

## Application web MVC avec Flask (micro-framework pour Python)

### 1- Configurer l'environnement :

- a. Assurez-vous d'avoir Python et pip installés sur votre machine.

```
C:\Users\INSPIRON>python --version
Python 3.12.4

C:\Users\INSPIRON>pip --version
pip 24.0 from C:\Users\INSPIRON\AppData\Local\Programs\Python\Python312\Lib\site-packages\pip (python 3.12)
```

- b. Installez Flask et SQLAlchemy (pour l'interaction avec la base de données).

```
C:\Users\INSPIRON>pip install flask
Collecting flask
  Downloading Flask-3.0.3-py3-none-any.whl.metadata (3.2 kB)
Collecting Werkzeug>=3.0.0 (from flask)
  Downloading werkzeug-3.0.3-py3-none-any.whl.metadata (3.7 kB)
Requirement already satisfied: Jinja2>=3.1.2 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (3.1.4)
Collecting itsdangerous>=2.1.2 (from flask)
  Downloading itsdangerous-2.2.0-py3-none-any.whl.metadata (1.9 kB)
Requirement already satisfied: click>=8.1.3 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (8.1.7)
Requirement already satisfied: blinker>=1.6.2 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (1.8.2)
Requirement already satisfied: colorama in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from click>=8.1.3->flask) (0.4.6)
Requirement already satisfied: MarkupSafe>=2.0 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from Jinja2>=3.1.2->flask) (2.1.5)
Downloading flask-3.0.3-py3-none-any.whl (101 kB)
101.7/101.7 kB 21.7 kB/s eta 0:00:00
Downloading itsdangerous-2.2.0-py3-none-any.whl (16 kB)
Downloading werkzeug-3.0.3-py3-none-any.whl (227 kB)
227.3/227.3 kB 33.3 kB/s eta 0:00:00
Installing collected packages: Werkzeug, itsdangerous, flask
Successfully installed Werkzeug-3.0.3 flask-3.0.3 itsdangerous-2.2.0

[notice] A new release of pip is available: 24.0 -> 24.1.2
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\INSPIRON>pip install sqlalchemy
Collecting sqlalchemy
  Downloading SQLAlchemy-2.0.31-cp312-cp312-win_amd64.whl.metadata (9.9 kB)
Requirement already satisfied: typing-extensions>=4.6.0 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from sqlalchemy) (4.12.2)
Collecting greenlet!=0.4.17 (from sqlalchemy)
  Downloading greenlet-3.0.3-cp312-cp312-win_amd64.whl.metadata (3.9 kB)
Downloading SQLAlchemy-2.0.31-cp312-cp312-win_amd64.whl (2.1 MB)
2.1/2.1 MB 3.4 MB/s eta 0:00:00
Downloading greenlet-3.0.3-cp312-cp312-win_amd64.whl (293 kB)
293.6/293.6 kB 302.4 kB/s eta 0:00:00
Installing collected packages: greenlet, sqlalchemy
Successfully installed greenlet-3.0.3 sqlalchemy-2.0.31

[notice] A new release of pip is available: 24.0 -> 24.1.2
[notice] To update, run: python.exe -m pip install --upgrade pip
```

### 2- Créer la structure du projet :

Créez les dossiers et fichiers nécessaires : app/, app/templates/, app/static/, app/models.py, app/views.py, app/controllers.py, config.py, et run.py.

```
mkdir app
mkdir app\templates
mkdir app\static
type NUL > app\models.py
type NUL > app\views.py
type NUL > app\controllers.py
type NUL > config.py
type NUL > run.py
```

```

C:\Users\INSPIRON>cd app

C:\Users\INSPIRON\app>tree /F
Structure du dossier
Le numéro de série du volume est 9E99-518B
C:.\
|   controllers.py
|   models.py
|   views.py
|
|   static
|   templates

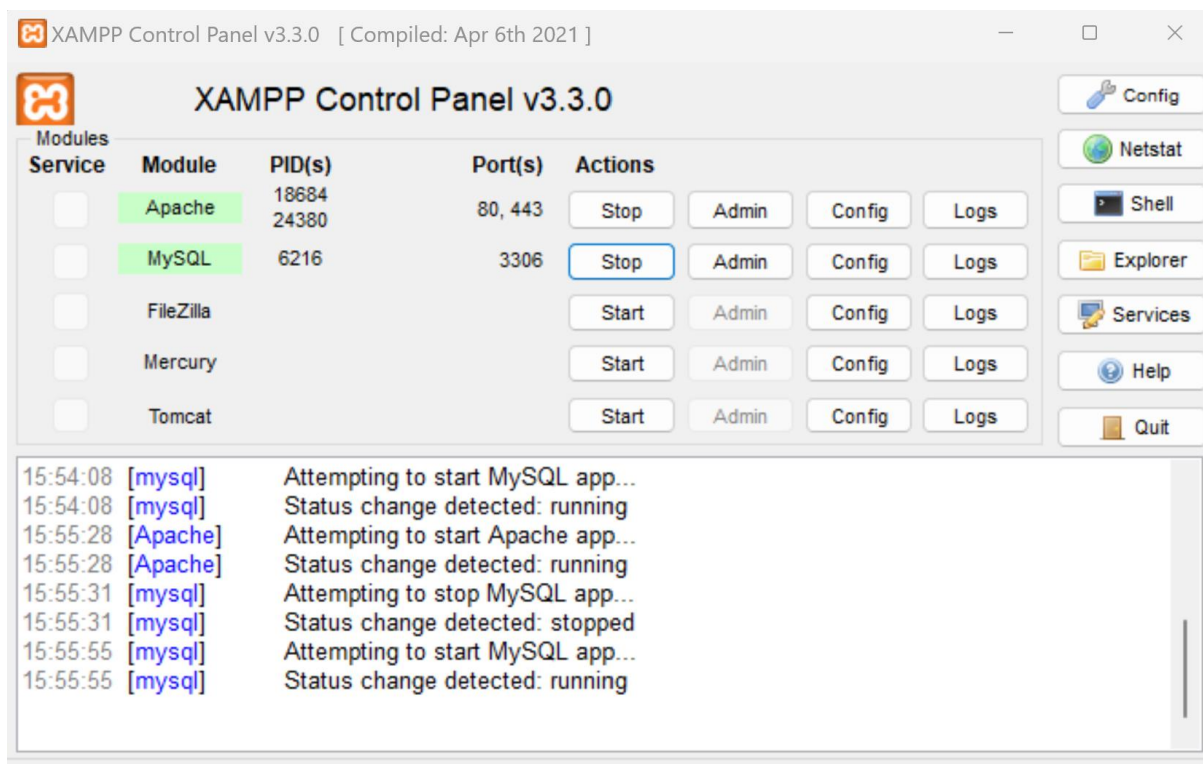
```

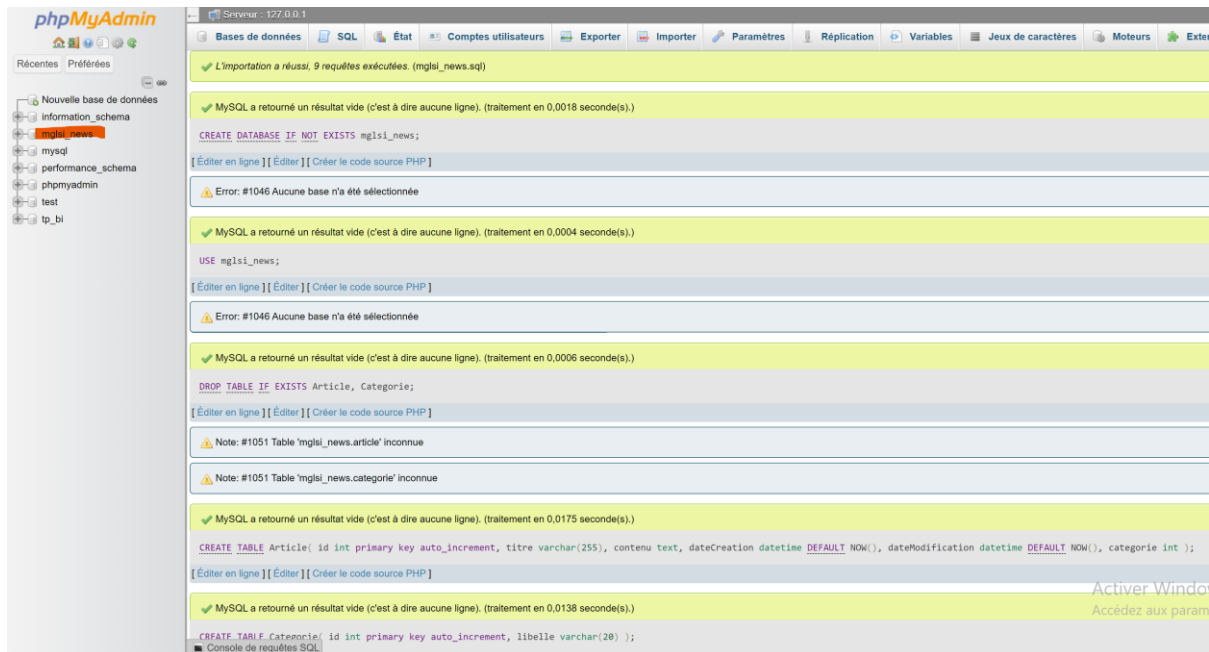
### 3- Configurer la base de données :

Importez le fichier SQL fourni (mglsi\_news.sql) dans une base de données MySQL ou SQLite.

- Ouvrir phpmyadmin (<http://localhost/phpmyadmin>)

(Lancer le serveur)





## 4- Développer l'application

### a. Étape 1 : Installation des dépendances

```
PS C:\Users\INSPIRON> pip install flask sqlalchemy pymysql
Requirement already satisfied: flask in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (3.0.3)
Requirement already satisfied: sqlalchemy in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (2.0.31)
Collecting pymysql
  Downloading PyMySQL-1.1.1-py3-none-any.whl.metadata (8.4 kB)
Requirement already satisfied: Werkzeug>=3.0.0 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (3.0.3)
Requirement already satisfied: Jinja2>=3.1.2 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (3.1.4)
Requirement already satisfied: itsdangerous>=2.1.2 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (2.2.0)
Requirement already satisfied: click>=8.1.3 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (8.1.7)
Requirement already satisfied: blinker>=1.6.2 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from flask) (1.8.2)
Requirement already satisfied: typing-extensions>=4.6.0 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from sqlalchemy) (4.12.2)
Requirement already satisfied: greenlet!=0.4.17 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from sqlalchemy) (3.0.3)
Requirement already satisfied: colorama in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from click>=8.1.3->flask) (0.4.6)
Requirement already satisfied: MarkupSafe>=2.0 in c:\users\inspiron\appdata\local\programs\python\python312\lib\site-packages (from Jinja2>=3.1.2->flask) (2.1.5)
Downloading PyMySQL-1.1.1-py3-none-any.whl (44 kB)
Installing collected packages: pymysql
Successfully installed pymysql-1.1.1

[notice] A new release of pip is available: 24.0 -> 24.1.2
[notice] To update, run: python.exe -m pip install --upgrade pip
```

### b. Étape 2 : Structure du projet (creation de chaque dossier et fichier)

```
mglsi_news_app/
|
├─ app/
|   ├── __init__.py
|   ├── models.py
|   ├── views.py
|   ├── controllers.py
|   └─ templates/
|       ├── base.html
|       ├── index.html
|       ├── sport.html
|       ├── sante.html
|       ├── education.html
|       └─ politique.html
|
├─ config.py
└─ run.py
```

```
type nul > app\__init__.py
type nul > app\models.py
type nul > app\controllers.py
type nul > app\views.py
type nul > config.py
type nul > run.py
type nul > app\templates\base.html
type nul > app\templates\index.html
type nul > app\templates\sport.html
type nul > app\templates\sante.html
type nul > app\templates\education.html
type nul > app\templates\politique.html
```