

# LINQ with the Entity Framework

# Entity Framework

Object Relational Mapper (ORM)

Create a DbContext object

Create entity classes to map to each  
table

Use LINQ to query database

```
List<Product> list;

using (AdvWorksDbContext db = new()) {
    var query = (from row in db.Products
                  select row);

    list = query.ToList();

    foreach (Product prod in list) {
        Console.WriteLine(prod.Name);
    }

    Console.WriteLine(
        EntityFrameworkQueryableExtensions
            .ToQueryString(query));
}
```

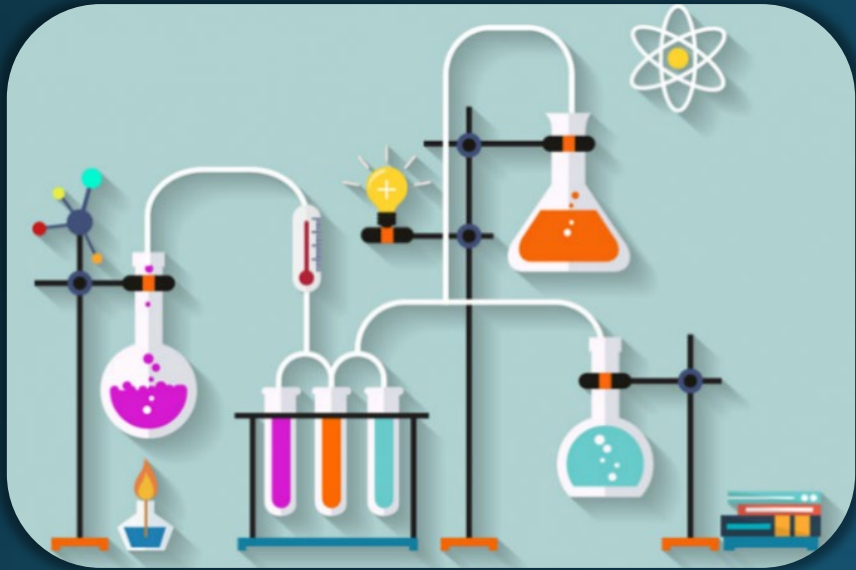
- ◀ Declare a list of product objects
- ◀ Create instance of DbContext
- ◀ Use LINQ to query Products table
- ◀ Convert to a List<Product>
- ◀ Use property name to retrieve a specific value
- ◀ Display SQL query sent to database

# EF Links

- Supported/Unsupported
  - <https://docs.microsoft.com/en-us/dotnet/framework/data/adonet/ef/language-reference/supported-and-unsupported-linq-methods-linq-to-entities>
- Optimizing EF
  - <https://docs.microsoft.com/en-us/ef/core/performance/efficient-querying?source=recommendations>



- Get All Rows
- Use a Where Clause
- Get a Single Row
- Use an OrderBy Clause
- Use Aggregate Functions



# Entity Framework Lab