



Kill Your Tech Interview

3877 Full-Stack, Coding & System Design Interview Questions

Answered To Get Your Next Six-Figure Job Offer

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35 Entity Framework Interview Questions (ANSWERED + .NET Core Updates) For 2020

Entity Framework 57



Currently, there are two latest versions of Entity Framework: EF 6 and EF Core. Follow along to refresh your knowledge around 35 most common Entity Framework Interview Questions and Answers every .NET developer may face on their tech interview.

Q1: What is Entity Framework?

Entry

Entity Framework 57

Answer

ADO.NET EF is an ORM (object-relational mapping) which creates a higher abstract object model over ADO.NET components. So rather than getting into dataset, datatables, command, and connection objects as shown in the below code, you work on higher level domain objects like customers, suppliers, etc.

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Source: codeproject.com

Q2: What is Code First approach in Entity Framework?

Junior

Entity Framework 57

Answer

In **Code First** approach we avoid working with the Visual Designer of Entity Framework. In other words the EDMX file is excluded from the solution. So you now have complete control over the context class as well as the entity classes.

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Source: codeproject.com

Q3: What is Conceptual Model?

Junior

Entity Framework 57

Answer

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Source: [a4academics.com](#)

Q4: What is Storage Model?

 Junior

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Answer

Storage Models are our database design models, which contains database tables, views, stored procs and keys with relationships.

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Source: [a4academics.com](#)

Q5: What is migration in Entity Framework?

 Junior

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Answer

Entity Framework introduced a migration tool that automatically updates the database schema when your model changes without losing any existing data or other database objects.

There are two kinds of Migration:

- Automated Migration
- Code-based Migration

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Source: [entityframeworktutorial.net](#)



27 Advanced Design Patterns Interview Questions For Senior Developers

 Design Patterns 45

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Q6: What is pluralize and singularize in the Entity

 Junior

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Answer

“Pluralize” and “Singularize” give meaningful naming conventions to objects. In simple words it says do you want to represent your objects with the below naming convention:

- One Customer record means “Customer” (singular).
- Lot of customer records means “Customer’s” (plural, watch the “s”)

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Source: codeproject.com

Q7: What is the purpose of a DBContext class?

Junior

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Answer

You can think of `DbContext` as the database connection and a set of tables, and `DbSet` as a representation of the tables themselves. The `DbContext` allows you to link your model properties (presumably using the Entity Framework) to your database with a connection string.

Later, when you wish to refer to a database in your controller to handle data, you reference the `DbContext`.

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Source: stackoverflow.com

Q8: Can you explain lazy loading in a detailed manner?

Mid

Entity Framework 57

Answer

Lazy loading is a concept where we load objects on demand rather than loading everything in one go. Consider a situation where you have 1 to many relationships between the Customer and Address objects. Now let's say you are browsing the customer data but you do not want address data to be loaded at that moment. But the time you start accessing the address object you would like to load address data from the database.

Entity Framework has lazy loading behavior by default enabled. For instance, consider the below code. When we are doing a foreach on the Customer object, the Address object is not loaded. But the time you start doing foreach on the address collection, the Address object is loaded from SQL Server by firing SQL queries.



```
MyEntities context = new MyEntities();

var Customers = context.Customers.ToList();

foreach (Customer cust in Customers) // In this line no address object loaded
{
    foreach (Address add in cust.Addresses) {} // Address object is loaded here
}
```

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Source: [codeproject.com](#)



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Q9: Explain Lazy loading, Eager Loading, and Explicit Loading?



[Entity Framework 57](#)

Answer

- Lazy Loading:** It is a process to delay the loading of related objects until it is required.
- Eager Loading:** It occurs when you query for an object and all of the related objects are also returned. In eager loading, related objects are loaded automatically with its parent object
- Explicit Loading:** Explicitly loading takes place when you have disabled Lazy loading, and you still want to lazy loading. For this, we have to call the load method on the related entities.



27 Objective-C Interview Questions (ANSWERED) Every iOS Developer Should Know

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iOS 36

Q10: Explain how you can load related entities in EF?

Mid

Entity Framework 57

Answer

You can load related entities or data in EF in three ways

- Eager Loading
- Lazy Loading
- Explicit Loading

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Source: career.guru99.com

Q11: How can we handle concurrency in Entity Framework?

Mid

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Answer

In EF, concurrency issue is resolved by using optimistic locking. To implement optimistic locking, right click on the EDMX designer and set the concurrency mode to Fixed. Now whenever we have concurrency issues you should get an `OptimisticConcurrencyException` error.

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Source: codeproject.com

Q12: What are POCO classes in Entity Framework?

Mid

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POCO means Plain Old C# Object. When EDMX creates classes, they are cluttered with a lot of entity tags. Many times we would like to use simple .NET classes and integrate them with Entity Framework.

Entity Framework allows this. In other words you can create a simple .NET class and use the entity context object to load your simple .NET classes.

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Source: codeproject.com

Q13: What are the advantages and disadvantages of Database First Approach?

Mid

 Entity Framework 57

Answer

Advantages:

- Easy to create entity models if there is an existing database.
- Preferred approach for data intensive applications.

Disadvantages:

- Once we create a edmx file from an existing database, huge pile of code is generated.
- If we want to add the additional functionality to the models generated, we need to extend the models.

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Source: a4academics.com



Top 34 C# Coding Interview Questions (SOLVED) To Crack Your Tech Interview

 C# 115

 Fibonacci Series 14

 Linked Lists 43

Q14: What are the advantages of Model First Approach?

Mid

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Answer

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Source: a4academics.com

Q15: What are the advantages/disadvantages of Code First Approach?

Mid

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Answer

Advantages:

- Based on business objects we can decide the database structure.
- We can decide which classes need to be serialized and can specify the collection to eager load.
- Good for smaller applications.

Disadvantages:

- All database related stuffs should be included in the code.
- For Stored Procs, we need to use the Fluent APIs to write it in code.
- Not good for data intensive applications.

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Source: a4academics.com

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Q16: What are the components of Entity Framework Architecture?

Mid

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Answer

Below are the components of Entity Framework:

- Entity Data Model (EDM)
- LINQ to Entities
- Entity SQL
- Object Service
- Entity Client Data Provider
- ADO.NET Data Provider

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Source: stackoverflow.com

Q17: What is EF Data Access Architecture?

Mid

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Answer

The ADO.NET Framework supports two models of Data Access Architecture:

- Connection Oriented
- Disconnected

EF uses the Disconnected model (doesn't leave a connection open). Since you work with data and make desired changes and then you perform the `SaveChanges`. In N-tier applications a context either produces entities or saves entities, not both. It produces entities that get serialized and the context is disposed. Entities that return from the client application are deserialized and re-attached to new context instance that saves their changes.

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Source: stackoverflow.com

Q18: What is Optimistic locking?

Mid

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Answer

Optimistic Locking is a strategy where you read a record, take note of a version number (other methods to do this involve dates, timestamps or checksums/hashes) and check that the version hasn't changed before you write the record back. When you write the record back you filter the update on the version to make sure it's atomic. (i.e. hasn't been updated between when you check the version and write the record to the disk) and update the version in one hit.

If the record is dirty (i.e. different version to yours) you abort the transaction and the user can re-start it.

This strategy is most applicable to high-volume systems and three-tier architectures where you do not necessarily maintain a connection to the database for your session. In this situation the client cannot actually maintain database locks as the connections are taken from a pool and you may not be using the same connection from one access to the next.

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Source: stackoverflow.com

Q19: What is eager loading?

Mid

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Answer

The opposite of lazy loading is **eager loading**. In eager loading we load the objects beforehand. So the first thing is we need to disable lazy loading by setting LazyLoadingEnabled to false.

```
context.ContextOptions.LazyLoadingEnabled = false;
```

Now we have to explicitly tell EF what objects we want to load by using the include function. Below is a simple sample code where we tell EF to load customer as well as address objects by using the include function.

Now the customer object and the related address objects will be loaded in one query rather than multiple queries.

```
var employees = context.Customers.Include("Addresses").Take(5);
```

Q20: Can you explain CSDL, SSDL and MSL sections in an EDMX file?

Senior

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Answer

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Q21: Could you explain pessimistic locking?

Senior

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Answer

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Q22: What are T4 templates?

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Answer

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Q23: What is faster - ADO.NET or ADO.NET Entity Framework?

Senior

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Answer

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Q24: What is the difference between ObjectContext and DbContext?

Senior

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Answer

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BETWEEN TDD, CODE FIRST, and

simple EF approach?

Answer

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Q26: What's the difference between LINQ to SQL and Entity Framework?

Senior

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Answer

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Q27: When would you use EF6 vs EF Core?

Senior

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Answer

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Q29: Can I use Entity Framework 6 (not core) in .Net Core?

Expert

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Answer

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Next Coding Interview



Q30: How can we do pessimistic locking in Entity Framework?

Expert

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Answer

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Q31: How do I view the SQL generated by the Entity Framework?

Expert

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Answer

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Q32: What are the advantages and disadvantages of creating a global entities context for the application (i.e. one static instance)?

Expert

Entity Framework 57

Answer



Q33: What difference does `.AsNoTracking()` make?

Expert

Entity Framework 57

Answer

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Q34: What is the difference between Automatic Migration vs Code-base Migration?

Expert

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Answer

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Q35: When would you use `SaveChanges(false)` + `AcceptAllChanges()`?

Expert

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50+ Mobile Developer Interview Questions (ANSWERED) to Know in 2021

Android 113



Mobile app developers are responsible for developing the applications both on Android and iOS and using all sort of tech including PWA, React Native, Ionic, Xamarin and etc. iOS developers can expect to earn, on average, over \$113,000, with some jobs...

27 Objective-C Interview Questions (ANSWERED) Every iOS Developer Should Know

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Objective-C is a nice middle ground that gets close to the performance of compiled languages (like C++) while still maintaining some dynamism that you find in interpreted languages (like JavaScript or Ruby). There is still some Objective-C development...



37 Advanced iOS Developer Interview Questions (SOLVED and EXPLAINED)

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The average iOS Developer salary in Australia is \$120,000 per year or \$61.54 per hour. Entry level positions start at \$66,250 per year while most experienced workers make up to \$162,900 per year. Follow along and check 37 most common iOS/Swif...



27 Advanced Swift Interview Questions (SOLVED) iOS Developers Must Know

iOS devices makeup over 50% of the Australian mobile operating system market, and capture around the same market share in the US. And Swift as a skill and iOS Developer roles are intrinsically intertwined and according to ZipRecruiter, the average iO...

Swift 72



21 Kubernetes Interview Questions (ANSWERED) For Senior and DevOps Developers

Kubernetes has become the go-to orchestration platform since it was launched

using Kubernetes. Foll...

 Kubernetes 27

29 Advanced MySQL Interview Questions Developers Must Know Before Tech Interview

MySQL has emerged as the most popular SQL-based RDBMS in 2019 with almost 40% of users opting for this platform. It is widely used as a stand-alone database solution as well as in combination with other solutions such as MongoDB and PostgreSQL. If yo...

 MySQL 55

27 Binary Tree Interview Questions (SOLVED with CODE) Devs Must Know

Amongst different types of data structures are binary trees that come with more uses than most of the other types. The reason that binary trees are used more often than n-ary trees (for example in searching) is that n-ary trees are more complex, but ...

 Binary Tree 26

32 Advanced Data Structures Interview Questions (ANSWERED) To Smash Your Next Programming Interview

Most interviews these days are whiteboard interviews demonstrating your knowledge of DSA. Unless you're interviewing for a top company, you can expect the questions to be fairly standard. The reason why questions about Data Structures are asked, has ...

 Data Structures 61

40 Coding Challenges (SOLVED with CODE) To Kill Your Next Coding Interview



between $O(n \log n)$ and $O(n^2)$, that you do understand when different data structures are approp...

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15 Hashing Interview Questions (EXPLAINED) To Check Before Next Coding Interview

Hashing is the practice of using an algorithm (or hash function) to map data of any size to a fixed length. This is called a hash value (or sometimes hash code or hash sums or even a hash digest if you're feeling fancy). In hashing, keys are converted...

 **Hash Tables** 31

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