Automapper

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Automapper, à quoi ça sert ?

```csharp
public class TodoItem
{
  [Key]
  [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
  public int Id { get; set; }

  [StringLength(30)]
  public string Title { get; set;
}
```

ViewModel

```csharp
namespace Todo.Web.ViewModels.Home
{
  public class Delete
  {
      public int Id { get; set; }
      public string Title { get; set; }
  }
}
```

MAP

Contrôleur

```csharp
public virtual ActionResult Delete(int todoItemId)
{
  var todoItem = _todoItemRepository.GetById(todoItemId);
  if (todoItem != null)
  {
      var todoItemViewModel = new ViewModels.Home.Delete()
      {
          Id = todoItem.Id,
          Title = todoItem.Title
      };
      return View(todoItemViewModel);
  }
  return HttpNotFound();
}
```

Sans Automapper

Avec Automapper

```csharp
var todoItemViewModel = Mapper.Map<ViewModels.Home.Delete>(todoItem);
```

Installation d'Automapper

AutoMapper
A convention-based object-object mapper

https://gist.github.com/ymazieres/74dd4746ce4813494ba9

▲ 📁 Mappers
  ▷ 🔒 C# AutoMapperConfiguration.cs
  ▷ 🔒 C# EntityToViewModelMappingProfile.cs
  ▷ 🔒 C# MappingExpressionExtensions.cs
  ▷ 🔒 C# ViewModelToEntityMappingProfile.cs

Ajouter l'instruction AutoMapperConfiguration.Configure()

Global.asax.cs

```csharp
public class MvcApplication : System.W
{
    protected void Application_Start()
    {
        AreaRegistration.RegisterAllAreas();
        RouteConfig.RegisterRoutes(RouteTable.Routes);
        Database.SetInitializer(new DatabaseInitializer());
        AutoMapperConfiguration.Configure();
        ...
```

Tests unitaires

```csharp
[TestInitialize]
public void test_initialize()
{
    AutoMapperConfiguration.Configure();
    ...
```

Exemple de mappage

```
public class TodoItem
{
  [Key]
  [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
  public int Id { get; set; }

  [StringLength(30)]
  public string Title { get; set;
}
```

Model

```
namespace Todo.Web.ViewModels.Home
{
  public class Delete
  {
    public int Id { get; set; }
    public string Title { get; set; }
  }
}
```

ViewModel

MAP

Mappage dans **get delete** de **HomeController**

Sans Automapper

```
var todoItemViewModel = new ViewModels.Home.Delete()
    {
        Id = todoItem.Id,
        Title = todoItem.Title
    };
```

Avec Automapper

Configuration

Source   Destination

```
Mapper.CreateMap<TodoItem, ViewModels.Home.Delete>();
```

Configuration dans
EntityToViewModelMappingProfile.cs

Utilisation

Destination   Source

```
var todoItemViewModel = Mapper.Map<ViewModels.Home.Delete>(todoItem);
```

Exemple de mappage

```
namespace Todo.Web.ViewModels.Home
{

  public class Create
  {

      [StringLength(30)]
      [DisplayName("Tâche")]
      [Required(ErrorMessage = "Requis")]
      public string Title { get; set; }

  }
}
```

MAP

Model

```
public class TodoItem
{
  [Key]
  [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
  public int Id { get; set; }


  [StringLength(30)]
  public string Title { get; set;
}
```

Mappage dans **post create** de **HomeController**

Sans Automapper

```
var todoItem = new TodoItem()
{

    Title = viewModel.Title

};
```

Avec Automapper

Configuration

```
Mapper.CreateMap<ViewModels.Home.Create, TodoItem>()
      .ForMember(dest => dest.Id, opt => opt.Ignore());
```

Configuration dans
ViewModelToEntityMappingProfile.cs

Utilisation

```
var todoItem = Mapper.Map<TodoItem>(viewModel);
```

Exemple de mappage

```csharp
public class TodoItem
{
  [Key]
  [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
  public int Id { get; set; }

  [StringLength(30)]
  public string Title { get; set;
}
```

MAP

```csharp
namespace Todo.Web.ViewModels.Home
{
  public class Index
  {
      public int Id { get; set; }
      public string Title { get; set; }
  }
}
```

Mappage dans **get Index** de **HomeController**

Sans Automapper

```csharp
var indexViewModels = todoItems.Select(i => new ViewModels.Home.Index()
            {
                Id = i.Id,
                Title = i.Title
            });
```

Avec Automapper

Configuration

```csharp
Mapper.CreateMap<TodoItem, ViewModels.Home.Index>();
```

Configuration dans
ViewModelToEntityMappingProfile.cs

Utilisation

```csharp
var indexViewModels = Mapper.Map<IEnumerable<ViewModels.Home.Index>>(todoItems);
```