



# Capstone Project 2

CMU-SE 451

## Proposal

Version 1.4

Date: 22<sup>nd</sup> May, 2021

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## PROJECT INFORMATION

<b>Project acronym</b>	FC		
<b>Project Title</b>			
<b>Start Date</b>	01 Mar, 2021	<b>End Date</b>	25 May, 2021
<b>Lead Institution</b>	International School, Duy Tan University		
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## REVISION HISTORY

Version	Date	Comments	Author	Approval
1.0	02/03/2021	Initial Release	C2SE.18 team	
1.1	12/03/2021	Update for sprint 1	Trung, Tran Quoc	
1.2	10/04/2021	Update for sprint 2	Trung, Tran Quoc	
1.3	13/05/2021	Update for sprint 3	Trung, Tran Quoc	
1.4	22/05/2021	Final	Vinh, Huynh Dac	

## Document Approval

The following signatures are required for approval of this document

<b>Mentor</b>	Dang Viet Hung	Date:
<b>Scrum Master</b>	Huynh Dac Vinh	Date:
<b>Product Owner</b>	Tran Quoc Trung	Date:
<b>Team Member</b>	Ton That Minh Huy	Date:
<b>Team Member</b>	Dang Van Duan	Date:

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*Capstone 2 – 2021 – Food Care***1. Introduction:****1.1. Purpose:**

Place information system's database design document describes the structure of the database and file structure of the system. The database Design document will introduce all attributes of the System that will help developers and testers base on this design to implement and test.

**1.2. Goal:**

To create the most accurate database for the system.

**1.3. Scope:**

- This Database Design Document provides the basic for the Food Care Database design.
- It defines the Database which will support the "Food Care" Data Model.
- "Food Care" uses the No-SQL as MongoDB to store the data. Each Schema could be a table or be a field in the other table

**1.4. Definitions, Acronyms and Abbreviations:**

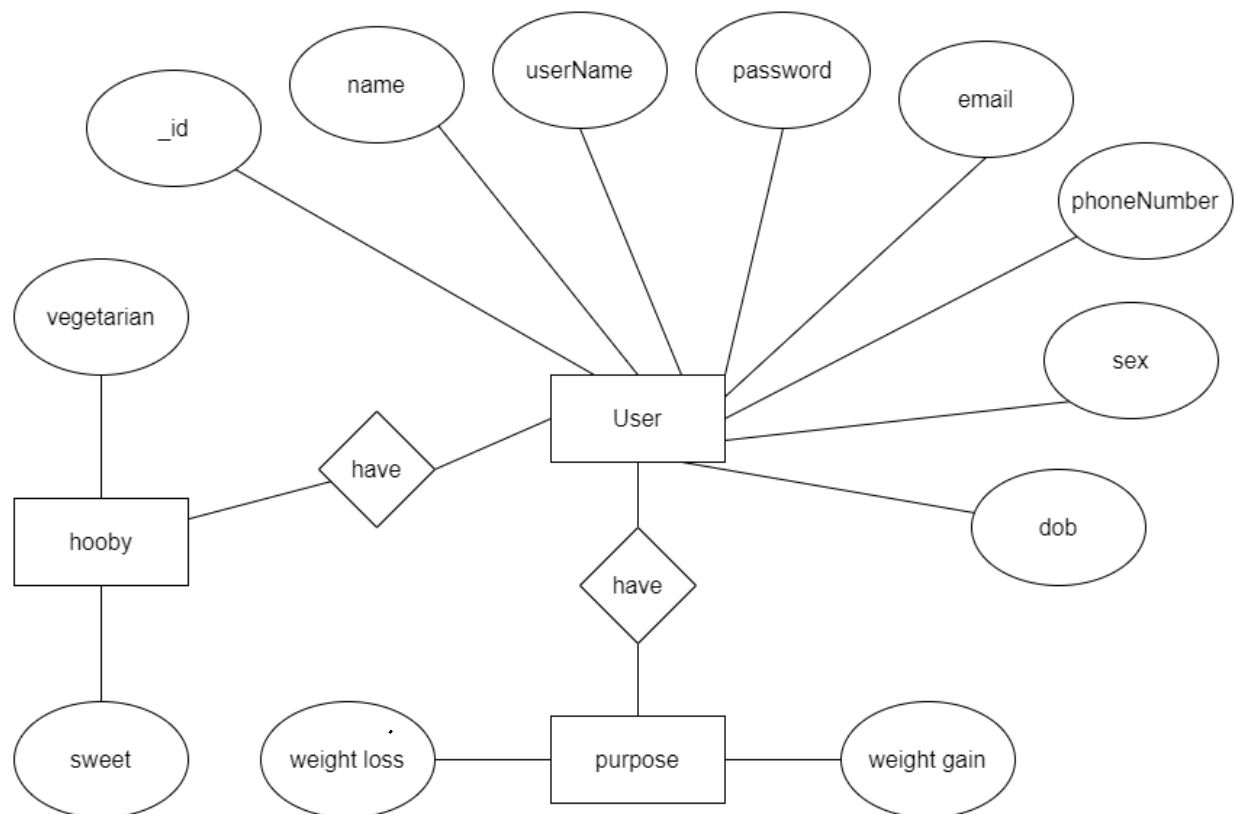
Abbreviations	Description	Comment
PK	Primary	Use to indicate a file is a Primary key in a schema
FC	FoodCare – Diet Building System	Project title
R	Randomized	Randomized
CT	Current_Timestamp	On update Current_Timestamp

## 2. Database Design for Sprint 1:

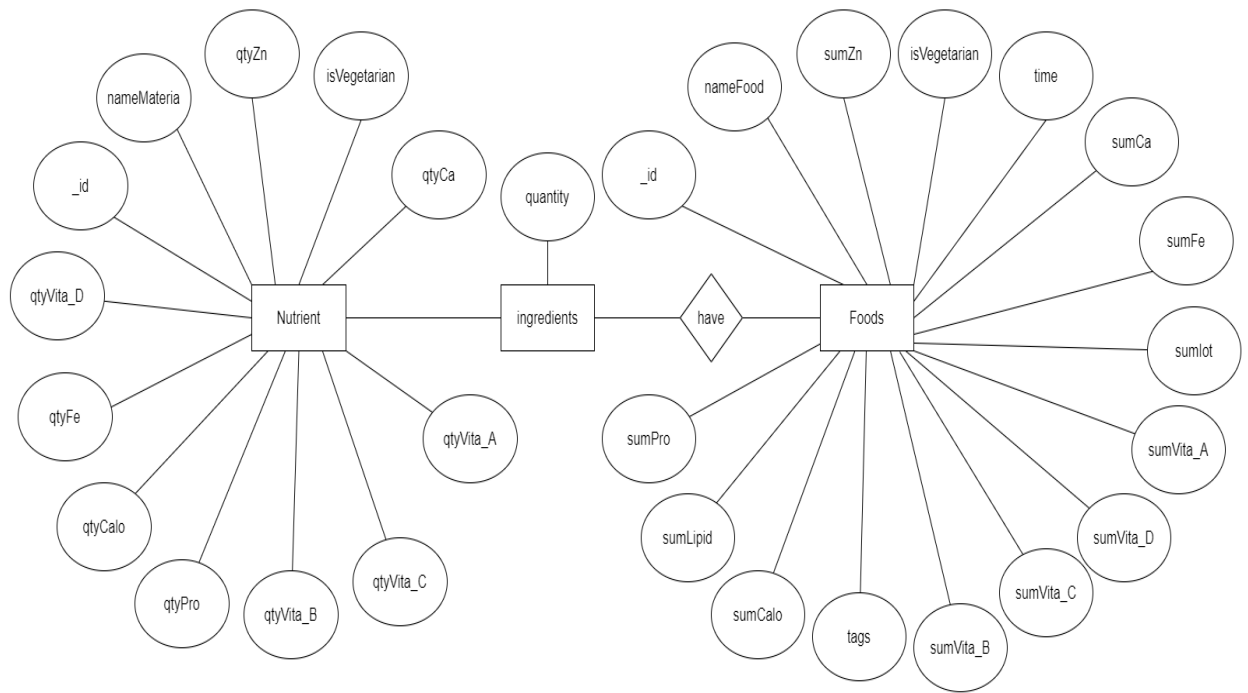
### 2.1. Schema Overview:

No	Schema name	Short Description
1	users	This table contains the information about users
2	foods	This table contains the information about the listed foods on the system
3	nutrients	This table contains the nutrient information of each ingredient
4	menus	This table contains the menu information of each user

### 2.2. Entity Relationship Diagram:



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2.3. Table Diagram:

Users	Foods
_id: ObjectId	_id: ObjectId
name: String	nameFood: String
userName: String	isVegetarian : Boolean
password: String	time: String
email: String	ingredients: Object
phoneNumber: Number	sumCa: Number
sex: boolean	sumFe: Number
dob: string	sumZn: Number
hooby: Object	sumIot: Number
purpose: Object	sumVita_A: Number
	sumVita_D: Number
	sumVita_B: Number
	sumVita_C: Number
	sumCalo: Number
	sumLipid: Number
	sumPro: Number
	tags: Number

Nutrient	probabilityofUser	probabilityofUser_total
_id: ObjectId	_id: String	_id: String
nameMaterial: String	_idFood: String	_idFoods: Object
isVegetarian : Boolean	Male: Number	Male: Number
qtyCa: Number	Female: Number	Female: Number
qtyFe: Number	6-11Ages: Number	6-11Ages: Number
qtyZn: Number	12-17Ages: Number	12-17Ages: Number
qtyIot: Number	18-23Ages: Number	18-23Ages: Number
qtyVita_A: Number	24-29Ages: Number	24-29Ages: Number
qtyVita_D: Number	30-35Ages: Number	30-35Ages: Number
qtyVita_B: Number	>=35Ages: Number	>=35Ages: Number
qtyVita_C: Number	Weight gain: Number	Weight gain: Number
qtyCalo: Number	Weight loss: Number	Weight loss: Number
qtyLipid: Number	Fitness: Number	Fitness: Number
qtyPro: Number		



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## 2.4. Detail

### 2.4.1. Users:

**This includes the attribute:**

**users**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
name	string				
userName	string				
Password	string	not			
email	string	not			
phoneNumber	string				
sex	boolean				
dob	string				
hooby	number				
purpose	object				

### 2.4.2. Foods

**This includes the attribute:**

**Foods**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
nameFood	string	not			
isVegetarian	boolean				
Time	string				
ingredients	object				
sumCa	number				
sumFe	number				
sumZn	number				

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sumIot	number				
sumVita_A	number				
sumVita_D	number				
sumVita_B	string				
sumVita_C	number				
sumCalo	number				
sumLipid	number				
sumPro	number				
tags	number				

**Nutrient**

Attributes	Datatype	Null	Key	Default	Extra
__id	string	not	PK		R
nameMaterial	string	not			
isVegetarian	boolean				
Time	string				
ingredients	object				
qtyCa	number				
qtyFe	number				
qtyZn	number				
qtyIot	number				
qtyVita_A	number				
qtyVita_D	number				
qtyVita_B	string				
qtyVita_C	number				
qtyCalo	number				
qtyLipid	number				

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qtyPro	number				
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**2.4.3. probabilityofUser**

**This includes the attribute:**

**probabilityofUser**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
_idFood	string	not			
Male	number	not			
Female	number	not			
6-11Ages	number	not			
12-17Ages	number	not			
18-23Ages	number	not			
24-29Ages	number	not			
30-35Ages	number	not			
>=35Ages	number	not			
Weight gain	number	not			
Weight loss	number	not			
Fitness	number	not			

**probabilityofUser\_total**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
_idFood	string	not			
Male	number	not			
Female	number	not			
6-11Ages	number	not			

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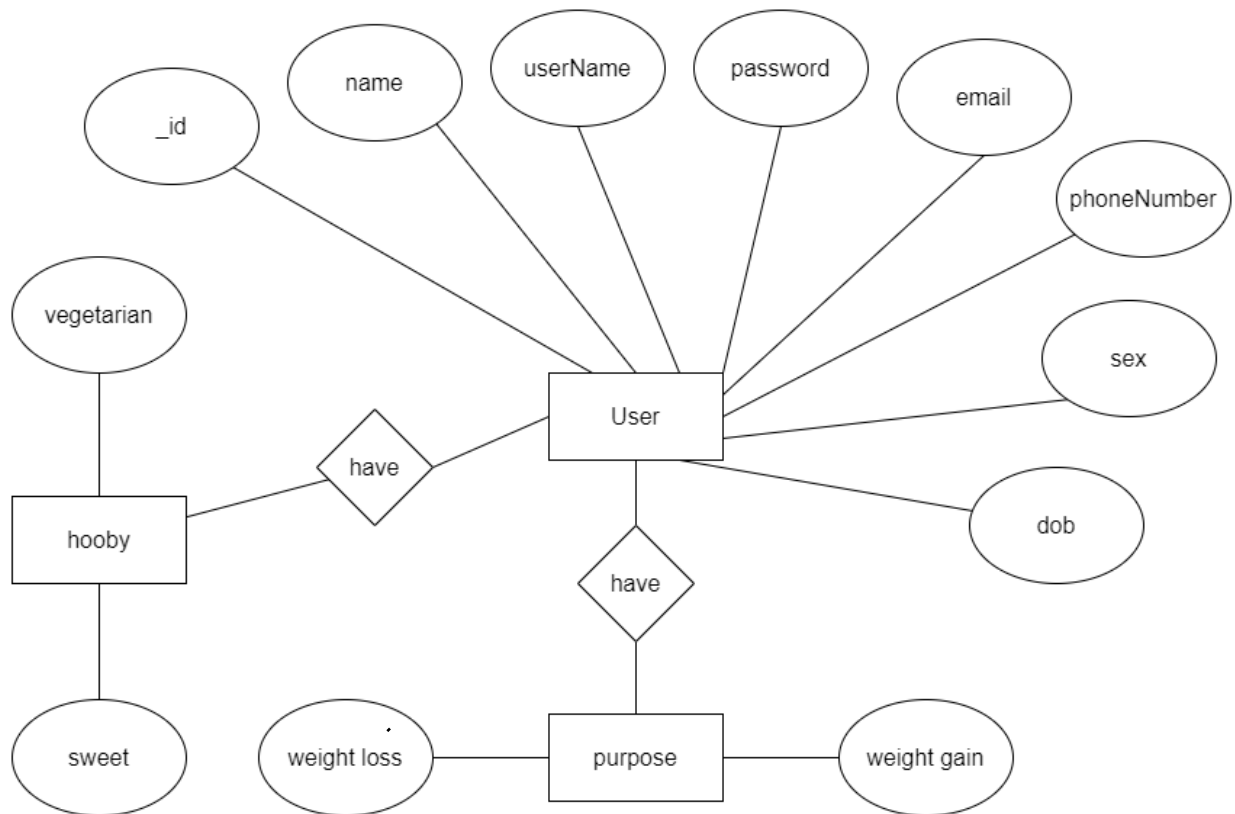
12-17Ages	number	not			
18-23Ages	number	not			
24-29Ages	number	not			
30-35Ages	number	not			
>=35Ages	number	not			
Weight gain	number	not			
Weight loss	number	not			
Fitness	number	not			

### 3. Database Design for Sprint 2:

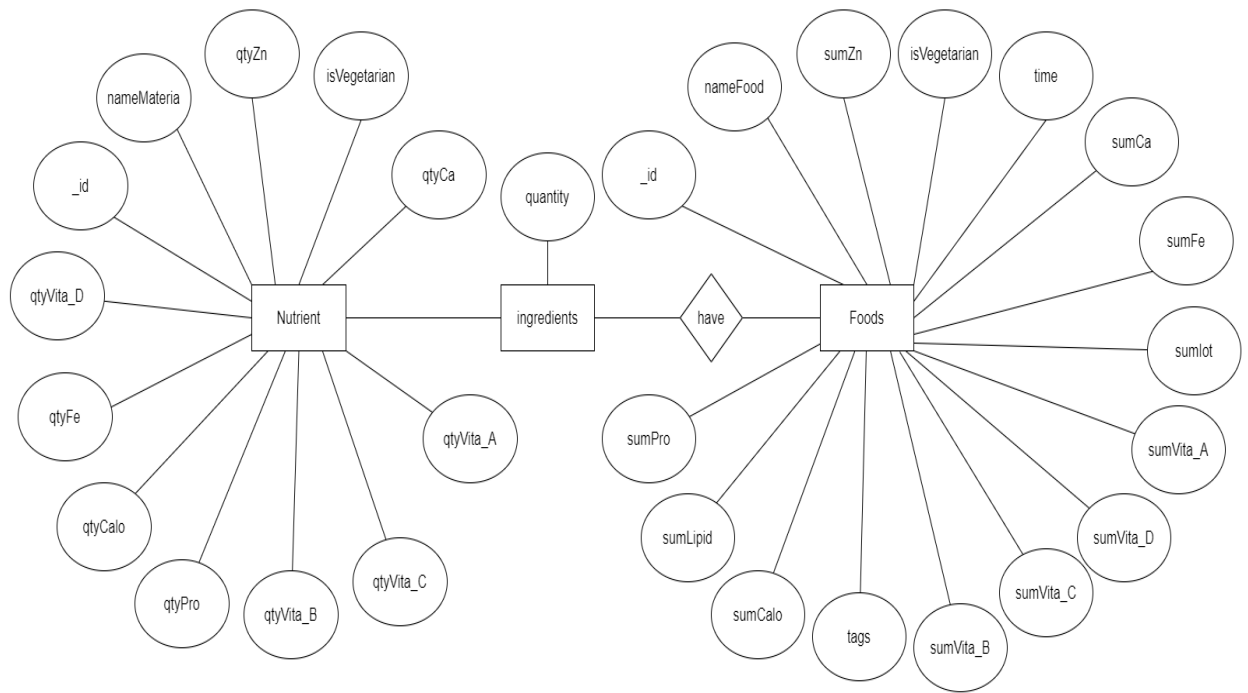
#### 3.1. Schema Overview:

No	Schema name	Short Description
1	users	This table contains the information about users
2	foods	This table contains the information about the listed foods on the system
3	nutrients	This table contains the nutrient information of each ingredient
4	menus	This table contains the menu information of each user

#### 3.2. Entity Relationship Diagram:

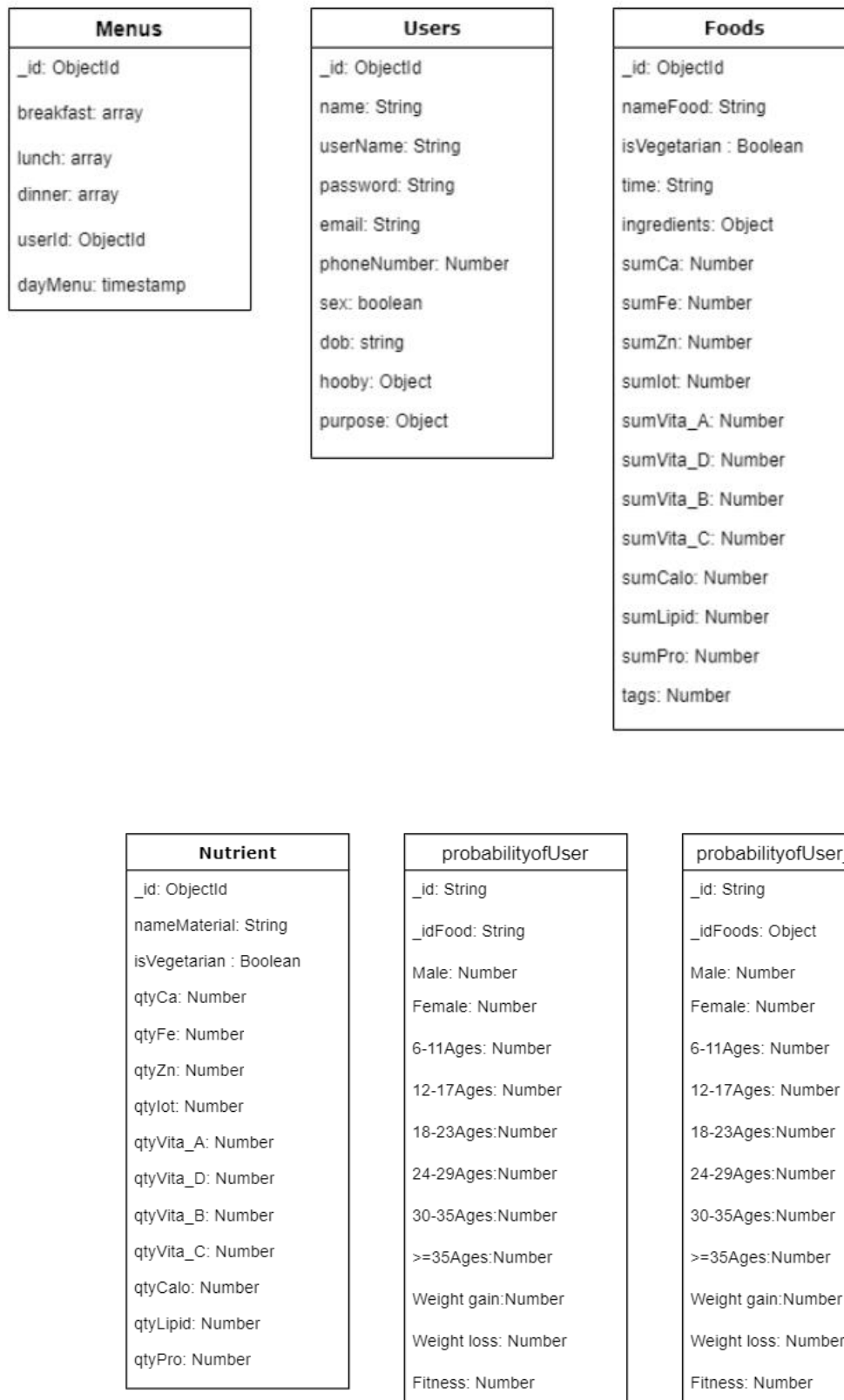


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### 3.3. Table Diagram:



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### 3.4. Detail

#### 3.4.1. Users:

**This includes the attribute:**

**users**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
name	string				
userName	string				
Password	string	not			
email	string	not			
phoneNumber	string				
sex	boolean				
dob	string				
hooby	number				
purpose	object				

#### 3.4.2. Foods

**This includes the attribute:**

**Foods**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
nameFood	string	not			
isVegetarian	boolean				
Time	string				
ingredients	object				
sumCa	number				
sumFe	number				
sumZn	number				



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sumIot	number				
sumVita_A	number				
sumVita_D	number				
sumVita_B	string				
sumVita_C	number				
sumCalo	number				
sumLipid	number				
sumPro	number				
tags	number				

**Nutrient**

Attributes	Datatype	Null	Key	Default	Extra
__id	string	not	PK		R
nameMaterial	string	not			
isVegetarian	boolean				
Time	string				
ingredients	object				
qtyCa	number				
qtyFe	number				
qtyZn	number				
qtyIot	number				
qtyVita_A	number				
qtyVita_D	number				
qtyVita_B	string				
qtyVita_C	number				
qtyCalo	number				
qtyLipid	number				

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qtyPro	number				
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### 3.4.3. ProbabilityofUser

This includes the attribute:

#### probabilityofUser

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
_idFood	string	not			
Male	number	not			
Female	number	not			
6-11Ages	number	not			
12-17Ages	number	not			
18-23Ages	number	not			
24-29Ages	number	not			
30-35Ages	number	not			
>=35Ages	number	not			
Weight gain	number	not			
Weight loss	number	not			
Fitness	number	not			

#### probabilityofUser\_total

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
_idFood	string	not			
Male	number	not			
Female	number	not			
6-11Ages	number	not			

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12-17Ages	number	not			
18-23Ages	number	not			
24-29Ages	number	not			
30-35Ages	number	not			
>=35Ages	number	not			
Weight gain	number	not			
Weight loss	number	not			
Fitness	number	not			

#### 3.4.4. Menus

**This includes the attribute:**

##### Menu

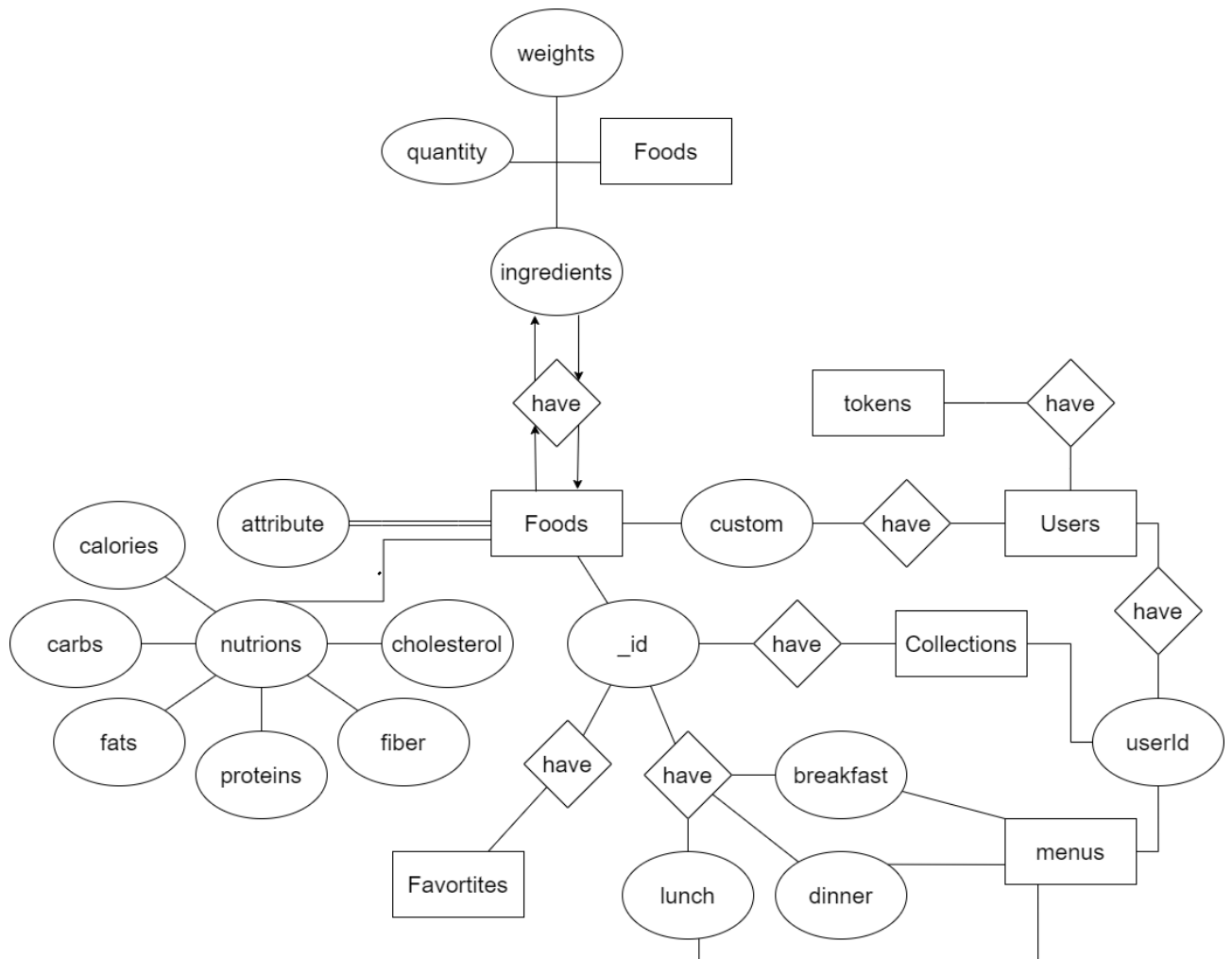
Attributes	Datatype	Null	Key	Default	Extra
_id	ObjectId	not	PK		R
_breakfast	Array	not			
lunch	Array	not			
dinner	Array	not			
userId	String	not			
Date	Date	not			

**4. Database Design for Sprint 3:****4.1. Schema Overview:**

No	Schema name	Short Description
1	users	This table contains the information about users
2	foods	This table contains the information about the listed foods on the system
3	menus	This table contains the menu information of each user
4	tokens	This table contains tokens for login verification
5	collections	This table contains the food collections of the users

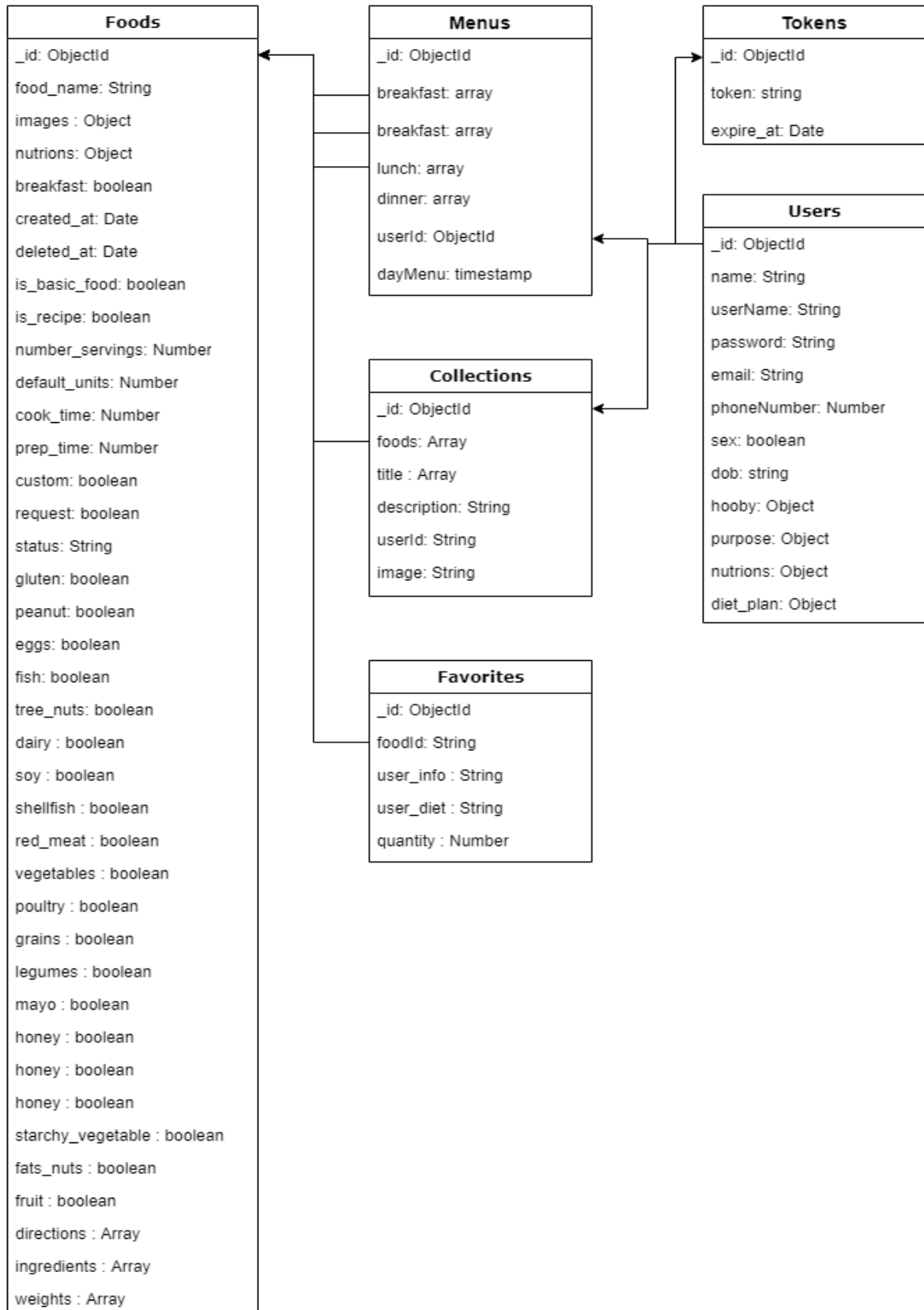
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4.2. Entity Relationship Diagram:



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4.3. Table Diagram:



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#### 4.4. Detail

##### 4.4.1. Users:

**This includes the attribute:**

**users**

Attributes	Datatype	Null	Key	Default	Extra
_id	string	not	PK		R
name	string				
userName	string				
Password	string	not			
email	string	not			
phoneNumber	string				
sex	boolean				
dob	string				
hooby	number				
purpose	object				

##### 4.4.2. Foods

**This includes the attribute:**

**Foods**

Attributes	Datatype	Null	Key	Default	Extra
_id	ObjectId	not	PK		R
id	number	not			
food_name	string				
images	object				
nutritions	object				
breakfast	boolean				
created_at	Date				
deleted_at	Date				

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is_basic_food	boolean				
is_recipe	boolean				
number_servings	number				
default_units	number				
cook_time	number				
prep_time	number				
custom	boolean				
request	boolean				
status	string				
gluten	boolean				
peanut	boolean				
eggs	boolean				
fish	boolean				
tree_nuts	boolean				
dairy	boolean				
soy	boolean				
shellfish	boolean				
red_meat	boolean				
vegetables	boolean				
poultry	boolean				
grains	boolean				
legumes	boolean				
mayo	boolean				
honey	boolean				
starchy_vegetables	boolean				
fats_nuts	boolean				
fruit	boolean				



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directions	Array				
ingredients	Array				
weights	Array				

#### 4.4.3. Tokens

**This includes the attribute:**

##### Tokens

Attributes	Datatype	Null	Key	Default	Extra
_id	ObjectId	not	PK		R
token	string	not			
expire_at	Date	not			

#### 4.4.4. Collections

**This includes the attribute:**

##### Collections

Attributes	Datatype	Null	Key	Default	Extra
_id	ObjectId	not	PK		R
foods	Array	not			
title	Array	not			
description	Array	not			
userId	String	not			
image	String	not			

#### 4.4.5. Favorites

**This includes the attribute:**

##### Favorites

Attributes	Datatype	Null	Key	Default	Extra
_id	ObjectId	not	PK		R

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foodId	String	not			
user_info	String	not			
user_diet	String	not			
quantity	number	not			

#### 4.4.6. Menus

This includes the attribute:

##### Menu

Attributes	Datatype	Null	Key	Default	Extra
_id	ObjectId	not	PK		R
breakfast	Array	not			
lunch	Array	not			
dinner	Array	not			
userId	String	not			