

FAANG System Design Interview Structure

 সাধারণত সময়: 45–60 মিনিট

Interviewer তোমাকে কোনো random system দেবে না —
সে দেখতে চায় **তুমি কীভাবে ভাবো**।

Phase 1: Problem Understanding (5–7 min)

 এখানেই অনেক candidate fail করে।

তুমি কী করবে:

- Question clarify করবে
- Assumption confirm করবে

তুমি যেসব প্রশ্ন করবেই:

- User scale কত?
- Read vs write ratio?
- Latency requirement?
- Availability কতটা critical?

Sample sentence (মুখ্য রাখো):

“Before designing, I’d like to clarify the requirements and constraints.”

 FAANG signal:

- ✓ তুমি blindly design শুরু করো না
- ✓ তুমি real-world engineer

Phase 2: Functional & Non-Functional Requirements (5 min)

Functional:

- System কী কী করবে

Example:

- User message পাঠাতে পারবে
- Message read হবে

Non-functional:

- Scale
- Latency
- Availability
- Consistency

Example:

“We need to support 10 million DAU with <200ms latency.”

📌 FAANG signal:

- ✓ তুমি priority বোঝো
- ✓ তুমি scale-aware

● Phase 3: High-Level Architecture (10 min)

এখানে diagram king 🤴

তুমি কী আঁকবে:

- Client
- Load Balancer
- API Gateway
- Services
- DB
- Cache

📌 বলবে:

“At a high level, the system consists of...”

✖ Low-level detail এখন না

❖ FAANG signal:

✓ Big picture thinking

● Phase 4: Data Design (5–7 min)

তুমি explain করবে:

- Data model
- Tables / Collections
- Primary key
- Index

Example:

User(id, name)

Message(id, senderId, receiverId, timestamp)

❖ FAANG signal:

✓ Data-driven thinking

● Phase 5: Deep Dive (10–15 min)

Interviewer এখানেই চাপ দেয় 😊

Topics:

- Scaling strategy
- Caching
- Sharding
- Consistency
- Async processing

Example:

“To scale reads, we add Redis cache with read-through strategy.”



FAANG signal:

✓ তুমি grow handle করতে পারো



Phase 6: Bottlenecks & Failure Handling (5–7 min)

Interviewer জিজ্ঞেস করবে:

“What if this component goes down?”

তুমি বলবে:

- Replication
- Retry
- Circuit breaker
- Graceful degradation



FAANG signal:

✓ Production experience mindset



Phase 7: Trade-offs & Alternatives (5 min)

এটাই FAANG differentiator 💡

Example:

“We choose NoSQL here for scalability, but we lose strong consistency.”



FAANG signal:

✓ Mature engineering judgement



Interview Flow (Short Version)

- 1 Clarify requirements
- 2 Define constraints
- 3 High-level design
- 4 Data model
- 5 Scale & optimize

6 Failure handling

7 Trade-offs

Common FAANG Mistakes

-  Straight design শুরু
-  Assumption না বলা
-  Trade-off explain না করা
-  Diagram ছাড়া কথা

FAANG Golden Rule

“There is no perfect design, only well-justified decisions.”

Interviewer খুশি হয় যখন তুমি বলো:

- “At scale, this becomes a bottleneck...”
- “To optimize this, we can...”
- “The trade-off here is...”