

# 풀스택서비스구축

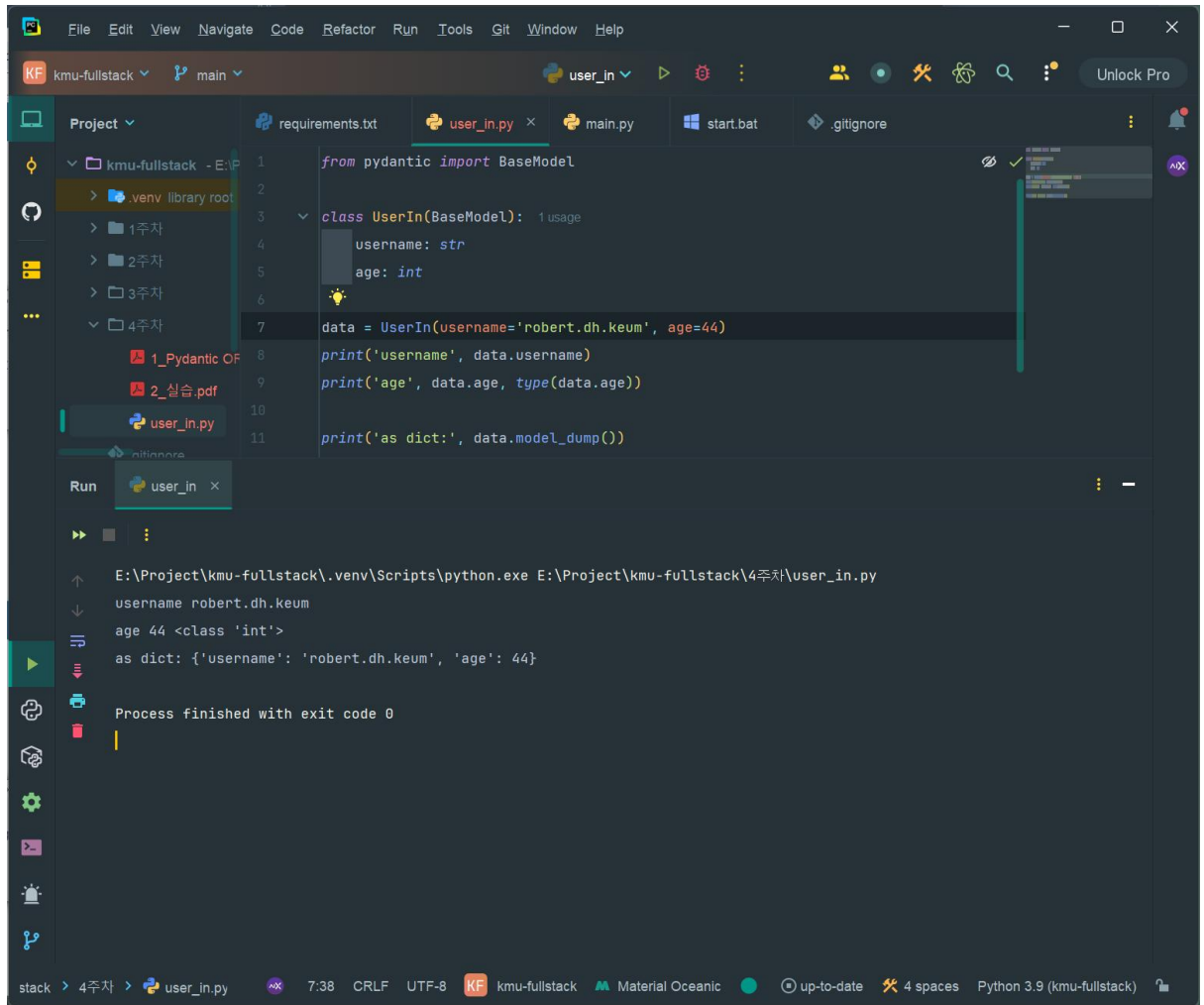
## 4 주차 과제

인공지능응용

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1. UserIn 클래스

The screenshot displays the PyCharm IDE interface for a project named 'kmu-fullstack'. The main editor window shows the file 'user\_in.py' with the following Python code:

```
1 from pydantic import BaseModel
2
3 class UserIn(BaseModel):
4     username: str
5     age: int
6
7 data = UserIn(username='robert.dh.keum', age=44)
8 print('username', data.username)
9 print('age', data.age, type(data.age))
10
11 print('as dict:', data.model_dump())
```

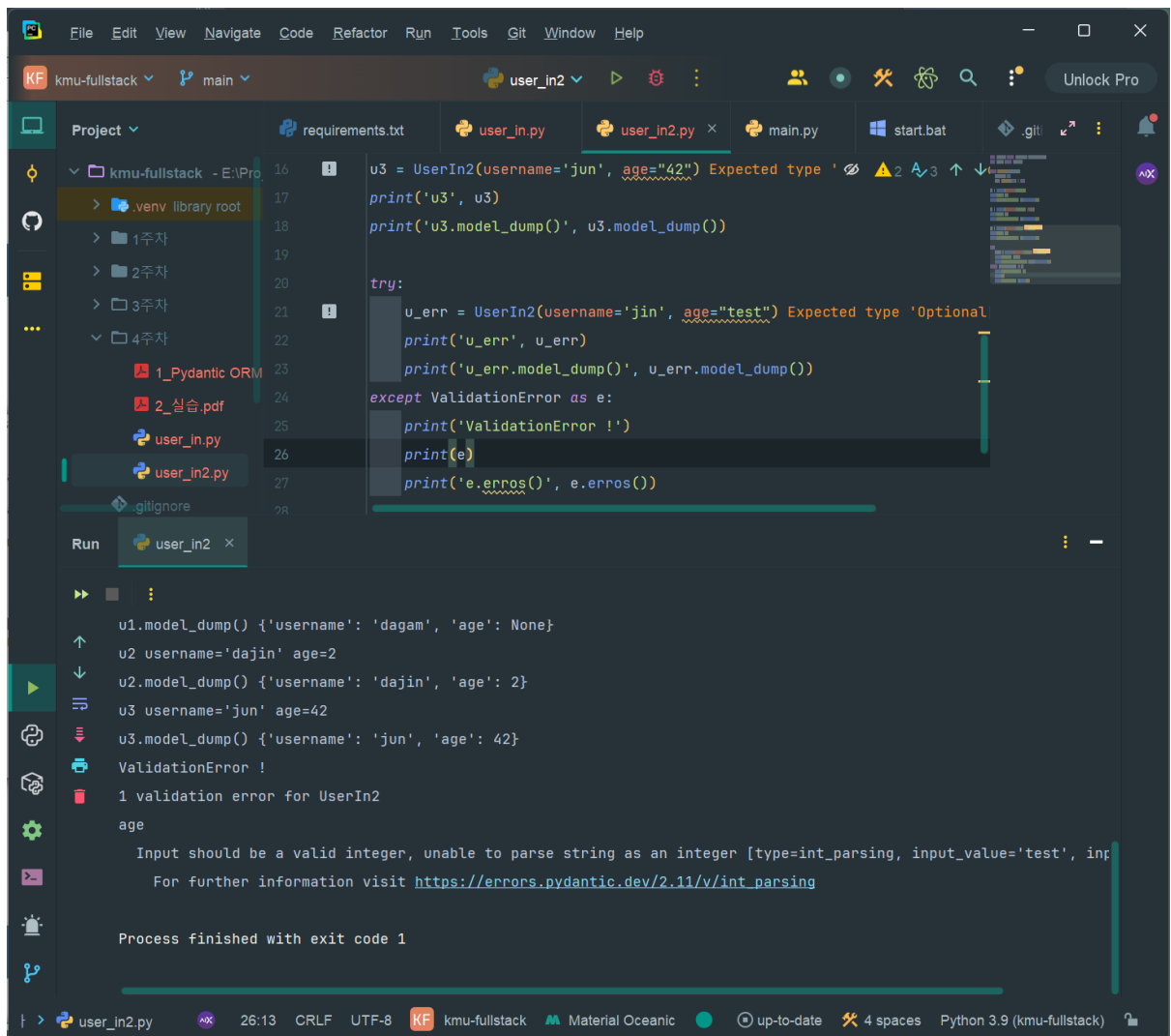
The left sidebar shows the project structure with folders for '1주차' through '4주차'. The 'Run' window at the bottom shows the execution output for 'user\_in.py':

```
E:\Project\kmu-fullstack\.venv\Scripts\python.exe E:\Project\kmu-fullstack\4주차\user_in.py
username robert.dh.keum
age 44 <class 'int'>
as dict: {'username': 'robert.dh.keum', 'age': 44}

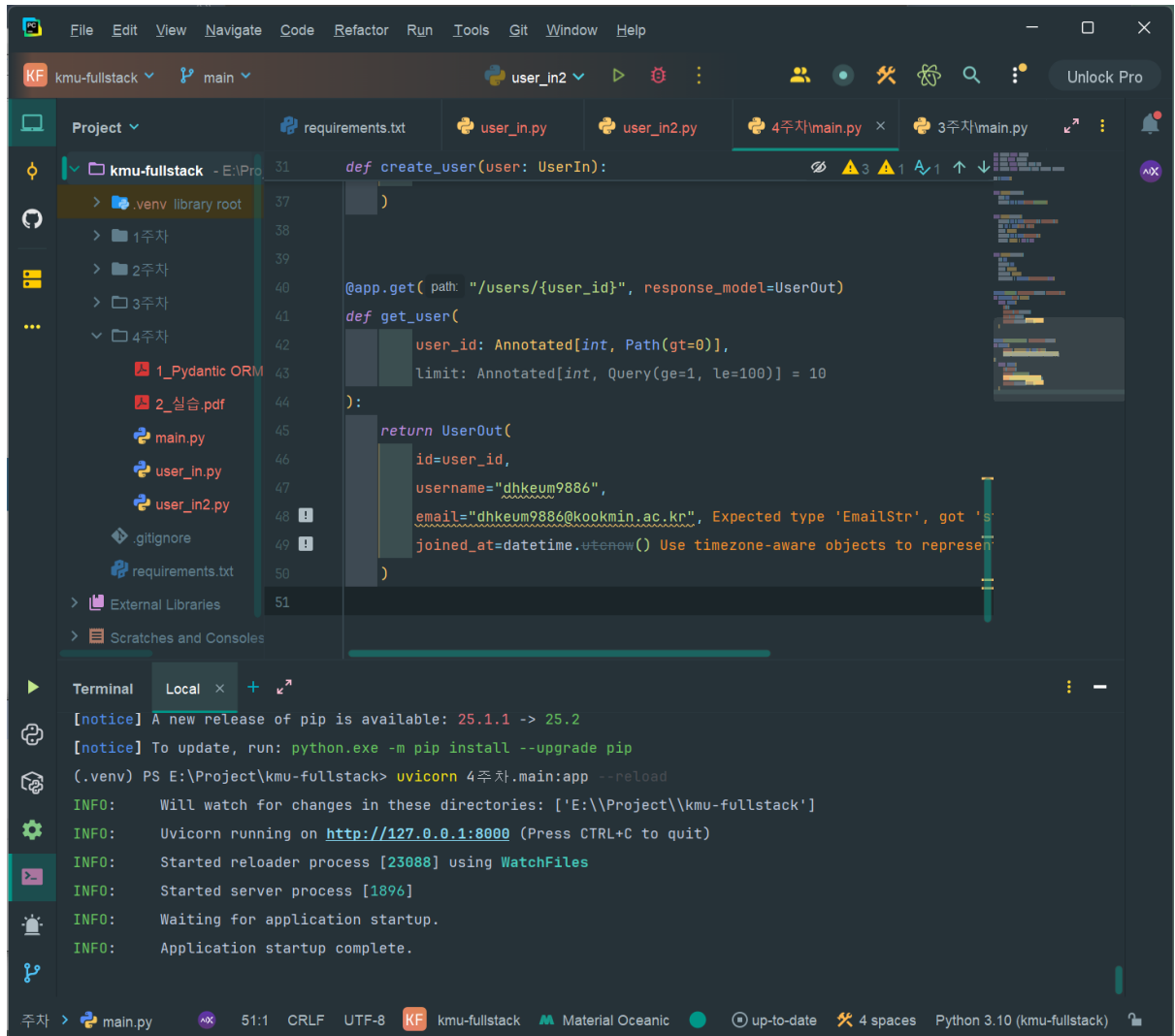
Process finished with exit code 0
```

The status bar at the bottom indicates the file encoding is UTF-8, the project is 'kmu-fullstack', and the Python version is 3.9.

## 2. UserIn2 클래스

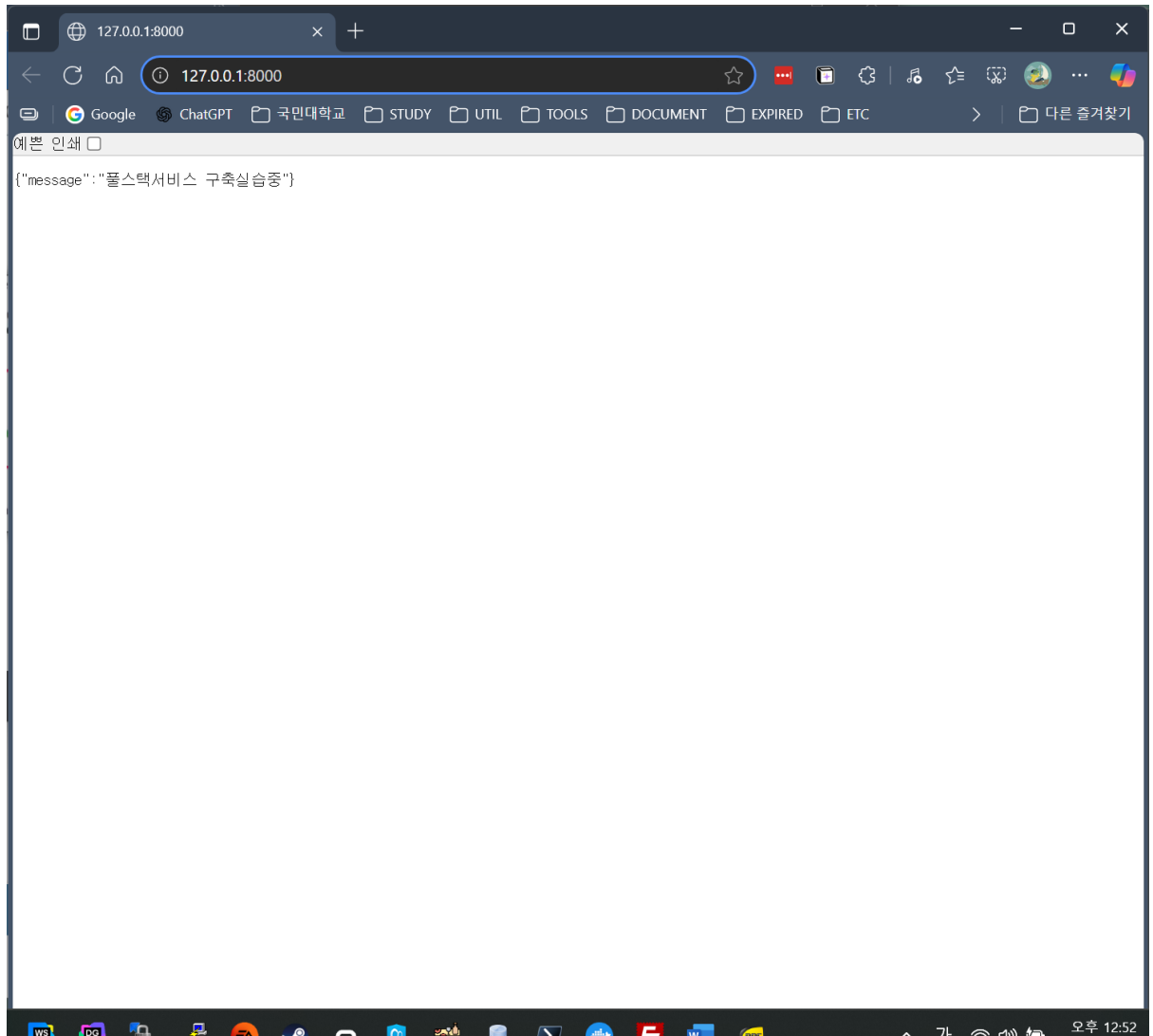


```
File Edit View Navigate Code Refactor Run Tools Git Window Help
KF kmu-fullstack - E:\Pro user_in2 user_in2.py main.py start.bat .git
Project requirements.txt user_in.py user_in2.py main.py start.bat .git
> .venv library root
> 1주차
> 2주차
> 3주차
> 4주차
1_Pydantic ORM
2_실습.pdf
user_in.py
user_in2.py
.gitignore
Run user_in2 x
16 u3 = UserIn2(username='jun', age="42") Expected type 'Optional'
17 print('u3', u3)
18 print('u3.model_dump()', u3.model_dump())
19
20 try:
21     u_err = UserIn2(username='jin', age="test") Expected type 'Optional'
22     print('u_err', u_err)
23     print('u_err.model_dump()', u_err.model_dump())
24 except ValidationError as e:
25     print('ValidationError !')
26     print(e)
27     print('e.errors()', e.errors())
28
>> :
u1.model_dump() {'username': 'dagam', 'age': None}
u2 username='dajin' age=2
u2.model_dump() {'username': 'dajin', 'age': 2}
u3 username='jun' age=42
u3.model_dump() {'username': 'jun', 'age': 42}
ValidationError !
1 validation error for UserIn2
age
  Input should be a valid integer, unable to parse string as an integer [type=int_parsing, input_value='test', input_type=str]
  For further information visit https://errors.pydantic.dev/2.11/v/int_parsing
Process finished with exit code 1
user_in2.py 26:13 CRLF UTF-8 KF kmu-fullstack Material Oceanic up-to-date 4 spaces Python 3.9 (kmu-fullstack)
```

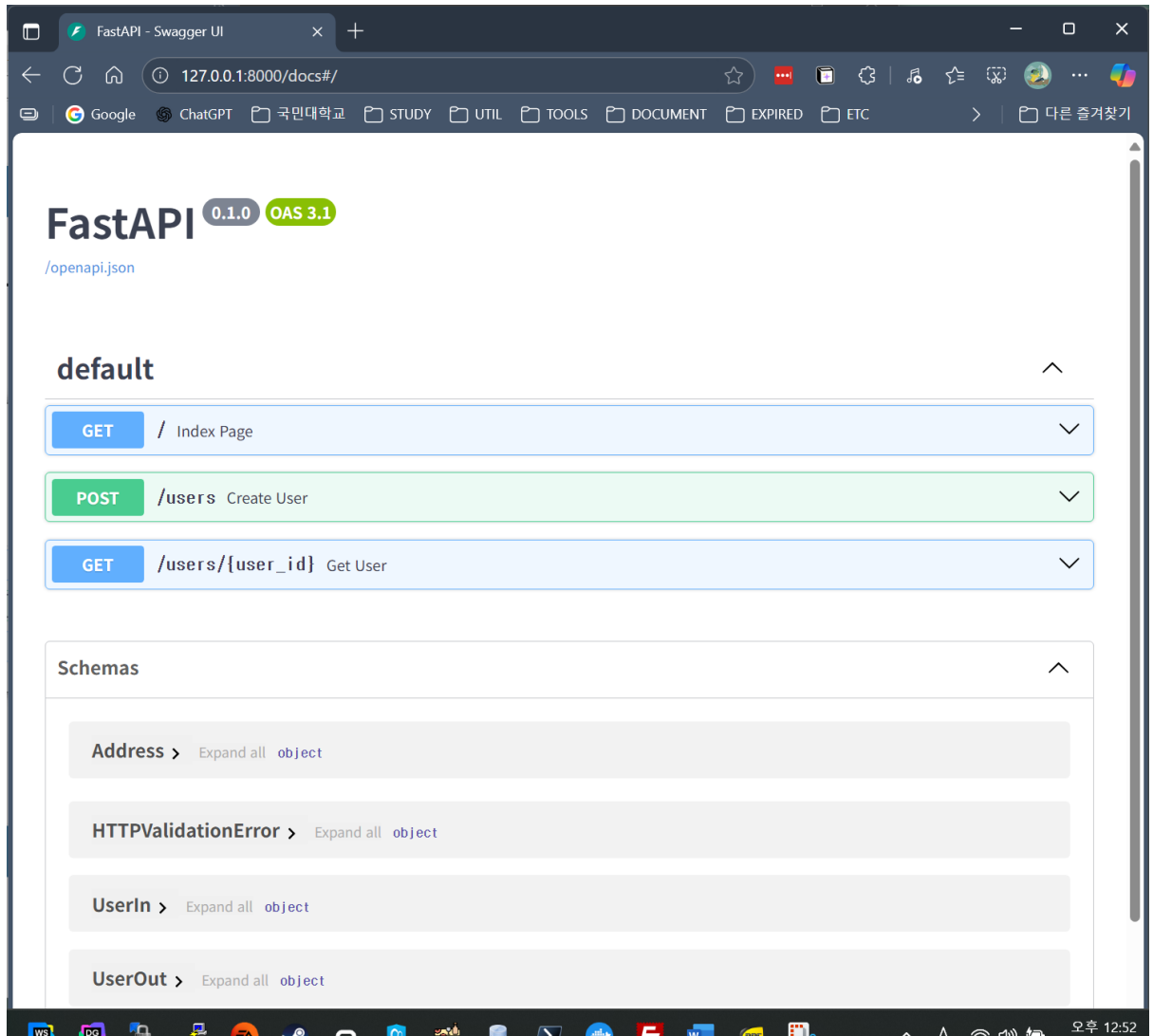
3. Main.py

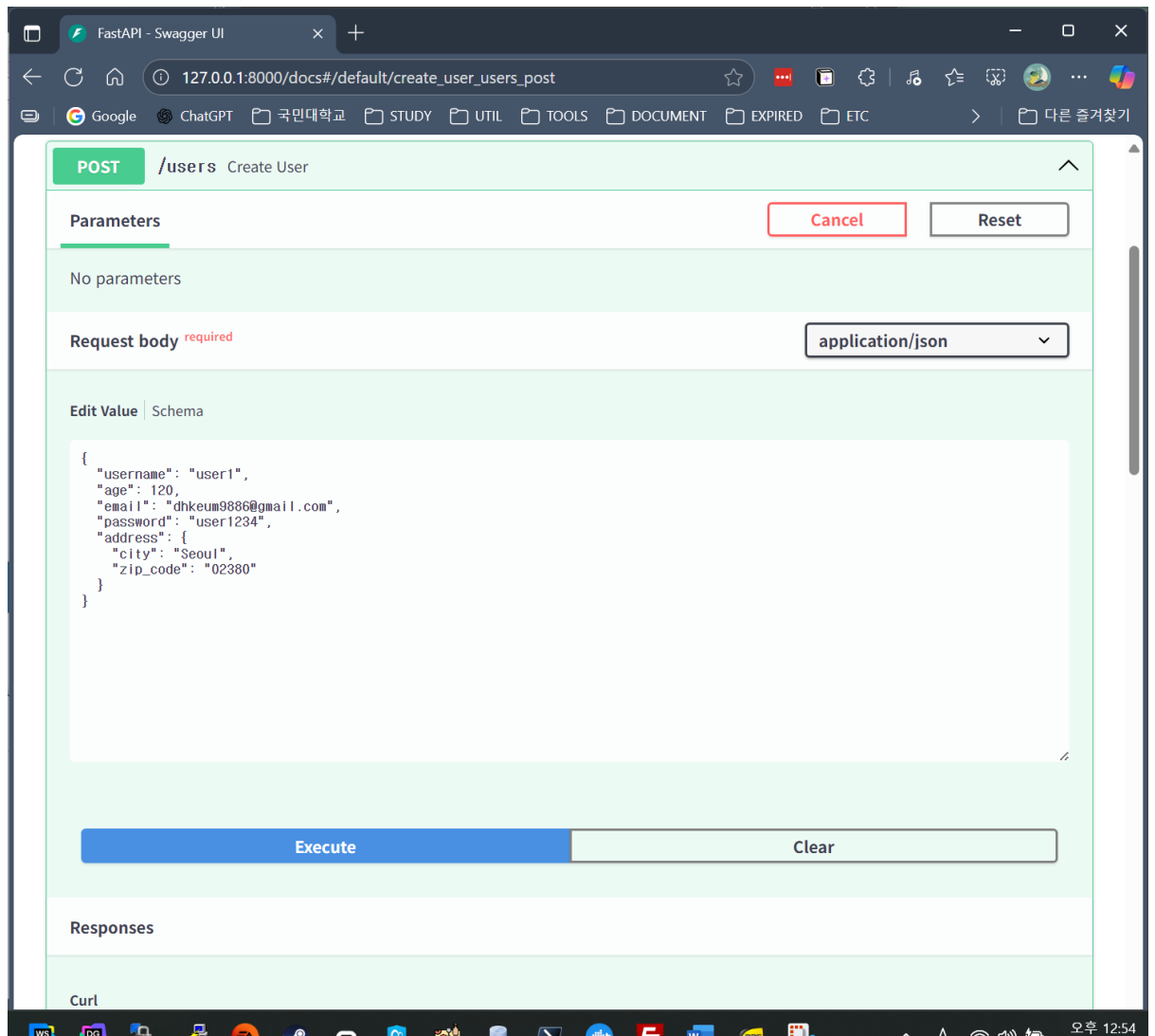
```
File Edit View Navigate Code Refactor Run Tools Git Window Help
KF kmu-fullstack main user_in2 user_in2.py 4주차/main.py 3주차/main.py
Project requirements.txt user_in.py user_in2.py 4주차/main.py 3주차/main.py
> .venv library root
> 1주차
> 2주차
> 3주차
> 4주차
1_Pydantic ORM
2_실습.pdf
main.py
user_in.py
user_in2.py
.gitignore
requirements.txt
External Libraries
Scratches and Consoles
Terminal Local x +
[notice] A new release of pip is available: 25.1.1 -> 25.2
[notice] To update, run: python.exe -m pip install --upgrade pip
(.venv) PS E:\Project\kmu-fullstack> uvicorn 4주차.main:app --reload
INFO: Will watch for changes in these directories: ['E:\Project\kmu-fullstack']
INFO: Uvicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit)
INFO: Started reloader process [23088] using WatchFiles
INFO: Started server process [1896]
INFO: Waiting for application startup.
INFO: Application startup complete.
```

#### 4. 메인페이지



5. /docs 페이지



6. /users PostA. Request



B. Response

The screenshot shows the FastAPI Swagger UI interface. At the top, the browser address bar displays the URL `127.0.0.1:8000/docs#/default/create_user_users_post`. Below the address bar, there are buttons for "Execute" and "Clear".

The "Responses" section is expanded, showing the following details:

- Curl:** A code block containing the following curl command:

```
curl -X 'POST' \
  'http://127.0.0.1:8000/users' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
    "username": "user1",
    "age": 120,
    "email": "dhkeum9886@gmail.com",
    "password": "user1234",
    "address": {
      "city": "Seoul",
      "zip_code": "02380"
    }
  }'
```
- Request URL:** A text box containing `http://127.0.0.1:8000/users`.
- Server response:** A table with two columns: "Code" and "Details".
  - Code:** 201
  - Details:**
    - Response body:** A JSON object: `{ "id": 1, "username": "user1", "email": "dhkeum9886@gmail.com", "joined_at": "2025-09-29T03:54:40.170946" }`. A "Download" button is next to it.
    - Response headers:** `content-length: 99, content-type: application/json, date: Mon, 29 Sep 2025 03:54:39 GMT, server: uvicorn`