

Week 4

Hosain Masba Tamim

Objectives & Outcomes

- Planned:

- Learn CRUD operations and database connections.

- Achieved:

- Basic knowledge about Database integration.
- In depth knowledge about CRUD operations with mySQL and PHP
- Some basic knowledge about analyzing data from the Database

App: [todo app](#)

Code & Explanations

- **What it does :** A simple todo list CLI app that tracks users daily activity.
- **How it works :** This CLI-based To-Do app uses PHP and MySQL to provide simple CRUD task management directly from the terminal. When the script runs, it connects to the todo_cli database and reads the first command-line argument (add, list, done, del, or clear). Based on the command, it performs its operations on the tasks table: adding a new task, listing all tasks as well as if they are “done” or “pending”, marking a task as done, deleting a task, or clearing the entire table. The output is printed directly to the terminal, making it a lightweight and fast task manager without any web interface.

- Screenshot :

```
(venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
● /bin/php todo.php  
  
CLI To-Do App Commands:  
/opt/lampp/bin/php todo.php add "task name"  
/opt/lampp/bin/php todo.php list  
/opt/lampp/bin/php todo.php done <id>  
/opt/lampp/bin/php todo.php del <id>  
(venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
● /bin/php todo.php add "electronics report-1 next sunday"  
  
added task: electronics report-1 next sunday  
(venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
● /bin/php todo.php list  
  
1. [done] sad ct1 25/11/25  
2. [pending] elec ct1 30/11/25  
3. [pending] electronics report-1 next sunday  
(venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
● /bin/php todo.php done 2  
  
task done.  
(venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
● /bin/php todo.php list  
  
○ (venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ █
```

App [Sales app](#)

Code & Explanations

- **What it does :** Keeps track of the sales of a shop and gives an analysis of its sales
- **How it works :** This CLI Sales Tracker app combines PHP (for CRUD operations) with Python and Pandas (for data analysis). The PHP script acts as a command-line interface where users can add new sales, view all records, update existing entries, delete sales, or clear the entire table. Each command interacts with the sales table in the sales_cli MySQL database using parameterized SQL queries for safety and accuracy. The app stores details such as product name, quantity, price, and sale date.
A separate Python script connects to the same MySQL database, loads all sales data into a Pandas DataFrame, and performs quick analytics such as calculating total revenue and identifying the highest-selling products. This creates a simple but powerful hybrid system where PHP handles data entry and management, while Python handles statistical insights—making the app both functional and analytical directly from the terminal.

- Screenshot :

```
• (venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
/bin/php sales.php  
CLI Sales Tracker Commands:  
    /opt/lampp/bin/php sales.php add "product" quantity price "YYYY-MM-DD"  
    /opt/lampp/bin/php sales.php list  
    /opt/lampp/bin/php sales.php update id field value  
    /opt/lampp/bin/php sales.php del id  
    /opt/lampp/bin/php sales.php clear  
• (venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
/bin/php sales.php "rice" 10 60 "2025-11-26"  
CLI Sales Tracker Commands:  
    /opt/lampp/bin/php sales.php add "product" quantity price "YYYY-MM-DD"  
    /opt/lampp/bin/php sales.php list  
    /opt/lampp/bin/php sales.php update id field value  
    /opt/lampp/bin/php sales.php del id  
    /opt/lampp/bin/php sales.php clear  
• (venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ /opt/lampp  
/bin/php sales.php add "rice" 10 60 "2025-11-26"  
sale added: rice (10 units at 60) on 2025-11-26  
• (venv) noir@noir-mk-2:~/myFile/uiu-aura/AURA-weekly-task/week4$ "/home/noir/  
myFile/study/7th sem/ai lab/project/hand gesture recognition/venv/bin/py  
thon" /home/noir/myFile/uiu-aura/AURA-weekly-task/week4/sales.py  
/home/noir/myFile/uiu-aura/AURA-weekly-task/week4/sales.py:13: UserWarning  
: pandas only supports SQLAlchemy connectable (engine/connection) or datab  
ase string URI or sqlite3 DBAPI2 connection. Other DBAPI2 objects are not  
tested. Please consider using SQLAlchemy.  
    df = pd.read_sql("SELECT * FROM sales", conn)  
total revenue: 24600.0  
best selling product:  
    product  
    pi 4 b      2  
    rice       10
```