Python Developer Preparation Plan

5-Day Intensive Preparation Plan

Day 1: Core Python Refresher

- Morning: Revise Python basics (data types, loops, conditionals, and functions).

  - Practice: Solve 5-10 problems on strings, lists, and dictionaries from HackerRank or LeetCode.

- Afternoon: Focus on Object-Oriented Programming (OOP).

  - Key Topics: Classes, inheritance, polymorphism, and encapsulation.

- Evening: Practice file handling and exception handling.

Resources:

- Python Crash Course: https://realpython.com/python-first-steps/

Day 2: Framework Basics (Django or Flask)

- Morning: Set up a Django or Flask project.

  - Django: Create a basic app with models, views, and templates.

  - Flask: Create routes and templates for a simple web app.

- Afternoon: Build a RESTful API.

  - Add basic CRUD operations.

- Evening: Study authentication (JWT or session-based).

  - Practice integrating user authentication into your app.

Resources:

- Django REST Framework: https://www.django-rest-framework.org/

- Flask Tutorials by Corey Schafer: https://www.youtube.com/user/schafer5

Day 3: Databases and Git

- Morning:

  - SQL: Revise SELECT, INSERT, UPDATE, DELETE, and JOIN queries.

  - Practice creating database schemas and queries.

- Afternoon: Work with Django ORM or Flask + SQLAlchemy.

  - Integrate your app with PostgreSQL or MongoDB.

- Evening: Review Git basics: branch, commit, merge, and push.

  - Simulate a small Git workflow by creating branches and merging changes.

Resources:

- SQL Tutorial: https://mode.com/sql-tutorial/

- Pro Git Book: https://git-scm.com/book/en/v2

Day 4: API Development and Problem-Solving

- Morning: Build a complete RESTful API with user authentication.

  - Add features like error handling and validation.

- Afternoon: Debugging session. Practice fixing common Python/Django/Flask issues.

- Evening: Solve algorithm problems focusing on arrays, strings, and recursion.

Resources:

- Postman: https://www.postman.com/

- LeetCode Python Problems: https://leetcode.com/problemset/all/

Day 5: Mock Interview and Final Review

- Morning: Mock interview:

  - Solve one coding problem (e.g., from HackerRank).

- Answer technical questions on Python, Django/Flask, and databases.

- Afternoon: Review your projects:

  - Be prepared to explain architecture, challenges, and solutions.

- Evening: Final touch-ups:

  - Study Python design patterns and best practices.

Additional Tips:

- Prioritize topics based on the job description.

- Use breaks to watch short tutorials for clarity.

- Reach out for help with specific doubts or practice questions!