Week 3 – Python OOP Practice Tasks

Review Questions

1. Person Class

- Create a class `Person` with attributes `name` and `age`.

- Make an object and print its attributes.

2. Dog Class

- Create a class `Dog` with a method `bark()` that prints `"Woof!"`.

- Create a dog object and call `bark()`.

3. Car Class

- Create a class `Car` with attribute `make`.

- Add a method `get_make()` that returns the make.

- Test it with an object.

4. Rectangle Class

- Create a class `Rectangle` with `width` and `height`.

- Print the **area** (without adding a separate method).

5. Student Class

- Create a class `Student` with private attribute `__grade`.

- Add methods `set_grade()` and `get_grade()`.

- Test by setting and getting the grade.

6. Employee Class

- Create a class `Employee` with attributes `name` and `salary`.

- Add a method `annual_salary()` that calculates yearly salary.

7. Library Class

- Create a class `Library` that stores a list of book titles.

- Add methods `add_book()` and `show_books()`.

- Test by adding a few books and displaying them.

8. Animal & Cat Classes (Inheritance)

- Create a base class `Animal` and a child class `Cat`.

- Add a `make_sound()` method for each.

- Test by calling the method on both objects.

9. Vehicle → Car (Method Overriding)

- Create a base class `Vehicle` with `brand` and `year`.

- Create a child class `Car` that adds `model`.

- Override a method `info()` in `Car`.

- Test `info()` for both classes.

10. BankAccount Class

- Create a class `BankAccount` with private `balance`.

- Add methods `deposit()`, `withdraw()`, and `get_balance()`.

- Ensure `withdraw()` does NOT allow negative balance.

- Test by attempting an invalid withdrawal.

TASK Instructions

We know these questions might seem easy — but they build the foundation you'll need for the advanced mini project coming next.

Submission

Inside your GitHub repo **django-gdg** (or the repo you created for the tasks):

- Create a new folder **Week-3**

- Add all your solutions inside it (in separate files)

After Submission

- Update the **progress sheet**

Deadline

Saturday – 6:00 PM (Local Time)
 Finish on time to earn **+3 coins**

Reminder

Some of you have not completed the **previous week tasks**.
Please finish those too **before the deadline**.