

Candidate

[Redacted]

Position

Backend Engineer | [Redacted]

Interviewer credentials

Senior Software engineer at Microsoft

Interview date

29th September 2022, 8:00 PM IST

 [Open playback](#)

Total time spent

1 hour 12 minutes

Round name

Backend Engineer | [Redacted]

Interviewer's decision

 Yes

Candidate rating



DB Design
(Low-level Design)



Code design and LLD with 2+
modules
(Low-level Design)



Code extensibility
(Low-level Design)



API/event contracts
(Low-level Design)



Sync/Async communication
(Low-level Design)



Functionally correct solution
(Data Structure & Algorithms)



Python core fundamentals
(Python/Django)



Model, View and Template
Layer
(Python/Django)



Django forms
(Python/Django)



Development process, admin
and security
(Python/Django)



Django for web applications
(Python/Django)

Questions asked

Introduction:

1. 3 years of experience
2. Python/Django framework
3. Analytical Thinker
4. Giving Tech Talks or Blogs

Architecture of Django

Django URLs

Design BookMyShow with basic database design, modules, and code extensibility

1. The candidate went in the right direction to first collect the requirements.

1 Low-level Design

DB Design (9/10)

Ability to identify entities, knowledge of joins, able to give practical application of indexes, right understanding of when to use what kind of join

1. The candidate came up with different entities and explained mapping one-to-one, one-to-many and many-to-many mappings between them.
2. He was good at defining different fields which be part of the entities and did not need any hand-holding.
3. He also explained how he will handle race conditions when multiple users are trying to book the same seats. He used a cache layer for reserved seats with an expiry time to allow the user to do payment

Code design and LLD with 2+ modules (7/10)

Able to choose proper classes to design the module with some hand-holding

1. The candidate was able to explain about different classes and how will he come up with different members inside it.

Code extensibility (7/10)

Able to incorporate any enhancement or extension in the given problem with some hand holding

1. Asked him to do code extensibility for by adding more events like comedy shows, talks, etc. He came up with defining an event class and then extending it from there.

API/event contracts (8/10)

Able to take care of Different security threats for API. Able to identify correct need of API. Able to understand the details of right rest principles , correct use of HTTP verbs

1. The candidate defined different sets of APIs with proper HTTP verbs like GET, POST, PUT, input request, and output request.
2. Did not take care of security threats like adding user tokens in the call etc.

Sync/Async communication (8/10)

Able to divide work into sync/async communications

He explained the Notification part using async communications.

He used celery for background tasks and then defined notification messages which he will send in a queue-like architecture. He also talked about different microservices and distributed architecture.

2 Data Structure & Algorithms

Functionally correct solution (7/10)

Candidate is able solve problem and able to write working code which is optimised enough.

The candidate was able to give proper functionality and write code as well for it.

3 Python/Django

Python core fundamentals (8/10)

Good knowledge of Python core concepts and knows practical application of some of them after giving some hints

He explained different concepts of python.

Model, View and Template Layer (8/10)

Strong knowledge of model, view and template layer and knows practical application of most of them

He explained different layers in a very detailed manner. List down how Django

framework internally and explained each layer with proper examples.

Django forms (9/10)

Strong knowledge of Django forms and knows practical application of most of them

The candidate's current project involves working in Django forms and he has good experience in it.

Development process, admin and security (8/10)

Good exposure to the development process with good prior experience after giving some hints

1. The candidate has good experience in the development process. He has in total 3 years of experience and worked on different technologies and has also given tech talks.

Django for web applications (9/10)

Strong knowledge of web application concepts with Django with great prior experience

1. The candidate has good experience in web applications and explained it in detail.