

## Week 7

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### **Personal Development Workouts**

1. Watch the movie “Coach Carter”

*Coach Carter is an inspiring sports drama based on the true story of Ken Carter, a high school basketball coach who prioritized discipline, education, and personal growth over athletic success. Ken Carter (played by Samuel L. Jackson) takes over as the head coach of the struggling Richmond High School basketball team. He implements strict rules, requiring players to sign contracts that mandate good grades, respectful behavior, and discipline both on and off the court. Initially, the team resists his methods, but they soon transform into a winning squad. However, when Carter discovers that several players are failing academically, he controversially locks the gym and cancels games, demanding that they improve their grades before playing again. This decision sparks outrage among parents, students, and the school board. Through determination and mentorship, Carter helps the team realize their potential beyond basketball. The film ends on a hopeful note, showing that some players go on to pursue higher education, proving that Carter's tough love approach made a lasting impact. Coach Carter is a powerful film about leadership, discipline, and the importance of education over short-term success.*

[audio](#)

### **Technical Workouts**

ORM

- Get

## Technical Workouts

- Filter
- Q object
- Annotate vs Aggregate
- Values and Values list
- F and FO object
- Managers
- Types of model inheritance in Django
- Meta class attributes
- Prefetch related and Select related
- Signals
- Raw method
- Cursor
- Redirect and Reverse lazy
- Aggregate functions
- Bulk create
- exclude()
- Month, year, weekday , day
- Contains, icontains
- Abstract user and abstract base user

Do the programs in python manage.py shell

*This week's technical workout involves deepening your understanding of Django's ORM and advanced querying techniques by practicing various tasks in the Django shell (python manage.py shell). You'll work with fundamental methods like get() and filter() to retrieve data, as well as explore the powerful Q object for building complex queries with logical conditions. You'll learn to use annotate() and aggregate() to perform calculations, and experiment with values() and values\_list() to retrieve specific fields. Other key areas include optimizing queries using select\_related() and prefetch\_related(), working with aggregate functions, and understanding model inheritance types like abstract user models. You'll also cover advanced features such as F and FO objects for complex queries, using bulk\_create() for efficient batch insertions, handling signals, and utilizing raw SQL methods for direct queries. Finally, you'll explore the redirect() and reverse\_lazy() functions, along with using Django's exclude(), and filtering based on specific date fields (month, year, weekday, day). This*

## Technical Workouts

*comprehensive exercise will solidify your skills in efficient data querying, performance optimization, and understanding Django's model system in practice.*

### ORM Practicals

## Miscellaneous Workouts

1. Practice typing for at least one hour each day on typing club, <http://typingclub.com/>. Finish as many chapters as possible as you can. Don't spend more than an hour each day.
2. Prepare a topic for the tech seminar. Record and upload it on youtube as an unlisted video. Topic eg: TCP/IP
3. Reflect on your week's learning experience. Were you satisfied with your progress? How do you plan performing in the upcoming review? What new concepts or skills did you learn, and how have they contributed to your growth? Reflect on your last review—what mistakes did you make, and how did you prepare to address them? Finally, what strategies or methods did you adopt differently this week?
4. Prepare your progress video for the last week. Record and upload it on youtube as an unlisted video.

*This week, I focused on improving my typing skills by practicing for at least one hour each day, as part of my goal to increase both speed and accuracy. I dedicated time to completing as many chapters as I could in Typing Club without exceeding the one-hour daily limit. Through consistent practice, I managed to reach Level 70 with an average WPM of 15, which is a significant improvement. I made sure to concentrate on accuracy while also pushing myself to type faster. The incremental challenge in each level helped me enhance my typing techniques and build muscle memory. I also paid attention to ergonomics to avoid strain and improve my endurance during the practice sessions. This approach not only boosted my typing speed but also made the process enjoyable and sustainable, ensuring I stay consistent without*

*overloading myself.*

### [Typing club](#)

*In this week I have discussed about the topic Object Oriented Programming.* Object-Oriented Programming (OOP) is a programming paradigm based on the concept of objects, which contain data (attributes) and behavior (methods). It has four key principles: Encapsulation, which restricts direct access to object data and ensures controlled modifications; Abstraction, which hides complex implementation details and exposes only the necessary functionality; Inheritance, which allows one class to inherit properties and behaviors from another, promoting code reuse; and Polymorphism, which enables a single function or method to work in different ways for different objects. These principles make OOP powerful by improving code organization, reusability, scalability, and maintainability, making it widely used in modern programming languages like Python, Java, and C++

### [Seminar video](#)

This week, I made significant progress in my learning journey by focusing on the ORM concepts. I have learned how to interact and communicate with the database through the django's built-in ORM. ORM is just that instead of communicating with the database using complex queries you can interact with the database using the Python code itself.

Additionally, I actively participated in all communication sessions, which greatly improved my interpersonal and professional communication abilities. These sessions taught me how to articulate my thoughts more clearly, listen actively, and convey ideas effectively in a team setting. The skills I gained here will undoubtedly be valuable for future collaborations and interviews.

To further enhance my productivity, I dedicated time to improving my typing speed and accuracy, achieving a significant milestone of level 60+ in Typing Club. This practice has not only made me faster at typing but also more efficient in completing tasks that require extended periods of keyboard usage.

Overall, this week has been incredibly productive, as I balanced technical learning, communication skill-building, and personal development to make steady progress toward my goals.

*This week, I made significant progress by combining technical learning and personal development. This week I have studies ORM ,Object relational mapping. This is how we interact with database in django , django has a django has a built in ORM of its own. These tasks deepened my understanding of backend development and database integration. On the personal front, I dedicated an hour each day to improving my typing skills on Typing Club, reaching Level 70 with an average WPM of 15. This consistent practice enhanced my speed and accuracy without feeling overwhelming. Overall, it was a productive week where I balanced hands-on technical work with personal growth, gaining both confidence and practical knowledge in my domain.*

[Progress video](#)