#### □ Updated saved memory

Awesome! Here's a structured roadmap to learn Python (basic to advanced) and then move into Django (basic to advanced) using PyCharm as your IDE.

## Phase 1: Python Basics (Start Here)

Goal: Build a strong Python foundation.

### 1. Python Setup in PyCharm

- Install PyCharm Community
- Create a new Python project and virtual environment.

#### 2. Core Topics

- Variables, Data Types (int, float, str, bool)
- Input/Output



- Loops (for, while)
- Functions
- Lists, Tuples, Sets, Dictionaries
- String Operations
- List Comprehensions

#### 3. Practice

• Solve 10–20 beginner problems on HackerRank or W3Schools

### Phase 2: Intermediate Python

Goal: Handle real-world logic and reusable code.

### 1. Core Topics

- File Handling (open, read, write)
- Frror Handling ( try | event )

# Modules and Packages

- Object-Oriented Programming (Classes, Objects, Inheritance)
- Lambda Functions, map(), filter(), reduce()
- Decorators
- Iterators and Generators

### 2. Practice Projects

- Build a calculator
- Create a contact book (save/load data from files)

### Phase 3: Advanced Python

Goal: Get comfortable with concepts used in web frameworks like Django.

#### 1. Advanced Topics

- Virtual environments ( venv )
- pip and requirements.txt
- Unit Testing (unittest, pytest)
- Regular Expressions
- Working with APIs ( requests )
- JSON, CSV
- SQLite with Python

### Phase 4: Django Basics

- 1. Django Setup • Install Django: pip install django

  - Create a project: django-admin startproject mysite
  - Run server: python manage.py runserver
  - Project vs App
  - URL Routing
  - Views and Templates
  - Models and Migrations
  - Admin Panel
- 3. Mini Project
  - Build a basic blog app

### Phase 5: Django Intermediate

Goal: Add more logic and structure to your app.

- 1. Topics
  - Class-Based Views
  - Forms (regular and ModelForm)
  - Static & Media Files
  - Authentication (Login/Logout/Register)
  - Django ORM queries
- 2. Mini Project
  - To-Do App with Login

# Phase 6: Django Advanced

Goal: Make your app production-ready.

- 1. Topics
  - Custom User Model
  - Signals
  - REST API with Django REST Framework
  - Pagination, Filtering, Search
  - Deployment (on PythonAnywhere or Kallway)
- 2. Final Project Ideas
  - Blog + Comments + Likes
  - Notes App with REST API
  - E-commerce mini project

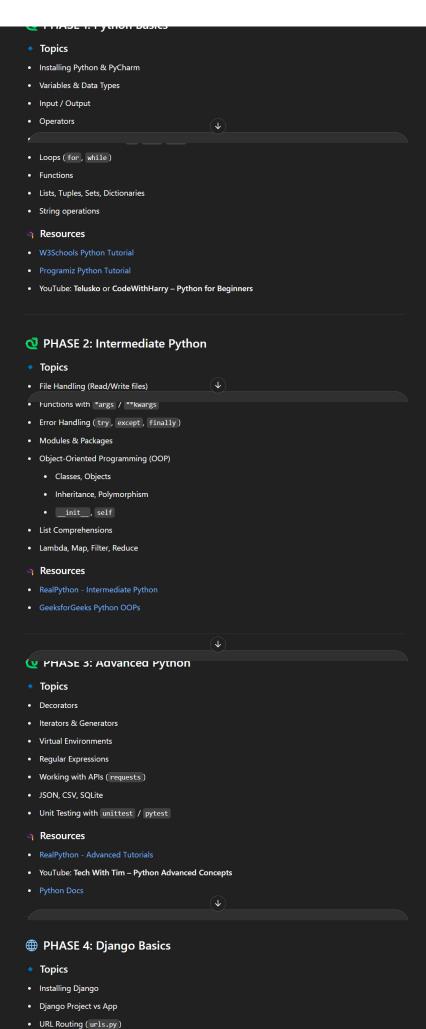
# ★ Bonus: PyCharm Tips

- Use the Python Console for quick testing.
- Explore debugger, code formatting, shortcuts.
- Enable Django support in PyCharm settings (Professional version has full support).

Would you like me to create a checklist, give you a wer  $\int_{-1}^{1} v \, plan,$  or recommend specific tutorials or YouTube pla<sup>-1</sup> · · · · · · · · ·

also give me roadmap of topics and resources

Perfect! Here's your complete Python + Django Development Roadmap along with resources for each topic, structured from Beginner to Advanced. It's ideal for self-paced learning using PyCharm.



- Views (Function-Based Views)
- Templates (HTML + Template Tags)
- Models, Migrations
- Admin Panel
- Static Files & Media

### Resources

- Django Official Tutorial
- MDN Django Tutorial

# PHASE 5: Django Intermediate

- Topics
- Class-Based Views
- Forms and ModelForms
- Authentication (Login, Logout, Register)
- Messages Framework
- Django ORM Deep Dive (filtering, querying)
- Custom Templates and Inheritance

### Resources

- SimpleIsBetterThanComplex Django Basics to A → nced
- Tourane. Denins Ivy Flojecis
- Django Docs CBV

# **##** PHASE 6: Django Advanced

- Topics
- Custom User Model
- Signals
- Permissions & Groups
- Pagination, Search & Filters
- Django REST Framework (DRF)
- API Endpoints, Serializers, ViewSets
- Deployment (Heroku, Railway, PythonAnywhere)

# Resources

- Django REST Framework Docs
- YouTube: BugBytes DRF Tutorial, Code With Stein
- Deploy Django to Railway

## Tools & Practice

# **PyCharm Tips**

- Use Code Snippets
- Learn PyCharm Shortcuts
- Use Debugger to step through code

### **Practice Platforms**

- LeetCode
- HackerRanl
- DjangoProject Practice Apps

# Suggested Weekly Plan (Optional)

