Automapper

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Automapper, à quoi ça sert ?

Model

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

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

MAP

```csharp
public class TodoItemDeleteViewModel
  {
      public int Id { get; set; }
      public string Title { get; set; }
  }
```

Contrôleur

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

Sans Automapper

```csharp
var todoItemViewModel = Mapper.Map<TodoItemDeleteViewModel>(todoItem);
```

Avec Automapper

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

Dans le projet web, ajouter les 4 classes suivantes dans un dossier nommé Mappers

Ajouter l'instruction AutoMapperConfiguration.Configure()

Global.asax.cs

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

Tests unitaires

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

Exemple de mappage

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

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

Model

ViewModel

MAP

```csharp
public class  TodoItemDeleteViewModel
  {
      public int Id { get; set; }
      public string Title { get; set; }
  }
```

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

Sans Automapper

```csharp
var todoItemDeleteViewModel = new TodoItemDeleteViewModel()
    {
       Id = todoItem.Id,
       Title = todoItem.Title
    };
```

Avec Automapper

Configuration

Source

Destination

Configuration dans
EntityToViewModelMappingProfile.cs

```csharp
Mapper.CreateMap<TodoItem, TodoItemDeleteViewModel>();
```

Utilisation

Destination

Source

```csharp
var todoItemDeleteViewModel = Mapper.Map<TodoItemDeleteViewModel>(todoItem);
```

Exemple de mappage

ViewModel

```csharp
public class TodoItemCreateViewModel
{

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

}
```

MAP

Model

```csharp
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

```csharp
var todoItem = new TodoItem()
{

    Title = viewModel.Title

};
```

Avec Automapper

Configuration

```csharp
Mapper.CreateMap<TodoItemCreateViewModel, TodoItem>()
    .ForMember(dest => dest.Id, opt => opt.Ignore());
```

Configuration dans
ViewModelToEntityMappingProfile.cs

Utilisation

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

Exemple de mappage

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

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

MAP

```
public class TodoItemIndexViewModel
  {
      public int Id { get; set; }
      public string Title { get; set; }
  }
```

Mappage d'une liste (exemple **get Index** de **HomeController)**

Sans Automapper

```
var indexViewModels = todoItems.Select(i => new TodoItemIndexViewModel()
            {
               Id = i.Id,
               Title = i.Title
            });
```

Avec Automapper

Configuration

```
Mapper.CreateMap<TodoItem, TodoItemIndexViewModel>();
```

Configuration dans
ViewModelToEntityMappingProfile.cs

Utilisation

```
var indexViewModels = Mapper.Map<IEnumerable< TodoItemIndexViewModel>>(todoItems);
```