

What does Query Projection mean in Entity Framework?

Asked 8 years ago Active 8 months ago Viewed 9k times



24



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I am looking at some EF examples and trying to decipher what 'Query Projection' *exactly* equates to when doing LINQ to Entities or EntitySQL. I believe it is when the query results are filtered and projected into an anonymous type but not 100% sure.

Can someone please define this and maybe provide a small L2E query that uses an example of it?

entity-framework

edited Oct 18 '19 at 14:04



pb2q

51.2k ● 16 ● 128 ● 135

asked Jun 1 '12 at 21:35



atconway

17.5k ● 21 ● 131 ● 205

1 Answer

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Projection is when the result of a query is output to a different type than the one queried. [Another article](#) defined it as : *the process of transforming the results of a query*

Projection can be to an anonymous type, but could also be to a concrete type. If you come from a SQL world, it is akin to the columns listed in your `SELECT` clause.

Example selecting a sub-set of an object into an concrete type:

```
ParentObj.Select(x=> new ParentSlim { ParentID = x.ParentID, Name = x.Name } );
```



Example merging to object into a 3rd anonymous type:

Note: the `select new` portion is the projection.

```
from P in ParentObj.AsQueryable()
join C in ChildObj.AsQueryable() on P.ParentID == C.ParentID
```

```
select new {  
    ParentID = P.ParentID,  
    Name      = P.Name,  
    SubName   = C.Name  
    RandomDate = DateTime.UtcNow()  
}
```

// <-- Look ma, i'm projecting!

edited Jun 1 '12 at 22:07

answered Jun 1 '12 at 21:43

**EBarr**

11.1k ● 7 ● 55 ● 80

Agreed, I enjoy that guys writing. – [EBarr](#) Jun 2 '12 at 13:35

@EBarr: Query projection can improve indexing on sql server? how? – [Amir](#) Jan 15 '16 at 22:07

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- 2 @Amir - where did I say that? I do see how it could result in faster executions under certain circumstances. If, however, you have distinct question it's best to post a question and allow people to fully respond. – [EBarr](#) Jan 16 '16 at 8:15
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