

## Template Generation Guideline

This study is aimed to test our dialogue augmentation framework, Velocidapter, with non-author users. Velocidapter is a framework that takes in turn-templates extracted from a small set of dialogues and uses them to populate the original set to much larger sizes.

1. A turn-template can consist of several pairs of turns, and usually has a slot label in a delexicalized form such as:

→ + Hi, I need to book a table at a restaurant in **[slot1]** of the city.

2. There are three types of templates: greeting, intermediate, and ending. These constraints make sure the merging generates a coherent dialogue.

**Greeting** templates are of an odd number of turns and **start with a user turn**.

→ + Hi, I need to book a table at a restaurant in **[slot1]** of the city.

→ +I want to book a table from a restaurant that serves **[slot2]** in **[slot1]** part of the town.

- What day are you looking to be there?

+I want to be there on **[slot3]**

**Intermediate** ones are of **even** number of turns and **start with the system**.

→ - What type of food are you looking for?

+ I want to have **[slot2]** food.

→ - Are you looking for a specific part of the city?

+ Yes I want it to be in **[slot1]** area

→ - You might like to dine at **[slot2]**.

+ Sorry what type of food do they serve?

- They serve **[slot1]** food.

+ Okay, sounds good.

**Ending** templates are **flexible** in the number of turns but they again have to **start with a system turn**.

→- Anything else I can help you with?

+ Could you give me the address and phone number?

- I sure can. The address is Cambridge Leisure Park Clifton Way CB 1, 7 DY, and the phone number is 01223308871.

+ Thank you.

→ - Can I help you with anything else today?  
+ No that was all. Thank you.

3. The system generates a dialogue by choosing **1** greeting, **n** intermediate, and **1** ending templates.
4. While doing so it makes sure that the same slot type is not repeated and it follows some preliminary rules of slots. Such as the restaurant name cannot be determined before the restaurant food type.
5. We also have an “**arbitrary**” slot type which the system fills in but does not label as the final value for that slot:

→ - What type of food you would like  
+ I want to have **[slot2a]** food.  
- Okay, noted.  
+ Actually, never mind I want to have **[slot2]** instead.

It is used for mind change or self-thinking traits of conversations as shown above. The system makes sure that arbitrary and original values are filled with different values.

#### **Your task:**

Given N dialogues go through the dialogues and extract greeting, intermediate, and ending templates. If you think there needs to be defined any preliminary rules, state them (e.g. restaurant name >> restaurant food type). That is all!

#### **Things you need to think about:**

1. Try to choose a set of templates with various samples so the system can combine them into new dialogues.
2. Make sure that every intermediate and ending template is reachable:  
If let's say all your greeting templates have slot **[slot1]**, and all your intermediate templates have **[slot1]** as well then the system will not use any of the intermediate templates by definition.
3. Make sure your templates cover all possible slot types for the respective domain.

## Sample Extraction on Restaurant Domain Dialogues

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- + I'm looking for a restaurant in the west side that's in the moderate price range.
- I have three listings, one for british, indian, italian. Are any of those types of food you are looking for?
- + Are any of them available for 8 people at 19:00 on Wednesday?
- There are two restaurants available the Indian restaurant Meghna and the Italian restaurant Prezzo 8 people at 19:00 on Wednesday. Which one do you prefer?
- + The Italian restaurant Prezzo sounds good.
- Booking was successful, table will be reserved for 15 mins. Reference number is : GVOKLI1A. Anything else?
- + nope that's it. thanks
- You're welcome. Have a great day!

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### Greeting:

- I'm looking for a restaurant in the [slot1] side that's in the [slot2] price range.
- I'm looking for a restaurant in the [slot1] side.

### Intermediate:

- - I have a listing for a [slot3] restaurant. Is that what you are looking for?
  - + Is it available for [slot4] people at [slot5] on [slot6]?
- - There are two restaurants available [slot3] restaurant [slot7] and the [slot3a] restaurant [slot7a]. Which one do you prefer?
  - + The former sounds good.

### Ending:

- - Booking was successful, table will be reserved for 15 mins. Reference number is : GVOKLI1A. Anything else?
  - + nope that's it. thanks
  - You're welcome. Have a great day!

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- + Where can I find malaysian food? I prefer an expensive restaurant please
- No I am deeply sorry I am not getting any
- + How about an expensive Malaysian restraint in the south? Is there anything available?
- I'm sorry. There's still no matching results. Would you like me to search for a different foot type?
- + Yes, please. How about Indian food?
- I have 1 expensive Indian food in the south. It's called Taj Tandoori. They are located on 64 Cherry Hinton Road Cherry Hinton. Would you like a + reservation?
- Perfect, yes. I want a table for 5 at 16:00 on monday.
- + Booking was successful. The table will be reserved for 15 minutes. Reference number is : X2V543QG
- Thank you. That was all I needed today. Goodbye.
- + You're very welcome. Have a nice time!

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Greeting:

- Where can I find [slot1] food? I prefer an [slot2] restaurant please.
- Where can I find [slot1] food?
- + Where can I find [slot1a]food? I prefer an [slot2a] restaurant please
- No I am deeply sorry I am not getting any
- + How about an [slot2] [slot1] restaurant in the [slot3]? Is there anything available?

Intermediate:

- -What type of food are you looking for?
- + How about Indian food.
- - I have 1 [slot2] [slot1] food in the[slot3]. It's called [slot4]. They are located on 64 Cherry Hinton Road Cherry Hinton. Would you like a + reservation?
- + Perfect, yes. I want a table for [slot4] at [slot5] on [slot6].

Ending:

- + Booking was successful. The table will be reserved for 15 minutes. Reference number is : X2V543QG
- Thank you. That was all I needed today. Goodbye.
- + You're very welcome. Have a nice time!

**Taxi domain slots:**

"taxi-arriveby"

"taxi-leaveat"

"taxi-departure"

"taxi-destination"

**Hotel domain slots:**

"hotel-area"

"hotel-bookday"

"hotel-bookpeople"

"hotel-bookstay"

"hotel-internet"

"hotel-name"

"hotel-parking"

"hotel-pricerange"

"hotel-stars"

"hotel-type"

**Restaurant Domain slots:**

"restaurant-area"

"restaurant-bookday"

"restaurant-bookpeople"

"restaurant-booktime"

"restaurant-food"

"restaurant-name"

"restaurant-pricerange"