

# Understanding Abstractions and APIs

1. For this assignment, you will be developing the following (in python):
  - a. A class with functions to handle DBMS operations
  - b. A module containing this class
  - c. A package with this module
  - d. A flask API server
  - e. An API operable database
2. Class requirements :
  - a. Name : Mysqlhandler
  - b. Functions :
    - i. `__init__`
    - ii. `add_user`
    - iii. `update_user`
    - iv. `delete_user`
    - v. `display_users`
3. Module requirements :
  - a. Name : `sqlhandler.py`
  - b. Create a main section (as mentioned in class main method does not exist in python)
4. Package requirements:
  - a. Name : `dbhandler`
5. Flask requirements:
  - a. Name : (Package Name) `flaskapp`
  - b. Endpoints:
    - i. `/user/register [POST]` : add user to the db
    - ii. `/user/update [POST]` : update the user data in the db
    - iii. `/user/delete [POST]` : delete the user data from the db
    - iv. `/user/view [GET]` : view all the users in the db
  - c. Import `dbhandler` package to do all the interaction with the database
  - d. Data format for communication on APIs : JSONs
  - e. Software to test your application : Postman
6. Driver script : `server.py`
7. Package requirements : `flask`, `mysql-connector-python`(verify form documentation of mysql)
8. If any details are missing, or concepts seem vague please let me know I will share information/resources on it.
9. Deadline : Monday Sept 20, 2021
10. Screenshots for reference (**names are different in the screenshot, but submission should be as per names listed above**):

This screenshot shows the Visual Studio Code editor with the `views.py` file open. The Explorer sidebar on the left shows the project structure, including folders like `__pycache__`, `dbhandler`, `flaskapp`, and `mucal`, and files like `__init__.py`, `crud.py`, `server.py`, and `views.py`. The Editor sidebar shows the `views.py` file is selected. The main editor area displays the following Python code:

```
1  
2 from . import app  
3  
4 from dbhandler import dbh  
5  
6 @app.route("/get_users",methods=["GET","POST"])  
7 def get_user():  
8     data=dbh.display_users()  
9     return data  
10  
11  
12
```

The status bar at the bottom indicates the Python 3.8.3 64-bit interpreter is active, and the current cursor position is Line 12, Column 1.

This screenshot shows the Visual Studio Code editor with the `__init__.py` file open. The Explorer sidebar on the left shows the project structure, including folders like `__pycache__`, `dbhandler`, `flaskapp`, and `mucal`, and files like `__init__.py`, `crud.py`, `server.py`, and `views.py`. The Editor sidebar shows the `__init__.py` file is selected. The main editor area displays the following Python code:

```
1  
2 from flask import Flask,request,Response  
3  
4 app=Flask(__name__)  
5  
6 from .views import *
```

The status bar at the bottom indicates the Python 3.8.3 64-bit interpreter is active, and the current cursor position is Line 6, Column 22.



