VOID

Sprint 1

Laravel Deployment with PHP and Nginx

Sprint 1 : Study Read

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Table des matières

1. Environment Preparation

Objective : Prepare a Debian server environment for Laravel deployment.

1. Update system :

```
sudo apt update && sudo apt upgrade -y
```

2. Install required packages :

```
sudo apt install -y nginx php php-fpm php-mysql php-cli php-curl \
php-mbstring php-xml php-zip unzip curl git
```

Result : System updated and PHP + Nginx installed.

2. Composer Installation

Objective : Install Composer to manage Laravel dependencies.

1. Download and install Composer :

```
curl -sS https://getcomposer.org/installer | php
sudo mv composer.phar /usr/local/bin/composer
composer --version
```

Result : Composer installed and available system-wide.

3. Laravel Installation

Objective : Create and configure a Laravel application.

1. Create Laravel project :

```
cd /var/www
sudo composer create-project laravel/laravel html
```

2. Set permissions :

```
sudo chown -R www-data:www-data /var/www/html
sudo chmod -R 775 /var/www/html/storage /var/www/html/bootstrap/cache
```

4. Nginx Configuration

Objective : Configure Nginx to serve the Laravel application.

1. Create Nginx site configuration :

```
sudo nano /etc/nginx/sites-available/default
```

2. Nginx configuration file :

```
server {
    listen 80;
    server_name localhost;

    root /var/www/html/public;
    index index.php index.html;

    location / {
        try_files $uri $uri/ /index.php?$query_string;
    }

    location ~ \.php$ {
        include snippets/fastcgi-php.conf;
        fastcgi_pass unix:/run/php/php8.2-fpm.sock;
    }

    location ~ /\.ht {
        deny all;
    }
}
```

3. Enable site and reload Nginx :

```
sudo ln -s /etc/nginx/sites-available/laravel /etc/nginx/sites-enabled/
sudo nginx -t
sudo systemctl reload nginx
```

Result : Nginx correctly configured for Laravel.

5. Laravel Verification

Objective : Verify Laravel deployment through the browser.

1. Start PHP-FPM :

```
sudo systemctl restart php8.2-fpm
```

2. Access application :

```
http://localhost:8081
```
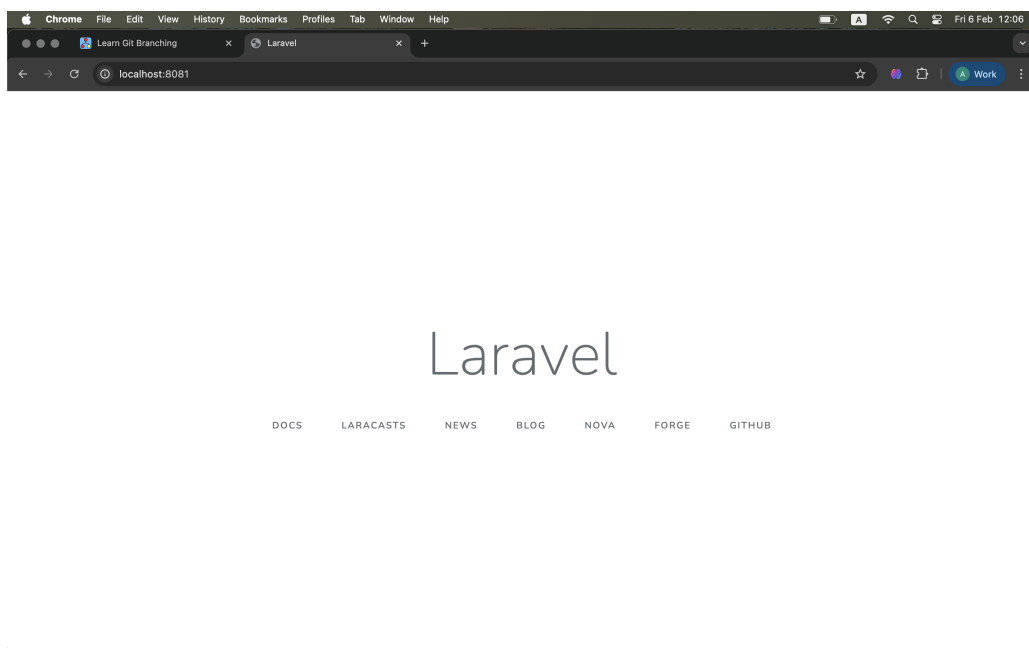
3. Displayed page :

FIGURE 1 – Laravel default welcome page

Result : Laravel welcome page displayed successfully using Nginx and PHP.