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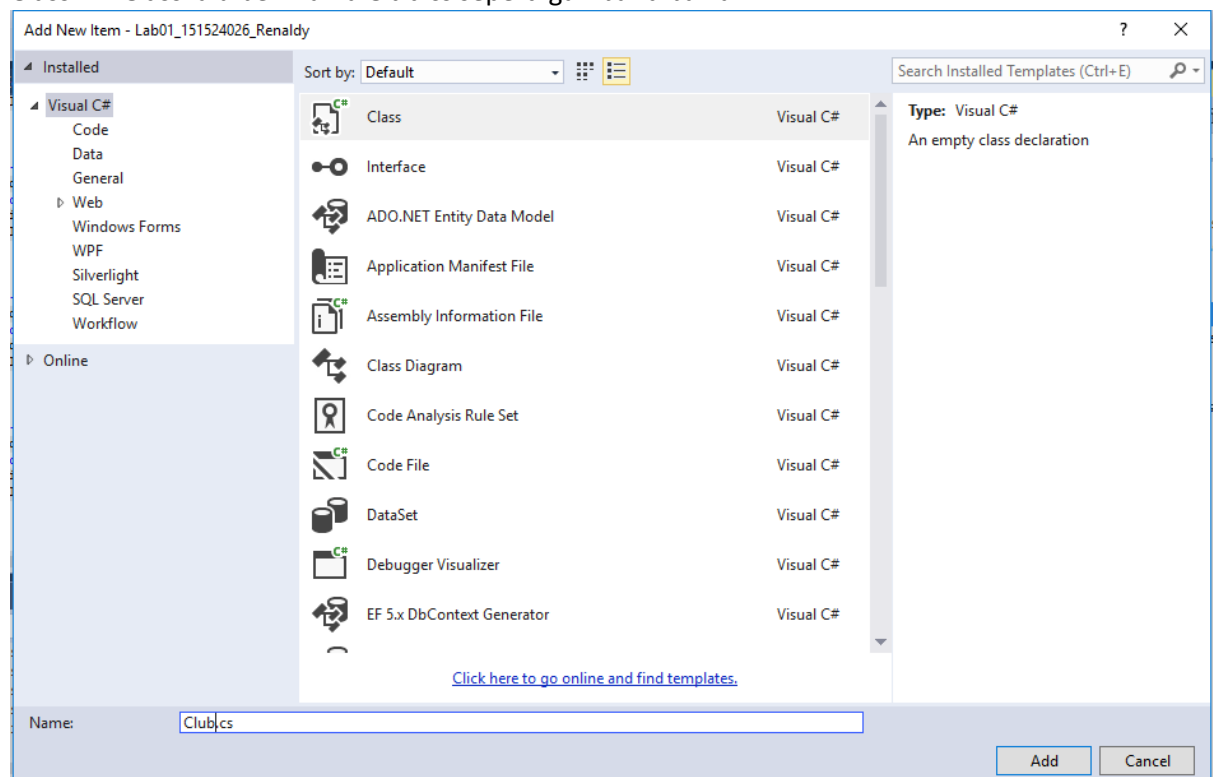
Tugas : PLOO - Lab02

## RELATIONSHIP ONE TO MANY - ENTITY FRAMEWORK ASP.NET MVC

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Langkah – Langkah Pembuatan :

1. Gunakan project yang sebelumnya dibuat.
2. Setelah itu buat class **Club.cs** dengan cara klik kanan pada folder **Model** pilih menu **Add > Class... > Class** lalu beri nama **Club.cs** seperti gambar dibawah :



Berikut source code dari class ini :

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Web;

namespace Lab01_151524026_Renaldy.Models
{
    [Table("Club")] //nama table
    public class Club
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int ClubId { get; set; }
    }
}
```

```

        [Required]
        [Display(Name = "Club Name")]
        [StringLength(255)]
        public string ClubName { get; set; }

        [StringLength(255)]
        public string Location { get; set; }

        [StringLength(225)]
        public string Motto { get; set; }

        [Required]
        [Display(Name = "Established Date")]
        [DataType(DataType.Date)]
        [DisplayFormat(DataFormatString = "{0:yyyy-MM-dd}",
            ApplyFormatInEditMode = true)]
        public DateTime EstablishedDate { get; set; }
    }
}

```

3. Lalu tambahkan code: `public virtual DbSet<Club> Club { get; set; }` agar model club bisa terhubung dengan member.

```

namespace Lab01_151524026_Renaldy.Models
{
    using System;
    using System.Data.Entity;
    using System.ComponentModel.DataAnnotations.Schema;
    using System.Linq;
    public class MemberModel : DbContext
    {
        public MemberModel()
            : base("name=db_lab01") // nama connection string
        {
        }

        // Add a DbSet for each entity type that you want to include
        // in your model. For more information
        // on configuring and using a Code First model, see
        // http://go.microsoft.com/fwlink/?LinkId=390109.

        public virtual DbSet<Member> Member { get; set; }
        public virtual DbSet<Club> Club { get; set; }
    }
}

```

4. Setelah itu buat class controller **ClubsController** dengan cara klik kanan pada folder Controllers pilih menu **Add > Controller... > MVC 5 Controller with views, using Entity Framework** lalu akan tampil seperti gambar di bawah dan sesuaikan, lalu beri nama controller dengan nama **ClubsController**

Add Controller

Model class: Club (Lab01\_151524026\_Renaldy.Models)

Data context class: MemberModel (Lab01\_151524026\_Renaldy.Models) +

☐ Use async controller actions

Views:

☐ Generate views

☒ Reference script libraries

☒ Use a layout page:

(Leave empty if it is set in a Razor \_viewstart file)

Controller name: ClubsController

Add Cancel

5. Setelah itu buka file **Member.cs** pada folder **Models**, lalu tambah source code berikut dibawah field telephone :

```
//Foreign key
[Display(Name = "Club Name")]
public int ClubId { get; set; }
public virtual Club Club { get; set; }
```

```
[StringLength(255)]
public string LastName { get; set; }

[Display(Name = "Date of Birth")]
[DataType(DataType.Date)]
[DisplayFormat(DataFormatString = "{0:yyyy-MM-dd}", ApplyFormatInEditMode = true)]
public DateTime DateOfBirth { get; set; }

public Nullable<int> Height { get; set; }

public Nullable<int> Weight { get; set; }

[Required]
[StringLength(20)]
public string Email { get; set; }

[Display(Name = "Telephone")]
[StringLength(12)]
public string Phone { get; set; }

//Foreign Key
[Display(Name = "Club Name")]
public int ClubId { get; set; }
public virtual Club Club { get; set; }
}
```

Setelah itu Rebuild project (Rebuild Lab01\_151524026\_Renaldy).

6. Setelah itu, buka **Package Manager Console** pada menu **Tools > NuGet Package Manager > Package Manager Console**

Ketik **Add-Migration** lalu masukan nama migrationnya dan akan menghasilkan file baru pada folder Migrations.

```
PM> Add-Migration
endlet Add-Migration at command pipeline position 1
Supply values for the following parameters:
Name: migration-onetomany-club
Scaffolding migration 'migration-onetomany-club'.
The Designer Code for this migration file includes a snapshot of your current Code First model. This snapshot is used to calculate the changes to your model when you scaffold the next migration. If you make additional changes to your model that you want to include in this migration, then you can re-scaffold it by running 'Add-Migration migration-onetomany-club' again.
```

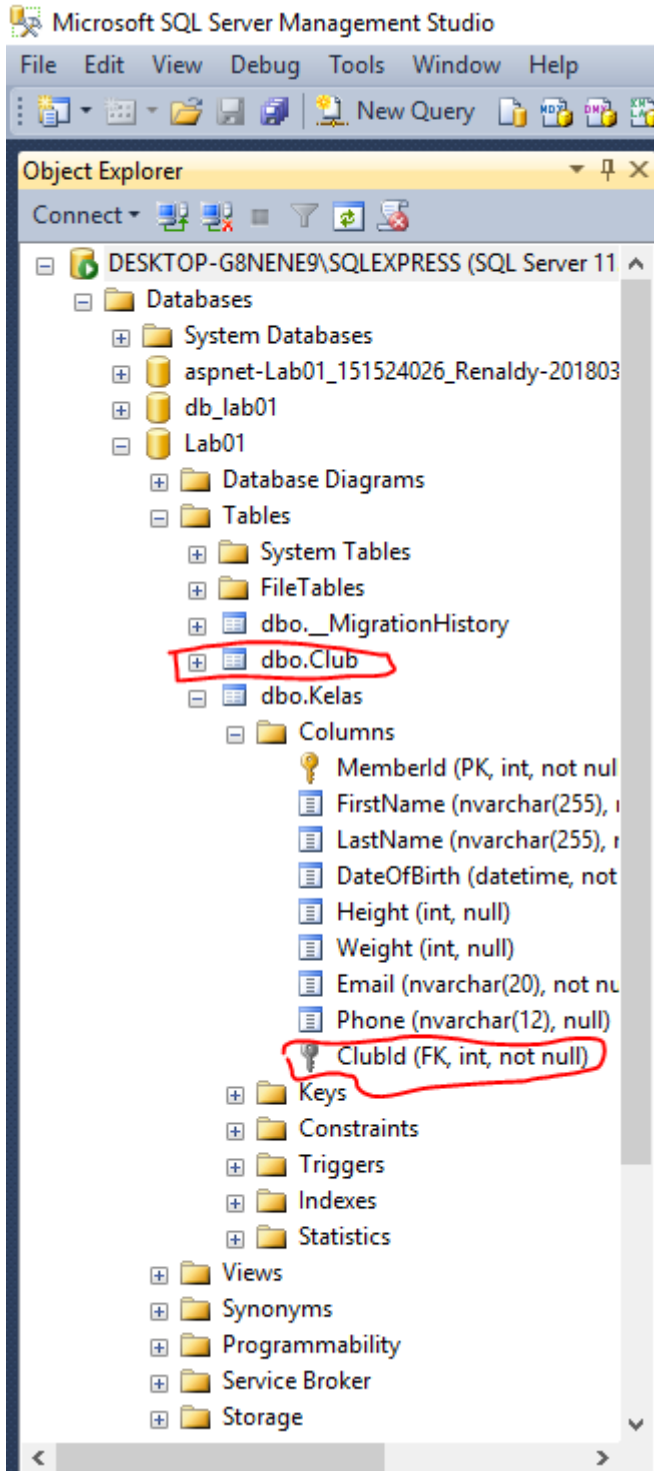
Setelah itu ketik kembali perintah **Update-Database** untuk mengubah struktur pada database. (Pastikan data yang berkaitan sedang dalam keadaan kosong agar menghindari conflict \*data pada table club dan member harus kosong)

```

PM> update-database
Specify the '-Verbose' flag to view the SQL statements being applied to the target database.
Applying explicit migrations: [201803220700358_migration-onetomany-club].
Applying explicit migration: 201803220700358_migration-onetomany-club.
Running Seed method.
PM>

```

7. Jika berhasil maka pada database akan terupdate seperti gambar di bawah ini:



8. Tambahkan perubahan yang diperlukan dalam method **Create** di **MemberController** seperti berikut :

```

MemberModel.cs Edit.cshtml Details.cshtml Create.cshtml MembersController.cs Member.cs
Lab01_151524026_Renaldy Lab01_151524026_Renaldy.Controllers.MembersC Create()

    if (id == null)
    {
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
    }
    Member member = db.Member.Find(id);
    if (member == null)
    {
        return HttpNotFound();
    }
    return View(member);
}

// GET: Members/Create
public ActionResult Create()
{
    ViewBag.ListClub = new SelectList(db.Club, "ClubId", "ClubName");
    return View();
}

```

9. Tambahkan parameter **ClubId** pada Method post **Create** seperti berikut :

```

MemberModel.cs Edit.cshtml Details.cshtml Create.cshtml MembersController.cs Member.cs
Lab01_151524026_Renaldy Lab01_151524026_Renaldy.Controllers.MembersC Create(Member member)

    }
    return View(member);
}

// GET: Members/Create
public ActionResult Create()
{
    ViewBag.ListClub = new SelectList(db.Club, "ClubId", "ClubName");
    return View();
}

// POST: Members/Create
// To protect from overposting attacks, please enable the specific properties you want to bind to, for
// more details see http://go.microsoft.com/fwlink/?LinkId=317598.
[HttpPost]
[ValidateAntiForgeryToken]
public ActionResult Create([Bind(Include = "MemberId,FirstName,LastName,DateOfBirth,Height,Weight,Email,Phone,ClubId")] Member member)
{
    if (ModelState.IsValid)
    {
        db.Member.Add(member);
        db.SaveChanges();
        return RedirectToAction("Index");
    }

    return View(member);
}

```

10. Selanjutnya tambahkan source dibawah pada file **Views/Member/Create.cshtml** :

```

<div class="form-group">
    @Html.LabelFor(model => model.ClubId, htmlAttributes: new
    { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.DropDownListFor(model => model.ClubId, new
        SelectList(ViewBag.ListClub, "Value", "Text"), new { @class = "form-
        control" })
        @Html.ValidationMessageFor(model => model.ClubId, "",
        new { @class = "text-danger" })
    </div>
</div>

```

Letakan di bawah element html LastName seperti berikut :

```

MemberModel.cs Edit.cshtml Details.cshtml Create.cshtml MembersController.cs Member.cs
<hr />
@Html.ValidationSummary(true, "", new { @class = "text-danger" })
<div class="form-group">
    @Html.LabelFor(model => model.FirstName, htmlAttributes: new { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.EditorFor(model => model.FirstName, new { htmlAttributes = new { @class = "form-control" } })
        @Html.ValidationMessageFor(model => model.FirstName, "", new { @class = "text-danger" })
    </div>
</div>

<div class="form-group">
    @Html.LabelFor(model => model.LastName, htmlAttributes: new { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.EditorFor(model => model.LastName, new { htmlAttributes = new { @class = "form-control" } })
        @Html.ValidationMessageFor(model => model.LastName, "", new { @class = "text-danger" })
    </div>
</div>

<div class="form-group">
    @Html.LabelFor(model => model.ClubId, htmlAttributes: new { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.DropDownListFor(model => model.ClubId, new SelectList(ViewBag.ListClub, "Value", "Text"), new { @class = "form-control" })
        @Html.ValidationMessageFor(model => model.ClubId, "", new { @class = "text-danger" })
    </div>
</div>

<div class="form-group">
    @Html.LabelFor(model => model.DateOfBirth, htmlAttributes: new { @class = "control-label col-md-2" })

```

11. Lakukan hal yang sama pada method get Edit dengan menambahkan sourcecode :

```
ViewBag.ListClub = new SelectList(db.Club, "ClubId", "ClubName",
member.ClubId);
```

```

MemberModel.cs Edit.cshtml Details.cshtml Create.cshtml MembersController.cs Member.cs
Lab01_151524026_Renaldy Lab01_151524026_Renaldy.Controllers.MembersC Edit(int? id)

// GET: Members/Edit/5
public ActionResult Edit(int? id)
{
    if (id == null)
    {
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
    }
    Member member = db.Member.Find(id);
    ViewBag.ListClub = new SelectList(db.Club, "ClubId", "ClubName");
    if (member == null)
    {
        return HttpNotFound();
    }
    return View(member);
}

// POST: Members/Edit/5
// To protect from overposting attacks, please enable the specific properties you want to bind to, for
// more details see http://go.microsoft.com/fwlink/?LinkId=317598.
[HttpPost]
[ValidateAntiForgeryToken]
public ActionResult Edit([Bind(Include = "MemberId,FirstName,LastName,DateOfBirth,Height,Weight,Email,Phone,ClubId")] Member member)
{
    if (ModelState.IsValid)
    {
        db.Entry(member).State = EntityState.Modified;
    }
}

```

12. Tambahkan parameter **ClubId** pada Method post **Create** seperti berikut :

```

MemberModel.cs Edit.cshtml Details.cshtml Create.cshtml MembersController.cs Member.cs
Lab01_151524026_Renaldy Lab01_151524026_Renaldy.Controllers.MembersC Edit(Member member)

// GET: Members/Edit/5
public ActionResult Edit(int? id)
{
    if (id == null)
    {
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
    }
    Member member = db.Member.Find(id);
    ViewBag.ListClub = new SelectList(db.Club, "ClubId", "ClubName");
    if (member == null)
    {
        return HttpNotFound();
    }
    return View(member);
}

// POST: Members/Edit/5
// To protect from overposting attacks, please enable the specific properties you want to bind to, for
// more details see http://go.microsoft.com/fwlink/?LinkId=317598.
[HttpPost]
[ValidateAntiForgeryToken]
public ActionResult Edit([Bind(Include = "MemberId,FirstName,LastName,DateOfBirth,Height,Weight,Email,Phone,ClubId")] Member member)
{
    if (ModelState.IsValid)
    {
        db.Entry(member).State = EntityState.Modified;
    }
}

```

13. Dan menambahkan source code pada file **Views/Member/Edit.cshtml**

```

<div class="form-group">
    @Html.LabelFor(model => model.ClubId, htmlAttributes: new {
        @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.DropDownListFor(model => model.ClubId, new
        SelectList(ViewBag.ListClub, "Value", "Text"), new { @class = "form-control"
        })
        @Html.ValidationMessageFor(model => model.ClubId, "", new {
        @class = "text-danger" })
    </div>
</div>

```

14. Setelah itu run program dan buka pada browser. Cobakan buat member, maka akan tampil sebagai berikut :

The screenshot shows a web browser window with the URL 'localhost:53991/Members/Create'. The page has a dark header with navigation links: 'Application name', 'Home', 'About', 'Contact', 'Register', and 'Log in'. The main content area is titled 'Create Member'. It contains a form with the following fields: 'First Name' (text input with value 'Renaldy'), 'Last Name' (text input with value 'Aldy'), 'Club Name' (dropdown menu with value 'Persib'), 'Date of Birth' (text input with value '12/04/1997'), 'Height' (text input with value '169'), 'Weight' (text input with value '53'), 'Email' (text input with value 'renaldyald@gmail.com'), and 'Telephone' (text input with value '123456789'). A 'Create' button is located below the form. A 'Back to List' link is at the bottom left of the form area.

15. Untuk menampilkan jumlah member pada list club, tambahkan baris code dibawah pada file Models/Club.cs

```

public virtual ICollection<Member> Member { get; set; }

```

Seperti berikut :

The screenshot shows a code editor with the file 'Club.cs' open. The code defines the 'Club' model with the following properties and methods:

```

[DatabaseGenerated(DatabaseGeneratedOption.Identity)]
public int ClubId { get; set; }

[Required]
[Display(Name = "Club Name")]
[StringLength(255)]
public string ClubName { get; set; }

[StringLength(255)]
public string Location { get; set; }

[StringLength(225)]
public string Motto { get; set; }

[Required]
[Display(Name = "Established Date")]
[DataType(DataType.Date)]
[DisplayFormat(DataFormatString = "{0:yyyy-MM-dd}", ApplyFormatInEditMode = true)]
public DateTime EstablishedDate { get; set; }

public virtual ICollection<Member> Member { get; set; }

```

16. Lalu ubah method Index pada ClubController menjadi :

```

public ActionResult Index()

```

```
{
    return View(db.Club.Include(m => m.Member).ToList());
}
```

17. Setelah itu, ubah file **Views/Club/Index.cshtml** menjadi :

```
@model IEnumerable<Lab01_151524026_Renaldy.Models.Club>

@{
    ViewBag.Title = "Index";
}

<h2>Index</h2>

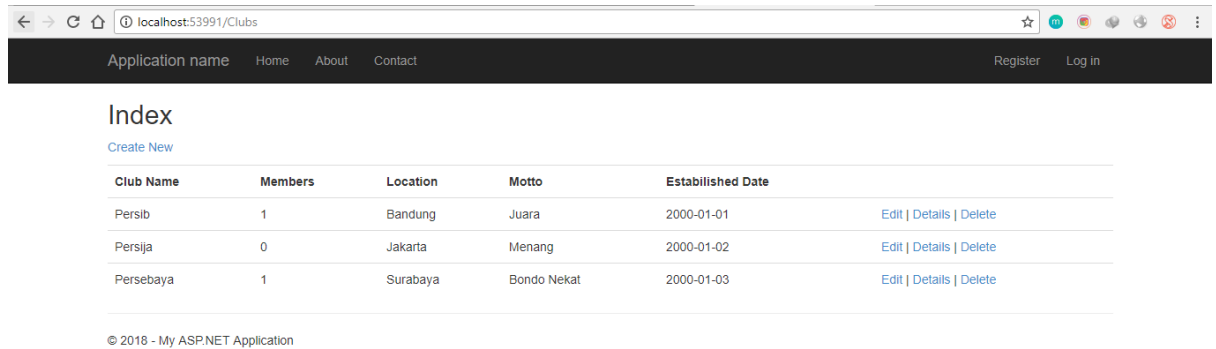
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<table class="table">
    <tr>
        <th>
            @Html.DisplayNameFor(model => model.ClubName)
        </th>
        <th>
            Members
        </th>
        <th>
            @Html.DisplayNameFor(model => model.Location)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.Motto)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.EstablishedDate)
        </th>
        <th></th>
    </tr>

    @foreach (var item in Model) {
        <tr>
            <td>
                @Html.DisplayFor(modelItem => item.ClubName)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Member.Count)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Location)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Motto)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.EstablishedDate)
            </td>
            <td>
                @Html.ActionLink("Edit", "Edit", new { id=item.ClubId }) |
                @Html.ActionLink("Details", "Details", new { id=item.ClubId }) |
                @Html.ActionLink("Delete", "Delete", new { id=item.ClubId })
            </td>
        </tr>
    }
}
```



```
</table>
```

18. Setelah itu, rebuild project dan jalankan project. Maka saat pada halaman daftar club akan menampilkan seperti ini :



The screenshot shows a web browser at localhost:53991/Clubs. The application has a dark navigation bar with links for 'Application name', 'Home', 'About', 'Contact', 'Register', and 'Log in'. Below the navigation bar is a section titled 'Index' with a 'Create New' link. A table lists three clubs: Persib, Persija, and Persebaya. Each row in the table includes links for 'Edit', 'Details', and 'Delete'.

Club Name	Members	Location	Motto	Established Date	
Persib	1	Bandung	Juara	2000-01-01	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Persija	0	Jakarta	Menang	2000-01-02	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Persebaya	1	Surabaya	Bondo Nekat	2000-01-03	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

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