RELATIONAL SCHEMA

Menus(id,name,description, start_date,end_date)

Example:

```
<menu>
  <id>1</id>
  <name>Weeknight Specials</name>
  <description>A selection of quick and delicious meals for busy weekdays.</descrip
  <start_date>2024-03-01</start_date>
  <end_date>2024-03-07</end_date>
</menu>
```

```
  <menu>
    <id>4</id>
    <name>Vegetarian Feast</name>
    <description>Celebrating the flavors of vegetables in a variety of delightful dis
    <start_date>2024-04-15</start_date>
    <end_date>2024-04-30</end_date>
  </menu>
```

dietaries(id,name,description)[Vegetarian, Gluten-free, High-protein]

```
<dietary>
  <id>1</id>
  <name>Vegetarian</name>
  <description>Suitable for vegetarian diets, avoiding meat and fish.</description>
</dietary>

<dietary>
  <id>2</id>
  <name>Gluten-free</name>
  <description>Does not contain gluten, suitable for individuals with gluten intole
</dietary>
```

Categories(id,name,description) [Dairy, Meat, Vegetables, Spices]

```
<category>
  <id>1</id>
  <name>Dairy</name>
  <description>Products derived from milk, including cheese, yogurt, and butter.</d
</category>

<category>
  <id>2</id>
  <name>Meat</name>
  <description>Various types of meats, such as beef, chicken, and pork.</descriptio
</category>
```

budgetcategories(id,name,description)["Budget-Friendly", "Economical", "Low-Cost"]

```
<budgetcategory>
  <id>1</id>
  <name>Budget-Friendly</name>
  <description>Offers cost-effective options without compromising quality or flavor
</budgetcategory>

<budgetcategory>
  <id>2</id>
  <name>Economical</name>
  <description>Provides economical choices suitable for thrifty shoppers.</descript
</budgetcategory>
```

Recipes(id,name,preparation_time,cooking_time, description, difficulty_level,serving_size,cooking_instructions,#budgetcategory_id,#category_id)

```
<recipe>
  <id>1</id>
  <name>Vegetarian Pasta Primavera</name>
  <preparation_time>20</preparation_time>
  <cooking_time>30</cooking_time>
  <description>A colorful and flavorful pasta dish with a variety of fresh vegetab
  <difficulty_level>Intermediate</difficulty_level>
  <serving_size>4</serving_size>
  <cooking_instructions>
    <!-- Instructions go here -->
  </cooking_instructions>
  <budgetcategory_id>1</budgetcategory_id>
  <category_id>3</category_id>
</recipe>
```

Menu_recipes(#menu_id, #recipe_id)

```
<menu_recipes>
  <menu_recipe>
    <menu_id>1</menu_id>
    <recipe_id>2</recipe_id>
  </menu_recipe>

  <menu_recipe>
    <menu_id>1</menu_id>
    <recipe_id>4</recipe_id>
  </menu_recipe>
</menu_recipes>
```

macronutrients(id, name, description)[carbohydrates,proteins,fats]

```
<macronutrients>
  <macronutrient>
    <id>4</id>
    <name>Fiber</name>
    <description>Supports digestive health, found in whole grains, fruits, and vegeta
  </macronutrient>

  <macronutrient>
    <id>5</id>
    <name>Sugars</name>
    <description>Simple carbohydrates, found in sweets and fruits.</description>
  </macronutrient>
</macronutrients>
```

macroelements(id, name, description)[le calcium, le chlore, le magnésium, le phosphore, le potassium et le sodium]

```
<macroelement>
  <id>1</id>
  <name>Le calcium</name>
  <description>Essential for bone health and nerve function.</description>
</macroelement>

<macroelement>
  <id>2</id>
  <name>Le chlore</name>
  <description>Involved in fluid balance and digestion.</description>
</macroelement>
```

oligoelements(id, name, description)[le fer, le zinc, le cuivre, le manganèse, l'iode, le sélénium, le chrome, le molybdène, le fluor, le cobalt, le silicium, le vanadium, le nickel, le bore et l'arsenic]

```
<oligoelement>
  <id>1</id>
  <name>Le fer</name>
  <description>Important for oxygen transport and energy production.</description>
</oligoelement>

<oligoelement>
  <id>2</id>
  <name>Le zinc</name>
  <description>Supports immune function, wound healing, and DNA synthesis.</descrip
</oligoelement>
```

Vitamins(id, name, description)[Vitamine A, Vitamin C, etc]

```
 <vitamin>
   <id>1</id>
   <name>Vitamine A</name>
   <description>Essential for vision, immune function, and skin health.</description
 </vitamin>

 <vitamin>
   <id>2</id>
   <name>Vitamin C</name>
   <description>Acts as an antioxidant, supports the immune system, and aids in coll
 </vitamin>
```

Ingredients(id, name, measurement_unit, cost,calories, #macronutrient_id, #recipe_id)

```
<ingredient>
  <id>1</id>
  <name>Tomato</name>
  <measurement_unit>Each</measurement_unit>
  <cost>0.5</cost>
  <calories>22</calories>
  <macronutrient_id>3</macronutrient_id>
  <recipe_id>1</recipe_id>
</ingredient>
```

Recipe_dietaries(#recipe_id, #dietary_id)

```
<recipe_dietaries>
  <recipe_dietary>
    <recipe_id>1</recipe_id>
    <dietary_id>1</dietary_id>
  </recipe_dietary>

  <recipe_dietary>
    <recipe_id>1</recipe_id>
    <dietary_id>3</dietary_id>
  </recipe_dietary>

  <recipe_dietary>
    <recipe_id>2</recipe_id>
    <dietary_id>2</dietary_id>
  </recipe_dietary>

  <!-- Add more entries as needed -->
</recipe_dietaries>
```

Ingredient_macroelements(#ingredient_id, #macroelement_id)

Ingredient_vitamins(#ingredient_id, #vitamin_id)

Ingredient_macronutrients(#ingredient_id, #macronutrient_id,value)

Ingredient_oligoelements(#ingredient_id,#oligoelement_id)

Recepe_ingredients(#reciped_id, #ingredient_id, quantity)

Customers(id, firstname, lastname, email, phone, address)

```
<customer>
  <id>1</id>
  <firstname>John</firstname>
  <lastname>Doe</lastname>
  <email>john.doe@example.com</email>
  <phone>123-456-7890</phone>
  <address>123 Main Street, Cityville</address>
</customer>
```

Orders(id,#customer_id,order_date,delivery_date,total_amount,"delevery_person_id, status('pending','accepted','cooking','on delevery','completed','cancelled')

```
<order>
  <id>1</id>
  <customer_id>1</customer_id>
  <order_date>2024-03-01</order_date>
  <delivery_date>2024-03-02</delivery_date>
  <total_amount>50.00</total_amount>
  <delivery_person_id>101</delivery_person_id>
  <status>pending</status>
</order>
```

Order_Items(#order_id,#recipe_id,quantity,price)

```
<order_item>
  <order_id>1</order_id>
  <recipe_id>3</recipe_id>
  <quantity>2</quantity>
  <price>20.00</price>
</order_item>

<order_item>
  <order_id>1</order_id>
  <recipe_id>1</recipe_id>
  <quantity>1</quantity>
  <price>30.00</price>
</order_item>
```

Reviews(id, #customer_id, #recipe_id, rating, comment, review_date)

```
<review>
  <id>1</id>
  <customer_id>1</customer_id>
  <recipe_id>3</recipe_id>
  <rating>4.5</rating>
  <comment>A delicious recipe! I loved it.</comment>
  <review_date>2024-03-05</review_date>
</review>

<review>
  <id>2</id>
  <customer_id>2</customer_id>
  <recipe_id>1</recipe_id>
  <rating>5.0</rating>
  <comment>Amazing taste and easy to prepare.</comment>
  <review_date>2024-03-06</review_date>
</review>
```

Delivery_persons(id, name, contact, vehicule_type('car','bike','scooter'), availability, vehicule_number, current_location)

```
<delivery_person>
  <id>101</id>
  <name>John Driver</name>
  <contact>987-654-3210</contact>
  <vehicle_type>car</vehicle_type>
  <availability>true</availability>
  <vehicle_number>ABC123</vehicle_number>
  <current_location>Cityville</current_location>
</delivery_person>
```

```
<Ingredient>
    <name>Example Food</name>
    <nutrients>
        <macronutrients>
            <macronutrient>
                <id>1</name>
                <name>carbohydrates</name>
                <description></description>
            </macronutrient>
            <macronutrient>
                <id>2</name>
                <name>proteins</name>
                <description></description>
            </macronutrient>
            <macronutrient>
                <id>3</name>
                <name>fats</name>
                <description></description>
            </macronutrient>
        </macronutrients>
        <micronutrients>
            <minerals>
                <macrominerals>
                    <!-- List of macrominerals -->
                </macrominerals>
                <microminerals>
                    <zinc>...</zinc>
                    <copper>...</copper>
                    <!-- Other trace minerals (oligo-elements) -->
                </microminerals>
            </minerals>
            <!-- Other micronutrients such as vitamins -->
        </micronutrients>
    </nutrients>
</Ingredient>
```

- Nutrients
  - Macro-nutrients
    - Carbohydrates
    - Proteins
    - Fats
  - Micro-nutrients
    - Macroelements (Minerals as an umbrella term)

- Calcium
- Chlorine
- Magnesium
- Phosphorus
- Potassium
- Sodium

- Oligo-elements (Minerals as an umbrella term)
  - Iron
  - Zinc
  - Copper
  - Manganese
  - Iodine
  - Selenium
  - Chromium
  - Molybdenum
  - Fluorine
  - Cobalt
  - Silicon
  - Vanadium
  - Nickel
  - Boron
  - Arsenic

- Vitamins
  - Vitamin A
  - Vitamin C
  - Vitamin D
  - Vitamin E
  - Vitamin K

WORKLOAD DISTRIBUTION WITHIN THE GROUP

	Contributors			
Tasks	Pascal	A	B	C
Database Modeling and Relational Schema	✓			
Validation of the database schema	✓	✓	✓	✓
Write an XML Schema that represents your modeling	✓	✓	✓	✓
Populating the XML Database	✓	✓	✓	✓
Visualization of a part of the database with XSL	✓	✓	✓	✓
The 6th visualization part	✓			
The 7th visualization part in JSON	✓			
Write a report		✓	✓	✓

Tasks	Responsible	Accountable	Consulted	Informed