Systemy Rozproszone 2024

Sprawozdanie 3, v1.0

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1. Tworzymy project w Symfony 6.4.* dla systemu dziedzinowego

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ composer create-project symfony/skeleton:6.4.* /var/www,
zad3 jwt
```

2. Przykładowy config zad3 apache

```
<VirtualHost *:80>
   ServerName zad3.local
   ServerAlias www.zad3.local
   SetEnvIfNoCase ^Authorization$ "(.+)" HTTP AUTHORIZATION=$1
   <FilesMatch \.php$>
       SetHandler proxy:unix:/run/php/php8.2-fpm.sock|fcgi://dummy
   </FilesMatch>
   DocumentRoot /var/www/zad3 jwt/public
   <Directory /var/www/zad3 jwt/public>
       AllowOverride None
       Require all granted
       FallbackResource /index.php
   </Directory>
   ErrorLog /var/log/apache2/zad3 jwt error.log
   CustomLog /var/log/apache2/zad3 jwt access.log combined
 /VirtualHost>
```

etc/apache2/sites-available/zad3 jwt.conf

```
127.0.0.1 localhost
127.0.1.1 inf2s_163105
#127.0.0.1 karkulowskiii.com
127.0.0.1 zad3.local
# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

etc/hosts

```
# localhost name resolution is handled within DNS itself.
# 127.0.0.1 localhost
# ::1 localhost
#192.168.1.146 karkulowskiii.com
192.168.1.146 zad3.local
```

 $C:\Windows\System 32\drivers\etc\hosts$

3. Instalujemy potrzebne biblioteki

```
composer require jms/serializer-bundle

composer require --dev symfony/maker-bundle

composer require symfony/maker-bundle

composer require symfony/orm-pack

composer require symfony/validator

composer require security
```

Szybkie sprawdzenie czy wszystko jest zainstalowane

```
return [
    JMS\SerializerBundle\JMSSerializerBundle::class => ['all' => true],
    FOS\RestBundle\FOSRestBundle::class => ['all' => true],
    Symfony\Bundle\FrameworkBundle\FrameworkBundle::class => ['all' => true],
    Doctrine\Bundle\DoctrineBundle\DoctrineBundle::class => ['all' => true],
    Doctrine\Bundle\MigrationsBundle\DoctrineMigrationsBundle::class => ['all' => true],
    Symfony\Bundle\MakerBundle\MakerBundle::class => ['dev' => true],
];
```

Jeśli czegoś brakuje, trzeba dodać wpis i zainstalować ponownie

4. Konfigurujemy FOSRest Bundle

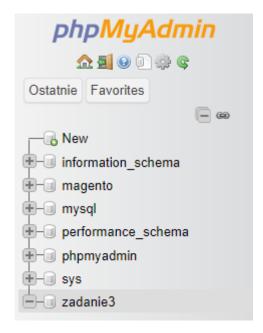
```
fos rest:
 routing_loader: false
   view response listener: 'force'
   formats:
     json: true
     xml: true
    - { path: '^/api' }
 format_listener:
   rules:
     - { path: '^/api/', priorities: ['json', 'html'], fallback_format: 'json', prefer_extension: t
 body listener:
   enabled: true
 param fetcher listener:
   enabled: true
 serializer:
   serialize_null: true
 exception:
   enabled: true
   map_exception_codes: true
   messages:
      Symfony\Component\HttpKernel\Exception\NotFoundHttpException': 404
     'Exception': 400
```

5. Edytujemy plik .env

```
In all environments, the following files are loaded if they exist,
 the latter taking precedence over the former:
                           contains default values for the environment variables needed by the app
  * .env.local uncommitted file with local overrides
* .env.$APP_ENV committed environment-specific defaults
  * .env.$APP ENV.local uncommitted environment-specific overrides
# Real environment variables win over .env files.
# DO NOT DEFINE PRODUCTION SECRETS IN THIS FILE NOR IN ANY OTHER COMMITTED FILES.
https://symfony.com/doc/current/configuration/secrets.html
 Run "composer dump-env prod" to compile .env files for production use (requires symfony/flex >=1.2
 https://symfony.com/doc/current/best_practices.html#use-environment-variables-for-infrastructure-of-
###> symfony/framework-bundle ###
APP ENV=dev
APP_SECRET=4a30a563589f03b0def2e8154c138d6f
###< symfony/framework-bundle ###
# Format described at https://www.doctrine-project.org/projects/doctrine-dbal/en/latest/reference/co
# IMPORTANT: You MUST configure your server version, either here or in config/packages/doctrine.yaml
# DATABASE_URL="sqlite:///%kernel.project_dir%/var/data.db"
# DATABASE_URL="mysql://app:!ChangeMe!@127.0.0.1:3306/app?serverVersion=8.0.32&charset=utf8mb4"
# DATABASE_URL="mysql://app:!ChangeMe!@127.0.0.1:3306/app?serverVersion=10.11.2-MariaDB&charset=utf8
DATABASE_URL=mysql://inf2s_163105:Wiocha22!!@192.168.1.146:3306/zadanie3?serverVersion=mariadb-10.6
###< doctrine/doctrine-bundle ###
```

Tutaj wystarczy zmienić login,haslo,nazwe bazy danych, adres i na MariaDB z aktualna wersja

6. Tworzymy bazę danych z pliku .env



7. Tworzymy encję Projekt (nazwa, opis, cena)

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console make:entity
 Class name of the entity to create or update (e.g. TinyChef):
> Project
 created: src/Entity/Project.php
 created: src/Repository/ProjectRepository.php
Entity generated! Now let's add some fields!
You can always add more fields later manually or by re-running this command.
New property name (press <return> to stop adding fields):
> name
Field type (enter ? to see all types) [string]:
> string
> 255
updated: src/Entity/Project.php
 Field type (enter ? to see all types) [string]:
> text
updated: src/Entity/Project.php
 Next: When you're ready, create a migration with php bin/console make:migration
```

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console make:user
 > User
 Do you want to store user data in the database (via Doctrine)? (yes/no) [yes]:
 Enter a property name that will be the unique "display" name for the user (e.g. email, username, us
id) [email]:
> email
Will this app need to hash/check user passwords? Choose No if passwords are not needed or will be c
hecked/hashed by some other system (e.g. a single sign-on server).
 Does this app need to hash/check user passwords? (yes/no) [yes]:
 > ves
 preated: src/Entity/User.php
    ted: src/Repository/UserRepository.php
 updated: src/Entity/User.php
 updated: config/packages/security.yaml
 Next Steps:
  - Use make:entity to add more fields to your User entity and then run make:migration.
  - Create a way to authenticate! See https://symfony.com/doc/current/security.html
```

Dodajemy pole username w src/Entity/User.php

```
public function getUsername(): string
{
    return $this->username;
}

public function setUsername(string $username): self
{
    $this->username = $username;
    return $this;
}
```

8. Tworzymy migrację i wykonujemy

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console make:migration
created: migrations/Version20240519083936.php

Success!

Review the new migration then run it with php bin/console doctrine:migrations:migrate
See https://symfony.com/doc/current/bundles/DoctrineMigrationsBundle/index.html
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console doctrine:migrations:migrate

WARNING! You are about to execute a migration in database "zadanie3" that could result in schema ch
anges and data loss. Are you sure you wish to continue? (yes/no) [yes]:
> yes

[notice] Migrating up to DoctrineMigrations\Version20240519083936
[notice] finished in 16.3ms, used 14M memory, 2 migrations executed, 4 sql queries

[OK] Successfully migrated to version: DoctrineMigrations\Version20240519083936
```

9. Tworzymy kontroler dla Projekt

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console make:controller ProjectController created: src/Controller/ProjectController.php

Success!

Next: Open your new controller class and add some pages!
```

10.Uruchamiamy aplikację

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ symfony server:start
 [WARNING] run "symfony server:ca:install" first if you want to run the web server with TLS suppor
 t, or use "--pl2" or "--no-tls" to avoid this warning
Following Web Server log file (/home/inf2s 163105/.symfony5/log/42f23ld2098ee587a4c543afcb512cb0fle9
5a4a.log)
Following PHP-FPM log file (/home/inf2s_163105/.symfony5/log/42f231d2098ee587a4c543afcb512cb0fle95a4
a/53fb8ec204547646acb3461995e4da5a54cc7575.log)
 [WARNING] The local web server is optimized for local development and MUST never be used in a pro
 duction setup.
 [OK] Web server listening
      The Web server is using PHP FPM 8.2.19
      http://127.0.0.1:8000
[Web Server ] May 19 08:22:34 | DEBUG
                                       PHP
                                                 Reloading PHP versions
[Web Server ] May 19 08:22:34 | DEBUG
                                       | PHP
                                                 Using PHP version 8.2.19 (from default version in $PA
[Web Server ] May 19 08:22:34 |INFO
                                                 listening path="/usr/sbin/php-fpm8.2" php="8.2.19" pc
            ] May 19 08:22:34 |
                                          FPM
                                                 fpm is running, pid 28072
            ] May 19 08:22:34 | NOTICE
                                                 ready to handle connections
PHP-FPM
            ] May 19 08:22:34 |
                                                 systemd monitor interval set to 10000ms
            ] 2024-05-19T08:22:36Z", "message": "Received timer message (first boot)"}
```

11. Testowanie API POST/GET/PUT/DELETE (CRUD)

inf2s_163105@inf2s163105:/var/www/zad3_jwt\$ php bin/console debug:router							
Name	Method	Scheme	Host	Path			
_preview_error api_project_index api_project_create api_project_show api_project_update api_project_delete	ANY GET POST GET PUT PATCH DELETE	ANY ANY ANY ANY ANY ANY ANY ANY	ANY ANY ANY ANY ANY ANY ANY ANY	<pre>/_error/{code}.{_format} /api/projects /api/projects /api/projects/{id} /api/projects/{id} /api/projects/{id}</pre>			

POST

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ curl -X POST http://zad3.local/api/projects
ent-Type: application/json" -d '{
       "name": "Nazwa testowa do zadania 3",
       "description": "Opis testowy do zadania 3"
   }' | jq
           % Total
                                                          Time Current
Left Speed
 "description": "Opis testowy do zadania 3"
inf2s 163105@inf2s163105:/var/www/zad3 jwt$ curl -X POST http://zad3.local/api/projects
                                                                                   -H "Cont
                           -d '{
ent-Type: application/json"
      "name": "Nazwa wkrrehtdorngh",
"description": "awdawdawd"
   }' | jq
           Time Current
Left Speed
 % Total
 "id": 7,
"name": "Nazwa wkrrehtdorngh",
"description": "awdawdawd"
```

GET

PUT

DELETE

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ curl -X DELETE http://zad3.local/api/projects/6 | jq

% Total % Received % Xferd Average Speed Time Time Time Current

Dload Upload Total Spent Left Speed

100 35 0 35 0 0 3221 0 --:--:-- --:-- 3500

"Pomyślnie usunięto id 6"
```

12. Wdrożenie JWT do systemu dziedzinowego (instalacja pakietów)

```
inf2s 163105@inf2s163105:/var/www/zad3 jwt$ composer require lexik/jwt-authentication-bundle
/composer.json has been updated
oading composer repositories with package information
 - Locking lcobucci/clock (3.2.0)
 - Locking lcobucci/jwt (5.3.0)
 - Locking lexik/jwt-authentication-bundle (v3.0.0)
riting lock file
Installing dependencies from lock file (including require-dev)
Package operations: 3 installs, 0 updates, 0 removals
- Installing lcobucci/jwt (5.3.0): Extracting archive
 - Installing lcobucci/clock (3.2.0): Extracting archive
 - Installing lexik/jwt-authentication-bundle (v3.0.0): Extracting archive
 - Configuring lexik/jwt-authentication-bundle (>=2.5): From github.com/symfony/recipes:main
Executing script cache:clear [OK]
Executing script assets:install public [OK]
What's next?
Please review, edit and commit them: these files are yours.
Using version ^3.0 for lexik/jwt-authentication-bundle
```

13. Tworzymy migrację jeśli coś zostało pominięte

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console make:migration

[WARNING] No database changes were detected.

The database schema and the application mapping information are already in sync.

inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console doctrine:migrations:migrate

WARNING! You are about to execute a migration in database "zadanie3" that could result in schema changes and data loss. Are you sure you wish to continue? (yes/no) [yes]:

> yes

[OK] Already at the latest version ("DoctrineMigrations\Version20240519083936")
```

14. Tworzymy folder jwt i generujemy klucze

```
inf2s_163105@inf2s163105:/var/www/zad3_jwt$ php bin/console lexik:jwt:generate-keypair
[OK] Done!
```

LUB

```
inf2s 163105@inf2s163105:/var/www/zad3 jwt$ mkdir config/jwt
inf2s 163105@inf2s163105:/var/www/zad3 jwt$ ls -1
total 260
drwxrwxr-x 2 inf2s 163105 inf2s 163105
                                        4096 May 19 07:14 bin
-rw-rw-r-- 1 inf2s 163105 inf2s 163105
                                        130 May 19 07:26 compose.override.yaml
-rw-rw-r-- 1 inf2s 163105 inf2s 163105 2027 May 19 10:06 composer.json
-rw-rw-r-- 1 inf2s 163105 inf2s 163105 213232 May 19 10:06 composer.lock
-rw-rw-r-- 1 inf2s 163105 inf2s 163105 897 May 19 07:26 compose.yaml
drwxrwxr-x 5 inf2s 163105 inf2s 163105 4096 May 19 10:09 config
drwxrwxr-x 2 inf2s 163105 inf2s 163105 4096 May 19 08:39 migrations
drwxrwxr-x 2 inf2s 163105 inf2s 163105 4096 May 19 07:14 public
drwxrwxr-x 5 inf2s 163105 inf2s 163105 4096 May 19 07:22 src
-rw-rw-r-- 1 inf2s 163105 inf2s 163105 4329 May 19 10:06 symfony.lock
drwxrwxrwx 4 inf2s 163105 inf2s 163105 4096 May 19 07:14 wa
drwxrwxr-x 14 inf2s 163105 inf2s 163105 4096 May 19 10:06 vendor
inf2s 163105@inf2s163105:/var/www/zad3 jwt$ 1s -1 config/jwt
total 0
```

```
chmod 644 config/jwt/private.pem
chmod 644 config/jwt/public.pem
```

15. Edycja pliku routes.yaml

```
controllers:
    resource:
        path: ../src/Controller/
        namespace: App\Controller
    type: attribute
api_login_check:
    path: /api/login_check
```

16. Edycja pliku security. yaml

Api/login musi być umiejscowione przed api żeby to zadziałało

17. Stworzenie Dashboard i Register kontroler

```
php bin/console make:controller DashboardController
php bin\console make:controller RegistrationController
```

18. Konfiguracja .env

```
###> lexik/jwt-authentication-bundle ###
JWT_SECRET_KEY=%kernel.project_dir%/config/jwt/private.pem
JWT_PUBLIC_KEY=%kernel.project_dir%/config/jwt/public.pem
JWT_PASSPHRASE=6749d81896eb4b5e723c8a90868e6e2cda03360cf288b8456ldclflde17c4f8e
###< lexik/jwt-authentication-bundle ###</pre>
```

Najpierw tworzymy klucze potem utworzy nam się to samo w pliku .env

19. Tworzenie nowego kontrolera:

```
php bin/console make:controller TokenController
```

20. Testowanie API z JWT

POST

GET

21. Wdrożenie JWT i zobaczenie produktów przed i po logowaniu

Brak dostępu bez tokenu

Po stworzeniu użytkownika, uzyskaniu tokenu i zalogowaniu się można zobaczyć dane zawarte w tabeli projects

22. Uzyskanie własnego tokenu i informacji o nim

```
fQ.HsfBfEn7Iih4uAnFepyN2BoOngU veRJgCoJlU4-OIDHT3sURwXU1P8jZdtcfeETGh9uYeiwCWNQ1
ERrOgvT69ZERXzgrI9qajxn8DIRjrylR00h3-R G-p0ICQ0N055TLhPq9IRS vEKQ1N1dPsrEDMmXU-e
Unmc0xCxCNdQGx3QXxKQ-MKZiyEWq7Ztw2Vae3T4FQBPRtJHniY76gqoVLmhvDHb5Q81nFCyHySpCpEq
jaBguErkPaGhg-EbwaBLz7fN8I XSPXeMQn6a pNQD2j122QwwW48B4Kso6DXZ9sGx1Fmop13iz6tDj3
AGEIKHklDhYCIY cPU0bJwdMg" -H "Content-Type: application/json" -d '{}' | jq
            % Received % Xferd Average Speed Time
                                                                Time Current
 % Total
                                                       Time
                                Dload Upload Total
                                                      Spent
                                                                Left Speed
100
                             2 16144
     660
                658 100
                                          49 --:--: 16500
 "Token": "eyJ0eXAiOiJKVlQiLCJhbGciOiJSUzIlNiJ9.eyJpYXQiOjE3MTc3NDUwOTEsImV4cC
6MTcxODEwNTA5MSwicm9sZXMiOlsiUk9MRV9VU0VSIl0sInVzZXJuYWllIjoidG9tZWsifQ.HsfBfEn
Iih4uAnFepyN2BoOngU veRJgCoJlU4-OIDHT3sURwXUlP8jZdtcfeETGh9uYeiwCWNQlERrOgvT69Z
RXzgrI9qajxn8DIRjry1R00h3-R G-p0ICQ0N055TLhPq9IRS vEKQ1N1dPsrEDMmXU-eUnmc0xCxCN
QGx3QXxKQ-MKZiyEWq7Ztw2Vae3T4FQBPRtJHniY76gqoVLmhvDHb5Q81nFCyHySpCpEcjaBquErkPa
ng-EbwaBLz7fN8I XSPXeMQn6a pNQD2j122QwwW48B4Kso6DXZ9sGx1Fmop13iz6tDj3AGEIKHk1Dh
 "Wydany (czas serwera)": "07/06/2024 07:24",
  "Czas wygaśnięcia (czas serwera)": "11/06/2024 11:24",
  "Uprawnienia": [
    "ROLE USER"
  ],
  "Użytkownik": "tomek"
inf2s 163105@inf2s163105:~$
```

23. Weryfikacja własnego tokenu

```
inf2s 163105@inf2s163105:~$ curl -X POST http://zad3.local/api/token/verify -H
Authorization: Bearer ^C
inf2s 163105@inf2s163105:~$ curl -X POST http://zad3.local/api/token/verify -H"A
uthorization: Bearer eyJ0eXAiOiJKVlQiLCJhbGciOiJSUzIlNiJ9.eyJpYXQiOjE3MTc3NDUwOT
EsImV4cCI6MTcxODEwNTA5MSwicm9sZXMiOlsiUk9MRV9VU0VSI10sInVzZXJuYW11IjoidG9tZWsifQ
.HsfBfEn7Iih4uAnFepyN2BoOngU veRJgCoJlU4-OIDHT3sURwXU1P8jZdtcfeETGh9uYeiwCWNQ1ER
rOgvT69ZERXzgrI9qajxn8DIRjrylR0Oh3-R G-p0ICQ0N055TLhPq9IRS vEKQlNldPsrEDMmXU-eUn
mc0xCxCNdQGx3QXxKQ-MKZiyEWq7Ztw2Vae3T4FQBPRtJHniY76gqoVLmhvDHb5Q81nFCyHySpCpEcja
BguErkPaGhg-EbwaBLz7fN8I XSPXeMQn6a pNQD2j122QwwW48B4Kso6DX29sGx1Fmopl3iz6tDj3AG
EIKHklDhYCIY cPU0bJwdMg" -H "Content-Type: application/json" -d '{}' | jq
            % Received % Xferd Average Speed Time
                                                      Time
                                                               Time Current
                               Dload Upload Total Spent
                                                              Left Speed
100
                 49 100
                            2 5699
                                        232 --:--:- 6375
 "status": "valid",
  "message": "Token jest aktywny"
```