

# Applied Artificial Intelligence Project -1

**Username: Toothless**

**Domain: Food On Chat (Virtual Assistant)**

Food On Chat (FOC) rule-based expert system is designed using JESS Rules and can answer questions based on some rules on which it is trained on. Restaurants use chatbots for customer service to answer simple questions, help users order food online, track current order, get more information on menu, etc. Having a chatbot help expedite this type of tasks, allows human agents to focus on more complex problems related to customer service. At the same time a chatbot allows the company to have a 24/7 service to attend to their customer's needs.

The system is designed to interact using the following functions in the Knowledge Base

- start-assistant-To run application
- ask-question-to get user input
- check-type-to check on valid response from user

Modules are

- start-consists of welcome data
- ruleset-consists of set rules which are activated based on user response.

No salience is used. Default conflict strategy is used(depth).

The questions are triggered based on the user answers. The facts and rules in the Knowledge Base are used to interact with the users, to ask questions and to process the answers.

**KB:** The knowledge base used by my system consists of the following:

**Facts:**

Questions:

This consists of questions and these questions have an id to distinguish them and the type, which specifies what type of answer the system is expecting.

The ChatBot helps with basic questions like

- Create new user account
- Track current order
- Cancel order
- Recommended menu option
- Apply discount via promocodes

- redirect to customer service representatives
- Receive customer queries
- Take feedback on assistance

## **Templates:**

### **1.User information**

This Template holds registered username and userid. This is used for finding the orders under a user.

(deftemplate user

(slot name (default 0))

(slot user-id (default 0)))

### **2.Questions**

This holds the questions in the format they have to be asked from the user.

(deftemplate question

"Questions asked"

(slot text)

(slot type)

(slot id))

### **3.Answers**

This stores the answers that are provided by the user corresponding to the questions

(deftemplate answer

(slot id)

(slot text))

### **4.Items**

This slot holds the restaurant menu items which are recommended. It consists on name, quantity and price. Promocode here is item specific.

(deftemplate items

"menu item details"

(slot itemname)

(slot quantity)

(slot price)

(slot promo))

## 5.Order

This template holds order details of an user .

(deftemplate order

"Order details"

(slot user-id)

(slot ordernumber)

(slot date)

(slot item)

(slot amount)

)

### Instructions to run the system:

- Save the "FOC.clp" file in the "Jess71p2\bin\" folder on your local system.
- Go to the command line interface for Jess and execute the file using the batch command along with the correct location of the file on the system (batch "FOC.clp").

### Test cases:

#### Testing data:

#### Order numbers :

1234

2345

8234

9234

#### User ids:

sant

veer

reg

del

#### menu names:

veg\_burger  
chicken\_sandwich  
veg\_friedrice  
chicken\_friedrice  
veg\_pizza  
smoothies

**Promocodes:**

big10  
sw05  
bc10  
vf25  
cf10  
vp15  
vt10  
sm10

case#1:  
data used are:  
userid-sant  
ordernumber-1234  
menu item-veg\_burger  
promocode-sw05

```

This copy of Jess will expire in 15 day(s).
Jess> (batch FOC.clp)

WELCOME TO FOOD ON CHAT(FOC)!. I am here to help you!
Please type your name and press Enter> sant

#####
Hello, sant Greetings!!!
Please answer few questions to assist you.

#####
Are you a registered user? (yes or no) yes
Please provide your user-id . sant

Your details! Username: sant
User-id :sant
Do you want to track your Order? (yes or no) yes
Do you have the order number/name? (yes or no) yes
Please provide your order number/name ? 1234
Your order: 1234 09/15/2018 veggie_burger $3.99
Your order is being prepared.It will be out for delivery in 10 minutes!
Do you wish to cancel your order? (yes or no) no
Would you like to order anything here? (yes or no) yes

#####
Our Recommended Menu:

veg_burger      3.99
chicken_sandwich 5.99
bacon_cheeseburger 8.99
veg_friedrice    7.99
chicken_friedrice 8.99
veg_pizza        13.99
veg_taco         4.99
smoothies        3.99

enter the menu item you would like to have? veg_burger
veg_burger $3.99
Do you have any promocode? (yes or no) yes
enter the promocode here: sw05
After 5% discount,Current price :5.6905
Do you confirm the order? (yes or no) yes
Order placed! Your order will be delivered in 30 minutes!
#####

ORDER NAME: sant

Call Customer care at 1800-000-000 for any special delivery instructions
#####
Do you have any other queries? (yes or no) no
Do you like to give feedback on our assistance? (yes or no) yes
Please help us grow with your suggestions : Add more options

#####
Happy assisting you
Have a great day!!! see you soon

```

Case#2:

Userid:reg

Ordered:8234

```

Jless> (batch FOC.clp)

WELCOME TO FOOD ON CHAT(FOC)!. I am here to help you!
Please type your name and press Enter> reg

#####
Hello, reg Greetings!!!
Please answer few questions to assist you.

#####
Are you a registered user? (yes or no) yes
Please provide your user-id . reg

Your details! Username: reg
User-id :reg
Do you want to track your Order? (yes or no) yes
Do you have the order number/name? (yes or no) yes
Please provide your order number/name ? 8234
Your order: 8234 09/18/2018 veg_pizza $13.99
Your order is being prepared.It will be out for delivery in 10 minutes!
Do you wish to cancel your order? (yes or no) yes
please provide reason for the order cancellation? I dont like your food taste
okay! Can I proceed with the cancellation? (yes or no) yes

Order cancelled!!
Do you have any other queries? (yes or no) yes
Please leave your message here: Please heed customer requirement

Thank you , We will contact you soon on your query.
Do you like to give feedback on our assistance? (yes or no) no

#####
Happy assisting you
Have a great day!!! see you soon

WELCOME TO FOOD ON CHAT(FOC)!. I am here to help you!
Please type your name and press Enter>

```

Case#3:

Username:del

Menu -item:veg\_taco

```
del> (batch FOC.clp)
```

```
WELCOME TO FOOD ON CHAT(FOC)!. I am here to help you!  
Please type your name and press Enter> del
```

```
#####
```

```
Hello, del Greetings!!!
```

```
Please answer few questions to assist you.
```

```
#####
```

```
Are you a registered user? (yes or no) no
```

```
Do you want to register for a new account? (yes or no) no
```

```
Do you want to track your Order? (yes or no) no
```

```
Would you like to order anything here? (yes or no) yes
```

```
#####
```

```
Our Recommended Menu:
```

```
veg_burger      3.99
```

```
chicken_sandwich 5.99
```

```
bacon_cheeseburger 8.99
```

```
veg_friedrice   7.99
```

```
chicken_friedrice 8.99
```

```
veg_pizza       13.99
```

```
veg_taco        4.99
```

```
smoothies       3.99
```

```
enter the menu item you would like to have? veg_taco
```

```
veg_taco $4.99
```

```
Do you have any promocode? (yes or no) no
```

```
Do you confirm the order? (yes or no) yes
```

```
Order placed! Your order will be delivered in 30 minutes!
```

```
#####
```

```
ORDER NAME: del
```

```
Call Customer care at 1800-000-000 for any special delivery instructions
```

```
#####
```

```
Do you have any other queries? (yes or no) no
```

```
Do you like to give feedback on our assistance? (yes or no) no
```

```
#####
```

```
Happy assisting you
```

```
Have a great day!!! see you soon
```