Overview

- CRUD and HTTP VERBS
- Naming Paths
  - Why follow convention?
- “RESTful”, a cruddy story

HTTP Verbs and CRUD

- GET - READ
- POST - CREATE
- PUT - UPDATE - Change an entire row
- PATCH - UPDATE - Change a single column
- DELETE - DELETE

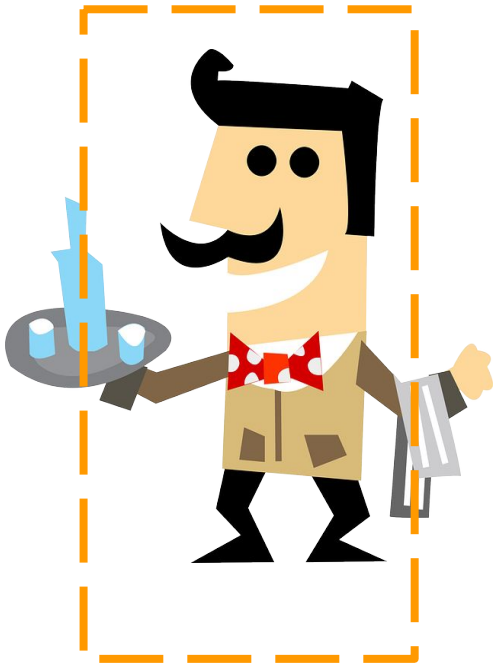
When we finish a task, we'll see this

Task complete!

RESTful, a cruddy story - cast of characters

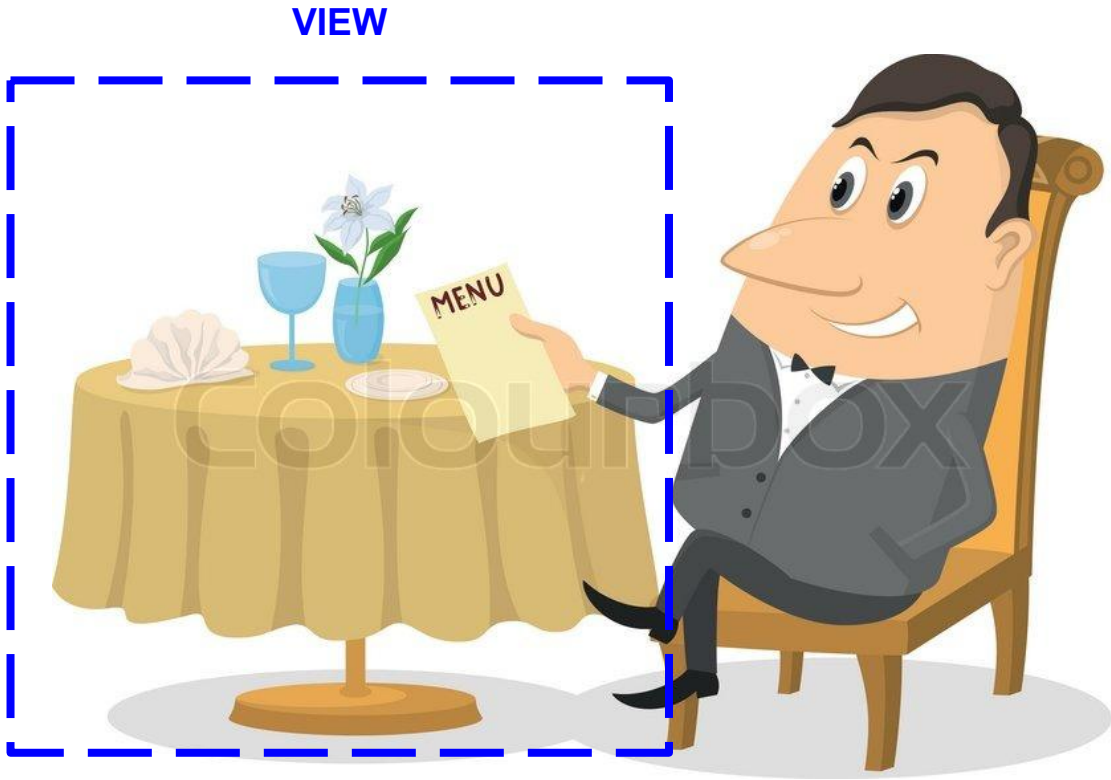
USER

CONTROLLER



MODEL

RESTful, a cruddy story - notable props



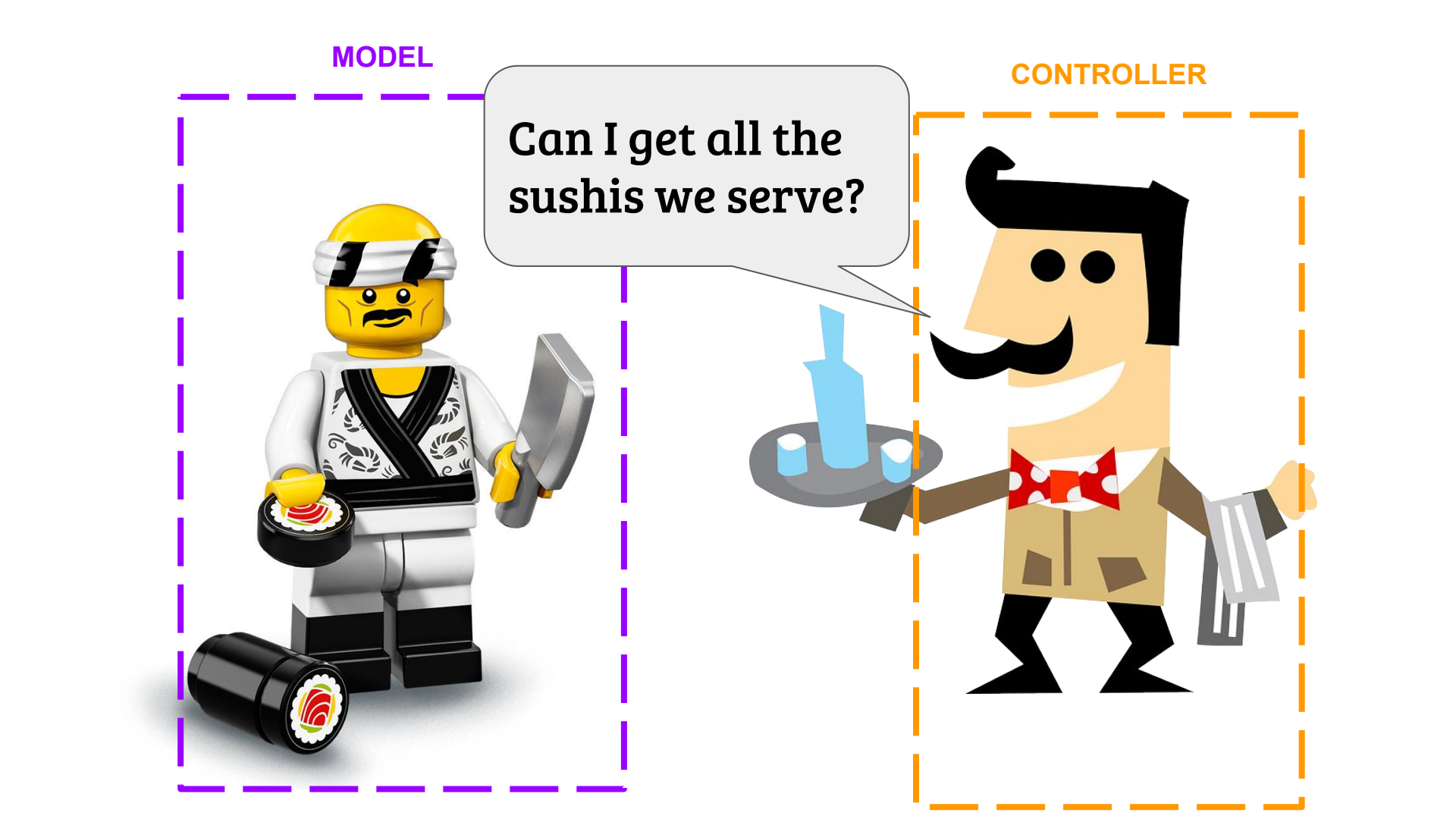
I want to see a menu of all the sushi I can order!

USER

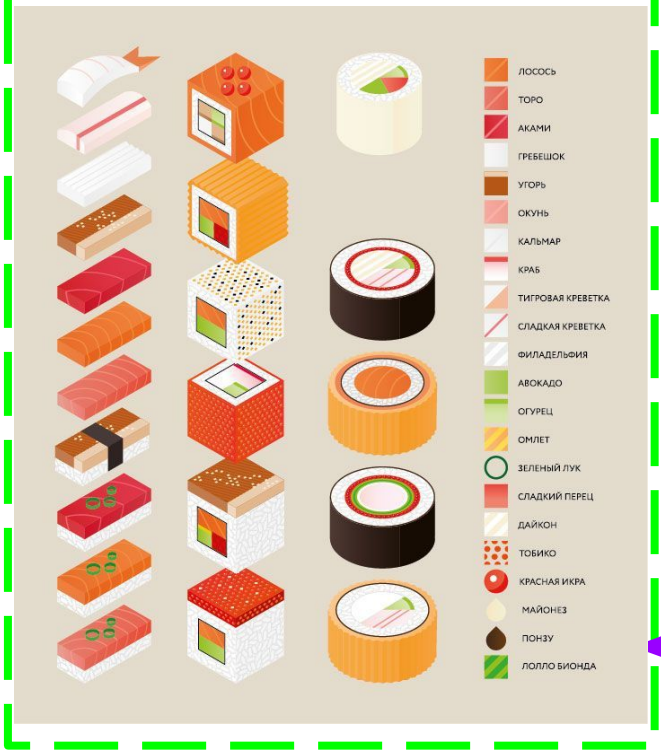
Task:

1. Show guest a list of all the sushis we have

Verb	URI	Controller Method	erb/redirect
?	?	?	?


MODEL
CONTROLLER
Can I get all the sushis we serve?

FIND ALL ROWS IN DATABASE

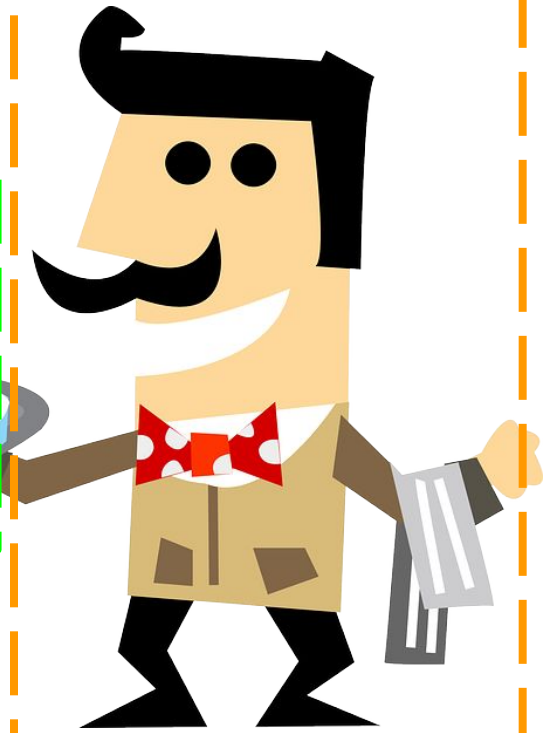


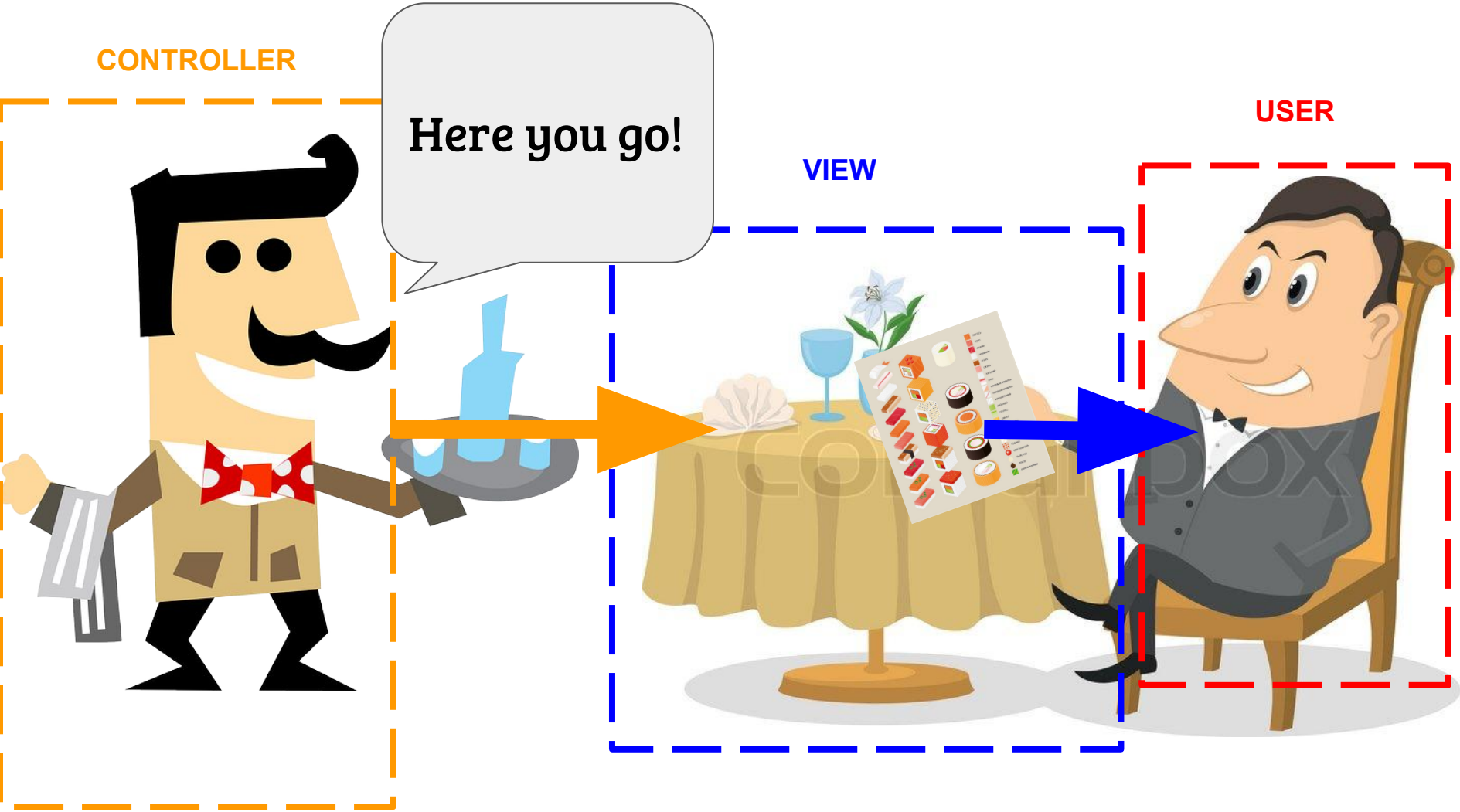
MODEL

MODEL

RETURN AS INSTANCES

CONTROLLER

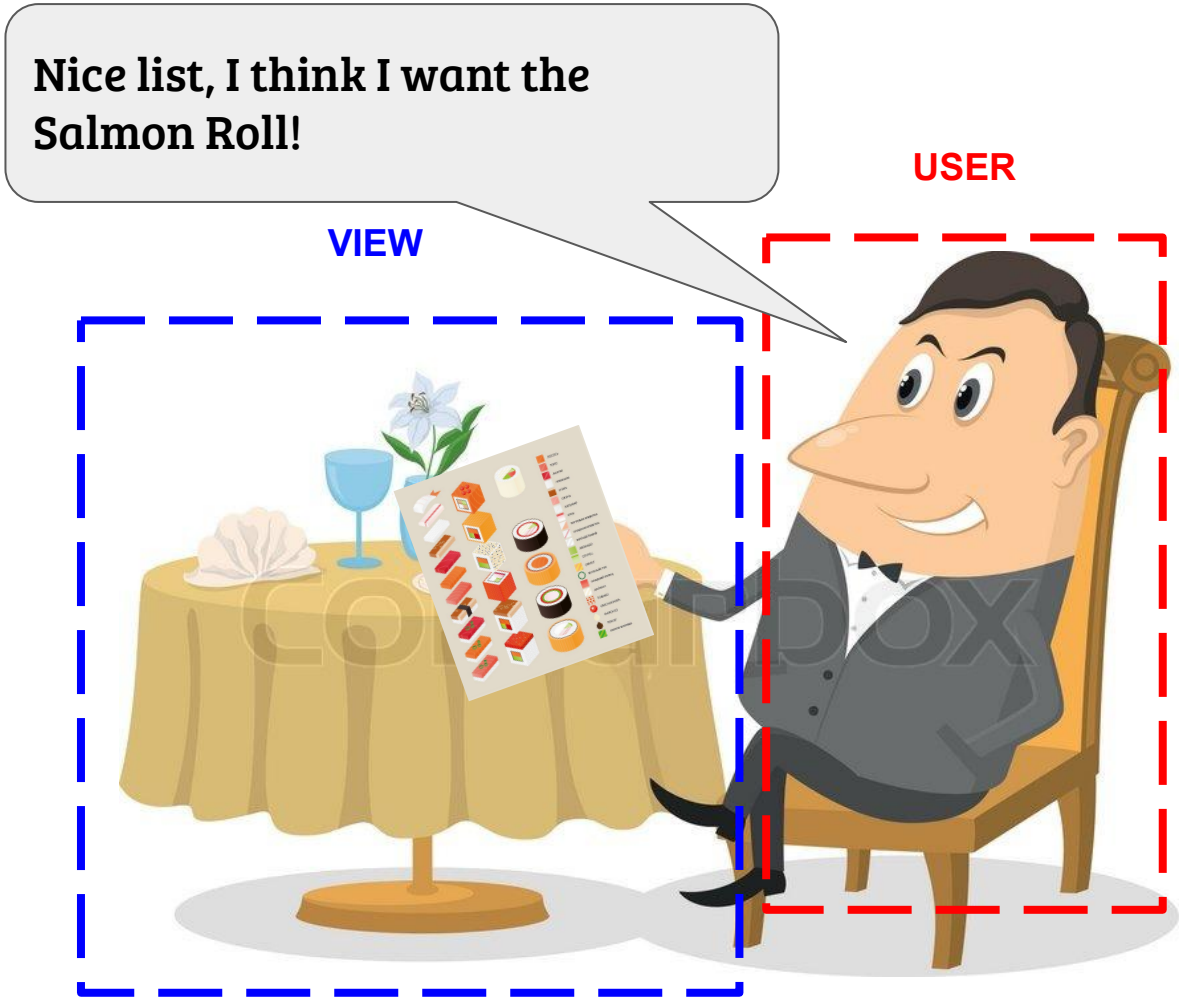



CONTROLLER
Here you go!
VIEW
USER

Task Complete

1. Show guest a list of all the sushis we have

Verb	URI	Controller Method	erb/redirect
get	/sushis	get '/sushis'	erb :index


Nice list, I think I want the Salmon Roll!
USER
VIEW

Task:

1. Tell Chef which roll the guest wants to see
2. Chef gets the ready-made roll out of the fridge
3. Bring the roll to the guest

Verb	URI	Controller Method	erb/redirect
?	?	?	?

CONTROLLER

VIEW

DATA

USER

I want SALMON!

Excellent choice.

Welcome To R.K. Sushi

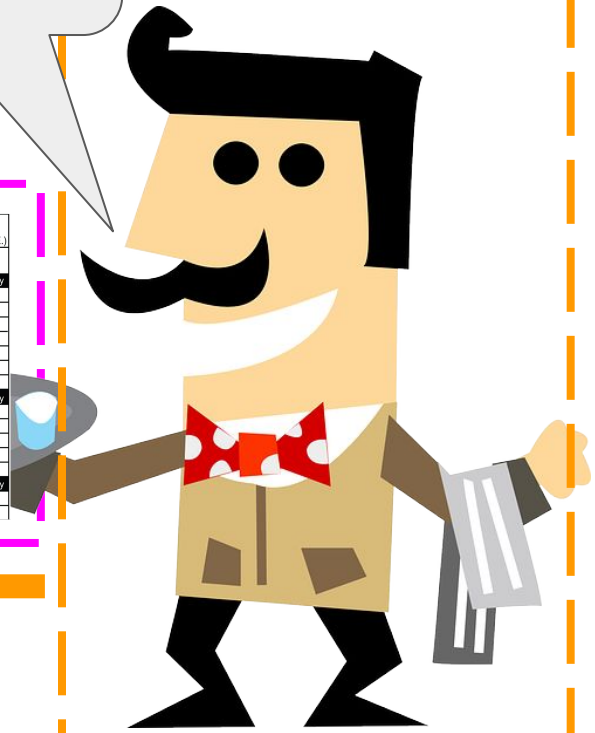
(GRATUITY WILL BE APPLIED FOR A PARTY OF 5 OR MORE.)

Table Number		* SUBSTITUTE SUBJECT TO EXTRA CHARGE	
Sashimi (5pcs) $7.00	Qty	**$6 Rolls**	Qty
Albacore		Eel Roll	
Salmon	X	Shrimp Crunch Roll	
Tilapia		Shrimp Tempura Roll	
Tuna		Snow Ball Roll	
Tuna Tataki		Spicy Tuna Roll	
Yellow Tail		Spicy Yellowtail Roll	
Nigiri (2pcs) $4.00	Qty	Spider Roll	
Albacore	Salmon Roe	**$7 Rolls**	Qty
Ebi	Stick Crab	Fire Cracker Roll	
Eel	Surf Clam	Pink Roll	
Ika	Tamago	Try This Roll	
Inari	Tilapia	Volcano Roll	
Mackerel	Tuna	Yellow Tail Special Roll	
Masago	Tuna Tataki	**$8 Rolls**	Qty
Octopus	Yellow Tail	Albacore Special Roll	
Salmon		Hillcrest Roll	

MODEL

Can you get me the salmon roll?

CONTROLLER



DATA

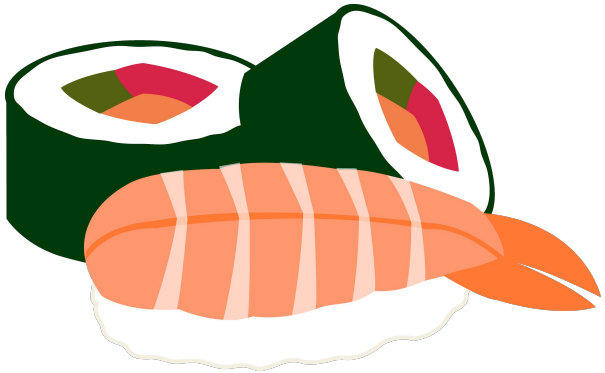
Welcome To R.K. Sushi

(GRATUITY WILL BE APPLIED FOR A PARTY OF 5 OR MORE.)

Table Number		* SUBSTITUTE SUBJECT TO EXTRA CHARGE	
Sashimi (5pcs) $7.00	**Qty**	**$6 Rolls**	**Qty**
Albacore		Eel Roll	
Salmon	✖	Shrimp Crunch Roll	
Tilapia		Shrimp Tempura Roll	
Tuna		Snow Ball Roll	
Tuna Tataki		Spicy Tuna Roll	
Yellow Tail		Spicy Yellowtail Roll	
Nigiri (2pcs) $4.00	**Qty**	Spider Roll	
Albacore	Salmon Roe	**$7 Rolls**	**Qty**
Ebi	Stick Crab	Fire Cracker Roll	
Eel	Surf Clam	Pink Roll	
Ika	Tamago	Try This Roll	
Inari	Tilapia	Volcano Roll	
Mackerel	Tuna	Yellow Tail Special Roll	
Masago	Tuna Tataki	**$8 Rolls**	**Qty**
Octopus	Yellow Tail	Albacore Special Roll	
Salmon		Hillcrest Roll	

MODEL

FIND ROW IN DATABASE BASED ON DATA

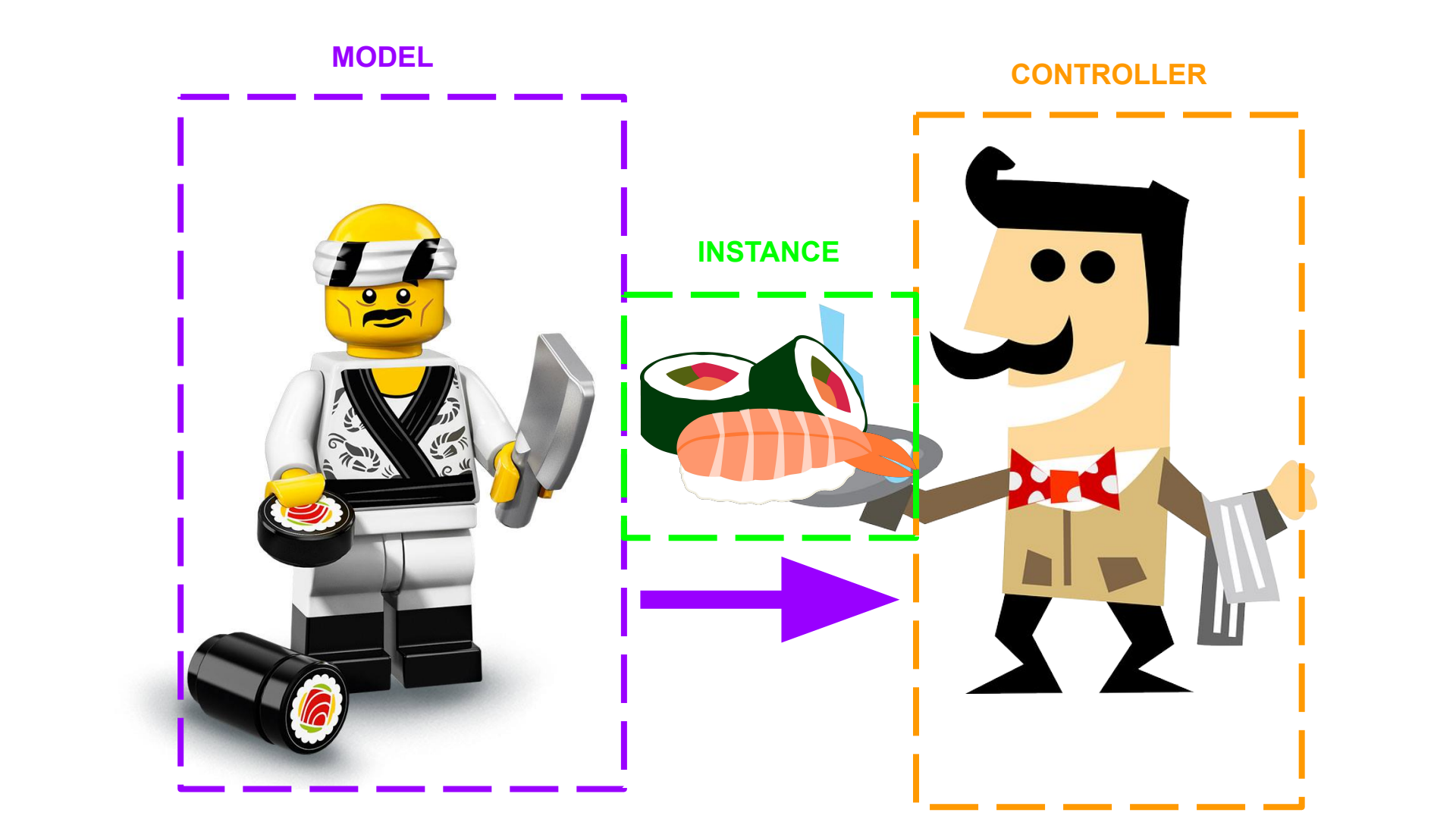


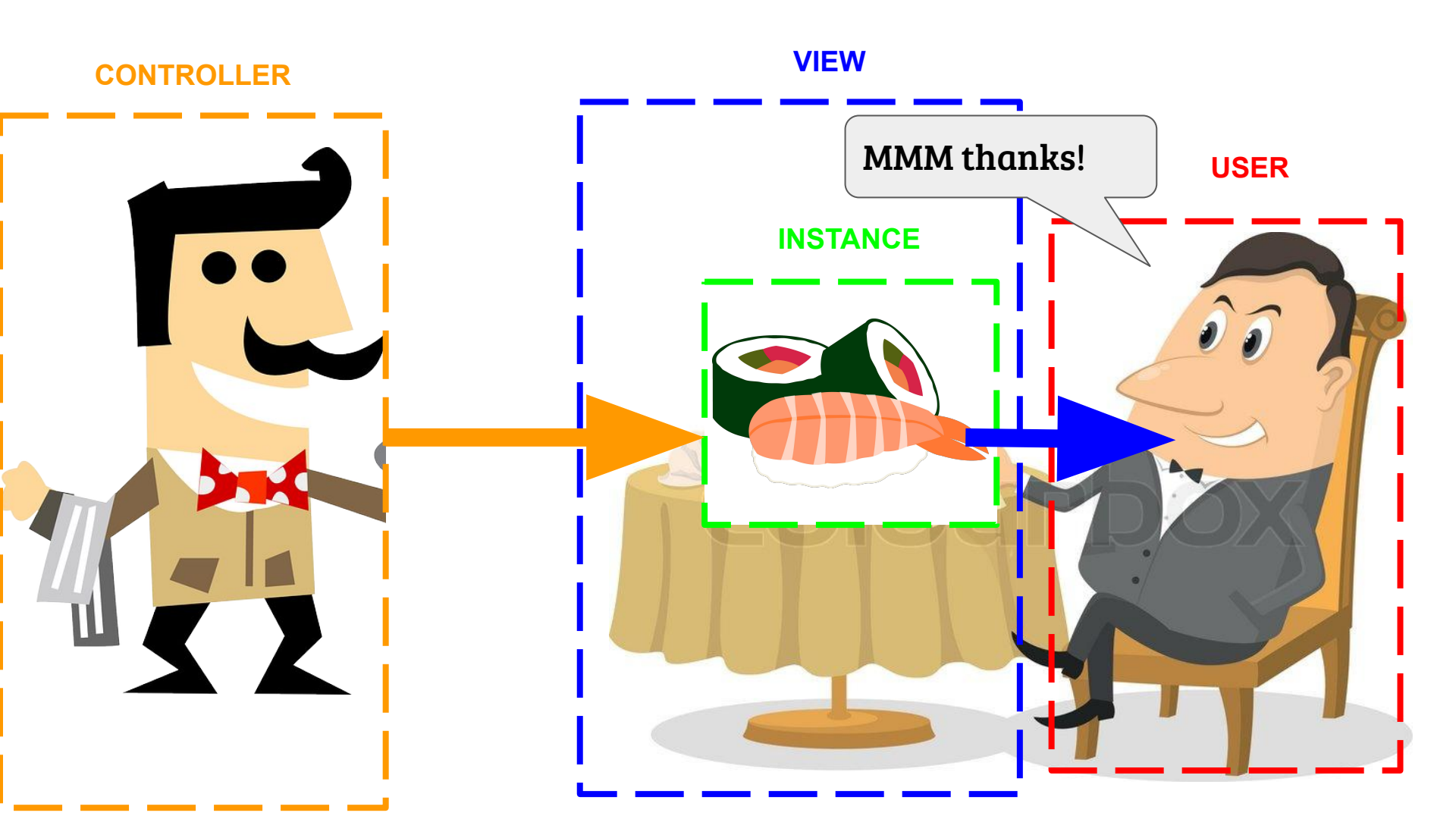
DATA

Welcome To R.K. Sushi

(GRATUITY WILL BE APPLIED FOR A PARTY OF 5 OR MORE.)

Table Number				* SUBSTITUTE SUBJECT TO EXTRA CHARGE	
Sashimi (5pcs) $7.00			**Qty**	**$6 Rolls**	**Qty**
Albacore				Eel Roll	
Salmon			✖	Shrimp Crunch Roll	
Tilapia				Shrimp Tempura Roll	
Tuna				Snow Ball Roll	
Tuna Tataki				Spicy Tuna Roll	
Yellow Tail				Spicy Yellowtail Roll	
Nigiri (2pcs) $4.00			**Qty**	Spider Roll	
Albacore		Salmon Roe		**$7 Rolls**	**Qty**
Ebi		Stick Crab		Fire Cracker Roll	
Eel		Surf Clam		Pink Roll	
Ika		Tamago		Try This Roll	
Inari		Tilapia		Volcano Roll	
Mackerel		Tuna		Yellow Tail Special Roll	
Masago		Tuna Tataki		**$8 Rolls**	**Qty**
Octopus		Yellow Tail		Albacore Special Roll	
Salmon				Hillcrest Roll	

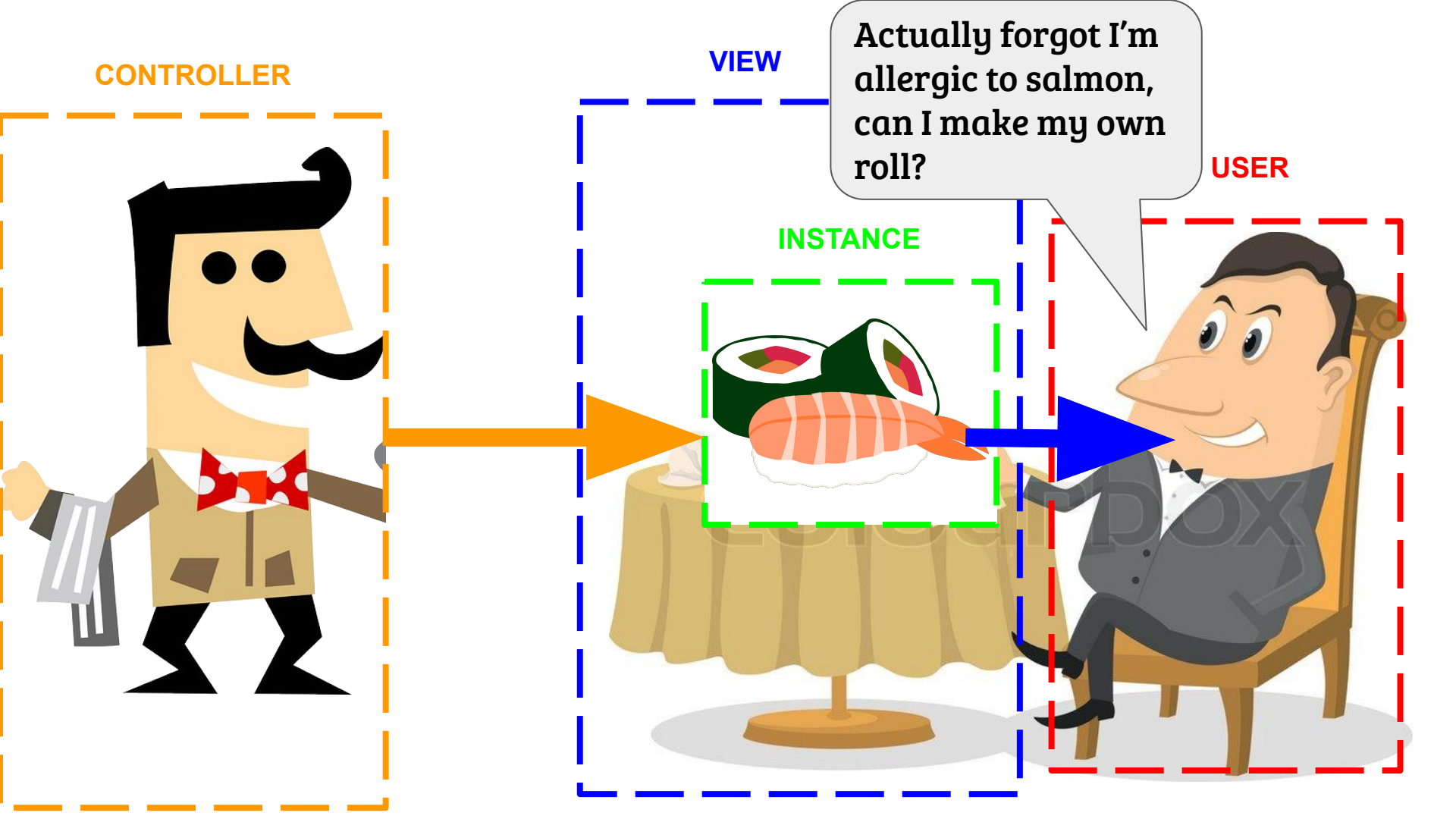

MODEL
CONTROLLER
INSTANCE


CONTROLLER
VIEW
MMM thanks!
USER
INSTANCE

Task Complete

1. Tell Chef which roll the guest wants to see
2. Chef gets the ready-made roll out of the fridge
3. Bring the roll to the guest

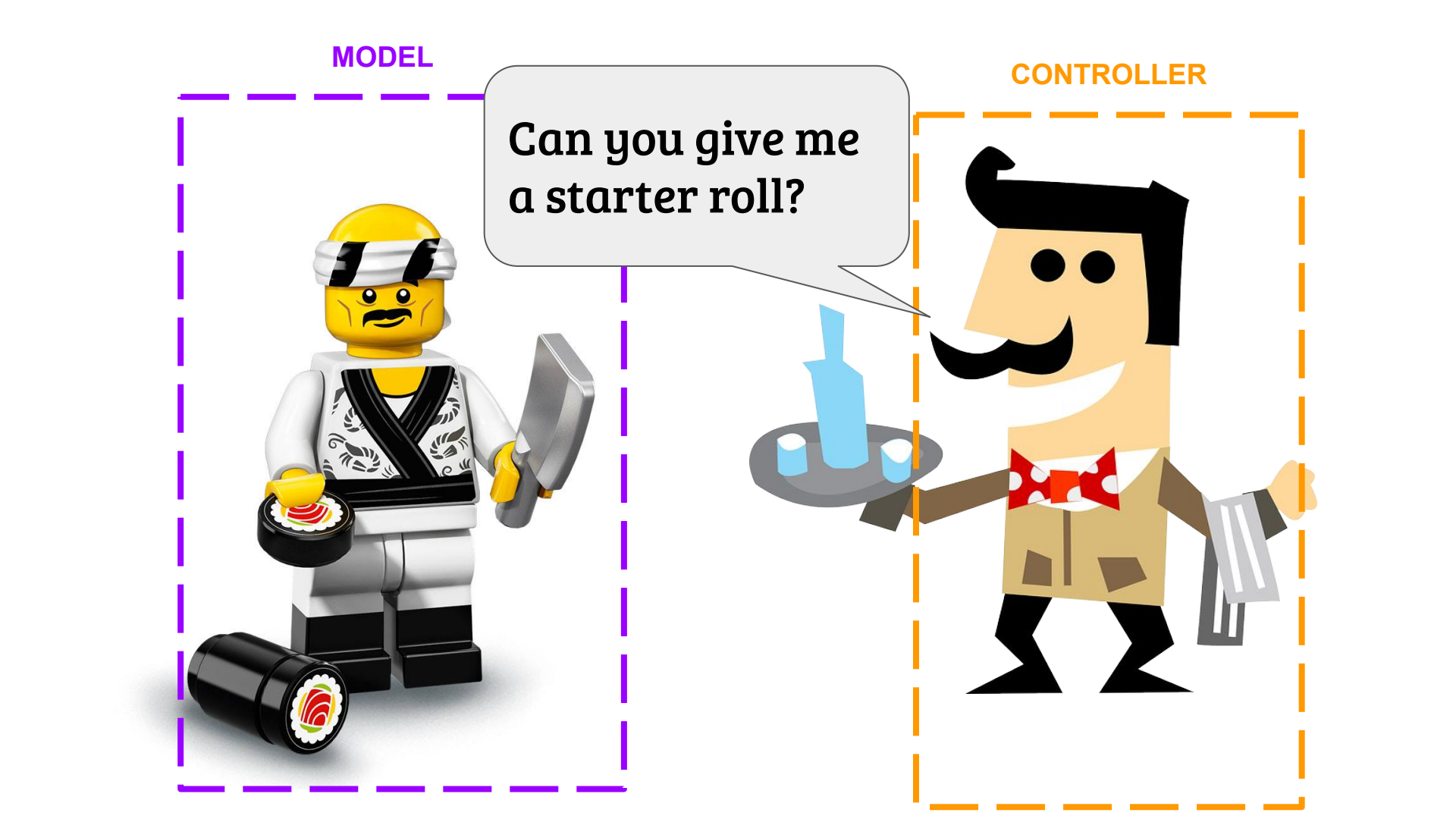
Verb	URI	Controller Method	erb/redirect
get	/sushis/:id	get '/sushis/:id'	erb :show


CONTROLLER
VIEW
INSTANCE
USER
Actually forgot I'm allergic to salmon, can I make my own roll?

Task:

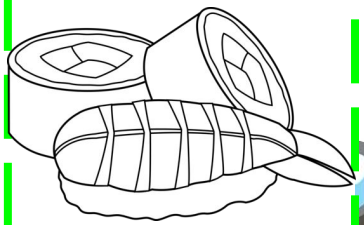
1. Give guest a means to make his custom sushi roll

Verb	URI	Controller Method	erb/redirect
?	?	?	?

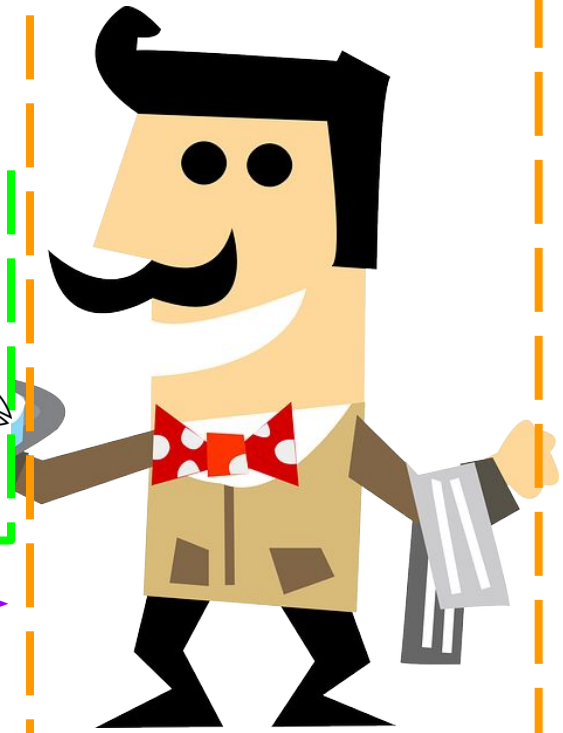

MODEL
Can you give me a starter roll?
CONTROLLER

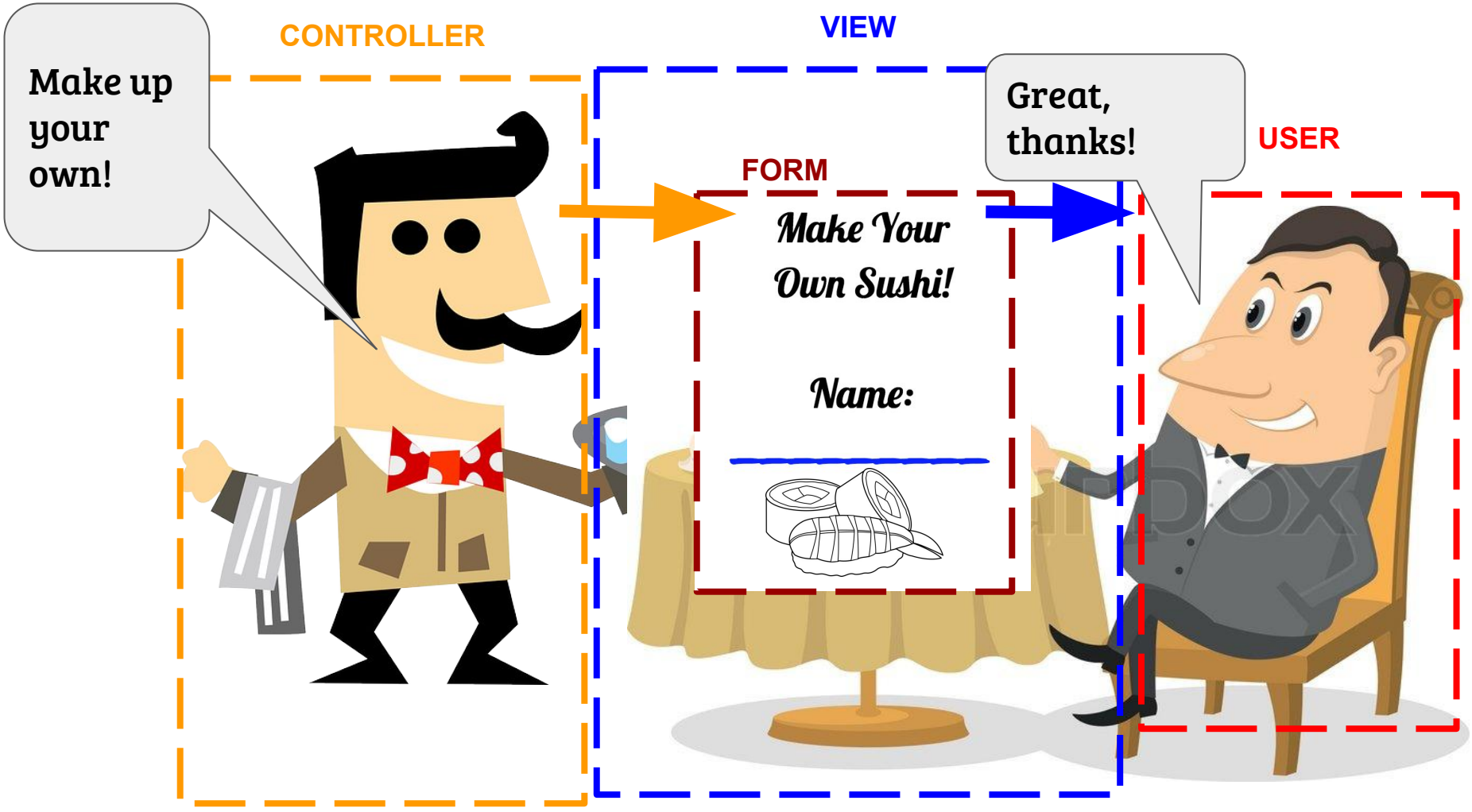
MODEL

NEW INSTANCE (NOT FROM DATABASE)



CONTROLLER

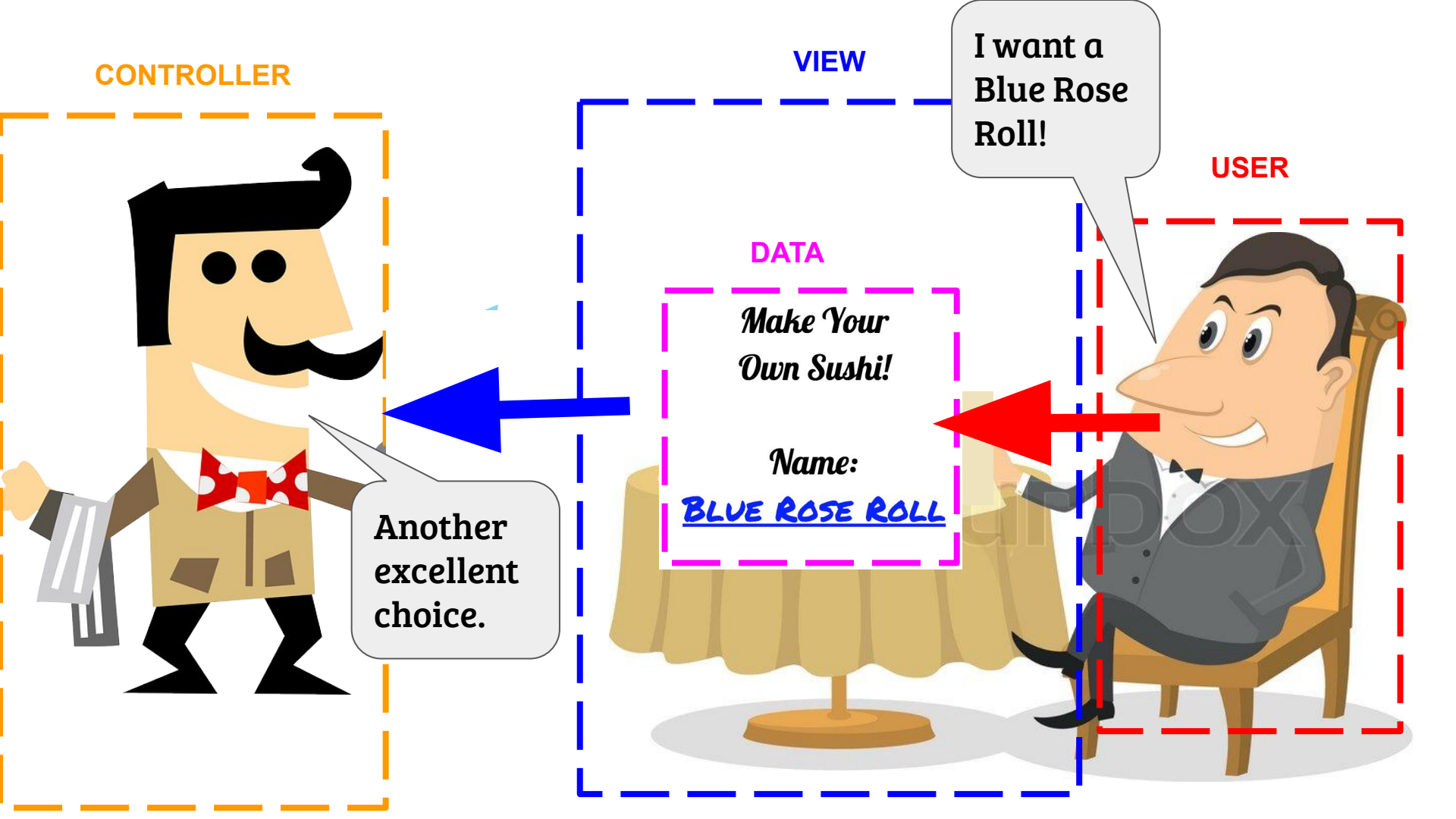



CONTROLLER
VIEW
Make up your own!
FORM
Make Your Own Sushi!
Name:
Great, thanks!
USER

Task Complete

1. Give guest a means to make his custom sushi roll

Verb	URI	Controller Method	erb/redirect
get	/sushis/new	get '/sushis/new'	erb :new


CONTROLLER
VIEW
USER
DATA
I want a Blue Rose Roll!
Make Your Own Sushi!
Name:
BLUE ROSE ROLL
Another excellent choice.

Task:

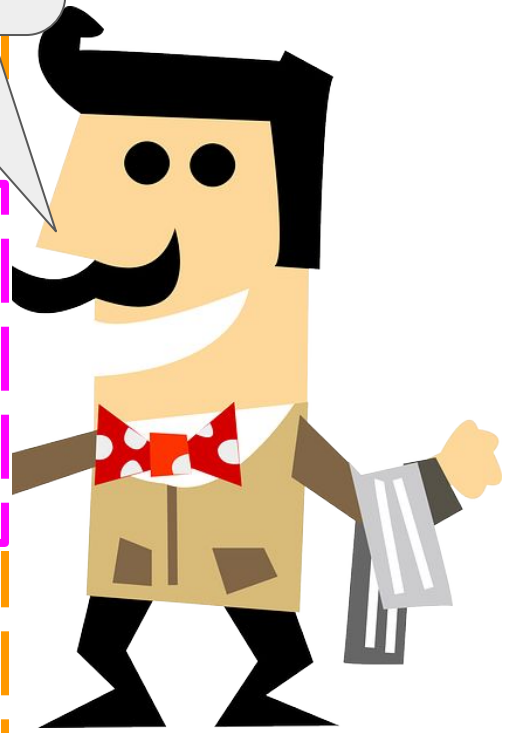
1. Take the guest's order
2. Bring the order to the Chef
3. Chef makes the roll and gives to the waiter
4. Waiter brings it to the guest

Verb	URI	Controller Method	erb/redirect
?	?	?	?

MODEL

Got a new kind of sushi to invent!

CONTROLLER



DATA

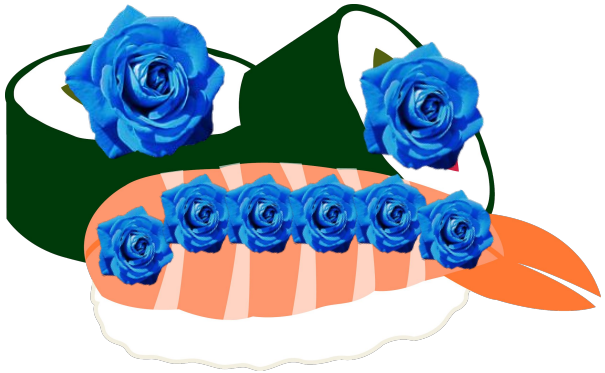
Make Your Own Sushi!

Name:

BLUE ROSE ROLL

MODEL

MAKE NEW ROW IN DATABASE

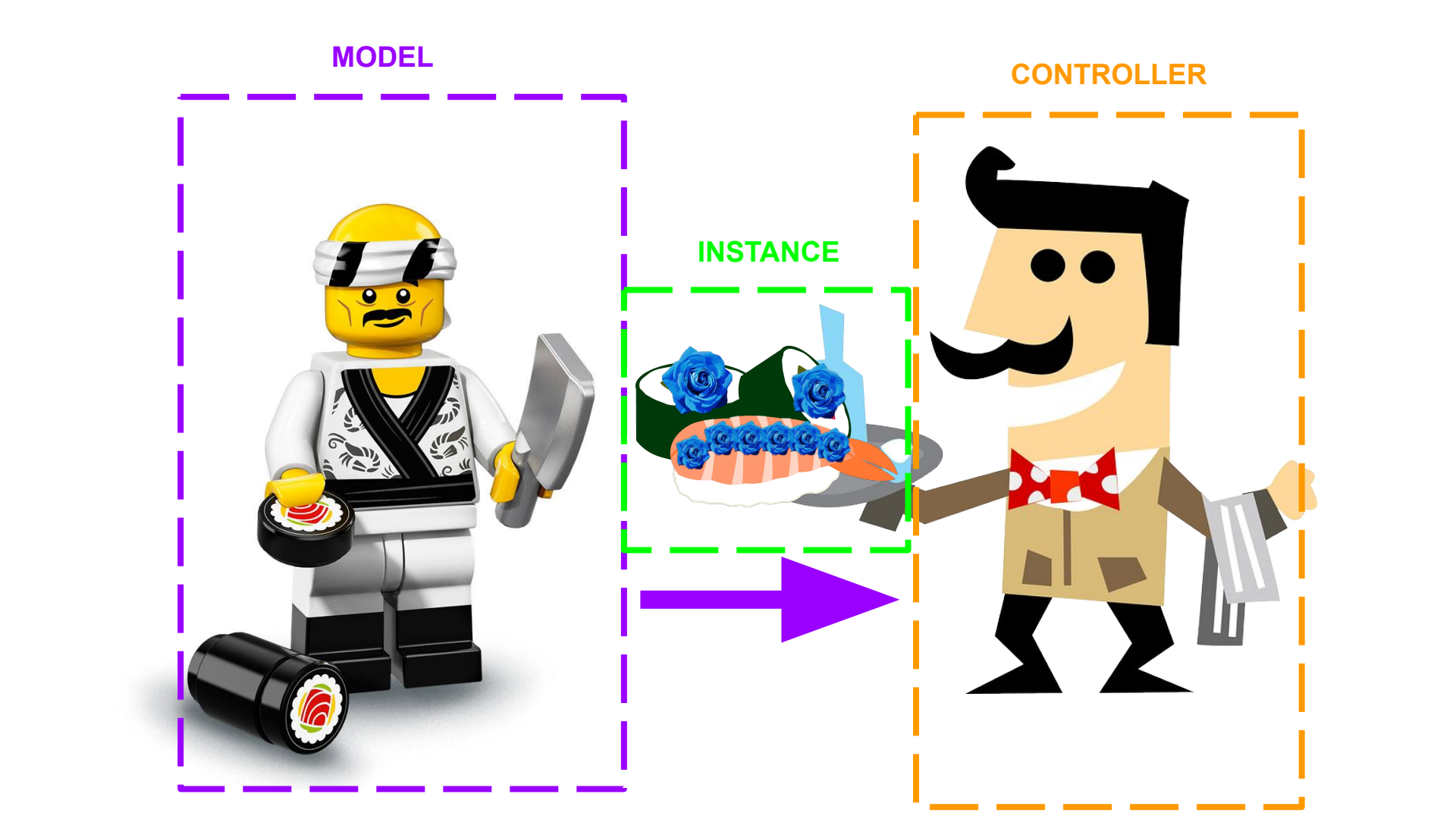


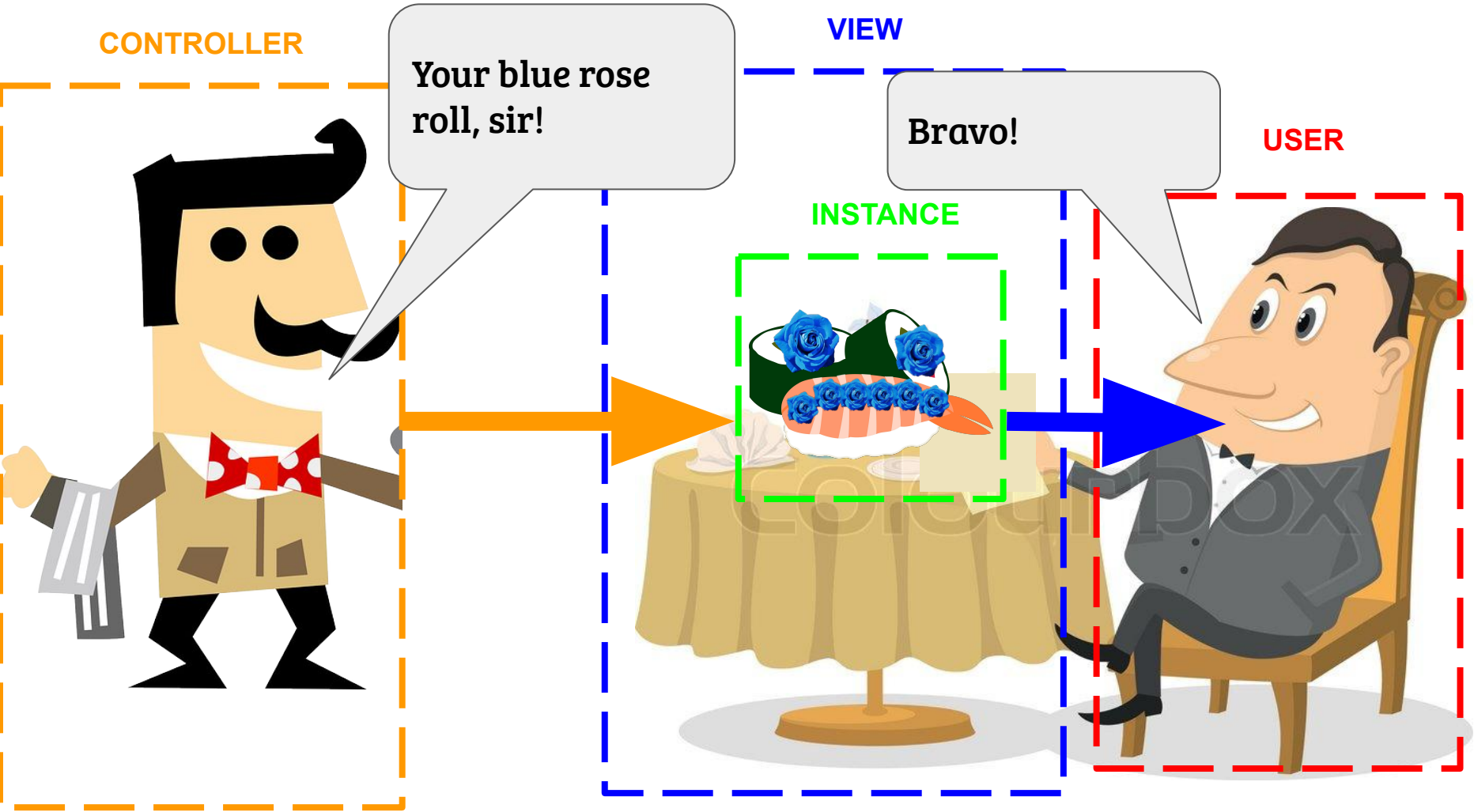
DATA

Make Your
Own Sushi!

Name:

BLUE ROSE ROLL

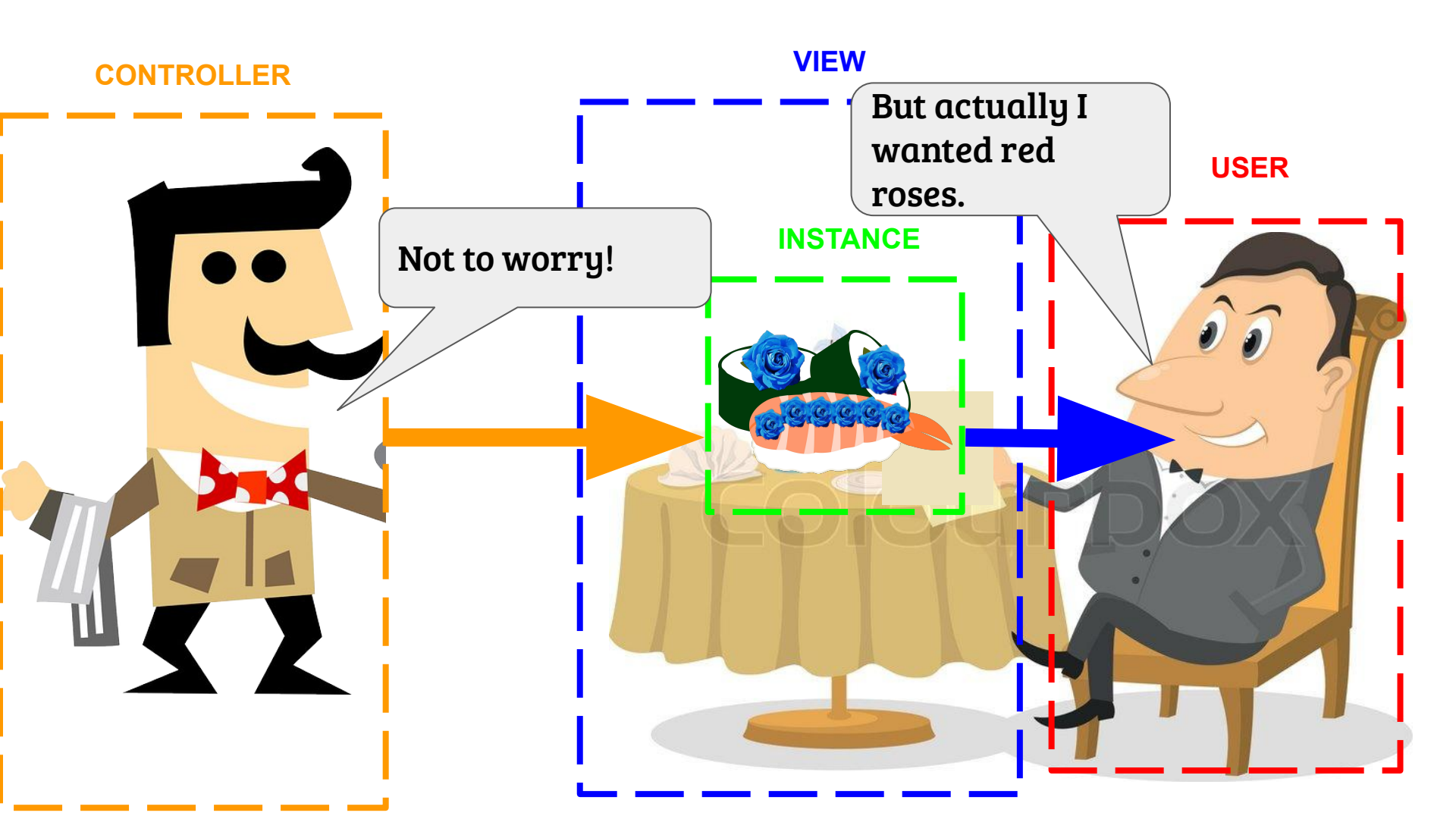

MODEL
CONTROLLER
INSTANCE


CONTROLLER
Your blue rose roll, sir!
VIEW
Bravo!
USER
INSTANCE

Task:

1. Take the guest's order
2. Bring the order to the Chef
3. Chef makes the roll and gives to the waiter
4. Waiter brings it to the guest

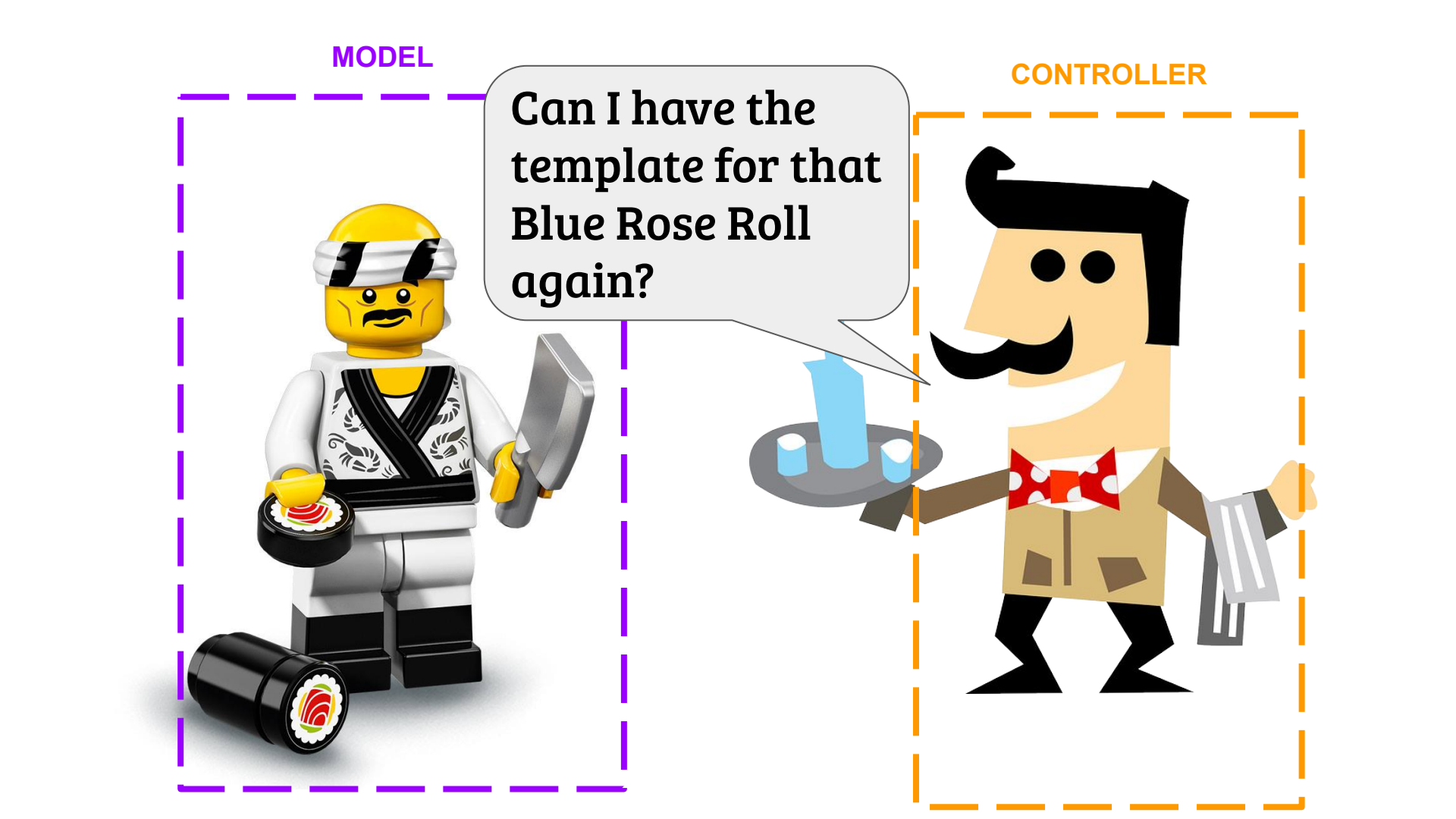
Verb	URI	Controller Method	erb/redirect
post	/sushis	post '/sushis'	redirect '/sushis/:id'


CONTROLLER
VIEW
INSTANCE
USER
Not to worry!
But actually I wanted red roses.

Task:

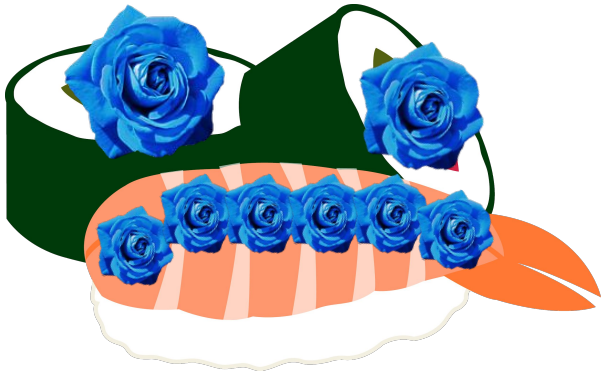
1. Give guest a way to change his order

Verb	URI	Controller Method	erb/redirect
?	?	?	?


MODEL
Can I have the template for that Blue Rose Roll again?
CONTROLLER

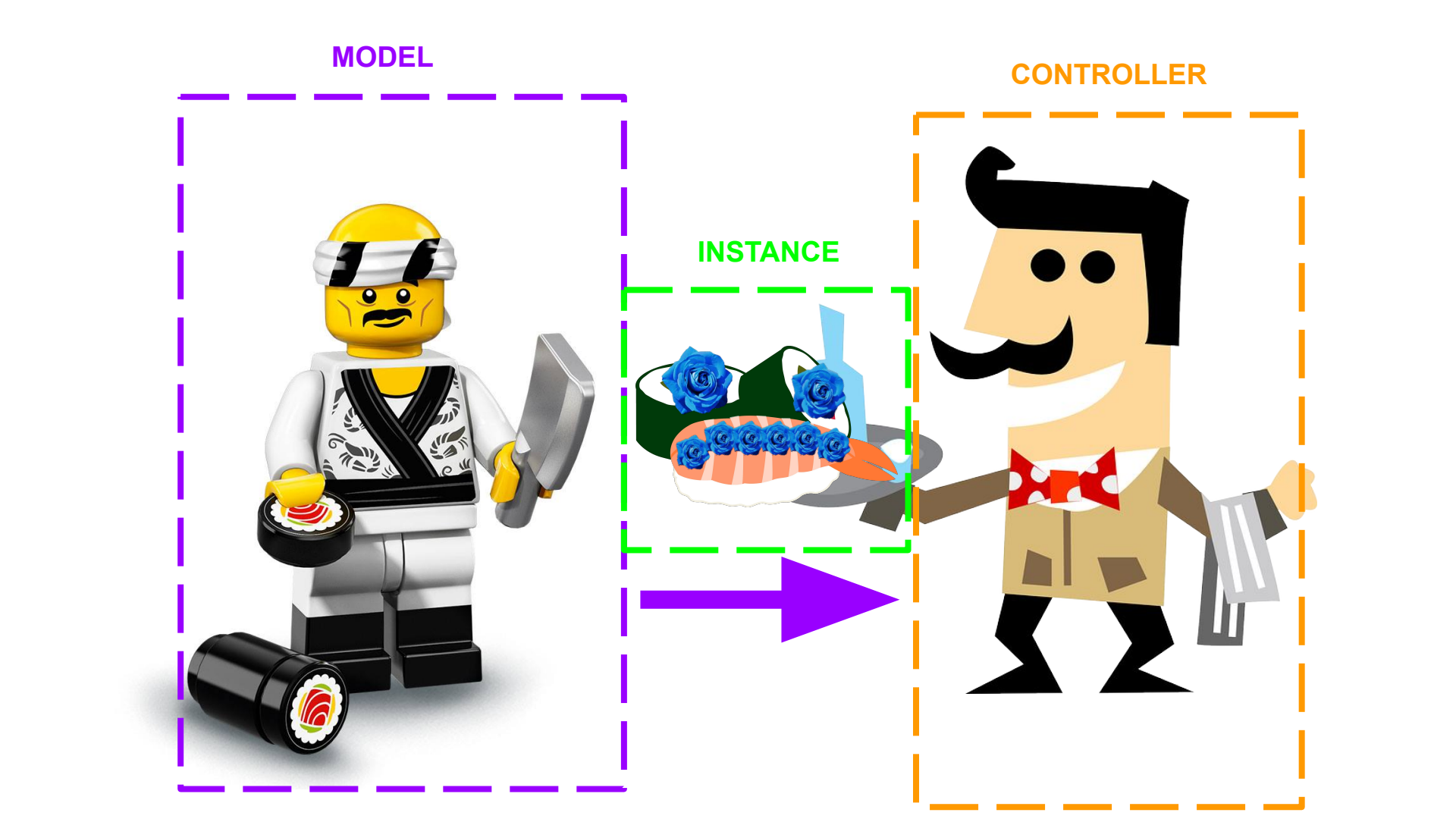
MODEL

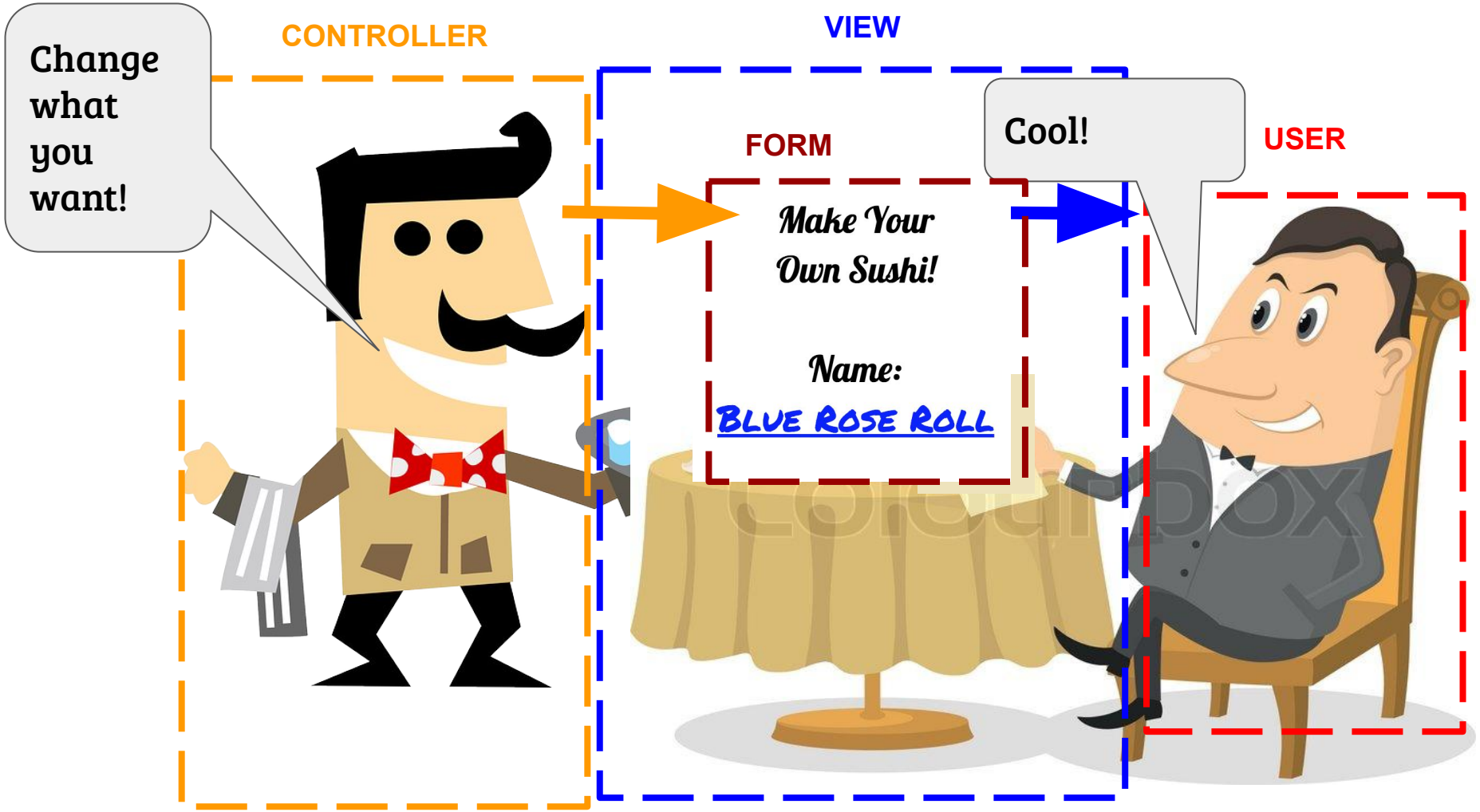
FIND ROW IN DATABASE



DATA

Can I have the template for that Blue Rose Roll again?

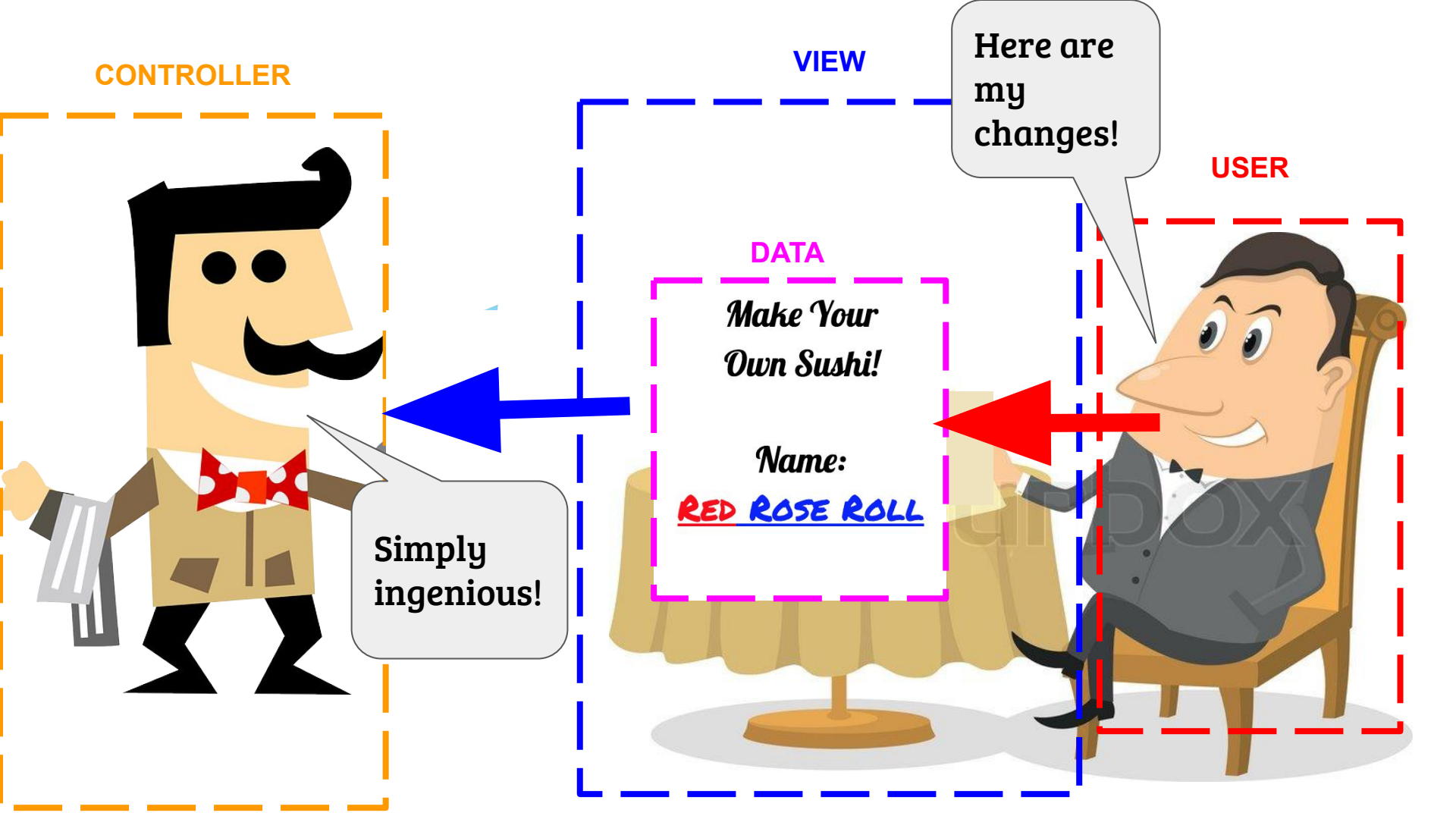

MODEL
CONTROLLER
INSTANCE


CONTROLLER
VIEW
Change what you want!
FORM
Make Your Own Sushi!
Name:
BLUE ROSE ROLL
Cool!
USER

Task Complete

1. Give guest a way to change his order

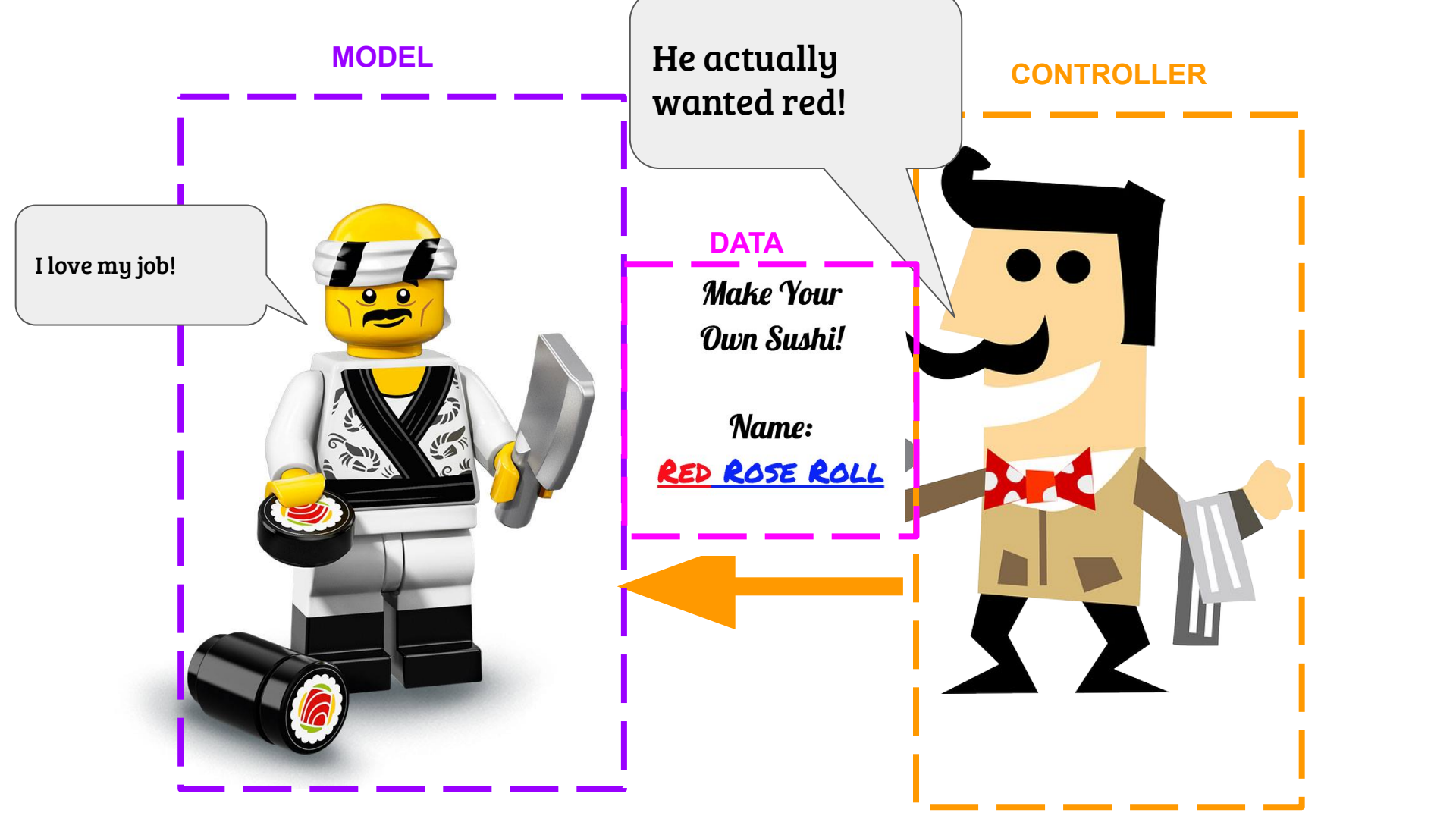
Verb	URI	Controller Method	erb/redirect
get	/sushis/:id/edit	get '/sushis/:id/edit'	erb :edit


CONTROLLER
VIEW
USER
DATA
Here are my changes!
Make Your Own Sushi!
Name:
RED ROSE ROLL
Simply ingenious!

Task:

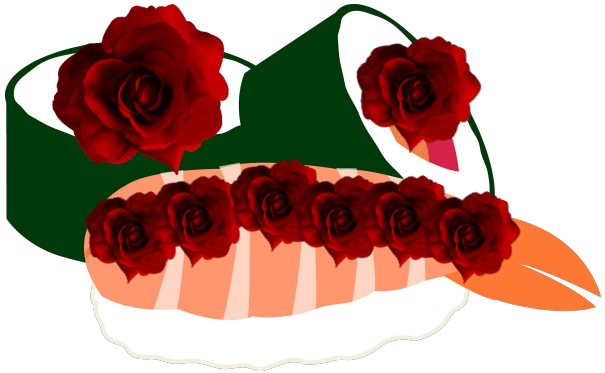
1. Take guest's changes to the chef
2. Chef makes alterations to the order
3. Chef gives food back to waiter
4. Waiter gives food to the guest

Verb	URI	Controller Method	erb/redirect
?	?	?	?


MODEL
He actually wanted red!
CONTROLLER
I love my job!
DATA
Make Your Own Sushi!
Name:
RED ROSE ROLL

MODEL

FIND ROW IN DATABASE AND UPDATE

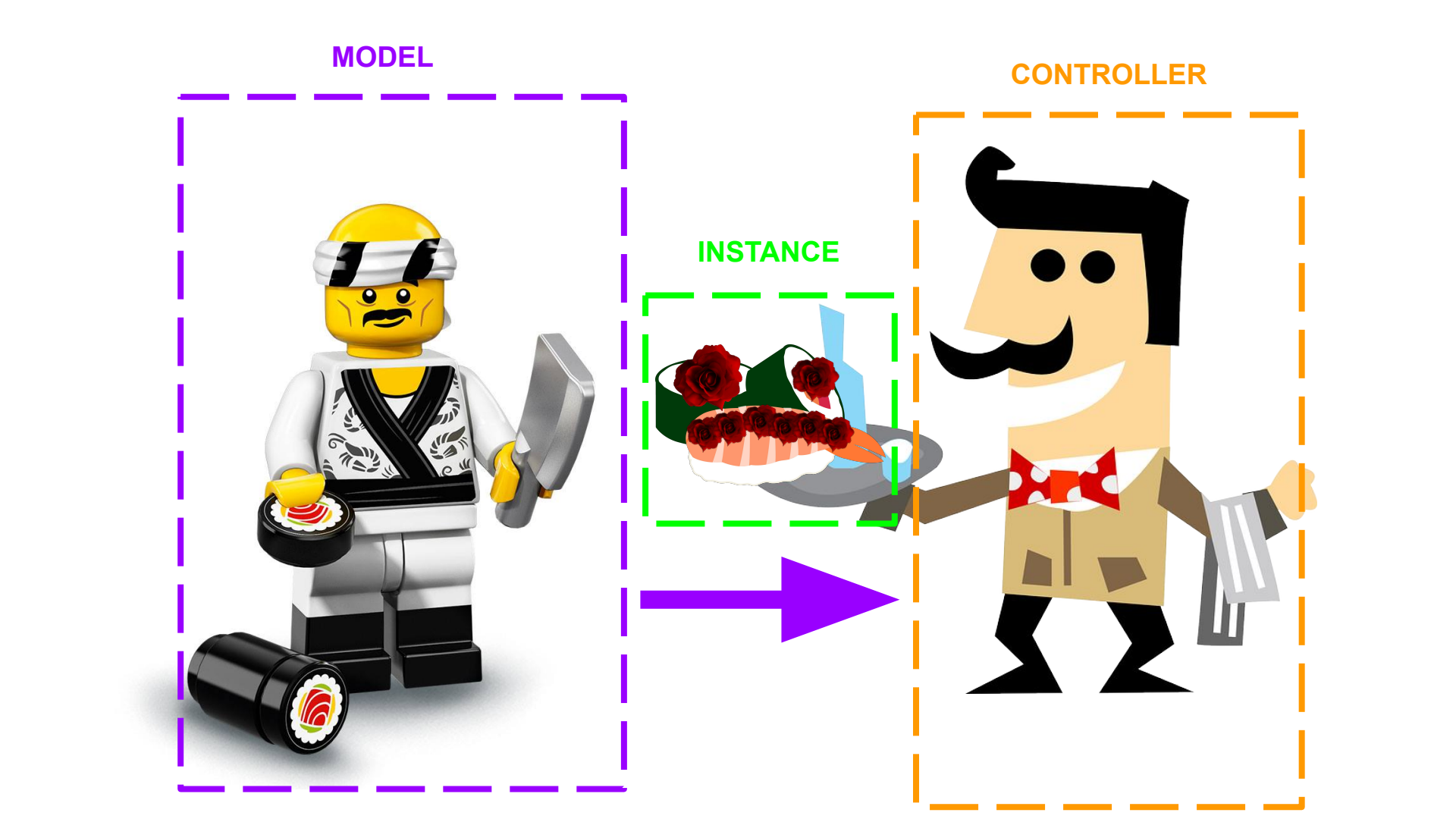


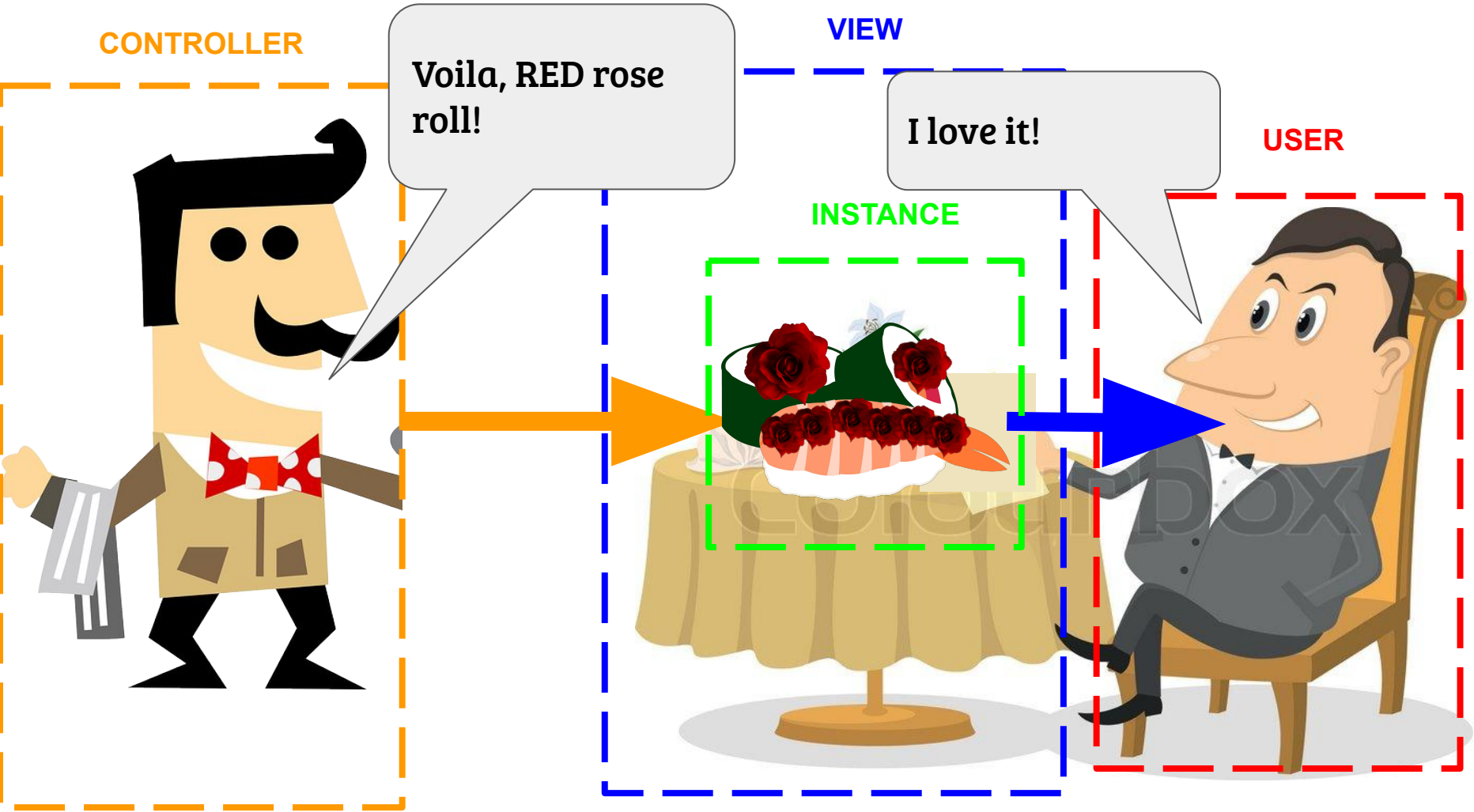
DATA

Make Your Own Sushi!

Name:

RED ROSE ROLL

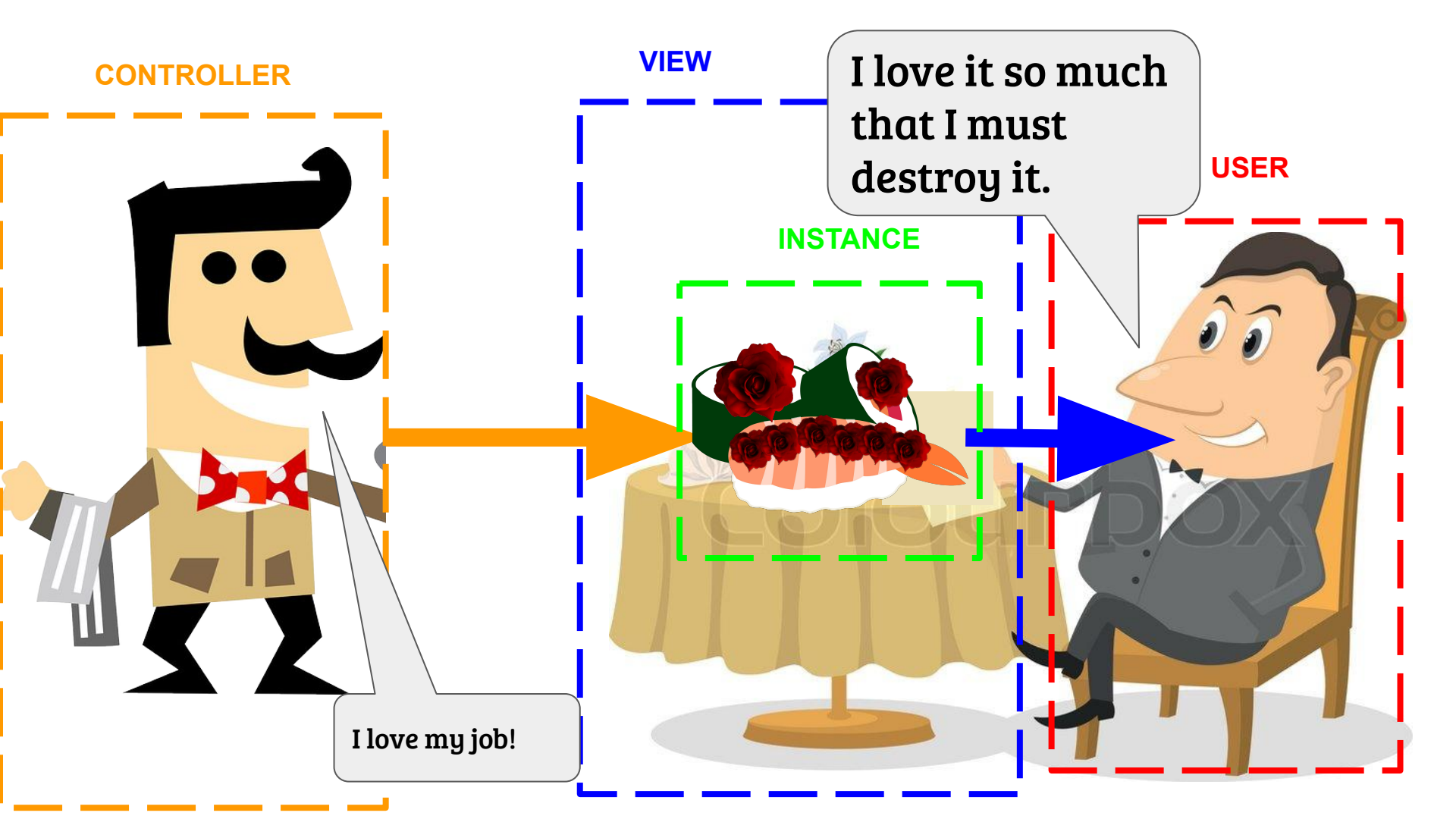

MODEL
CONTROLLER
INSTANCE


CONTROLLER
Voila, RED rose roll!
VIEW
INSTANCE
I love it!
USER

Task Complete

1. Take guest's changes to the chef
2. Chef makes alterations to the order
3. Chef gives food back to waiter
4. Waiter gives food to the guest

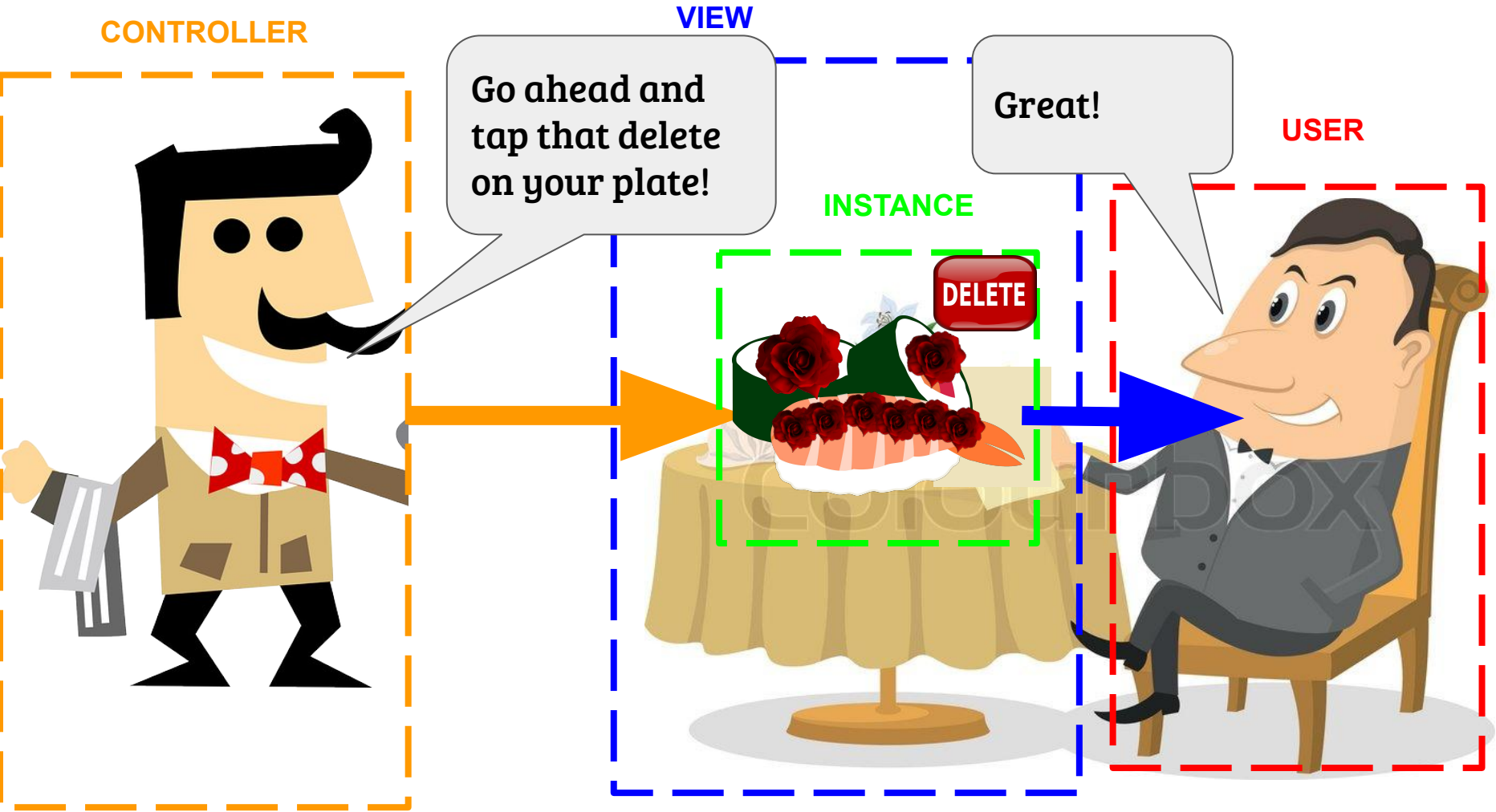
Verb	URI	Controller Method	erb/redirect
patch	/sushis/:id	patch '/sushis/:id'	redirect '/sushis/id'

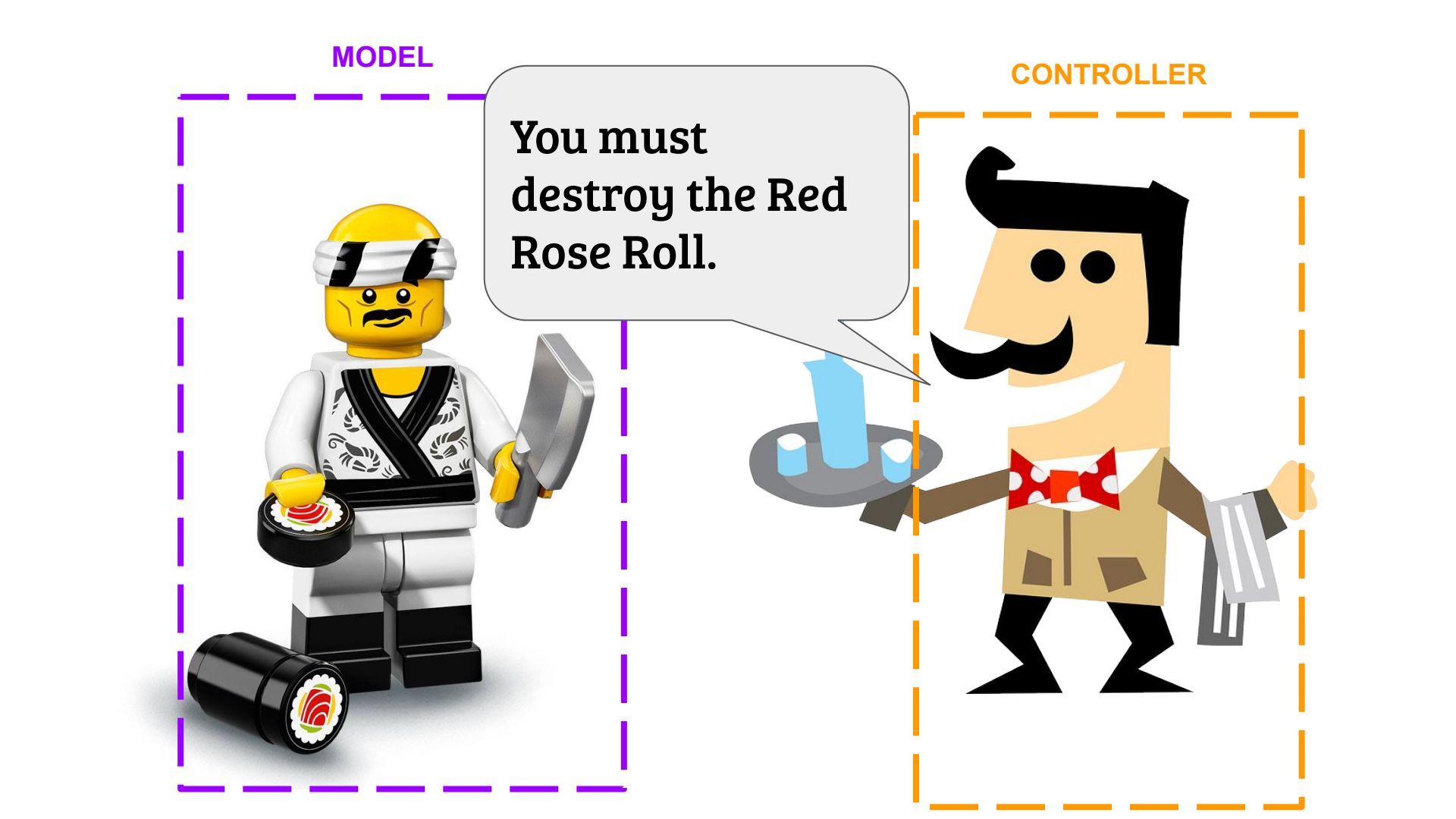

CONTROLLER
VIEW
I love it so much that I must destroy it.
USER
INSTANCE
I love my job!

Task:

1. Give guest the option to destroy the roll they ordered.
2. Tell the Chef to destroy his work.
3. Bring the menu back to the guest.

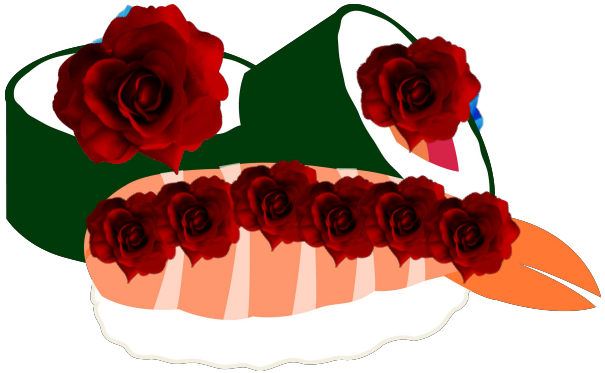
Verb	URI	Controller Method	erb/redirect
?	?	?	?


CONTROLLER
VIEW
USER
INSTANCE
Go ahead and tap that delete on your plate!
Great!
DELETE


MODEL
CONTROLLER
You must destroy the Red Rose Roll.

MODEL

FIND ROW IN DATABASE

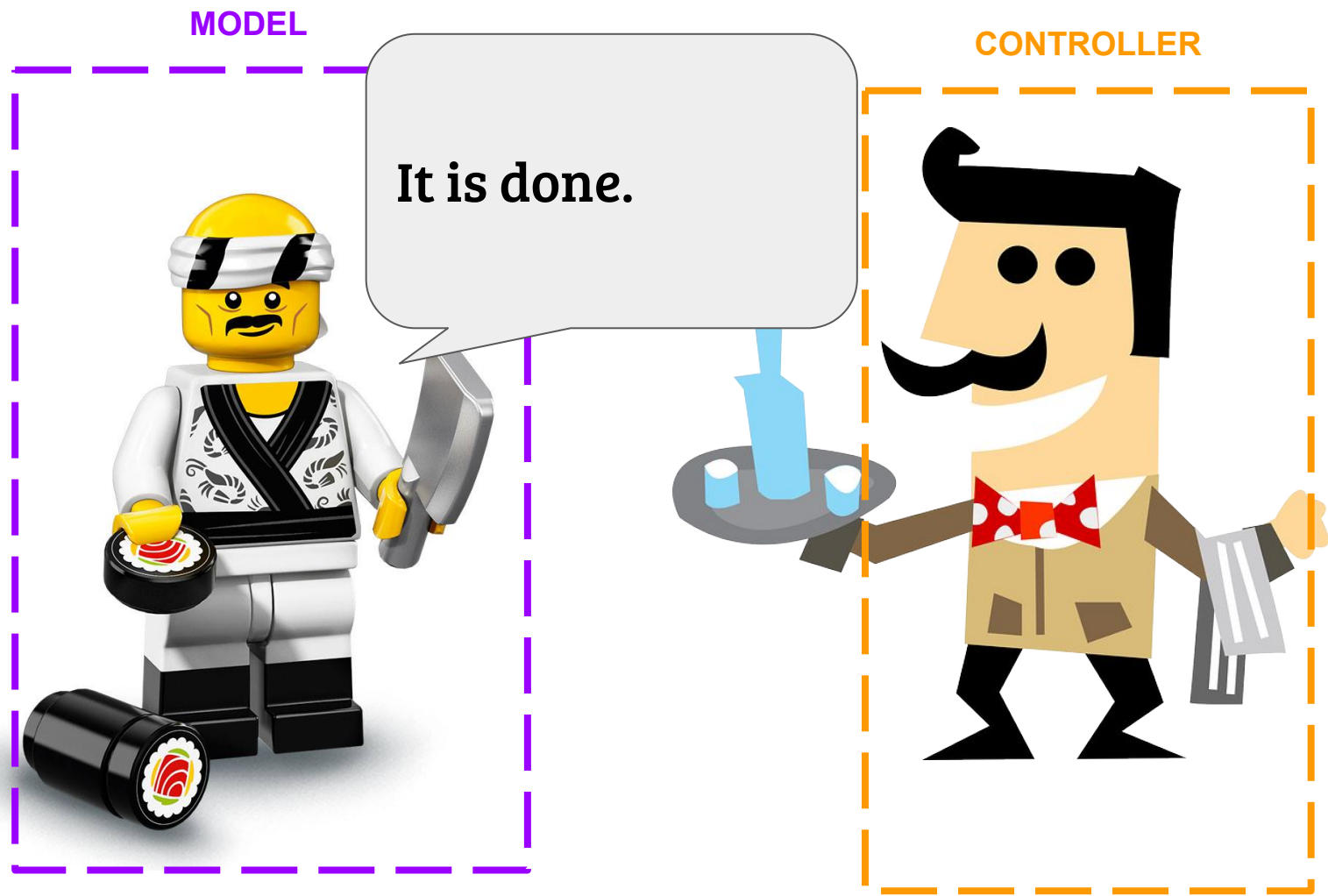


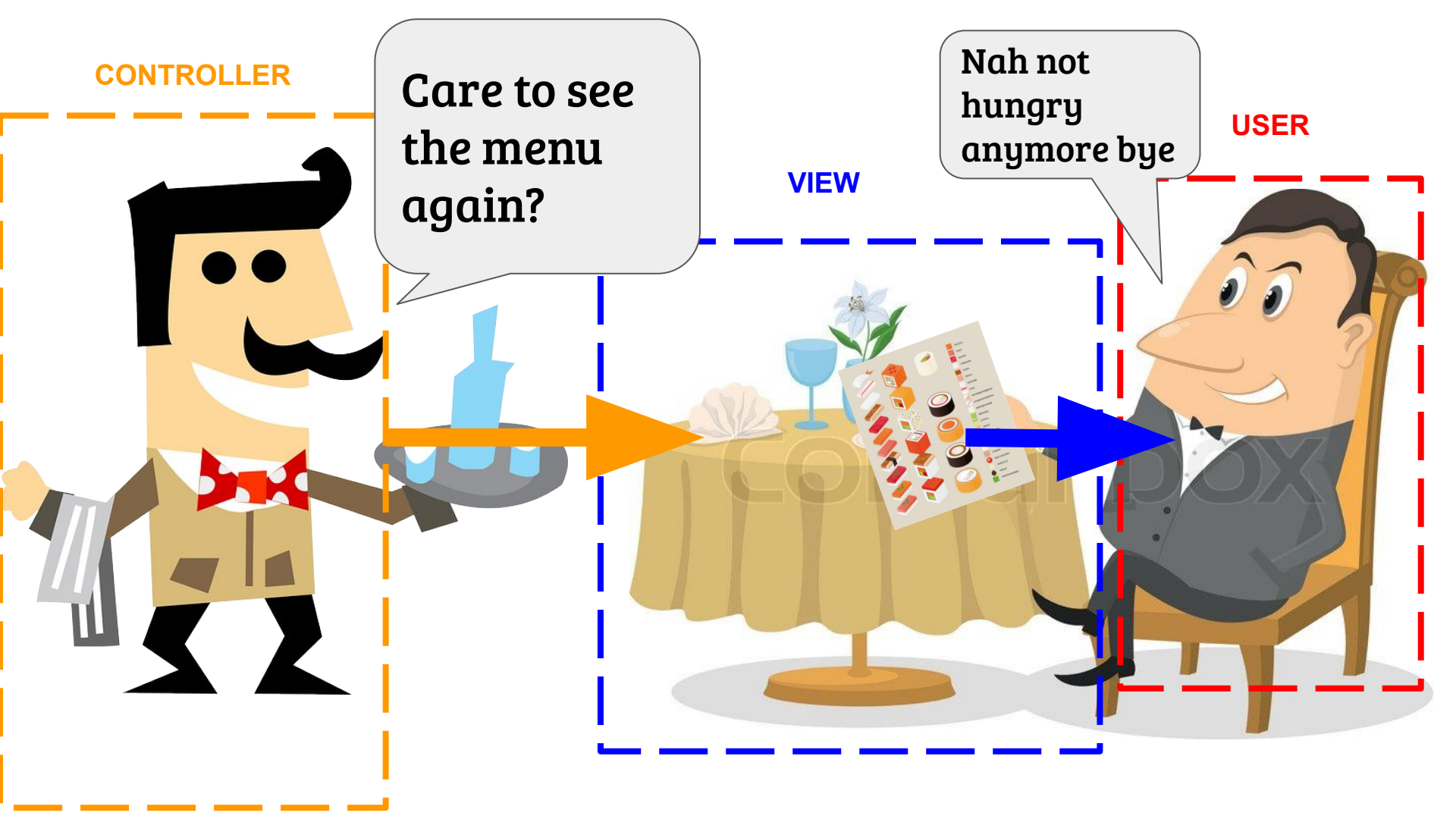
DATA

You must destroy the Red Rose Roll.

MODEL

DESTROY


MODEL
It is done.
CONTROLLER


CONTROLLER
Care to see the menu again?
VIEW
Nah not hungry anymore bye
USER

Task:

1. Give guest the option to destroy the roll they ordered.
2. Tell the Chef to destroy his work.
3. Bring the menu back to the guest.

Verb	URI	Controller Method	erb/redirect
delete	/sushis/:id	delete '/sushis/:id'	redirect '/sushis'

RESTful app

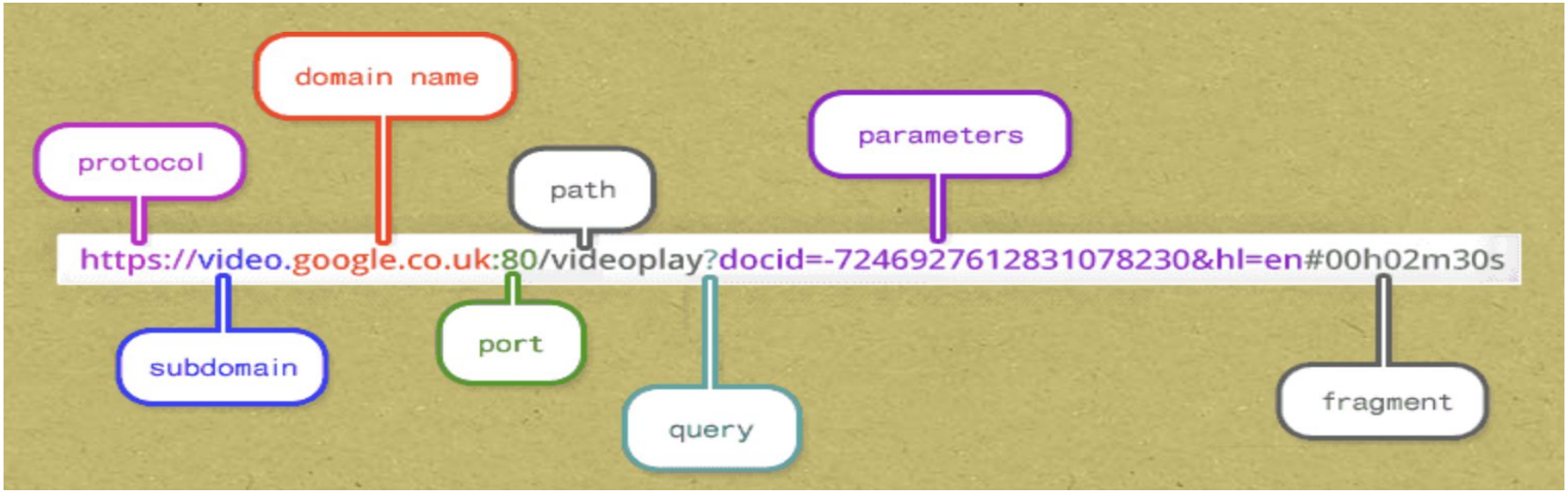
Resource: sushis

Verb	**URI**	**Controller Method**	**erb/redirect to**
GET	/sushis	get ‘/sushis’	erb :index
POST	/sushis	post ‘/sushis’	redirect ‘/sushis/id’
GET	/sushis/new	get ‘/sushis/new’	erb :new
GET	/sushis/:id/edit	get ‘/sushis/:id/edit’	erb :edit
GET	/sushis/:id	get ‘/sushis/:id’	erb :show
PATCH	/sushis/:id	patch ‘/sushis/:id’	redirect ‘/sushis/id’
PUT	/sushis/:id	put ‘/sushis/:id’	redirect ‘/sushis/id’
DELETE	/sushis/:id	delete ‘/sushis/:id’	redirect ‘/sushis’

RESTful Routes Ultimate Cheat Sheet

Task	CRUD	Verb	URI	Rails Path Helper - does not apply in Sinatra	Action (Rails)	View
1. Show all sushis	Read	get	/sushis	sushis_path	index	erb :index
2. Show a sushi	Read	get	/sushis/:id	sushi_path	show	erb :show
3. Form to add sushi	-------	get	/sushis/new	new_sushi_path	new	erb :new
4. Add sushi	Create	post	/sushis	sushis_path	create	redirect '/sushis/:id'
5. Form to edit sushi	Read	get	/sushis/:id/edit	edit_sushi_path	edit	erb :edit
6. Edit sushi	Update	patch	/sushis/:id	sushi_path	update	redirect '/sushis/:id'
7. Destroy sushi	Destroy	delete	/sushis/:id	sushi_path	destroy	redirect '/sushis'

Parts of a URL



https://doepud.co.uk/blog/anatomy-of-a-url