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Add or Remove Multiple Entities in Entity Framework

Entity Framework 6 introduced methods to add and remove a collection of entities in one go. The `DbSet.AddRange()` method attaches a collection of entities to the context with Added state, which will execute the INSERT command in the database for all entities on `SaveChanges()`. In the same way, the `DbSet.RemoveRange()` method attaches a collection of entities with Deleted state, which in turn will execute the DELETE command for all entities on `SaveChanges()`.

Adding or removing entities using the `AddRange` and `RemoveRange` methods improves the performance. It is recommended to use these methods if you want to insert or delete large number of records from the database using Entity Framework.

The following example demonstrates saving multiple entities.

```
IList<Student> newStudents = new List<Student>() {  
    new Student() { StudentName = "Steve" };  
    new Student() { StudentName = "Bill" };  
    new Student() { StudentName = "James" };  
};  
  
using (var context = new SchoolDBEntities())  
{  
    context.Students.AddRange(newStudents);  
    context.SaveChanges();  
}
```

The following example demonstrates removing multiple entities.

```
IList<Student> studentsToRemove = new List<Student>() {  
    new Student() { StudentId = 1, StudentName = "Steve" };  
    new Student() { StudentId = 2, StudentName = "Bill" };  
    new Student() { StudentId = 3, StudentName = "James" };  
};  
  
using (var context = new SchoolDBEntities())  
{  
    context.Students.RemoveRange(studentsToRemove);  
    context.SaveChanges();  
}
```

Note: EF Core improves the performance of `AddRange` and `RemoveRange` methods by executing the INSERT and DELETE commands for all entities in a single database round trip.

[!\[\]\(a870788d6ed9b8fd294b7654a8c8526b_img.jpg\) Download EF 6 DB-First Demo Project from Github](#)

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