



Projet 6:

Monde du développeur full stack

CHRISTOPHE PIERRÈS, LE 26 MAI 2025, DURÉE: 15MN

JORDI CHARPENTIER

INTRODUCTION

- Avant propos
- Questions:
 - Explication des choix
 - Démo fonctionnelle de l'application
 - Points clés du code dont l'intégration front / back

PROCESS GITFLOW

```
D:\IJDEV\opencr\P6-fullstack-mdd git:[master]
git flow init

Which branch should be used for bringing forth production releases?
- master

Branch name for production releases: [master]

Branch name for "next release" development: [develop]

How to name your supporting branch prefixes?
Feature branches? [feature/]

Bugfix branches? [bugfix/]

Release branches? [release/] Hotfix branches? [hotfix/]

Support branches? [support/]

Version tag prefix? []

Hooks and filters directory? [D:/IJDEV/opencr/P6-fullstack-mdd/.git/hooks]
```

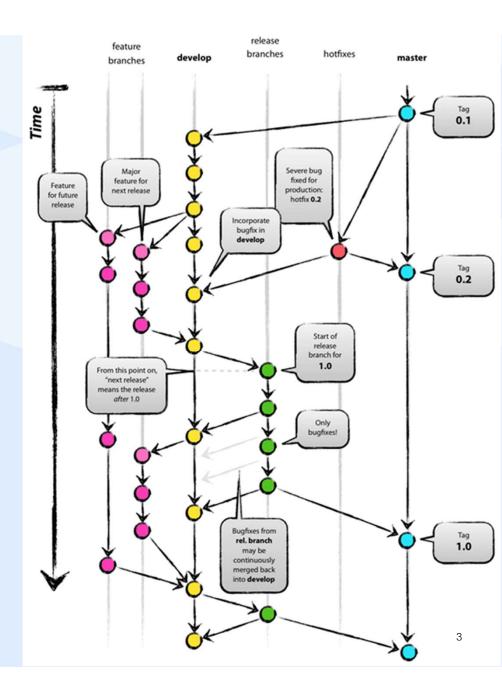
```
D:\IJDEV\opencr\pómdd git:[develop]
git flow feature start register
Switched to a new branch 'feature/register'

Summary of actions:
- A new branch 'feature/register' was created, based on 'develop'
- You are now on branch 'feature/register'

Now, start committing on your feature. When done, use:

git flow feature finish register

D:\IJDEV\opencr\pómdd git:[feature/register]
```



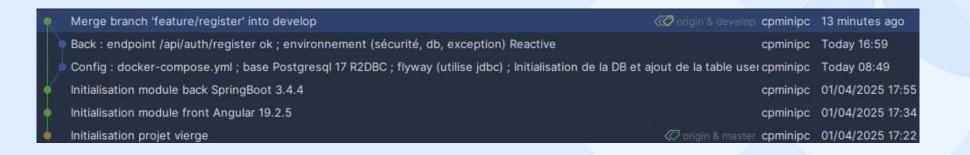
```
Config: docker-compose.yml; base Postgresql 17 R2DBC; flyway (utilise jdbc); Initialisation de la DB et ajout de la table users cominipo Today 08:49
                   Initialisation module back SpringBoot 3.4.4
                                                                                                                                    @ origin & develop cpminipc 01/04/2025 17:55
                                                                                                D:\IJDEV\opencr\p6mdd\.git\MERGE_MSG - Notepad++

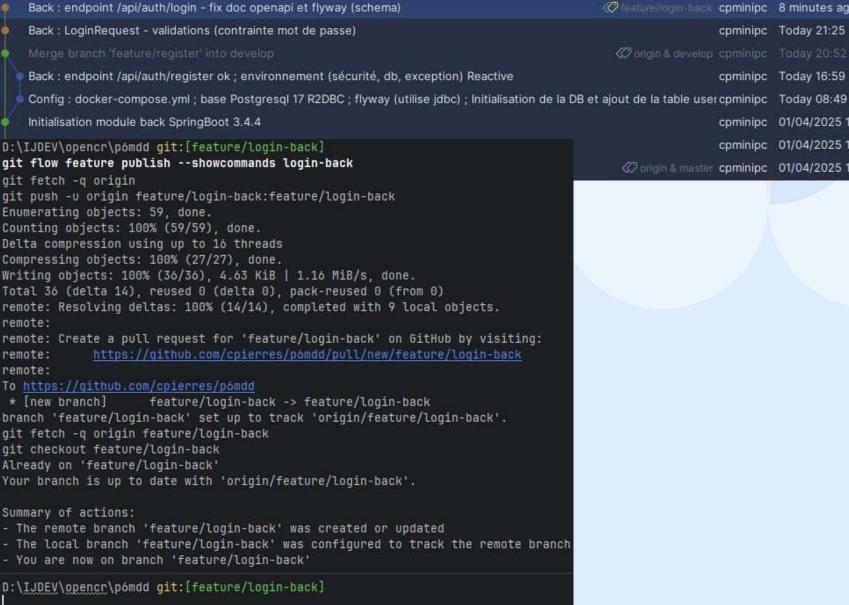
    Initialisation module front Angular 19.2.5

                                                                                                Fichier Édition Recherche Affichage Encodage Langage Paramètres Outils Macro Exécution Modu
                   Initialisation projet vierge
                                                                                                3 🖶 🗎 🗟 🗟 🐧 🖧 🐧 🖍 🗅 🗂 🕽 C 🗎 🐈 🔍 🥞 📮 🚍 🚍 🗆 🗆 🔻 🐷 📓 🚳
D:\IJDEV\opencr\pómdd qit:[feature/register]
                                                                                                  1 Merge branch 'feature/register' into develop
git flow feature finish --showcommands --fetch --push --keepremote
                                                                                                        # Please enter a commit message to explain why this merge is necessary,
git fetch -g origin develop
git checkout develop
                                                                                                       # especially if it merges an updated upstream into a topic branch.
Switched to branch 'develop'
Your branch is up to date with 'origin/develop'.
                                                                                                       # Lines starting with '#' will be ignored, and an empty message aborts
git merge --no-ff feature/register
                                                                                                       # the commit.
Merge made by the 'ort' strategy.
 .idea/misc.xml
                                                      10 ++-
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/entities/BaseEntity.java
 .idea/modules.xml
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/entities/User.java
                                                      20 +++++
 docker-compose.yml
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/exception/6lobalExceptionHandler.java
 modules/back/compose.yaml
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/exception/ResourceAlreadyExistException.java
 modules/back/pom.xml
                                                     100 ++++++++++++++++++++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/mappers/UserMapper.java
 .../main/java/com/mdd/back/BackApplication.java
                                                      ó +-
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/models/AuthSuccess.java
 .../java/com/mdd/back/config/JwtProperties.java
                                                      15 ++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/models/MessageResponse.java
 .../main/java/com/mdd/back/config/R2dbcConfig.java | 10 +++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/models/RegisterRequest.java
 .../java/com/mdd/back/config/SecurityConfig.java
                                                      90 +++++++++++++++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/models/UserDto.java
 .../com/mdd/back/controller/AuthController.java
                                                      64 ++++++++++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/models/ValidationErrorResponse.java
 .../java/com/mdd/back/entities/BaseEntity.java
                                                      22 +++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/repositories/UserRepository.java
 .../src/main/java/com/mdd/back/entities/User.java
                                                      24 +++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/services/AuthService.java
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/services/JwtService.java
 .../mdd/back/exception/GlobalExceptionHandler.java |
                                                     43 +++++++
                                                                                              create mode 100644 modules/back/src/main/java/com/mdd/back/utils/SecretKeyGenerator.java
 .../exception/ResourceAlreadyExistException.iava
                                                                                              delete mode 100644 modules/back/src/main/resources/application.properties
 .../main/java/com/mdd/back/mappers/UserMapper.java | 24 +++++
                                                                                              create mode 100644 modules/back/src/main/resources/application.yml
 .../main/java/com/mdd/back/models/AuthSuccess.java | 18 ++++
                                                                                              create mode 100644 modules/back/src/main/resources/db/migration/V000/V000.001__init.sql
 .../java/com/mdd/back/models/MessageResponse.java | 12 +++
                                                                                              create mode 100644 modules/back/src/main/resources/db/migration/V000/V000.002__init_schemas.sql
 .../iava/com/mdd/back/models/RegisterReguest.iava |
                                                     27 +++++
                                                                                              create mode 100644 modules/back/src/main/resources/db/migration/V000/V000.003__add_users_table.sql
 .../src/main/java/com/mdd/back/models/UserDto.java | 37 +++++++
                                                                                             git push origin develop
 .../mdd/back/models/ValidationErrorResponse.java
                                                      22 +++++
                                                                                             Enumerating objects: 87, done.
 .../com/mdd/back/repositories/UserRepository.java
                                                      18 ++++
                                                                                             Counting objects: 100% (87/87), done.
 .../java/com/mdd/back/services/AuthService.java
                                                      46 ++++++++
                                                                                            Delta compression using up to 16 threads
 .../java/com/mdd/back/services/JwtService.java
                                                      59 ++++++++++
                                                                                             Compressing objects: 100% (55/55), done.
 .../com/mdd/back/utils/SecretKeyGenerator.java
                                                      18 ++++
                                                                                            Writing objects: 100% (72/72), 14.43 KiB | 1.44 MiB/s, done.
 .../back/src/main/resources/application.properties | 1 -
                                                                                             Total 72 (delta 10), reused 0 (delta 0), pack-reused 0 (from 0)
 modules/back/src/main/resources/application.vml
                                                      35 +++++++
                                                                                             remote: Resolving deltas: 100% (10/10), completed with 4 local objects.
 .../resources/db/migration/V000/V000.001__init.sql | 1 +
 .../db/migration/V000/V000.002__init_schemas.sql | 2 +
                                                                                               2f09bdb..b14115c develop -> develop
 .../migration/V000/V000.003__add_users_table.sql
                                                       9 ++
                                                                                             git branch -d feature/register
                                                                                             Deleted branch feature/register (was bbf568f).
 30 files changed. 727 insertions(+). 26 deletions(-)
 create mode 100644 .env
 create mode 100644 docker-compose.yml
                                                                                               The feature branch 'feature/register' was merged into 'develop'
 delete mode 100644 modules/back/compose.yaml
                                                                                               Feature branch 'feature/register' has been locally deleted
 create mode 100644 modules/back/src/main/java/com/mdd/back/config/JwtProperties.java
                                                                                               You are now on branch 'develop'
 create mode 100644 modules/back/src/main/java/com/mdd/back/config/R2dbcConfig.java
 create mode 100644 modules/back/src/main/java/com/mdd/back/config/SecurityConfig.java
                                                                                             D:\IJDEV\opencr\pómdd git:[develop]
 create mode 100644 modules/back/src/main/iava/com/mdd/back/controller/AuthController.iav
```

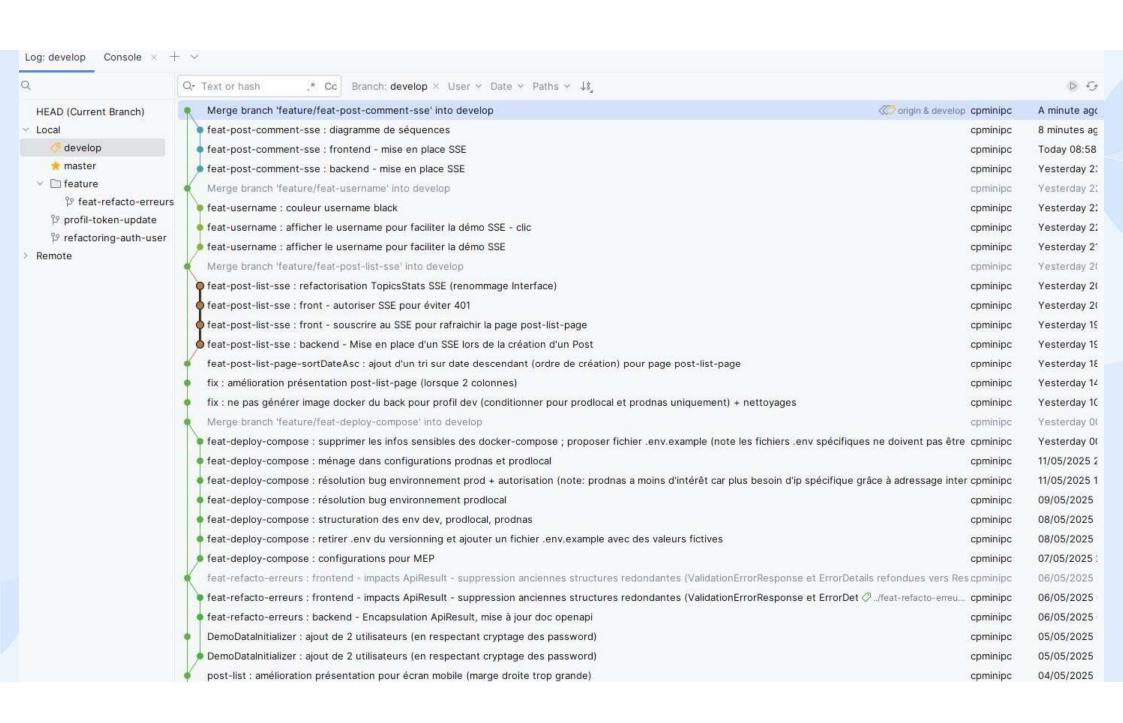
Back: endpoint /api/auth/register ok; environnement (sécurité, db, exception) Reactive

@ feature/register cominipc Today 16:59





@feature/login-back cpminipc 8 minutes ago cpminipc Today 21:25 cpminipc Today 16:59 cpminipc 01/04/2025 17:55 cpminipc 01/04/2025 17:34 @ origin & master cpminipc 01/04/2025 17:22



```
Back : endpoint /api/auth/login - fix doc openapi et flyway (schema)

Back : LoginRequest - validations (contrainte mot de passe)

Merge branch 'feature/register' into develop

Back : endpoint /api/auth/register ok ; environnement (sécurité, db, exception) Reactive

Config : docker-compose.yml ; base Postgresql 17 R2DBC ; flyway (utilise jdbc) ; Initialisation de la DB et ajout de la table user cpminipc

Today 20:52

Today 20:52

Today 16:59

Today 16:59

Today 08:49

Initialisation module back SpringBoot 3.4.4

cpminipc

O1/04/2025 17:55

Initialisation projet vierge

Origin & master cpminipc

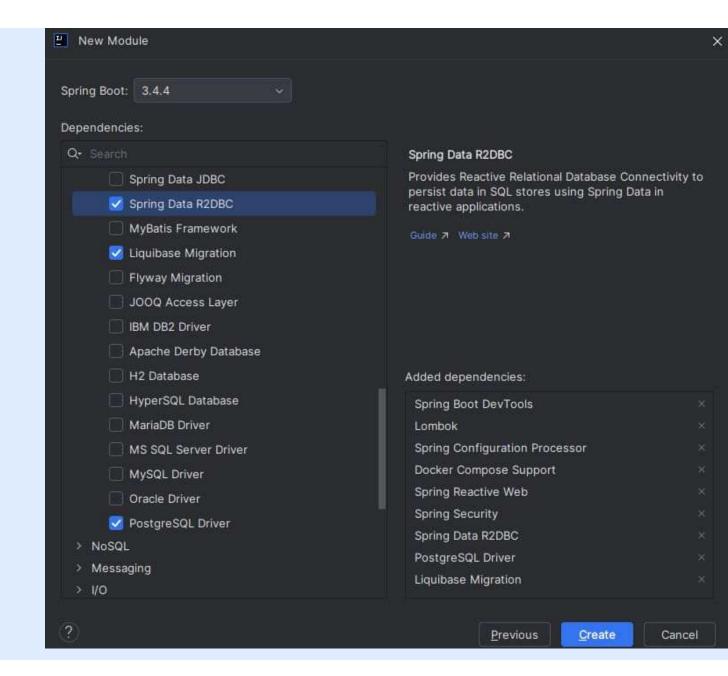
O1/04/2025 17:22
```

```
D:\IJDEV\opencr\pómdd git:[feature/login-back]
git flow feature finish --showcommands --fetch --push --keepremote login-back
git fetch -q origin feature/login-back
git fetch -g origin develop
git checkout develop
Switched to branch 'develop'
Your branch is up to date with 'origin/develop'.
git merge --no-ff feature/login-back
Merge made by the 'ort' strategy.
                                                   79 ++++++++++
 .../com/mdd/back/controller/AuthController.java
 .../src/main/java/com/mdd/back/entitles/User.java | 2 +-
 .../java/com/mdd/back/models/LoginRequest.java
                                                   1 28 +++++++
 .../java/com/mdd/back/models/RegisterRequest.java | 5 ++
 .../java/com/mdd/back/services/AuthService.java
                                                   1 28 ++++++
 modules/back/src/main/resources/application.yml
                                                   1 4 +-
 .../db/migration/V000/V000.002_init_schemas.sql | 2 +-
 7 files changed, 117 insertions(+), 31 deletions(-)
 create mode 100644 modules/back/src/main/java/com/mdd/back/models/LoginRequest.java
git push origin develop
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 242 bytes | 242.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/cpierres/pomdd
  b14115c..f641981 develop -> develop
git branch -d feature/login-back
Deleted branch feature/login-back (was dd84677).
Summary of actions:
- The feature branch 'feature/login-back' was merged into 'develop'
- Feature branch 'feature/login-back' has been locally deleted; it is still remotely available on 'origin'
 You are now on branch 'develop'
D:\IJDEV\opencr\pómdd git:[develop]
```

DÉMARCHE

- Premier choix d'étude d'architecture pour une cible :
 - Réactif de bout en bout
 - Spring WebFlux + R2DBC (PostgreSQL) + flux SSE temps réel côté frontend
 - Mise en place d'une architecture microservice simple
 - Microservice pour l'authentification (avec client OAuth2 pour auth via Google)
 - Microservice pour mdd-social
 - Microservice pour Gateway
- Révision des ambitions par rapport au temps et au risque
 - Démarrage sur Monolithe mdd-social avec Spring WebFlux + R2DBC
 - Lorsque le cœur de métier sera fait, refonte sur la partie authentification

TECHNOS



AUTOMATISATION COMPLETE

- Spring gère automatiquement le docker-compose
 - Démarrage lors de l'exécution du back
 - Arrêt lors de l'arrêt du back
- Gestion automatique du schéma via flyway
- Insertion automatique idempotent des données exemples pour « topics » (après la création du schéma)

CHOIX SUR GENERATION DU SCHÉMA

 Préférence pour les scripts plutôt que la génération automatique via JPA (maîtrise des index par exemple)

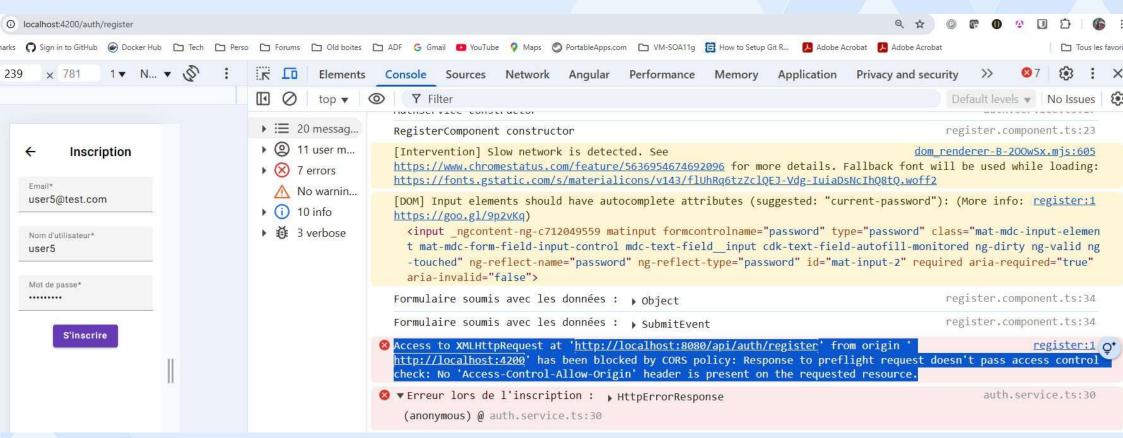
SCÉNARIO DÉMO

· Validité du mot de passe lors register et login

SOLID - PARTIE BACK

- SRP:
 - Duplication de RegisterRequest vers UpdateUserRequest
 - Objectif/finalité n'est pas la même (reponsabilité, évolutivité)
 - Les mappers mapStruct concentre toute la logique du mapping :
 - Exemple intéressant :
 - UserMapper. updateAuthenticatedUserFromRequest

ERREUR D'INTEGRATION (CORS)



ERREUR D'INTEGRATION (TRAITEMENT CORS)

- Au départ, traitement côté backend (dans SecurityConfig)
 - Fonctionnait mais désactivation
- Sur conseil de mon mentor :
 - Traitement côté frontend (via proxy) pour le développement
 - En production, ce sera traité selon différents procédés :
 - soit côté du proxy, soit via le réseau docker
 - Exposer son backend en créant une ouverture vers le frontend peut amener potentiellement à une faille de sécurité

ERREUR D'INTEGRATION

type: undefined

▶ [[Prototype]]: HttpResponseBase

url: "http://localhost:8080/api/auth/register"

```
▶ :≡ 41 messages
                                                                                                                                       register.component.ts:34
                      Formulaire soumis avec les données :
                         SubmitEvent {isTrusted: true, submitter:
② 3 user messa...
                        button.mdc-button.mdc-button--raised.mat-mdc-raised-button.mat-primary.mat-mdc-button-base.cdk-focu..., type: 'submit', target:
39 errors
                         form.ng-dirty.ng-touched.ng-valid.ng-submitted, currentTarget: app-user-form, ...}
  ⚠ No warnings

▼ POST http://localhost:8080/api/auth/register 400 (Bad Request)

                                                                                                                                    register.component.ts:64 (A)
                        handleFormSubmit
                                                                                  @ register.component.ts:64
▶ (i) 2 info
                        RegisterComponent Template app user form submit 0 listener @ register.component.ts:3
  No verbose
                        Zone - HTMLElement.addEventListener:submit
                        RegisterComponent Template
                                                                                  @ register.component.ts:3
                        (anonymous)
                                                                                  @ register.component.ts:17
                        Promise.then
                        RegisterComponent HmrLoad
                                                                                  @ register.component.ts:17
                        (anonymous)
                                                                                  @ register.component.ts:17
                        (anonymous)
                                                                                  @ client:129
                        notifyListeners
                                                                                  @ client:129
                        notifyListeners
                                                                                  @ client:966
                        handleMessage
                                                                                  @ client:909
                        onMessage
                                                                                  @ client:299
                        (anonymous)
                                                                                  @ client:429
                        Show ignore-listed frames
                    auth.service.ts:30 0+
                        HttpErrorResponse {headers: HttpHeaders, status: 400, statusText: 'Bad Request', url: 'http://localhost:8080/api/auth/register', ok: fa
                       * lse, ...} i
                         > error: {timestamp: '2025-04-09T10:13:03.038+00:00', path: '/api/auth/register', status: 400, error: 'Bad Request', requestId: '4b6d23ce
                         ▶ headers: HttpHeaders {headers: undefined, normalizedNames: Map(0), lazyUpdate: null, lazyInit: f}
                           message: "Http failure response for http://localhost:8080/api/auth/register: 400 Bad Request"
                           name: "HttpErrorResponse"
                           ok: false
                           status: 400
                           statusText: "Bad Request"
```

ERREUR D'INTEGRATION

⊗ ▼ POST http://localhost:8080/api/auth/register 400 (Bad Request)

▶ [[Prototype]]: HttpResponseBase

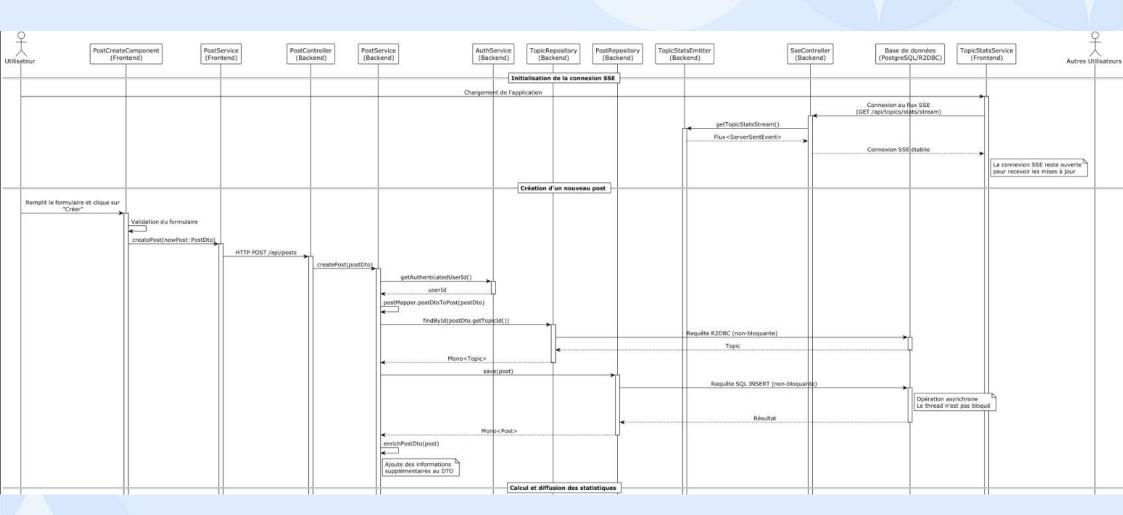
```
@ register.component.ts:64
   RegisterComponent Template app user form submit 0 listener @ register.component.ts:3
   Zone - HTMLElement.addEventListener:submit
   RegisterComponent_Template
                                                               @ register.component.ts:3
   (anonymous)
                                                               @ register.component.ts:17
   Promise.then
   RegisterComponent_HmrLoad
                                                               @ register.component.ts:17
                                                               @ register.component.ts:17
   (anonymous)
                                                               @ client:129
   (anonymous)
   notifyListeners
                                                               @ client:129
   notifyListeners
                                                              @ client:966
   handleMessage
                                                               @ client:909
   onMessage
                                                               @ client:299
   (anonymous)
                                                               @ client:429
   Show ignore-listed frames

    ▶ Erreur lors de l'inscription :

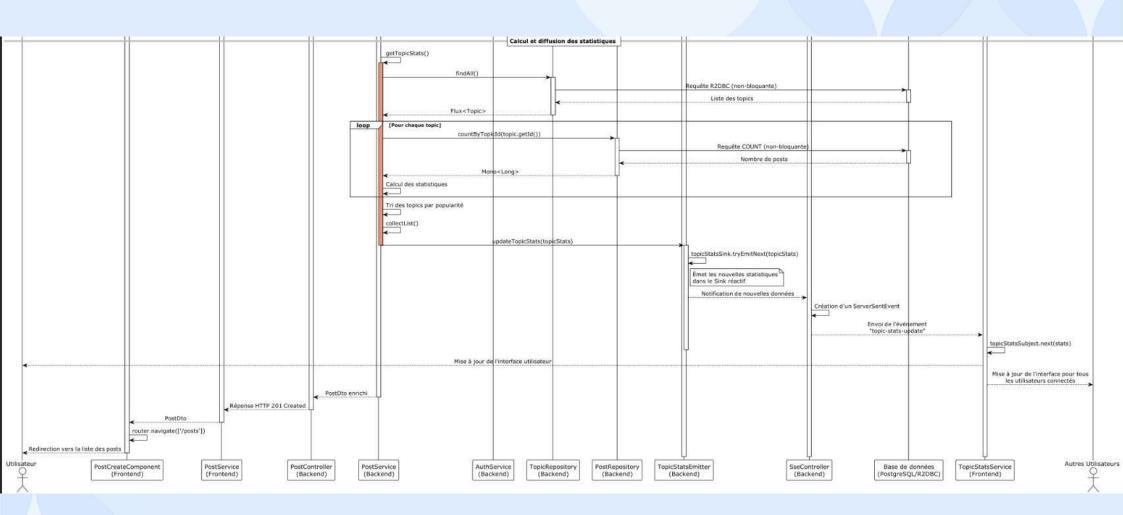
                                                                                                                                                                                                                          auth.service.ts:30
   → HttpErrorResponse {headers: _HttpHeaders, status: 400, statusText: 'Bad Request', url: 'http://localhost:8080/api/auth/register', ok: false, ...} i
     ▼ error:
        error: "Bad Request"
      ▶ errors: (3) [{...}, {...}, {...}]
        message: "Validation failed for argument at index 0 in method: public reactor.core.publisher.Mono<org.springframework.http.ResponseEntity<com.mdd.back.models.AuthSuccess>> com.mdd.back.controller.AuthController.registerUser(com.
        path: "/api/auth/register"
        requestId: "4b6d23ce-4"
        status: 400
        timestamp: "2025-04-09T10:13:03.038+00:00"
        trace: "org.springframework.web.bind.support.WebExchangeBindException: Validation failed for argument at index 0 in method: public reactor.core.publisher.Mono<org.springframework.http.ResponseEntity<com.mdd.back.models.AuthSucce
      ▶ [[Prototype]]: Object
     ▼ headers: HttpHeaders
        headers: undefined
      ▶ lazyInit: () => {...}
       lazyUpdate: null
      ▶ normalizedNames: Map(0) {size: 0}
      ▶ [[Prototype]]: Object
      message: "Http failure response for http://localhost:8080/api/auth/register: 400 Bad Request"
      name: "HttpErrorResponse"
      ok: false
      status: 400
      statusText: "Bad Request"
      type: undefined
      url: "http://localhost:8080/api/auth/register"
```

register.component.ts:64 (f)

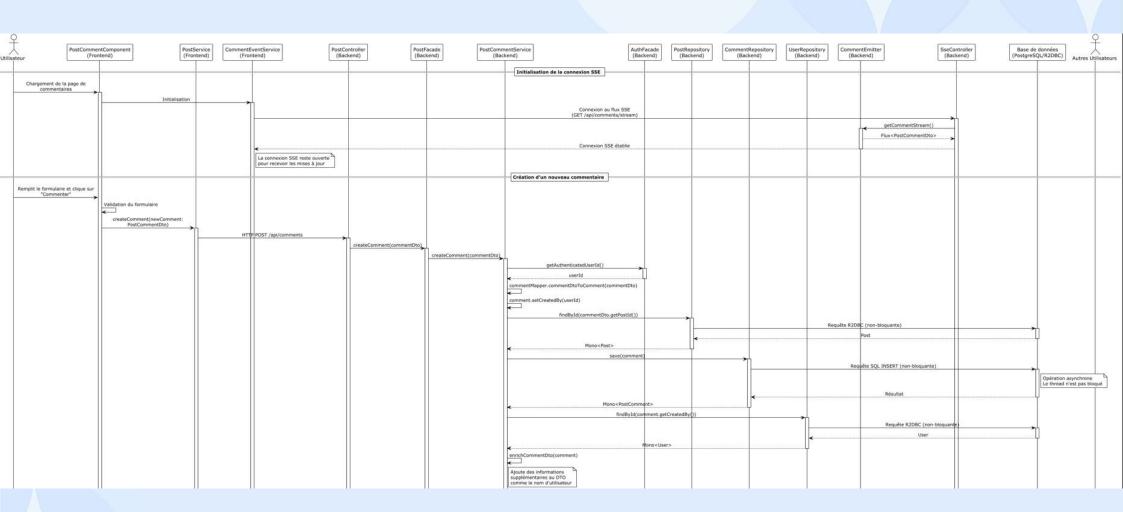
CRÉATION D'UN POST ET MISE À JOUR DES STATISTIQUES EN TEMPS RÉEL (1)



CRÉATION D'UN POST ET MISE À JOUR DES STATISTIQUES EN TEMPS RÉEL (2)



CRÉATION D'UN COMMENTAIRE ET MISE À JOUR EN TEMPS RÉEL



CRÉATION D'UN COMMENTAIRE ET MISE À JOUR EN TEMPS RÉEL (SUITE)

