Cloud service

Cancel

Create

This screen shows an example of all the information you might see when selecting an Intent.

Pactera BGUS Appraisal System

https://ipactor.com

**pact.AI** John Doe

Bots Resources Users

### Mom & Pop Pizza Bot

Test Bot

Dialogs Intents Entities

Rule: Uttrance must be alternanting (Bot, User, Bot, User, etc.). Intents can be between them.

Hi! How can I help you today?  
( Welcome Intent)

What are your store hours?  
Hours

Where is your store located?  
Location

I want to place an order?  
Order

What is the air-speed velocity of an unladen swallow?  
I Dont Understand You

What type of food do you want?

Pizza  
Order Pizza

Pasta  
Order Pasta

Salad  
Order Salad

No  
Checkout

Want to order anything else?

Yes

Bot Utterance User Utterance Intent

**Rules**

The sole purpose of this diagram is to show the relationship between Intents.

The only Entity Questions that a bot will ask are those that force a different flow to a different Intent. All other Entity Questions do not show here.

Nodes can only connect to each other in order shown above:  
(Intent to Bot Utterance to User Utterance)

This screen shows an example of all the information you might see when selecting an Intent.

Pactera BGUS Appraisal System

https://ipactor.com

pact.AI
John Doe

Bots
Resources
Users

## Mom & Pop Pizza Bot

Test Bot

Dialogs

Intents

Entities

+ Example utterances that imply this intent

-

Greeting	-	Can I order a <span style="background-color: yellow;">thin crust pepperoni pizza?</span>	✎ -
Order	-	I would like to place an <span style="background-color: yellow;">order</span> .	✎ -
Order Pizza	-	I need a <span style="background-color: yellow;">large pizza</span> .	✎ -
Order Pasta	-	I want to get some <span style="background-color: yellow;">pasta delivered</span> .	✎ -
Order Salad	-		
Hours	-	Add a question here...	
Location	-		

### Dialog Maker

Add Action

**Action 1:**

check utterance for entities

+ -

Entities If not present, ask

Food Type	▼	What food would you like to add to your order?	-
Delivery	▼	Is this delivery or carry-out?	-

**Action 2:**

if entity has a value of

+ -

Food Type	▼	=	▼	Pizza	▼	go to intent	▼	Order Pizza	▼	-
Food Type	▼	=	▼	Pasta	▼	go to intent	▼	Order Pasta	▼	-
Food Type	▼	=	▼	Salad	▼	go to intent	▼	Order Salad	▼	-

**Action 3:**

respond with the following text

Can I order you anything else?

**Final Action:**

Waiting for user input

This screen show how you would mark entities in Intent questions. The dropdown would appear when the user is done highlighting a word (or group of words) and disappear when focus is lost.

Pactera BGUS Appraisal System

https://ipactor.com

**pact.AI** John Doe

Bots Resources Users

### Mom & Pop Pizza Bot

Test Bot

Dialogs Intents **Entities**

**Example utterances that imply this intent**

- Greeting
- Order**
- Order Pizza
- Order Pasta
- Order Salad
- Hours
- Location

Can I order a **thin crust pepperoni pizza**?

I would like to place an **order**.

I need a **large pizza**.

Select an entity

- Food Type
- Pizza Type
- Pizza Crust
- Size
- Quantity

Add Action

**Action 1:**

check utterance for entities

Entities If not present, ask

Food Type What food would you like to add to your order?

Delivery Is this delivery or carry-out?

**Action 2:**

if entity has a value of

Food Type	=	Pizza	go to intent	Order Pizza
Food Type	=	Pasta	go to intent	Order Pasta
Food Type	=	Salad	go to intent	Order Salad

**Action 3:**

respond with the following text

Can I order you anything else?

**Final Action:**

Waiting for user input

This screen shows an example of all the information you might see when selecting an Intent.

Pactera BGUS Appraisal System

← → ↻ 
☰

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Bots
Resources
Users

## Mom & Pop Pizza Bot

Test Bot

Dialogs

Intents

Entities

**Entities**

- Food Type -
- Pizza Type -
- Pasta Type -
- Salad Type -
- Crust Type -
- Pizza Size -
- Quantity -

**Values** Enter comma seperated values. The first value will be the variable name \*

- @Pizza: piazze, piazzas, pis, pies, pizzazz, huzza, piers, pious -
- @Pasta: noodles, gnocchi, linguine -
- @Salad: -

This screen show what happens when you click the TEST BOT button. This sidebar slides out from the left and is visible no matter what tab the user is on (Dialog, Intents, or Entities).

Pactera BGUS Appraisal System

← → ↻

pact.AI
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Bots
Resources
Users

Mom & Pop Pizza Bot

Switch Cloud Service
Channel
Publish
Test Bot

Dialogs
Intents
Entities

+

Example utterances that imply this intent

Can I order a thin crust pepperoni pizza?

I would like to place an order.

I need a large pizza.

I want to get some pasta delivered.

**Dialog Maker**
Add Action

---

**Action 1:**

check utterance for entities
+

Entities If not present, ask

Food Type
▼

What food would you like to add to your order?

⊖

Quantity
▼

How many would you like to order?

⊖

**Action 2:**

if entity has a value of
+

Food Type
▼

=
▼

Pizza
▼

go to intent
▼

Order Pizza
▼

⊖

Food Type
▼

=
▼

Pasta
▼

go to intent
▼

Order Pasta
▼

⊖

Food Type
▼

=
▼

Salad
▼

go to intent
▼

Order Salad
▼

⊖

**Action 3:**

respond with the following text
▼

Can I order you anything else?

**Final Action:**

Waiting for user input
▼

**Try it out!**
⋮

Hello, I'm BoBo the pizza bot. I can help with directions to my store, hours of operation and ordering food!

Matching Predicts:

Intent	Score
Order	26.1
Order Pizza	6.0
Order Pasta	5.3

Entity	Score
Food Type	58.1
Pizza Type	48.0

Context:

Entity	Value
Food Type	Pizza
Pizza Type	Pepperoni