

Département Technologie de l'Information et la Communication

PROJET DE FIN D'ANNÉE 2

CONCÉPTION ET DÉVELOPPEMENT D'UNE PLATEFORME DE COVOITURAGE EN ARCHITECTURE MICROSERVICES (CÔTÉ CONDUCTEUR)

ENCADRANT : MR. MOHAMED RAMZI HADDAD

Élaborée par Ahmed HAZGUI et Marouane BOUSLAMA

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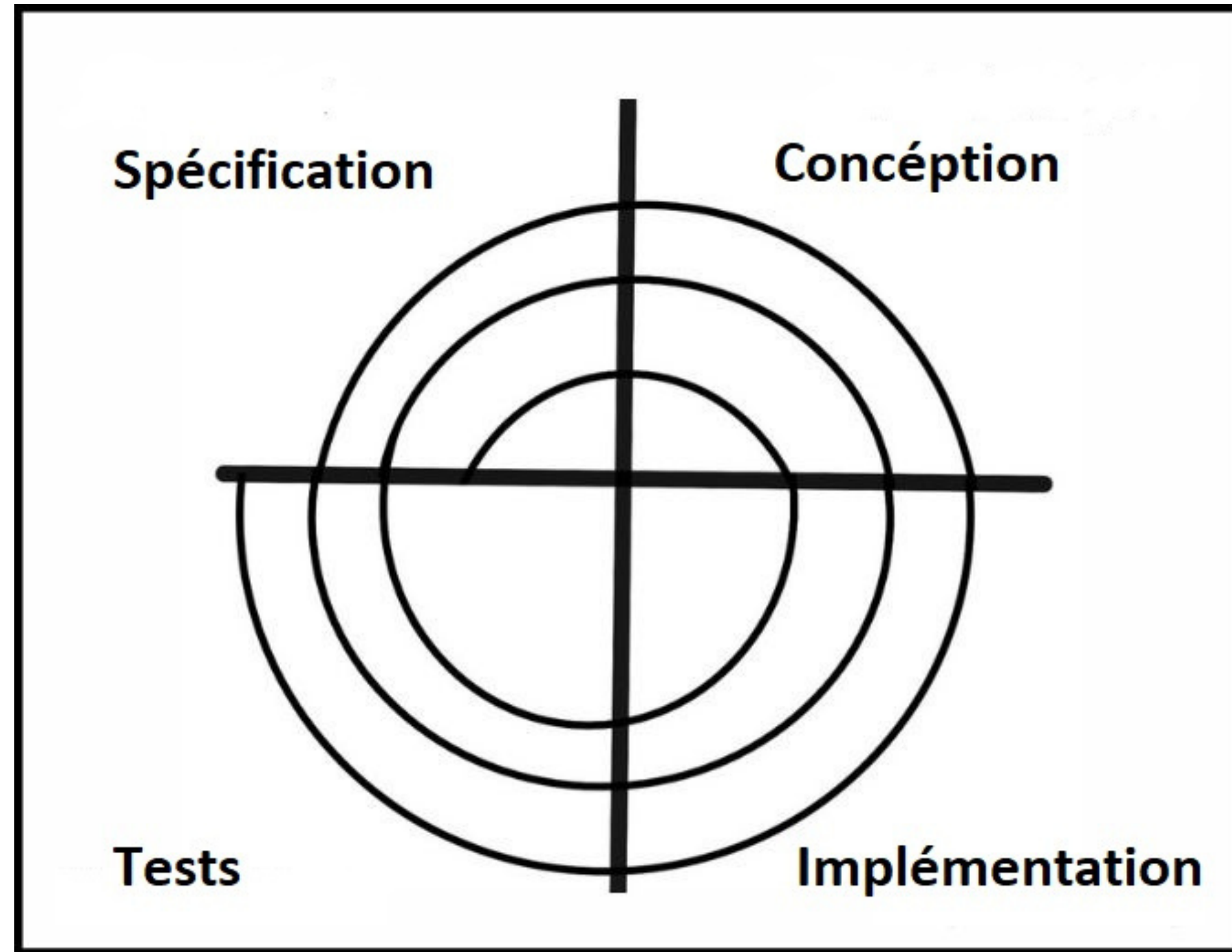
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Réalisation de l'application

Introduction

Contexte et spécification des besoins du projet

Méthodologie de travail



Spécification des besoins

Spécification des besoins

Besoins non fonctionnels

Spécification des besoins

Besoins non fonctionnels

Besoins fonctionnels

Besoins non fonctionnels

Besoins non fonctionnels

- **Modularité**

Besoins non fonctionnels

- **Modularité**
- **Flexibilité**

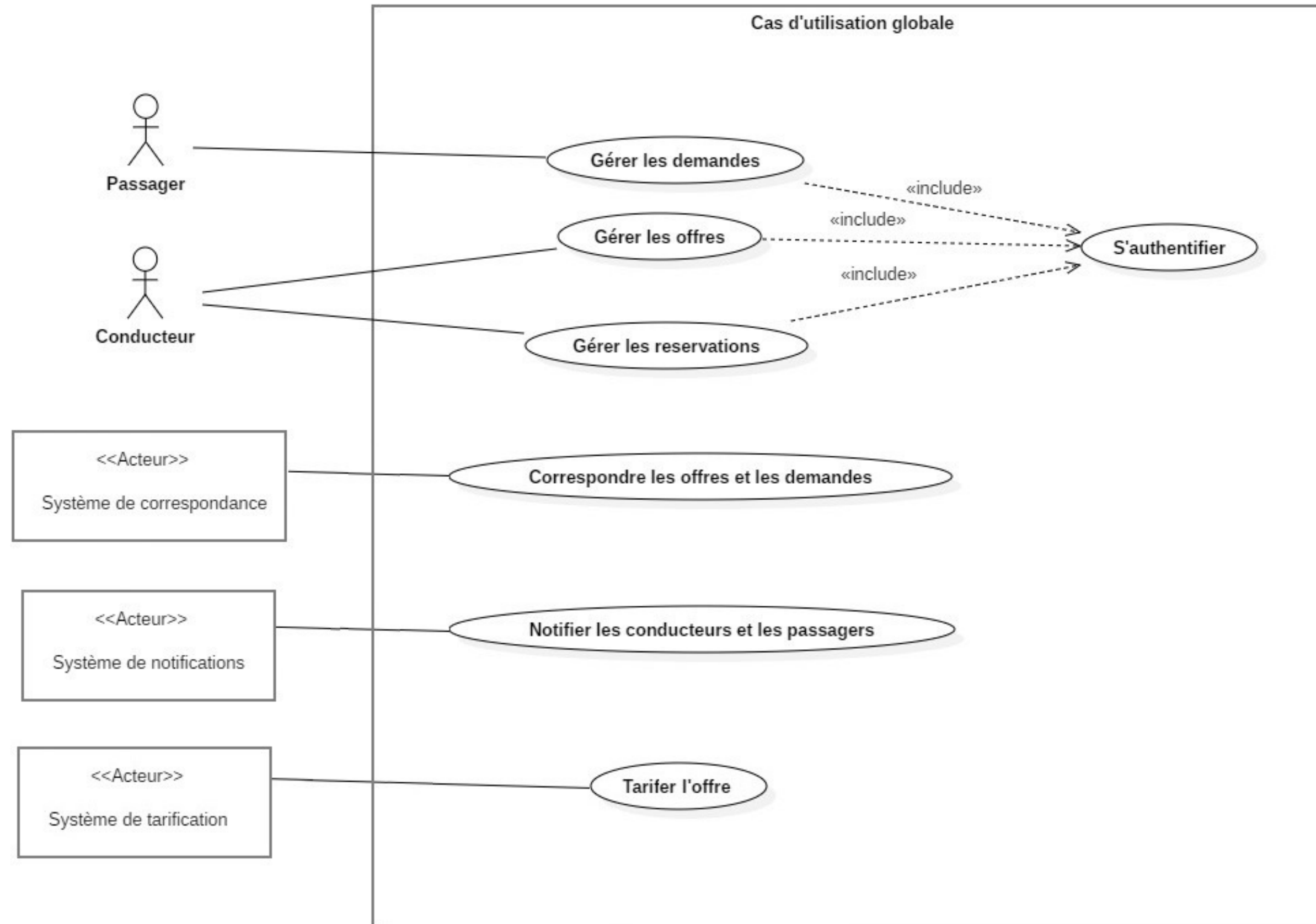
Besoins non fonctionnels

- **Modularité**
- **Flexibilité**
- **Tolérance aux pannes**

Besoins non fonctionnels

- **Modularité**
- **Flexibilité**
- **Tolérance aux pannes**
- **Maintenabilité**

Besoins fonctionnels





Architecture et conception

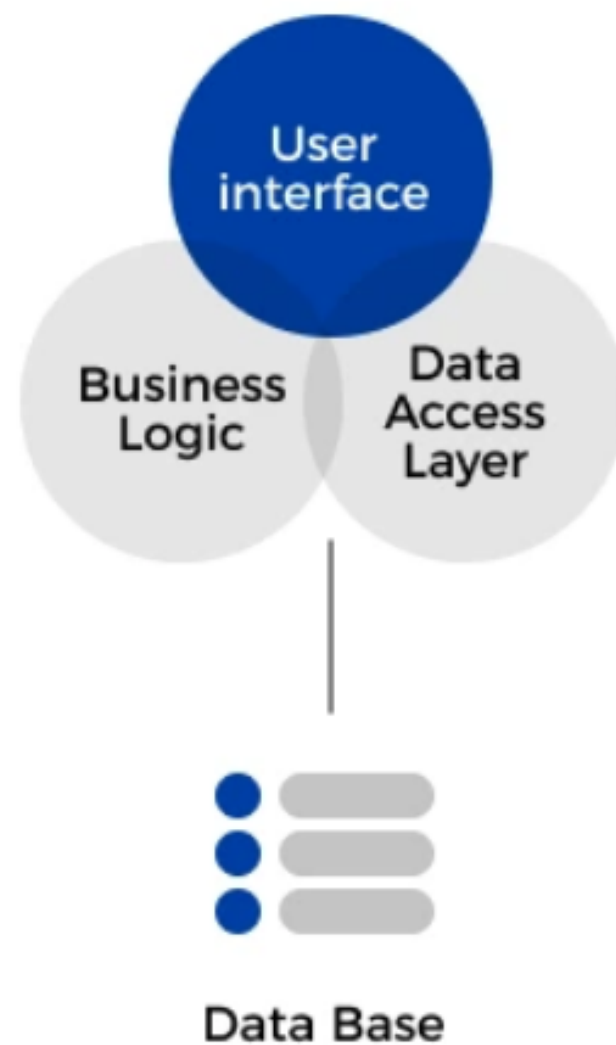
Choix de l'architecture

MONOLITHIC ARCHITECTURE

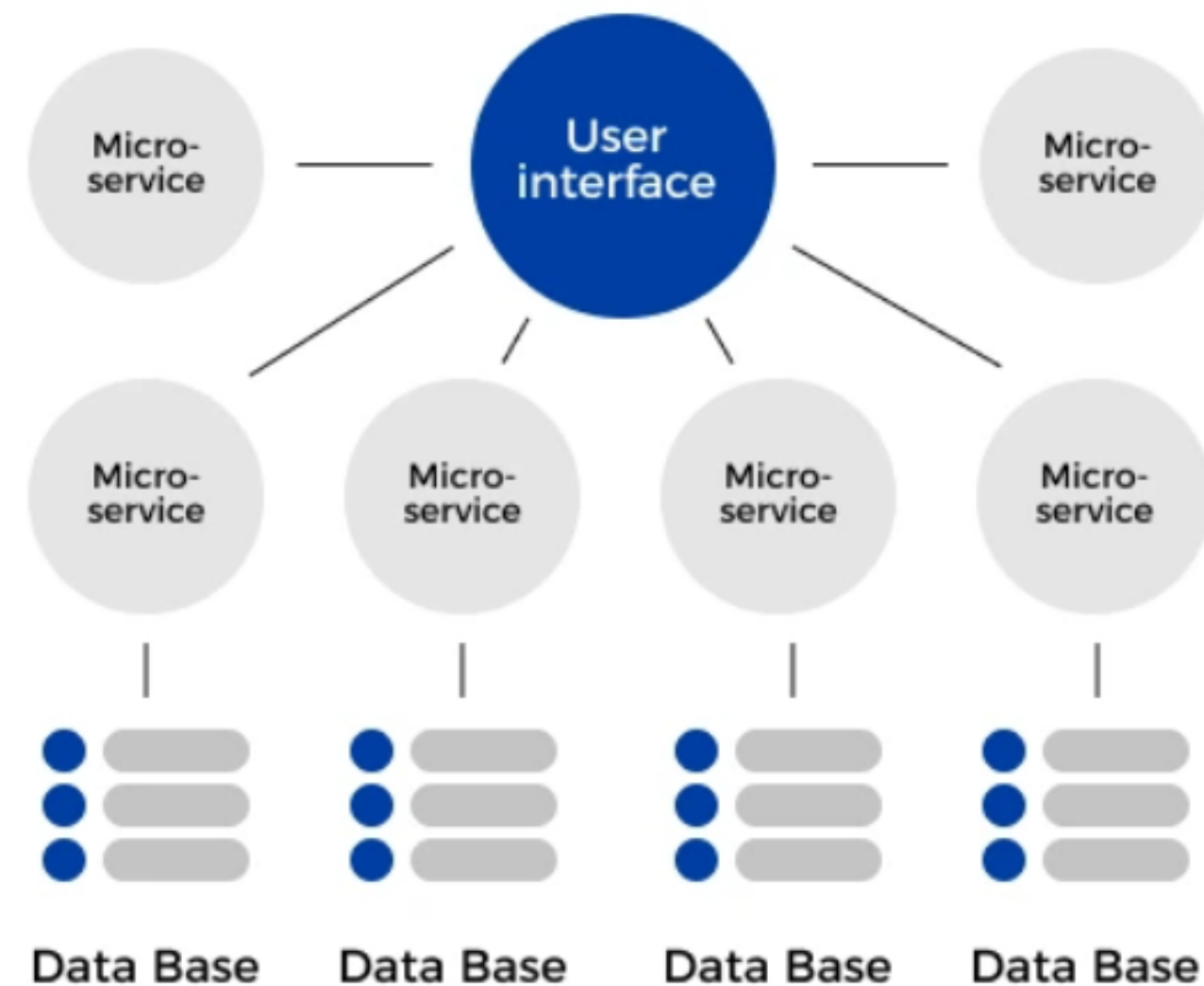


Choix de l'architecture

MONOLITHIC ARCHITECTURE



MICROSERVICE ARCHITECTURE



Conception pilotée par le domaine (DDD)

Conception pilotée par le domaine (DDD)

- **Modèle du domaine**

Conception pilotée par le domaine (DDD)

- **Modèle du domaine**
- **Langage commun**

Conception pilotée par le domaine (DDD)

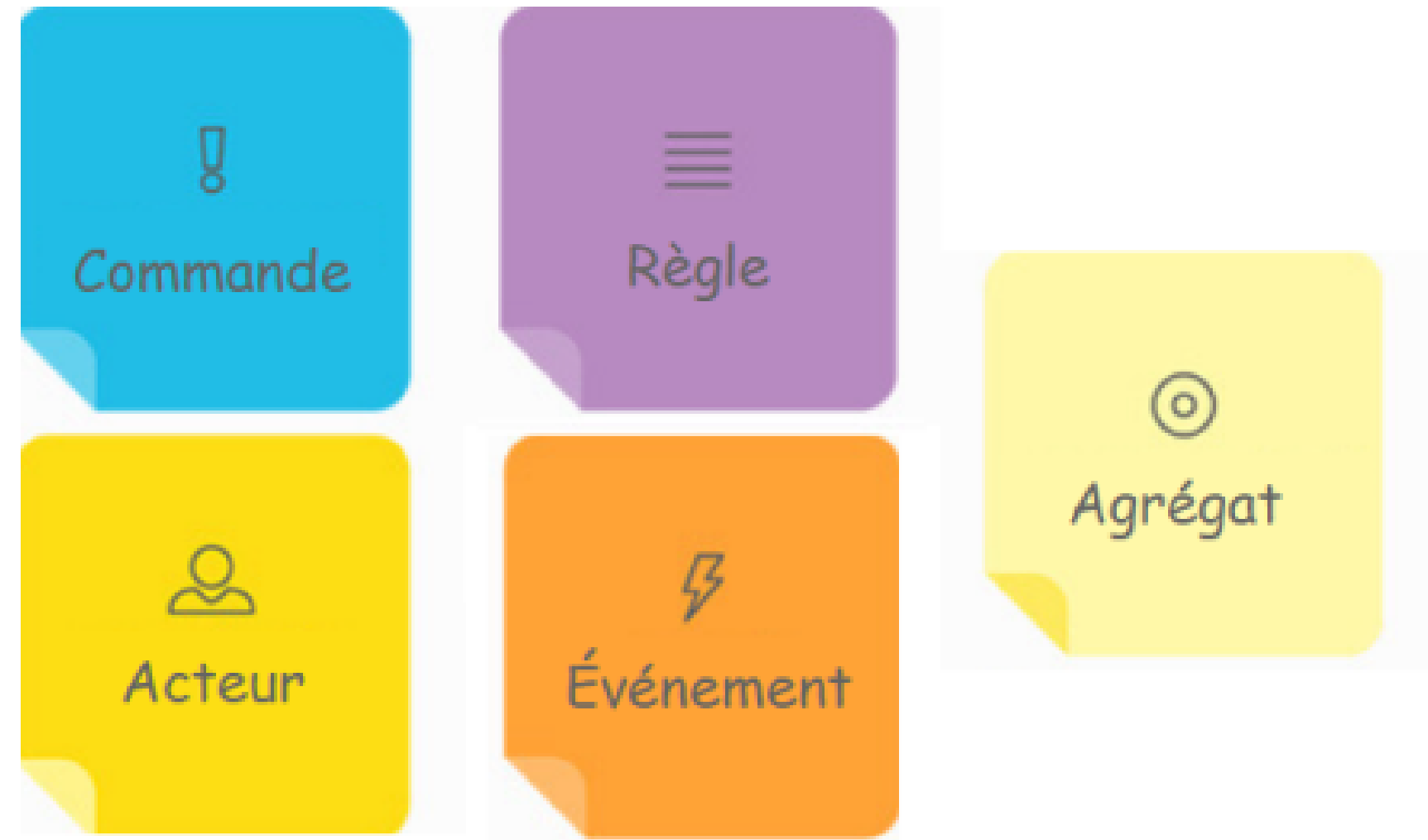
- **Modèle du domaine**
- **Langage commun**
- **Contexte borné**

Conception pilotée par le domaine (DDD)

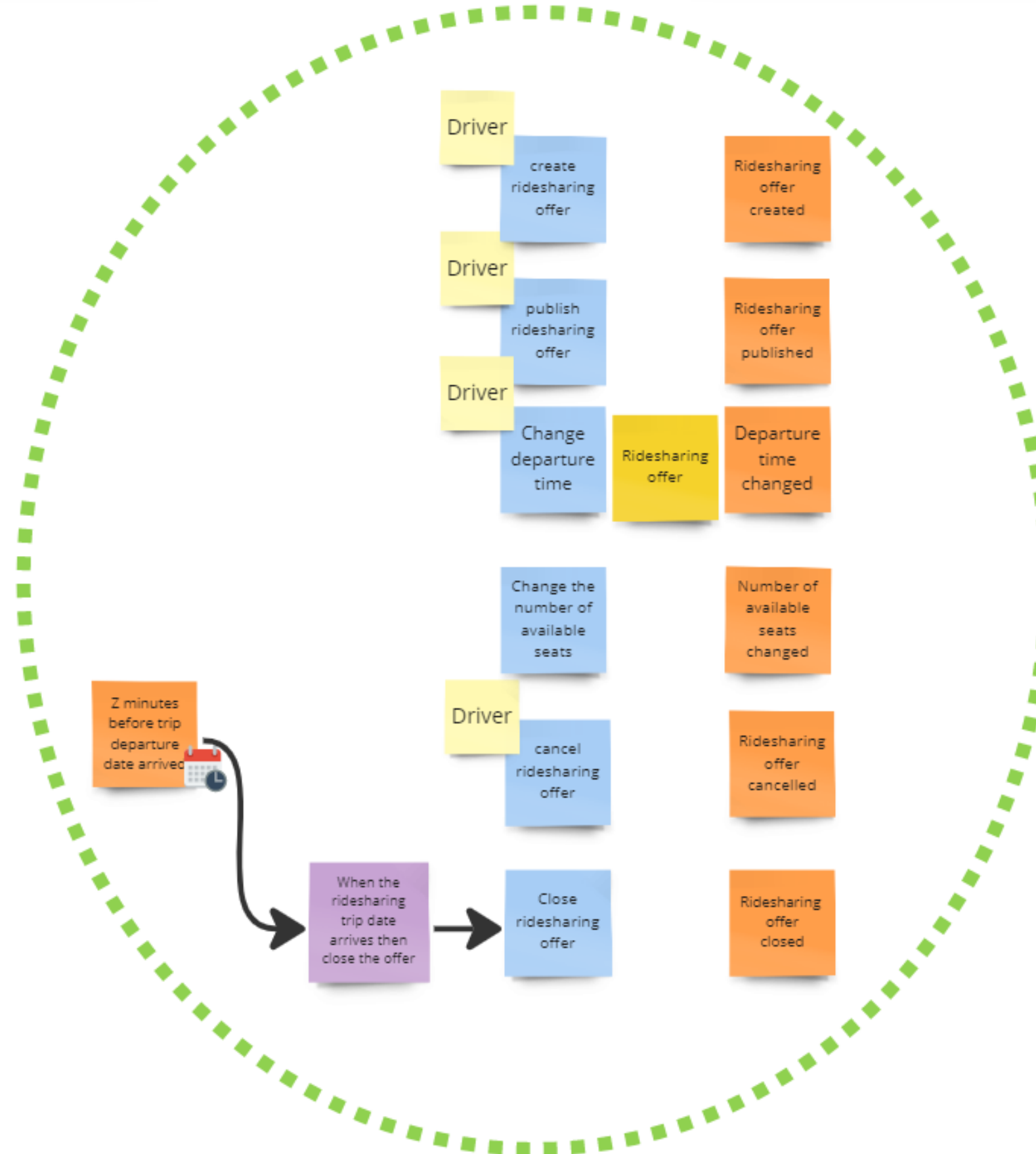
- **Modèle du domaine**
- **Langage commun**
- **Contexte borné**
- **Agrégats**

Event Storming

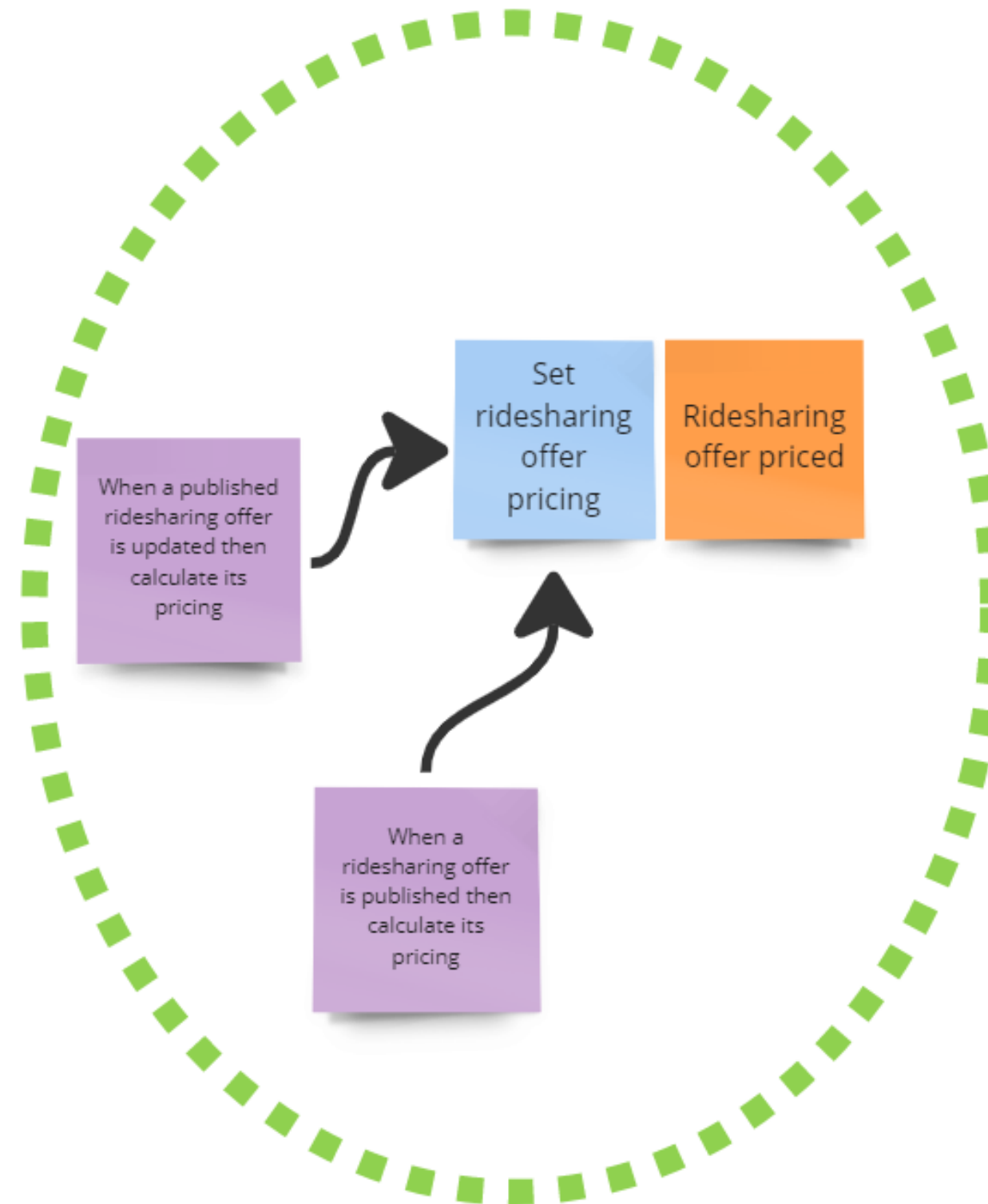
Event Storming



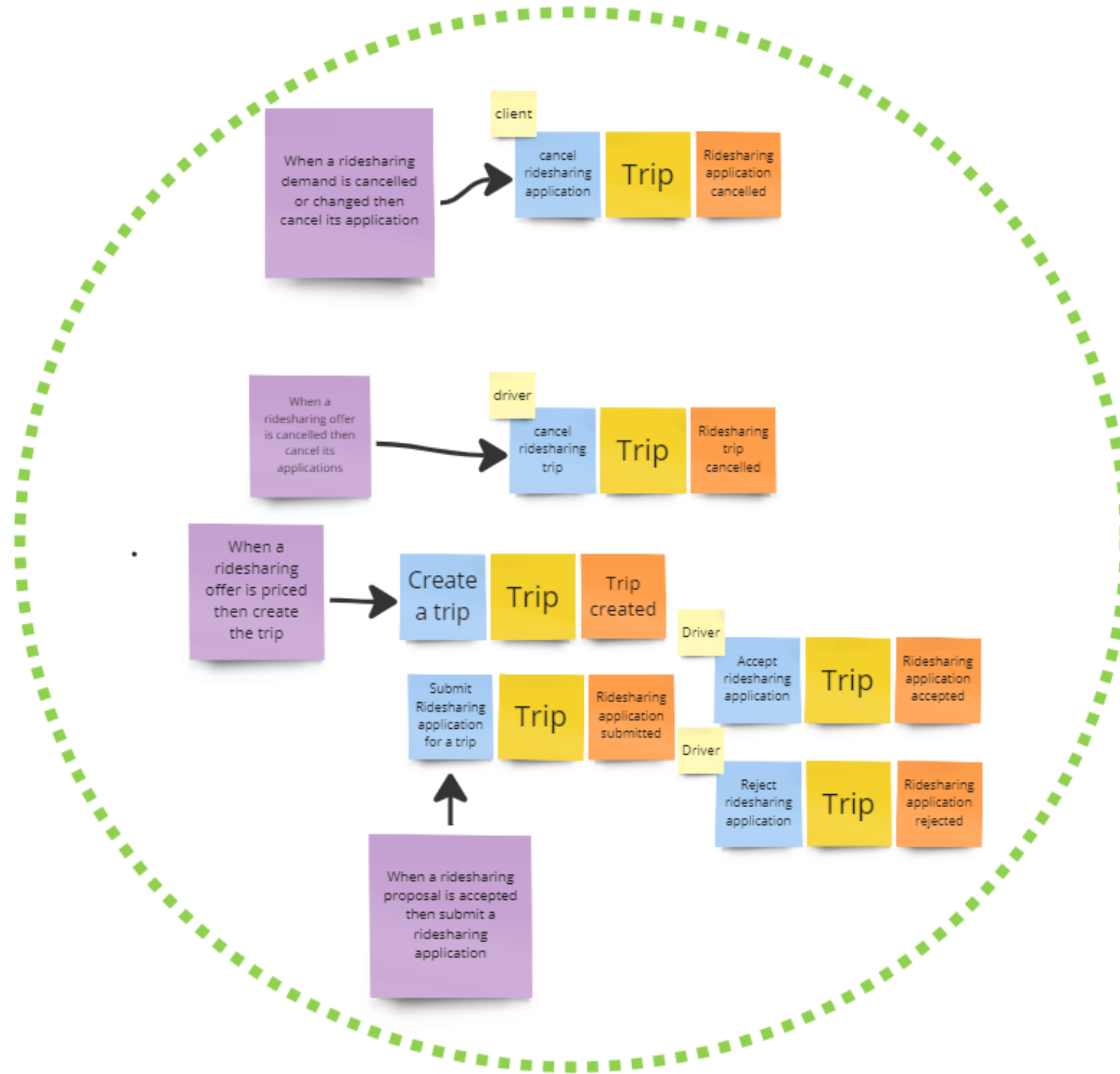
Contexte borné "Gestion des offres"



Contexte borné "Tarification"



Contexte borné "Réservations"



Contexte borné "Notifications"



Carte de contextes

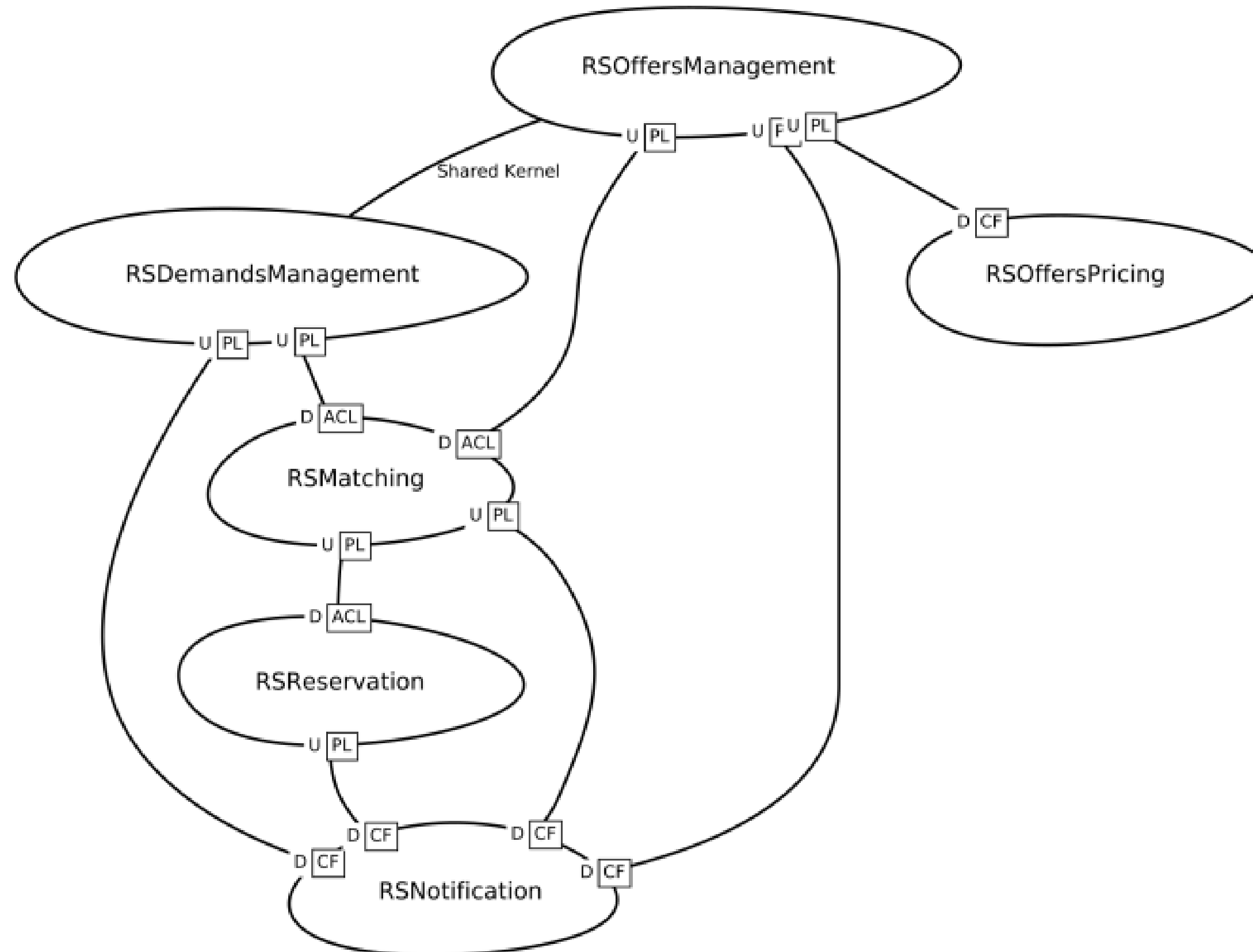


Diagramme de classe générique

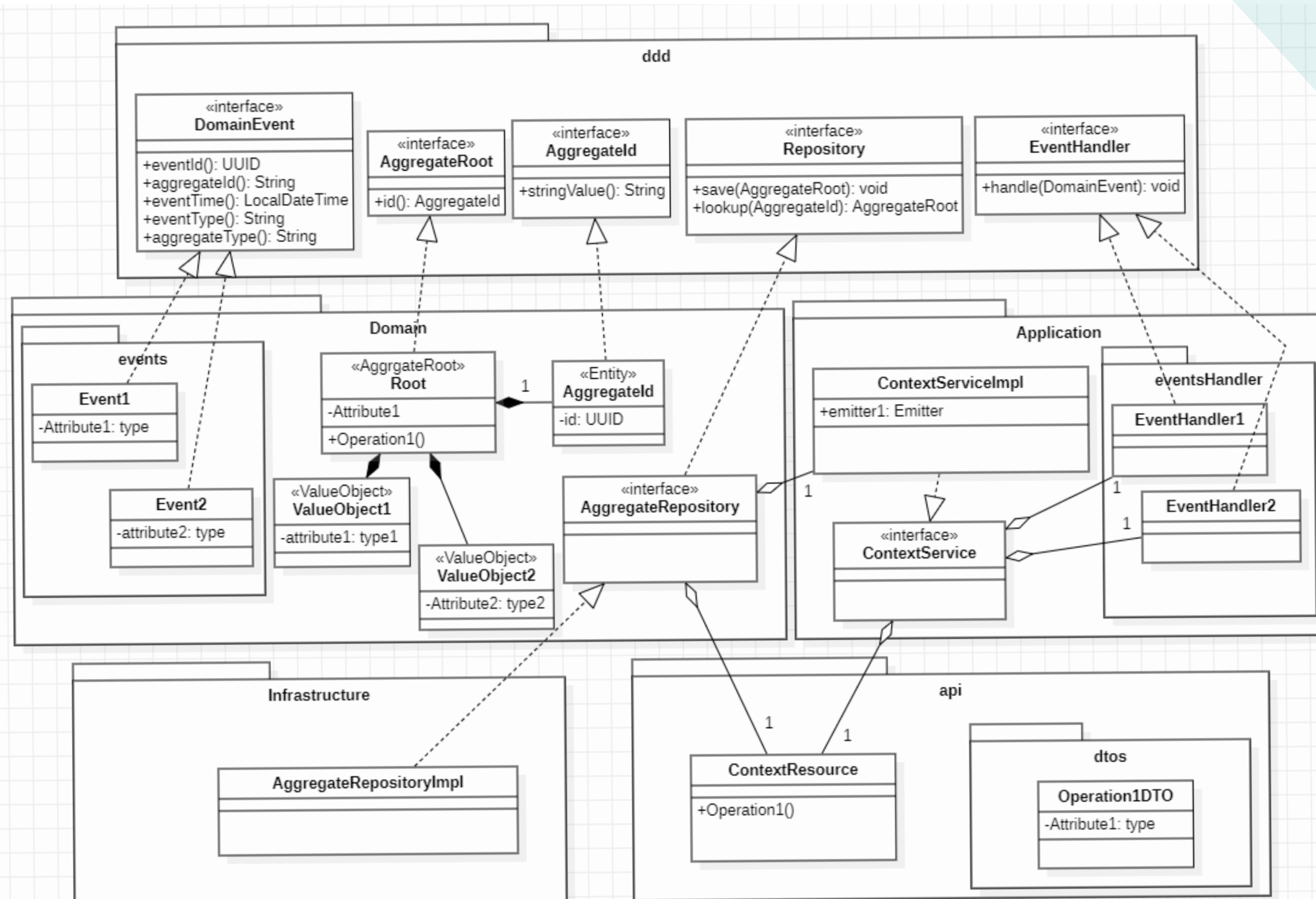
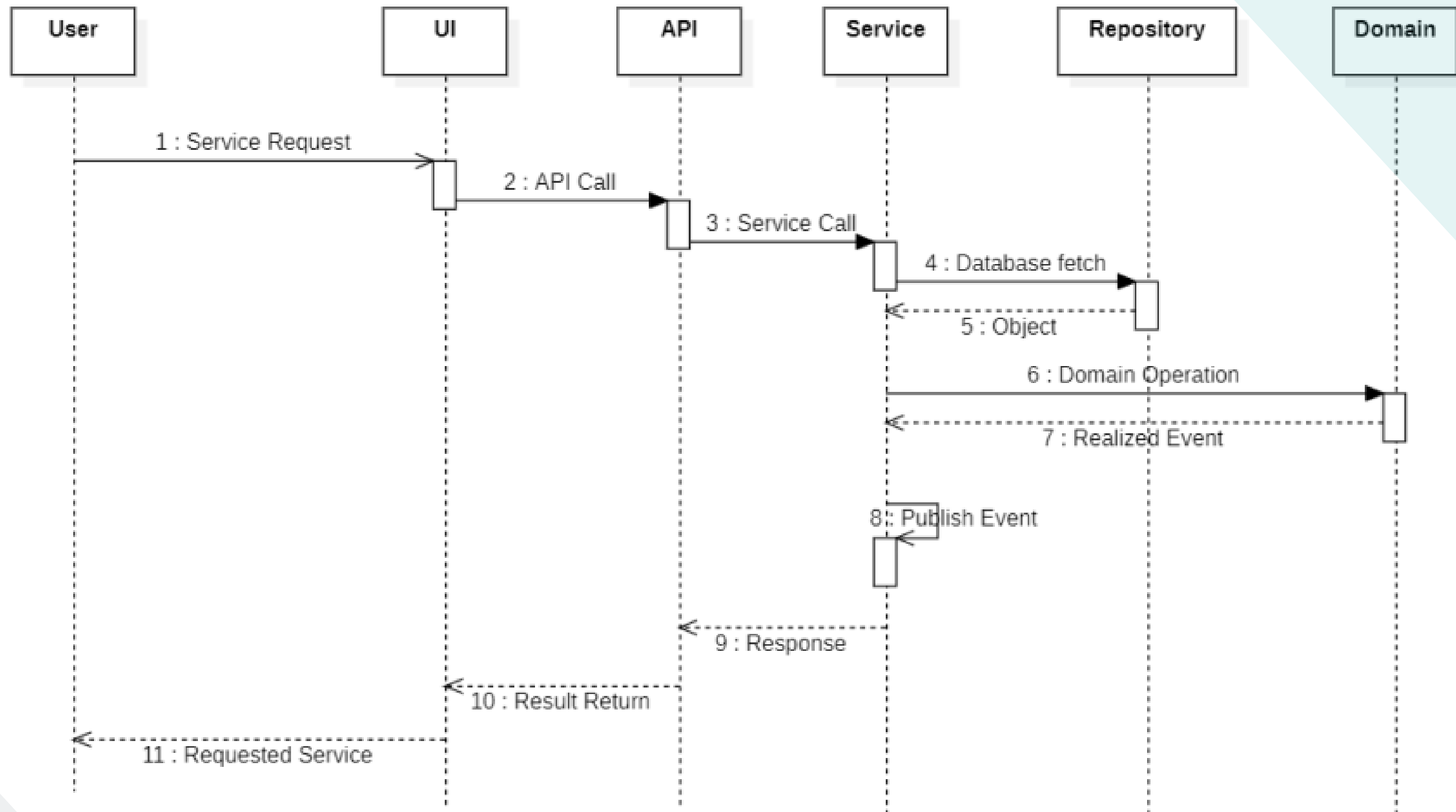
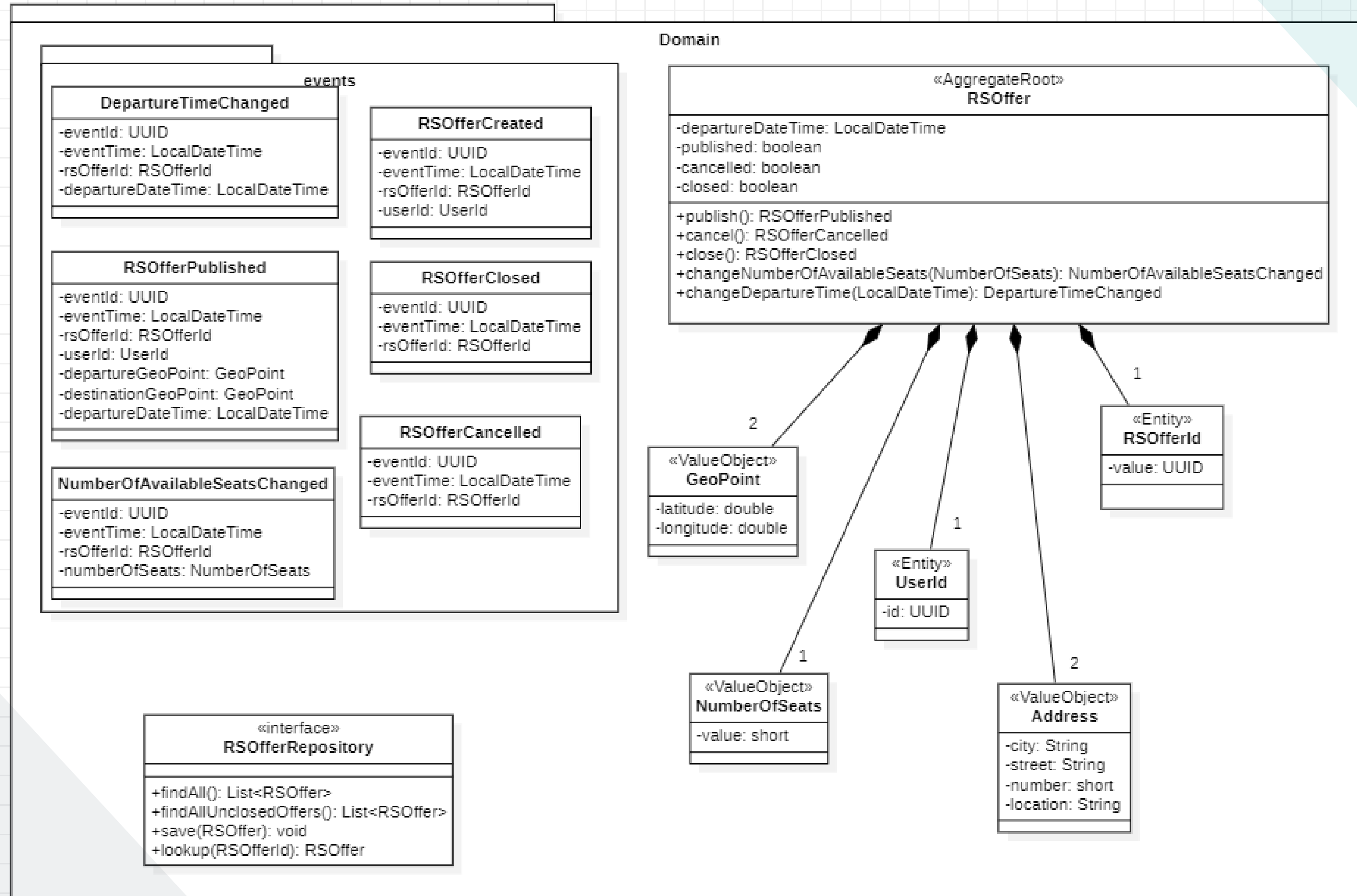


Diagramme de séquence générique

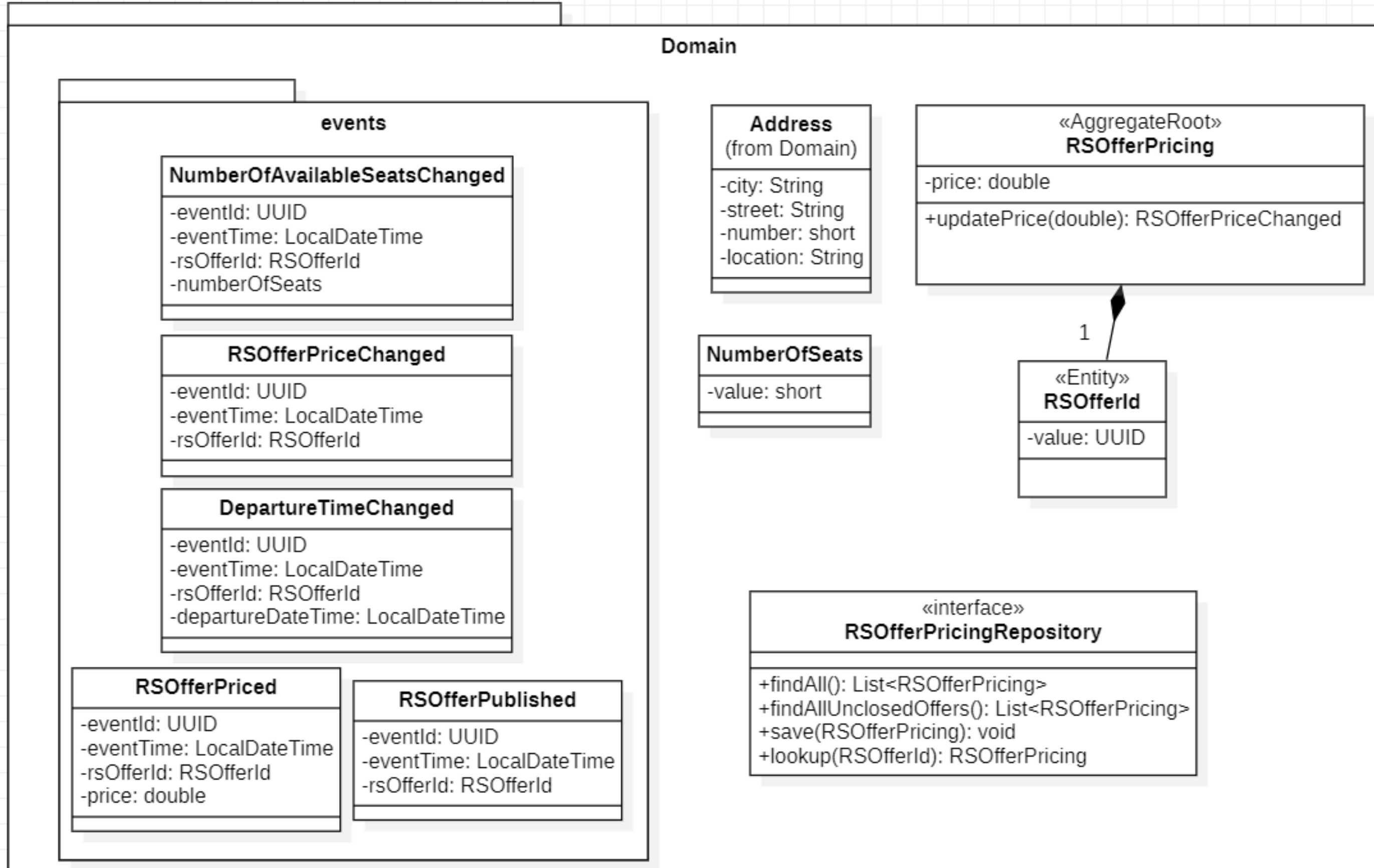


Conception détaillée

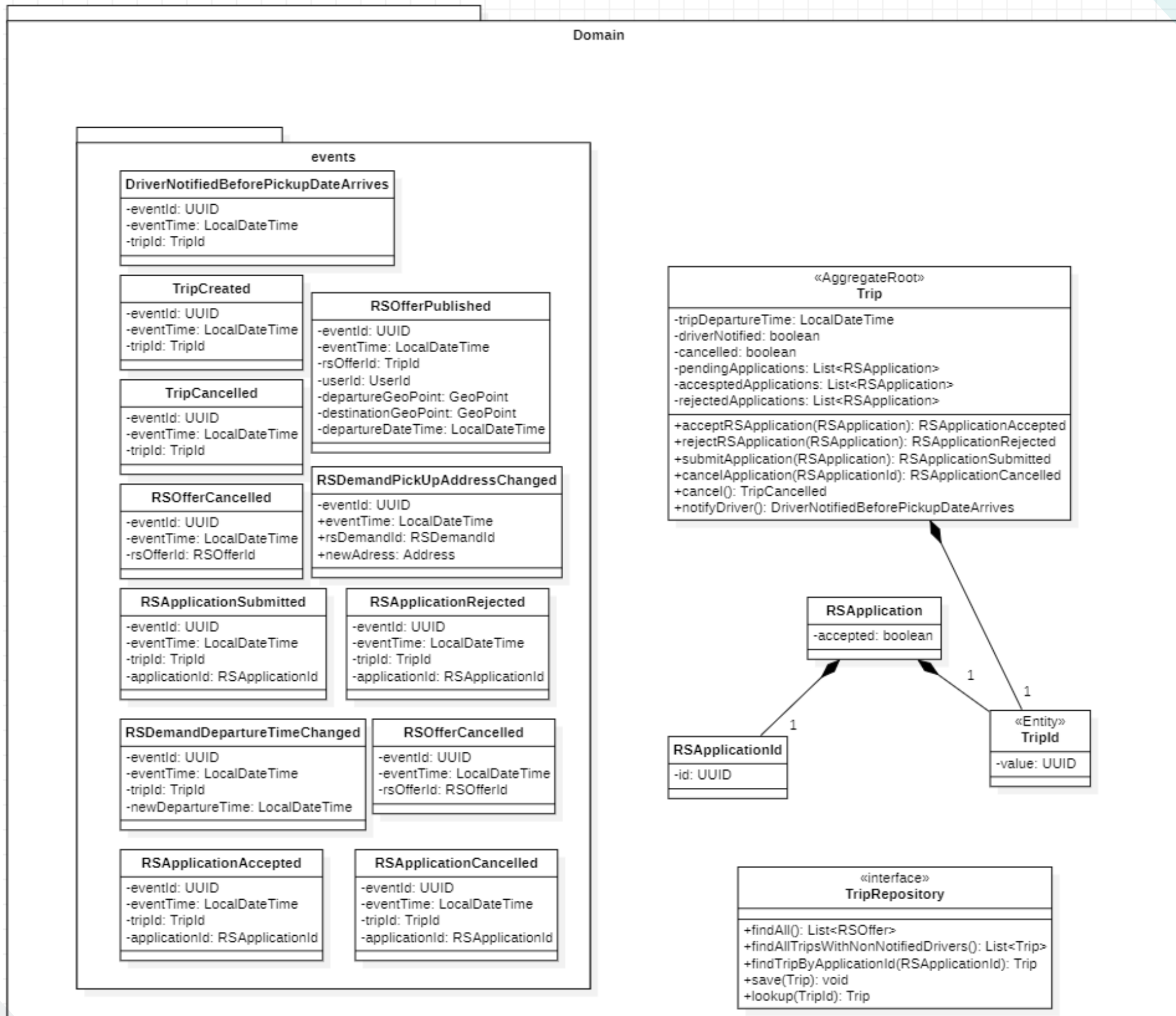
Domaine du microservice "Gestion des offres de covoiturage"



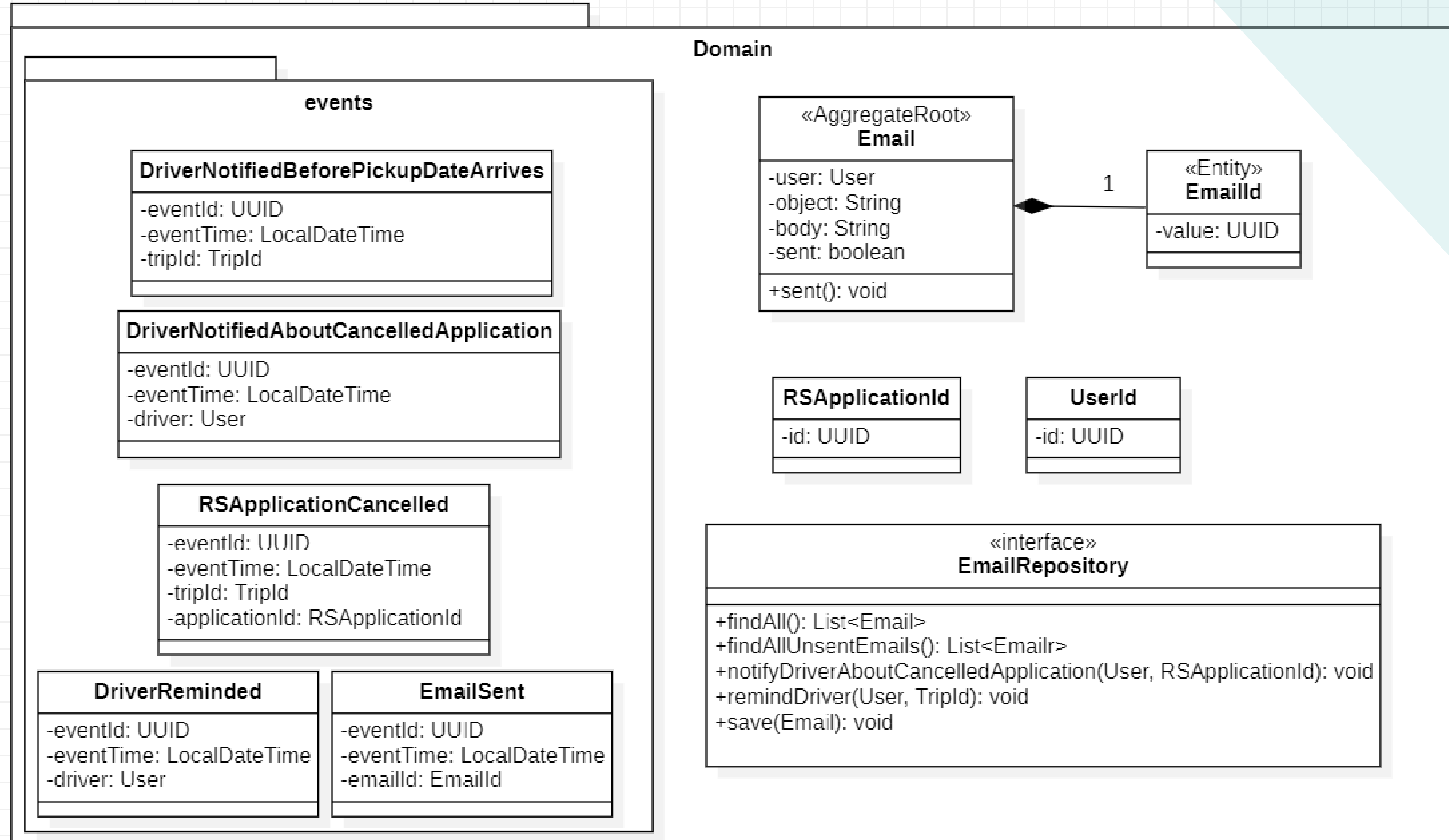
Domaine du microservice "Tarifaction"



Domaine du microservice "Reservations"



Domaine du microservice "Notifications"

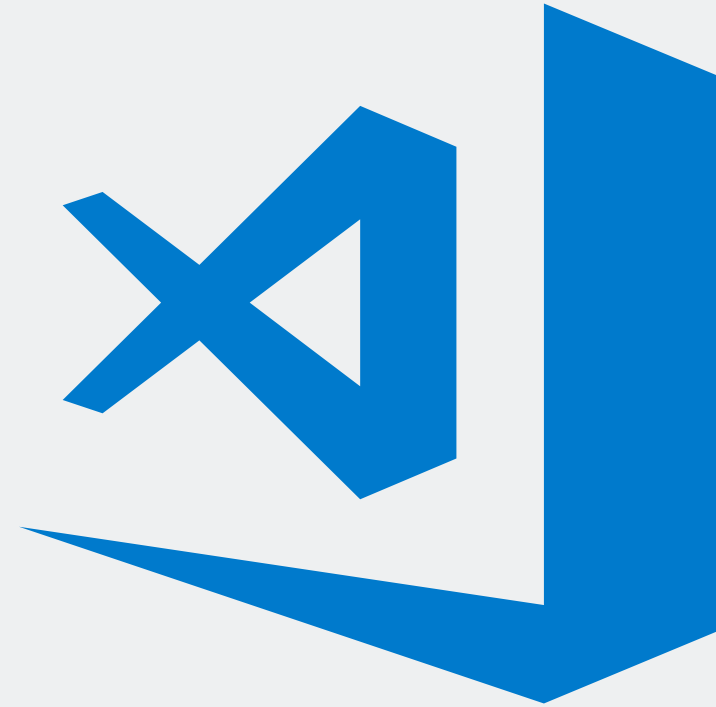


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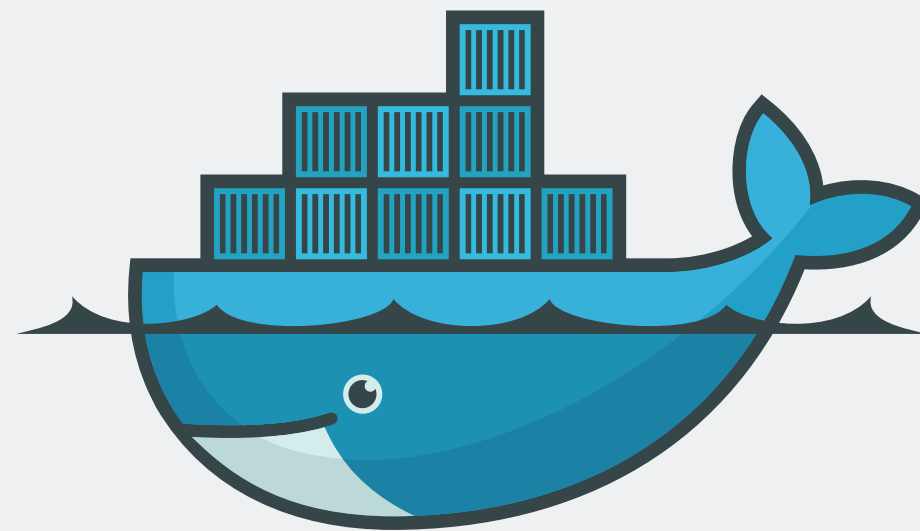
Réalisation de l'application

Technologies utilisées

Environnement de développement



mongoDB



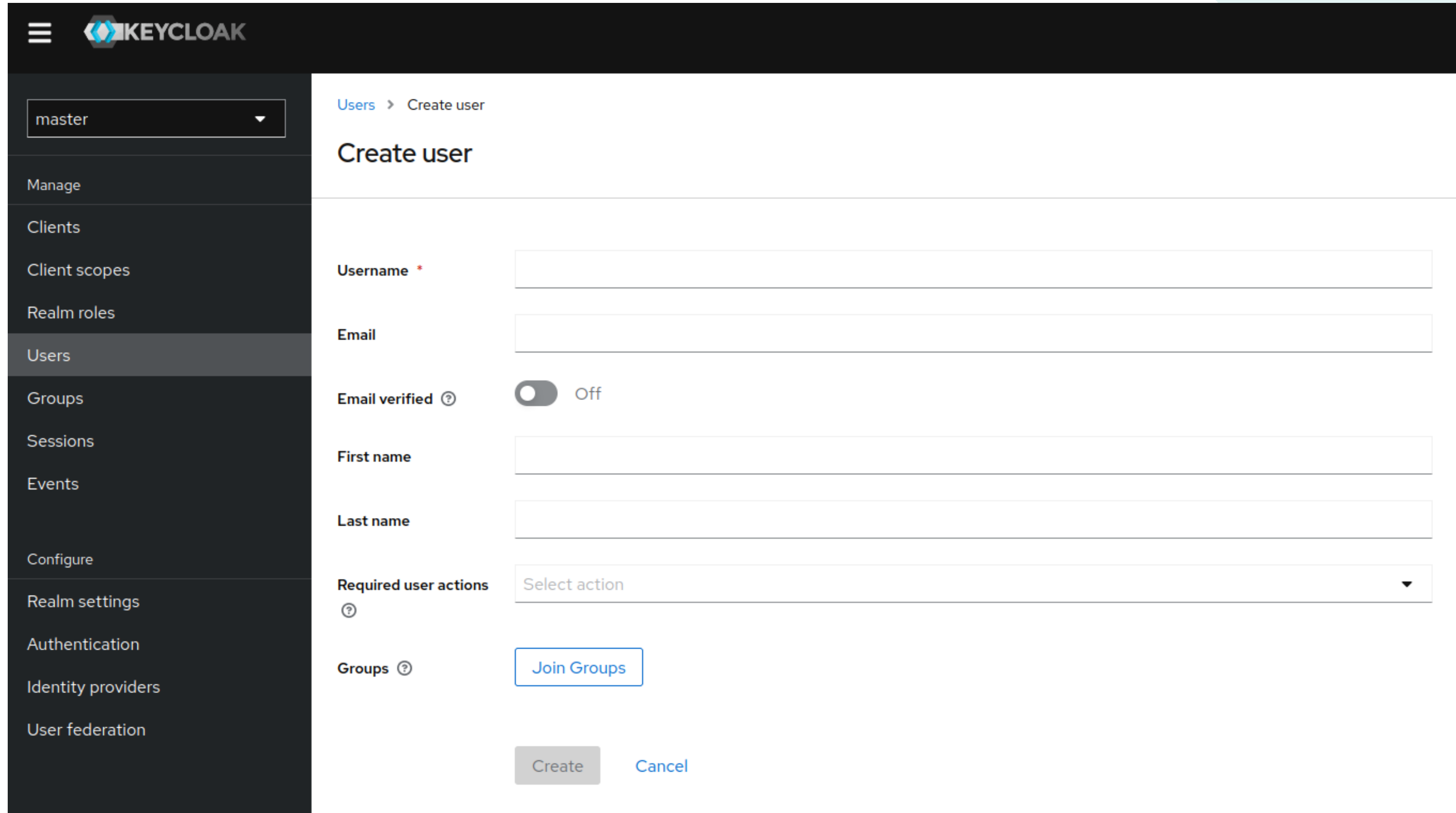
docker

Outils, bibliothèques et frameworks



Réalisation des microservices

Authentication avec Keycloak



The screenshot shows the Keycloak administration interface. On the left is a dark sidebar with a menu. The top of the sidebar has a hamburger menu icon and the 'KEYCLOAK' logo. Below this is a dropdown menu currently showing 'master'. The menu items are: Manage, Clients, Client scopes, Realm roles, Users (which is highlighted), Groups, Sessions, Events, Configure, Realm settings, Authentication, Identity providers, and User federation. The main content area is titled 'Users > Create user'. It has a 'Create user' heading. The form contains the following fields: 'Username *' (required), 'Email', 'Email verified' (a toggle switch currently set to 'Off'), 'First name', 'Last name', 'Required user actions' (a dropdown menu showing 'Select action'), and 'Groups' (with a 'Join Groups' button). At the bottom of the form are two buttons: 'Create' and 'Cancel'.

KEYCLOAK

master

Manage

Clients

Client scopes

Realm roles

Users

Groups

Sessions

Events

Configure

Realm settings

Authentication

Identity providers

User federation

Users > Create user

Create user

Username *

Email

Email verified ? Off

First name

Last name

Required user actions ? Select action

Groups ? Join Groups

Create Cancel

Authentication avec Keycloak

Assign roles to hazgui account



Filter by realm roles

Search by role name



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Name

Description



default-roles-rs-platform

\${role_default-roles}



offline_access

\${role_offline-access}



rs-admin

Administrateur de la plateforme



rs-manager

manager ayant le droit de voir le reporting seulement



rs-user

utilisateur de la plateforme



uma_authorization

\${role_uma_authorization}

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Assign

Cancel

Authentication avec Keycloak

RS-PLATFORM

Sign in to your account

Username or email

Password

Sign In


Microservice "Gestion des offres de covoiturage"

Créer une offre

Offre créée

```
{
  "departureAddress": {
    "city": "string",
    "street": "string",
    "number": 0,
    "location": "string"
  },
  "departureGeoPoint": {
    "latitude": 0,
    "longitude": 0
  },
  "destinationAddress": {
    "city": "string",
    "street": "string",
    "number": 0,
    "location": "string"
  },
  "destinationGeoPoint": {
    "latitude": 0,
    "longitude": 0
  },
  "availableSeatsNumber": {
    "value": 0
  },
  "departureDateTime": "2022-03-10T12:15:50"
}
```

ENTITÉS | Home | Home | All offers | All demands


All
—
All

Details

departure city : string (0,0)
destination city : string (0,0)
time : 2022-03-10 12:15:50
cancelled : false
published : false

Pricing

Publish your offer to get pricingx

Publish

Cancel

Microservice "Gestion des offres de covoiturage"

publier ou annuler une offre

```
{  
  "rsOfferId": {  
    "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"  
  }  
}
```

Modifier le nombre de places disponibles d'une offre

```
{  
  "rsOfferId": {  
    "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"  
  },  
  "availableSeatsNumber": {  
    "value": 0  
  }  
}
```

Microservice "Tarifaction"

Fixer le prix d'une offre

```
{
  "price": 87.69642291259643 ,
  "rsOfferId": {
    "value": "904ba787-8414-4920-be50-4695479a7861"
  }
}
```

Offre tarifée

ENIT RS

Home

Home

All offers

All demands



All



All

Details

departure city : string (0,0)
destination city : string (0,0)
time : 2022-03-10 12:15:50
cancelled : true
published : true

Pricing

pricing = 100

Microservice "Reservations"

Récupérer un voyage

```
{
  "tripId": {
    "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
  },
  "pendingApplications": [
    {
      "rsApplicationId": {
        "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
      },
      "tripId": {
        "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
      },
      "accepted": false
    }
  ],
  "acceptedApplications": [
    {
      "rsApplicationId": {
        "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
      },
      "tripId": {
        "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
      },
      "accepted": true
    }
  ],
  "rejectedApplications": [
    {
      "rsApplicationId": {
        "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
      },
      "tripId": {
        "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
      },
      "accepted": false
    }
  ],
  "tripDepartureTime": "2022-03-10T12:15:50",
  "cancelled": false,
  "passengerNotified": true,
  "driverNotified": true
}
```

Accepter ou refuser une application

```
{
  "tripId": {
    "value": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
  },
  "applicationId": {
    "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
  }
}
```


Microservice "Notifications"

Récupérer une notification

```
{
  "emailId": {
    "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
  },
  "user": {
    "userId": {
      "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
    },
    "nom": "string",
    "prenom": "string",
    "emailAddress": "string"
  },
  "object": "string",
  "body": "string",
  "sent": true
}
```

Notifier le conducteur d'une application annulée

```
{
  "driver": {
    "userId": {
      "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
    },
    "nom": "string",
    "prenom": "string",
    "emailAddress": "string"
  },
  "rsApplicationId": {
    "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
  }
}
```

Conclusion

Merci pour votre attention

