

Mock Techno MR Interview Script (Python / FastAPI)

Interviewer: Hi, can you introduce yourself?

You: "Hello, I'm [Your Name]. I've been working as a backend developer with a focus on Python and FastAPI. I have hands-on experience building REST APIs, JWT authentication, integrating databases using SQLAlchemy, and optimizing performance. I enjoy solving problems, writing clean code, and collaborating with teams to deliver scalable solutions."

Interviewer: What do you like most about FastAPI compared to other frameworks?

You: "FastAPI is fast, easy to use, and comes with automatic validation using Pydantic. It supports async, which makes it great for high-performance applications, and generates Swagger/OpenAPI docs automatically, which helps both developers and clients. Compared to Flask or Django, it's much faster to build production-ready APIs."

Interviewer: How would you implement JWT authentication in FastAPI?

You: "Step 1: Install `python-jose` and `passlib`."

Step 2: Create a login endpoint that validates username/password and generates a JWT token using a secret key.

Step 3: Store token in client (usually header).

Step 4: For protected routes, use a dependency that verifies the token and extracts the user info.

This way only authenticated users can access those routes."

Interviewer: How do you connect and use a database in FastAPI?

You: "I use SQLAlchemy with a database session. I configure `SessionLocal` in a `database.py` file and then create a dependency `get_db()` that yields the session. I inject it into my routes using `Depends`, so I can query or insert data safely. Finally, I close the session after use to avoid memory leaks."

Interviewer: Can you explain sync vs async in FastAPI with an example?

You: "Sync functions block the thread until the operation finishes, while async functions free the thread while waiting, which improves performance for I/O tasks."

Example: If I call an external API or run a DB query, async lets FastAPI serve other requests instead of waiting. But if it's CPU-bound, sync might be fine."

Interviewer: Tell me about a situation where you solved a big problem in your project.

You: "In one project, our API response time was very slow (4–5 seconds). I analyzed queries and found unoptimized joins. I added indexes, used query caching, and rewrote some queries. Response time dropped below 500 ms, and client satisfaction improved a lot."

Interviewer: What do you do if you have multiple deadlines at the same time?

You: "I prioritize based on impact and urgency, break tasks into smaller chunks, and communicate with the manager early if something needs extra support. I also try to automate or reuse code where possible to save time."

Interviewer: How do you handle conflict in your team?

You: "I try to understand both sides, keep discussions professional, and focus on project goals instead of personal opinions. If needed, I suggest a middle ground. If still unresolved, I escalate respectfully to the manager."

Interviewer: Why should we hire you?

You: "I bring strong Python and FastAPI expertise, real-world experience in JWT authentication and SQLAlchemy, and I focus on writing clean, scalable code. I also have good communication skills and can work well in a team, making sure we meet deadlines while keeping quality high."

Interviewer: Where do you see yourself in 3 years?

You: "In 3 years, I see myself as a senior backend developer or tech lead, contributing to architecture decisions, mentoring juniors, and building scalable backend systems."