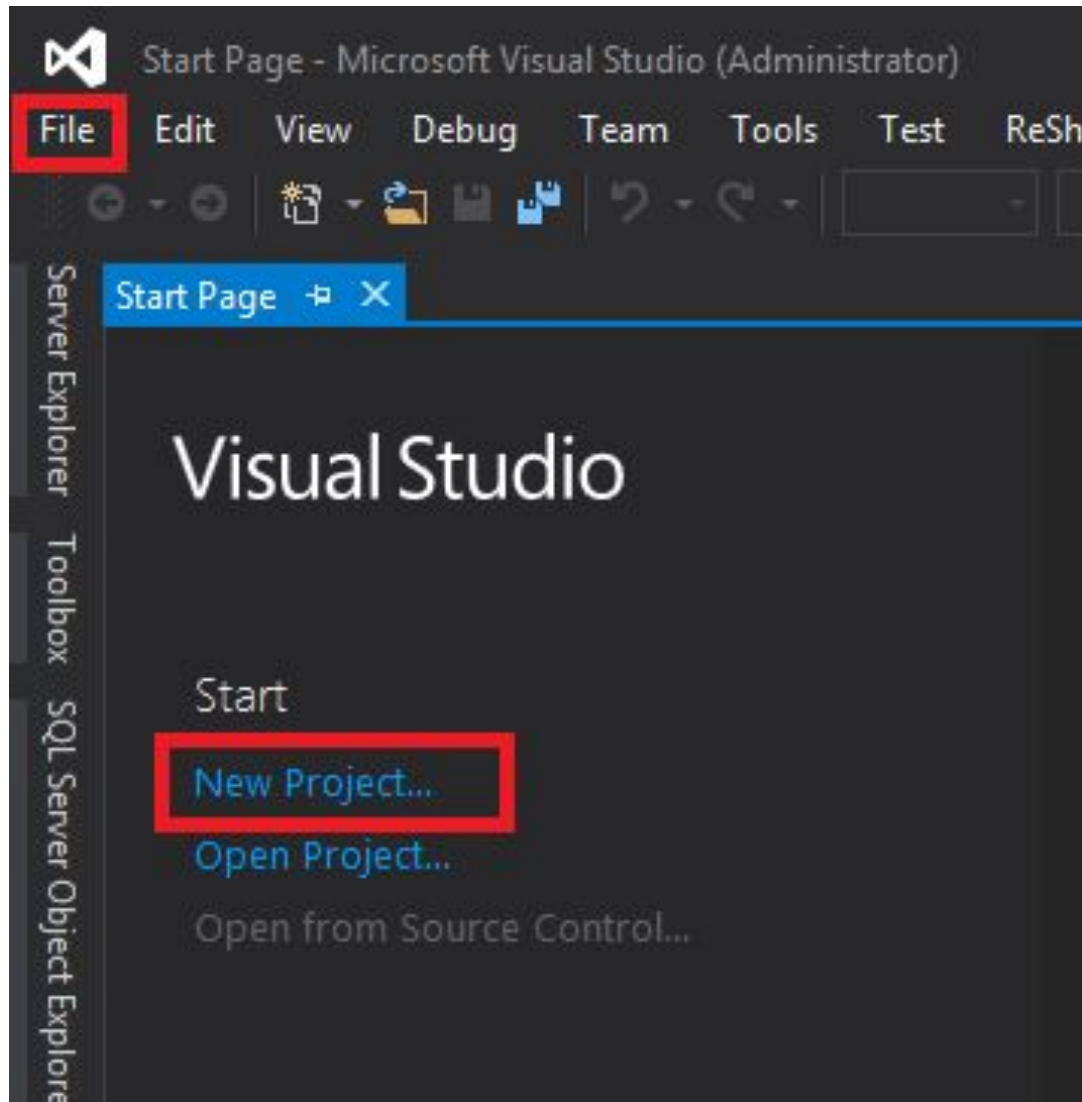


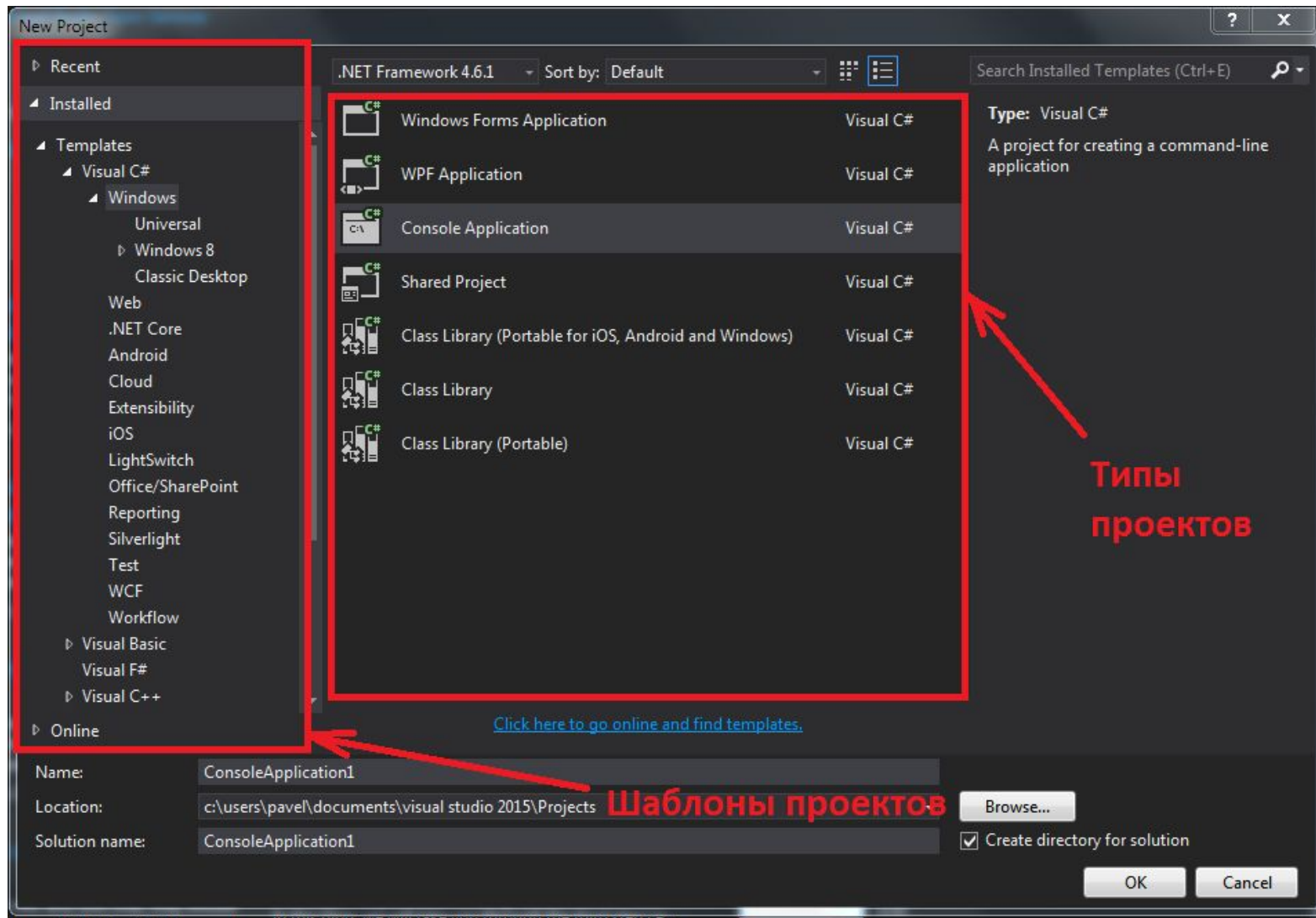
# Школа «Молодого программиста»

Первое приложение на ASP.NET MVC, структура типичного проекта, MVC в действии, рассмотрение паттерна на примере проекта

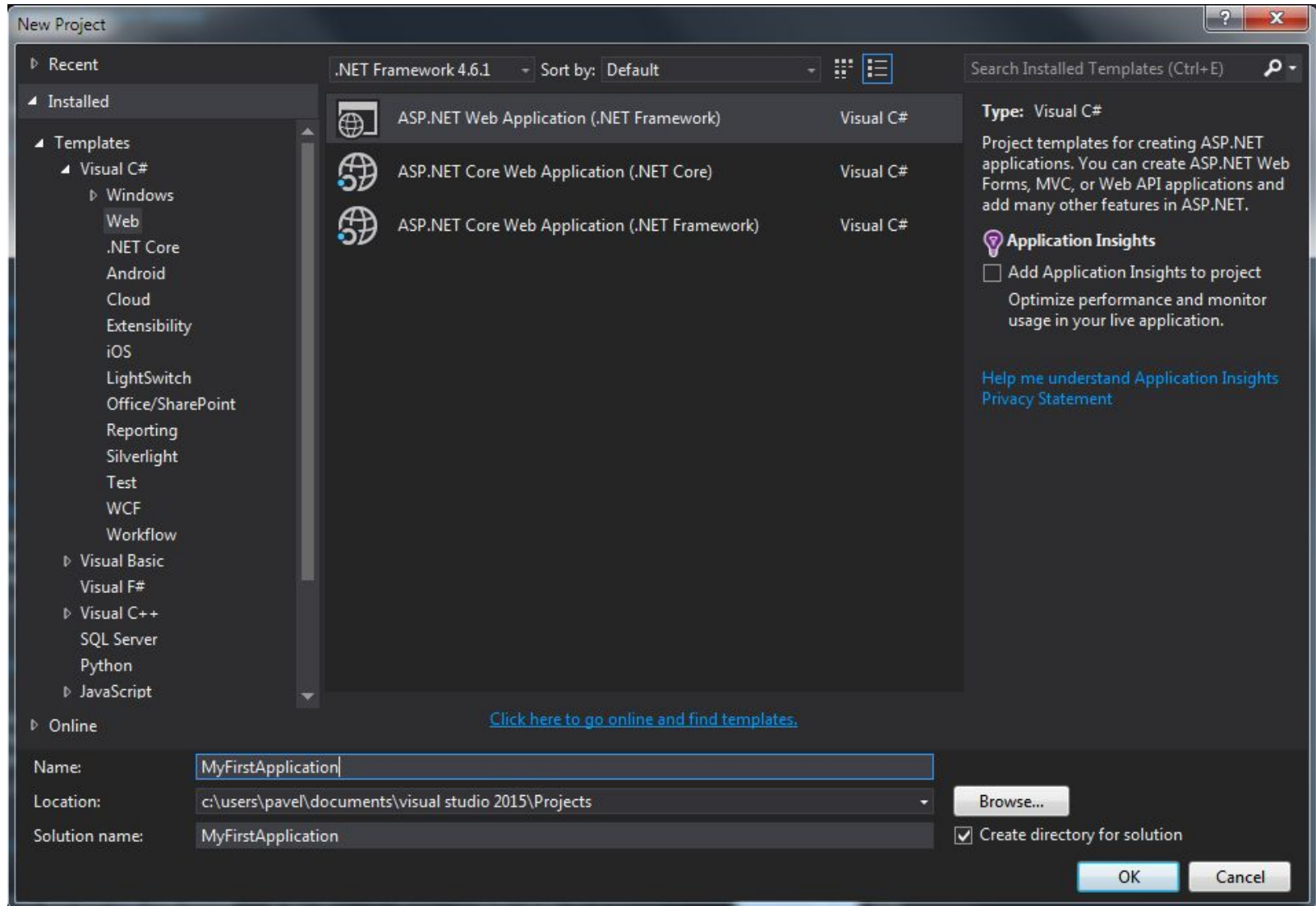
# Создание нового проекта



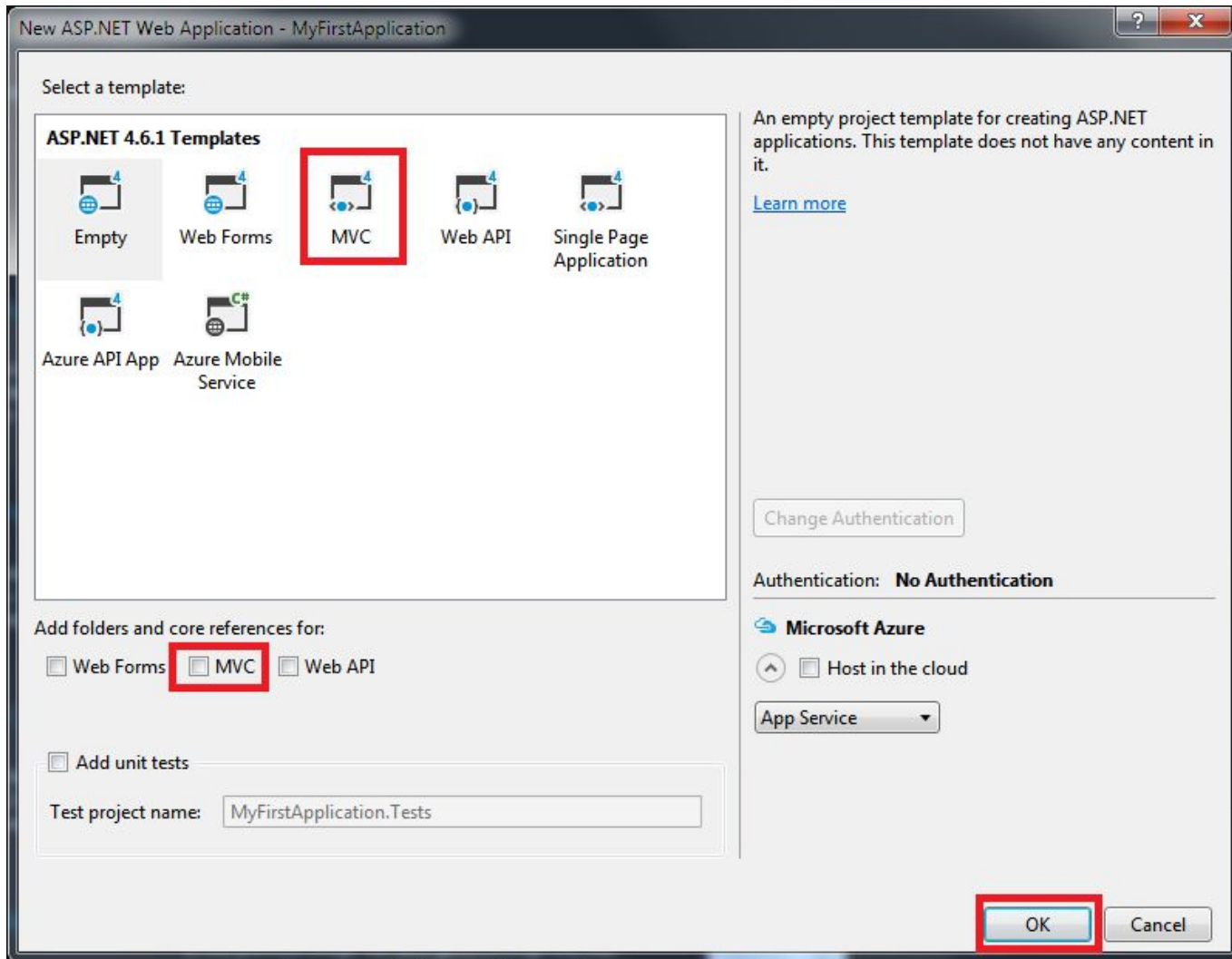
# Типы и шаблоны проектов



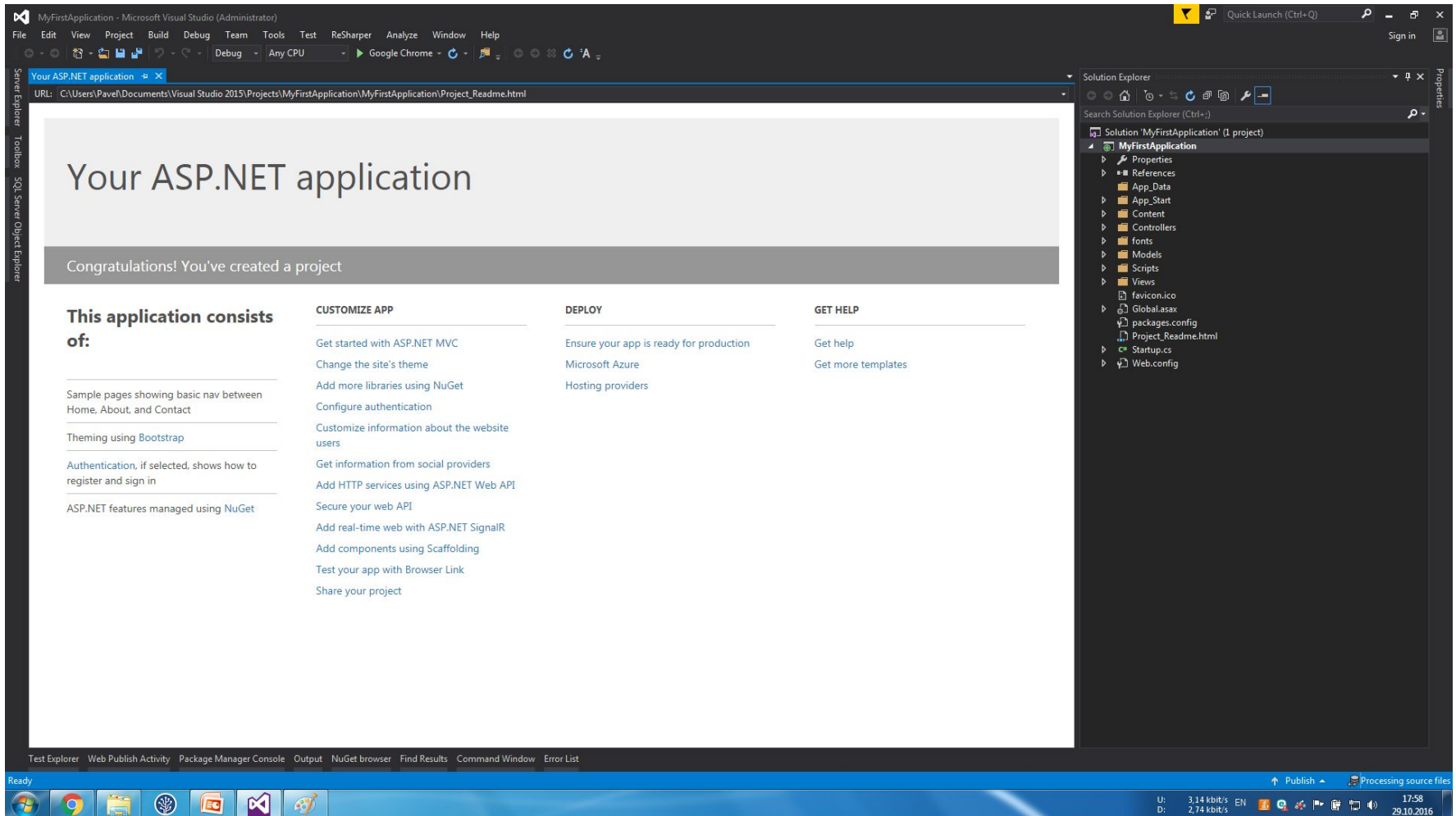
# Приложения ASP.NET MVC



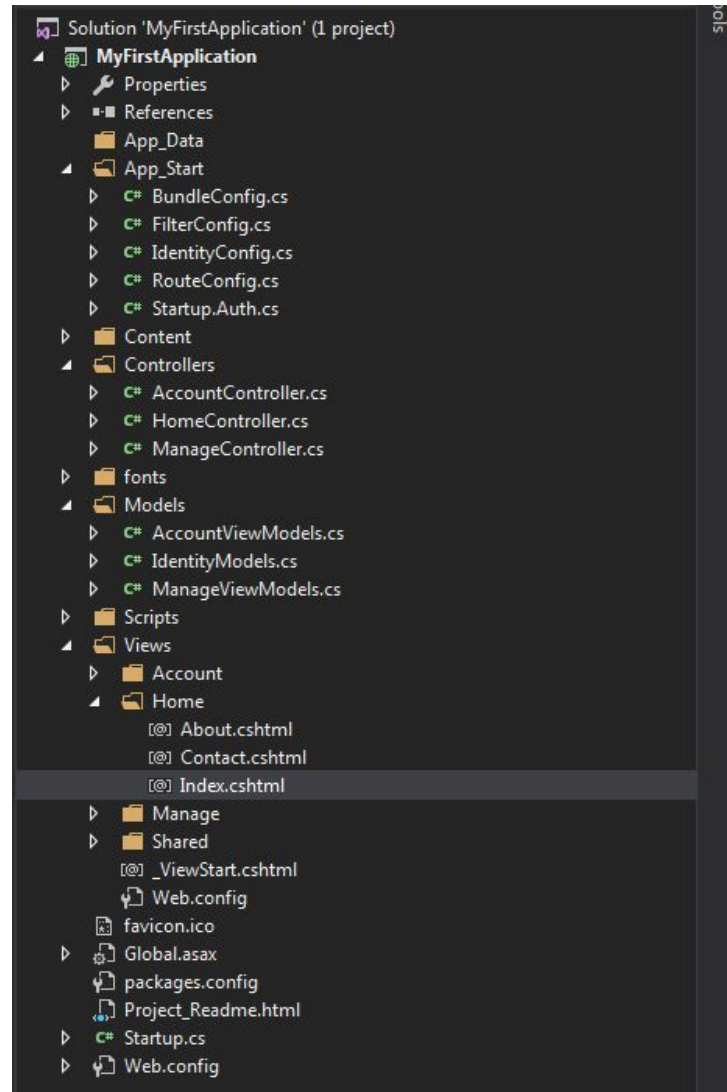
# Типы приложений ASP.NET



# Ваше первое приложение



# Структура проекта



# Запуск проекта

Application name

[Home](#)

[About](#)

[Contact](#)

[Register](#)

[Log in](#)

## ASP.NET

ASP.NET is a free web framework for building great Web sites and Web applications using HTML, CSS and JavaScript.

[Learn more »](#)

### Getting started

ASP.NET MVC gives you a powerful, patterns-based way to build dynamic websites that enables a clean separation of concerns and gives you full control over markup for enjoyable, agile development.

[Learn more »](#)

### Get more libraries

NuGet is a free Visual Studio extension that makes it easy to add, remove, and update libraries and tools in Visual Studio projects.

[Learn more »](#)

### Web Hosting

You can easily find a web hosting company that offers the right mix of features and price for your applications.

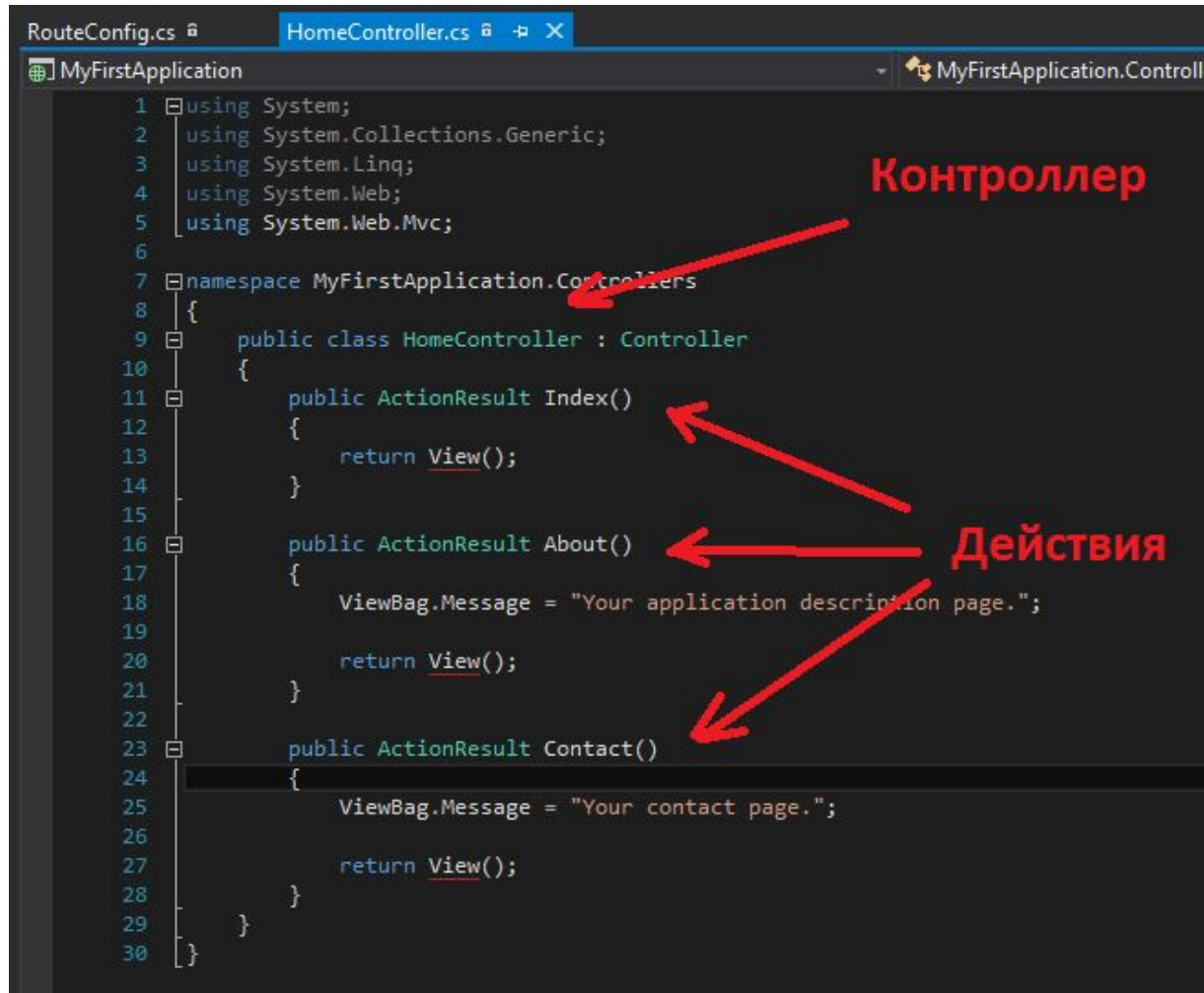
[Learn more »](#)



# Маршрутизация

```
RouteConfig.cs  HomeController.cs
MyFirstApplication  MyFirstApplication.RouteConfig
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.Mvc;
6  using System.Web.Routing;
7
8  namespace MyFirstApplication
9  {
10     public class RouteConfig
11     {
12         public static void RegisterRoutes(RouteCollection routes)
13         {
14             routes.IgnoreRoute("{resource}.axd/{*pathInfo}");
15
16             routes.MapRoute(
17                 name: "Default",
18                 url: "{controller}/{action}/{id}",
19                 defaults: new { controller = "Home", action = "Index", id = UrlParameter.Optional }
20             );
21         }
22     }
23 }
24
```

# Контроллер и действия



```
RouteConfig.cs | HomeController.cs | MyFirstApplication | MyFirstApplication.Controllers
```

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5 using System.Web.Mvc;
6
7 namespace MyFirstApplication.Controllers
8 {
9     public class HomeController : Controller
10    {
11        public ActionResult Index()
12        {
13            return View();
14        }
15
16        public ActionResult About()
17        {
18            ViewBag.Message = "Your application description page.";
19
20            return View();
21        }
22
23        public ActionResult Contact()
24        {
25            ViewBag.Message = "Your contact page.";
26
27            return View();
28        }
29    }
30 }
```

**Контроллер** (points to the `HomeController` class definition)

**Действия** (points to the `Index()`, `About()`, and `Contact()` methods)

# Частичное представление домашней страницы

```
Index.cshhtml  RouteConfig.cs  HomeController.cs
1
2 ViewBag.Title = "Home Page";
3
4
5 <div class="jumbotron">
6   <h1>ASP.NET</h1>
7   <p class="lead">ASP.NET is a free web framework for building great Web sites and Web applications using HTML, CSS and JavaScript.</p>
8   <p><a href="http://asp.net" class="btn btn-primary btn-lg">Learn more &raquo;</a></p>
9 </div>
10
11 <div class="row">
12   <div class="col-md-4">
13     <h2>Getting started</h2>
14     <p>
15       ASP.NET MVC gives you a powerful, patterns-based way to build dynamic websites that
16       enables a clean separation of concerns and gives you full control over markup
17       for enjoyable, agile development.
18     </p>
19     <p><a class="btn btn-default" href="http://go.microsoft.com/fwlink/?LinkId=301865">Learn more &raquo;</a></p>
20   </div>
21   <div class="col-md-4">
22     <h2>Get more libraries</h2>
23     <p>NuGet is a free Visual Studio extension that makes it easy to add, remove, and update libraries and tools in Visual Studio projects.</p>
24     <p><a class="btn btn-default" href="http://go.microsoft.com/fwlink/?LinkId=301866">Learn more &raquo;</a></p>
25   </div>
26   <div class="col-md-4">
27     <h2>Web Hosting</h2>
28     <p>You can easily find a web hosting company that offers the right mix of features and price for your applications.</p>
29     <p><a class="btn btn-default" href="http://go.microsoft.com/fwlink/?LinkId=301867">Learn more &raquo;</a></p>
30   </div>
31 </div>
```

# Общее представление

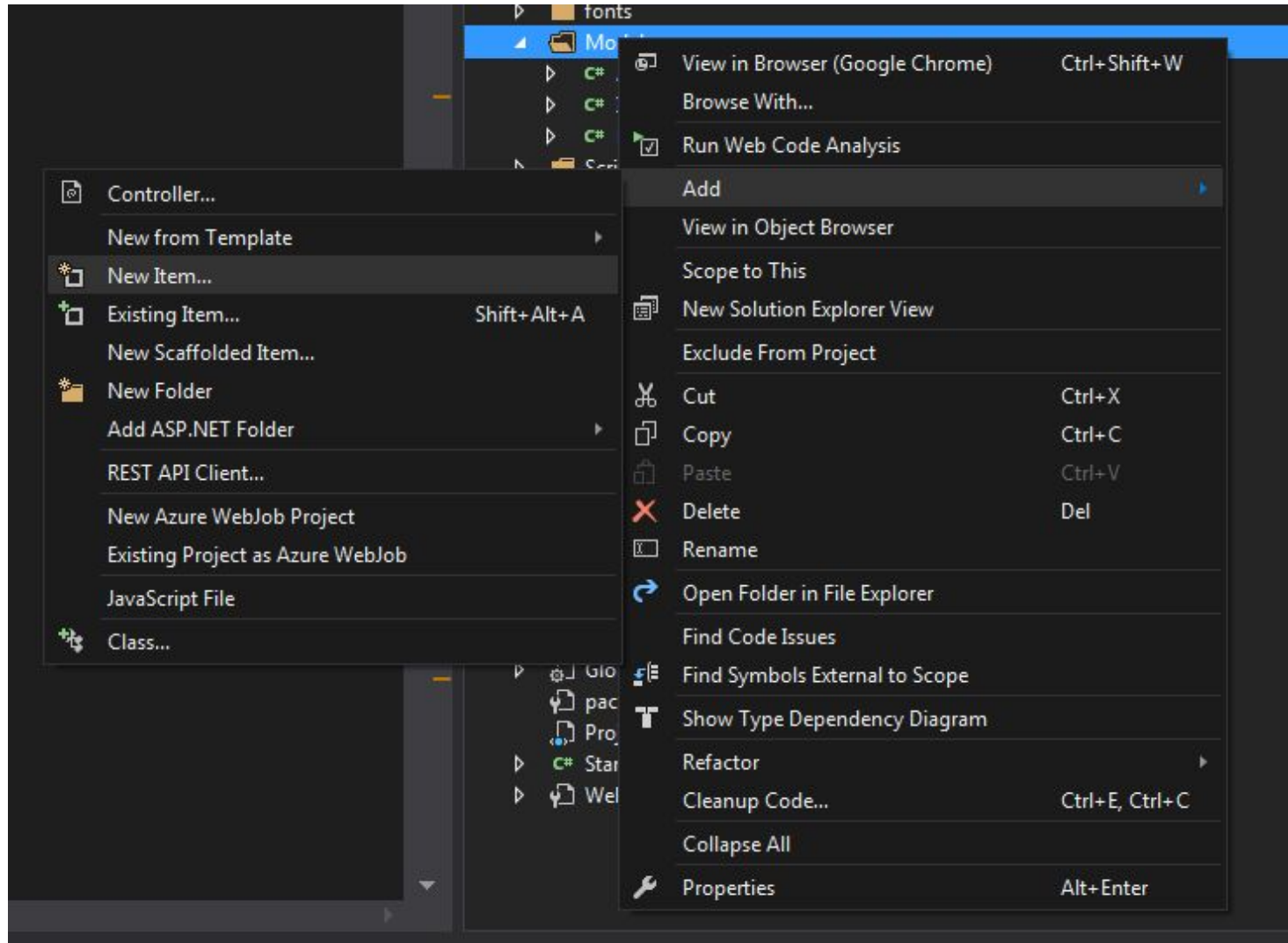
```
_Layout.cshtml  X Index.cshtml  RouteConfig.cs  HomeController.cs
1  <!DOCTYPE html>
2  <html>
3  <head>
4    <meta charset="utf-8" />
5    <meta name="viewport" content="width=device-width, initial-scale=1.0">
6    <title>@ViewBag.Title - My ASP.NET Application</title>
7    @Styles.Render("~/Content/css")
8    @Scripts.Render("~/bundles/modernizr")
9
10 </head>
11 <body>
12   <div class="navbar navbar-inverse navbar-fixed-top">
13     <div class="container">
14       <div class="navbar-header">
15         <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse">
16           <span class="icon-bar"></span>
17           <span class="icon-bar"></span>
18           <span class="icon-bar"></span>
19         </button>
20         @Html.ActionLink("Application name", "Index", "Home", new { area = "" }, new { @class = "navbar-brand" })
21       </div>
22       <div class="navbar-collapse collapse">
23         <ul class="nav navbar-nav">
24           <li>@Html.ActionLink("Home", "Index", "Home")</li>
25           <li>@Html.ActionLink("About", "About", "Home")</li>
26           <li>@Html.ActionLink("Contact", "Contact", "Home")</li>
27         </ul>
28         @Html.Partial("_LoginPartial")
29       </div>
30     </div>
31   </div>
32   <div class="container body-content">
33     @RenderBody()
34     <hr />
35     <footer>
36       <p>&copy; @DateTime.Now.Year - My ASP.NET Application</p>
37     </footer>
38   </div>
39
40   @Scripts.Render("~/bundles/jquery")
41   @Scripts.Render("~/bundles/bootstrap")
42   @RenderSection("scripts", required: false)
43 </body>
44 </html>
45
```

# Модели

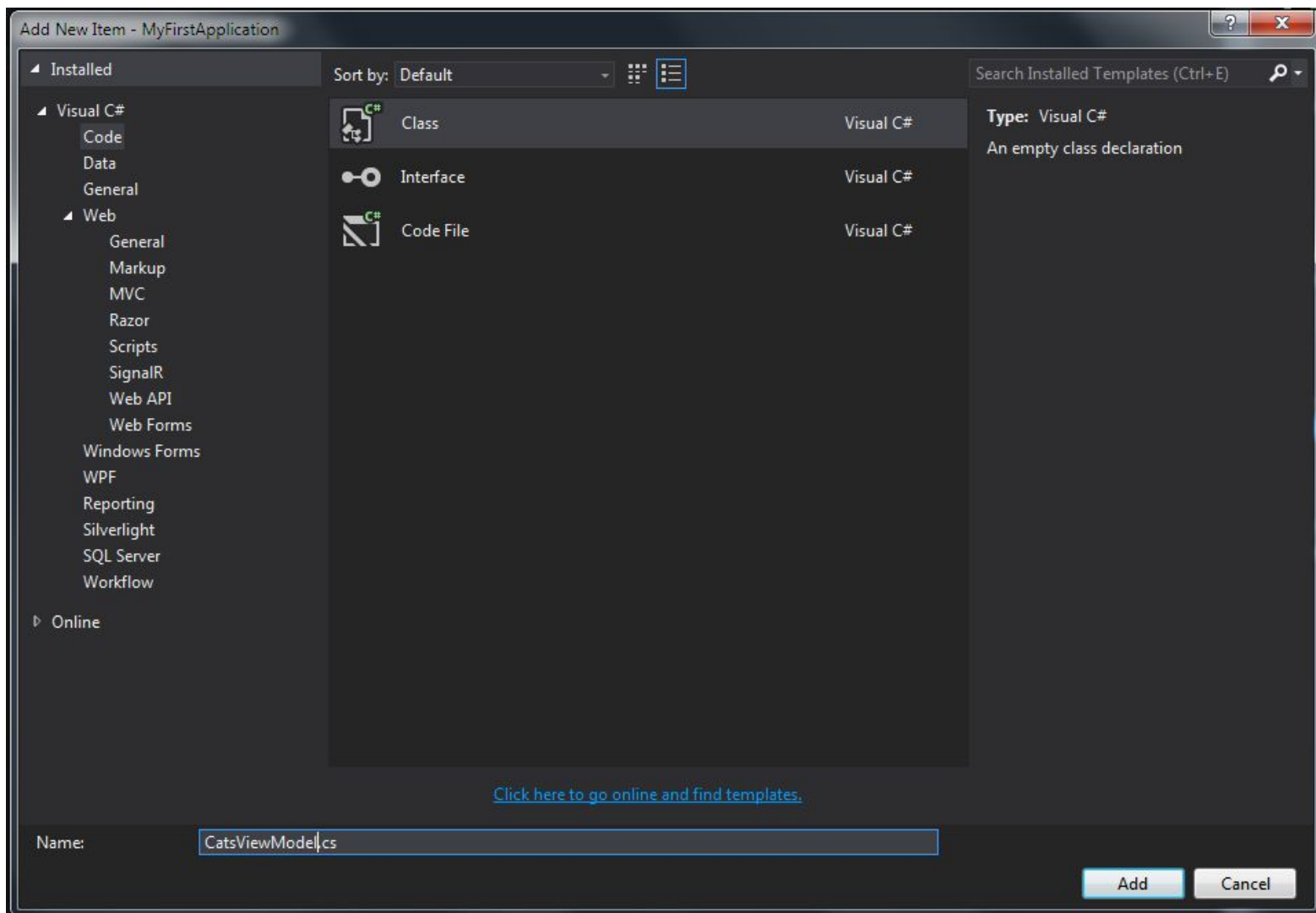
```
ManageViewModels.cs  X  _Layout.cshtml  Index.cshtml  RouteConfig.cs  HomeController.cs
MyFirstApplication  MyFirstApplication.Models.ManageLoginsViewMode

1  using System.Collections.Generic;
2  using System.ComponentModel.DataAnnotations;
3  using Microsoft.AspNet.Identity;
4  using Microsoft.Owin.Security;
5
6  namespace MyFirstApplication.Models
7  {
8      public class IndexViewModel
9      {
10         public bool HasPassword { get; set; }
11         public IList<UserLoginInfo> Logins { get; set; }
12         public string PhoneNumber { get; set; }
13         public bool TwoFactor { get; set; }
14         public bool BrowserRemembered { get; set; }
15     }
16
17     public class ManageLoginsViewModel
18     {
19         public IList<UserLoginInfo> CurrentLogins { get; set; }
20         public IList<AuthenticationDescription> OtherLogins { get; set; }
21     }
22
23     public class FactorViewModel
24     {
25         public string Purpose { get; set; }
26     }
27
28     public class SetPasswordViewModel
29     {
30         [Required]
31         [StringLength(100, ErrorMessage = "The {0} must be at least {2} characters long.", Min
32         [DataType(DataType.Password)]
33         [Display(Name = "New password")]
34         public string NewPassword { get; set; }
35
36         [DataType(DataType.Password)]
37         [Display(Name = "Confirm new password")]
38         [Compare("NewPassword", ErrorMessage = "The new password and confirmation password do
39         public string ConfirmPassword { get; set; }
40     }
41
```

# Добавление модели



# Создание объекта модели



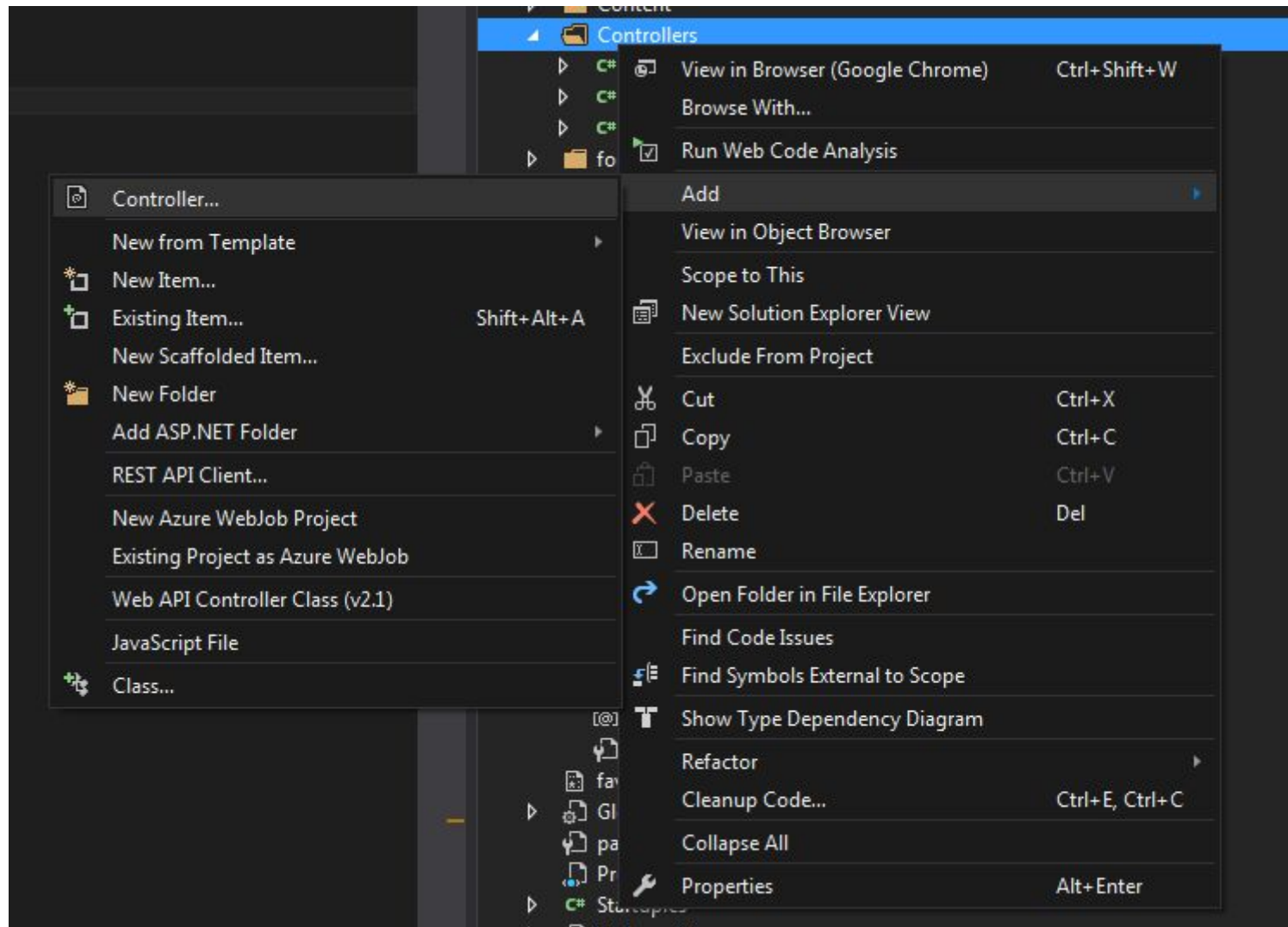
# Заполнение модели

```
CatsViewModel.cs X Index.cshtml CatsController.cs ManageViewModels.cs
MyFirstApplication MyFirstApplic

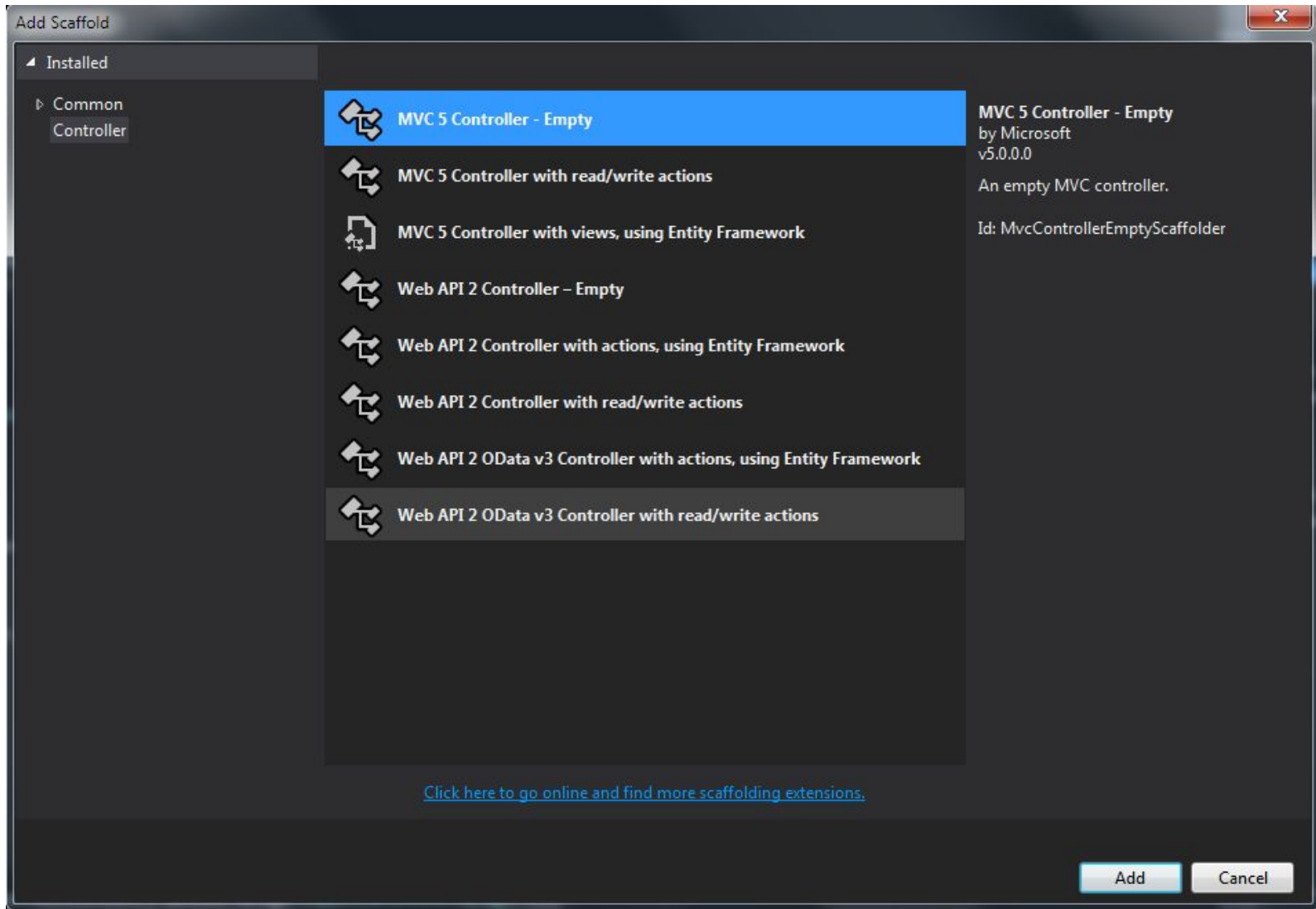
1 using System;
2   using System.Collections.Generic;
3   using System.Linq;
4   using System.Web;
5
6 namespace MyFirstApplication.Models
7 {
8   public class CatsViewModel
9   {
10      public string Name { get; set; }
11      public int FeetCount { get; set; }
12      public bool IsLikeFish { get; set; }
13
14   }
15 }
```



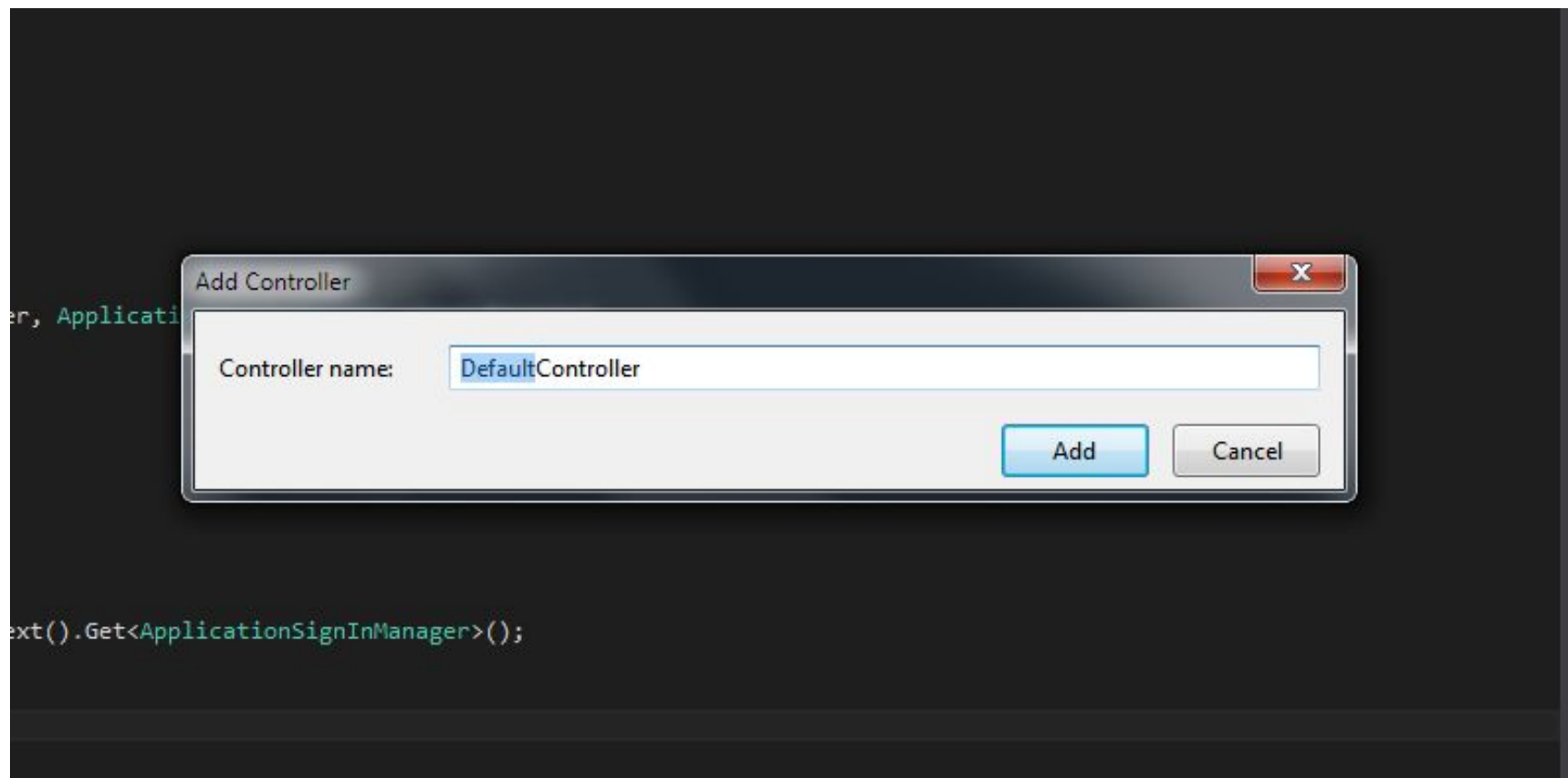
# Добавление контроллера



# Выбор типа контроллера

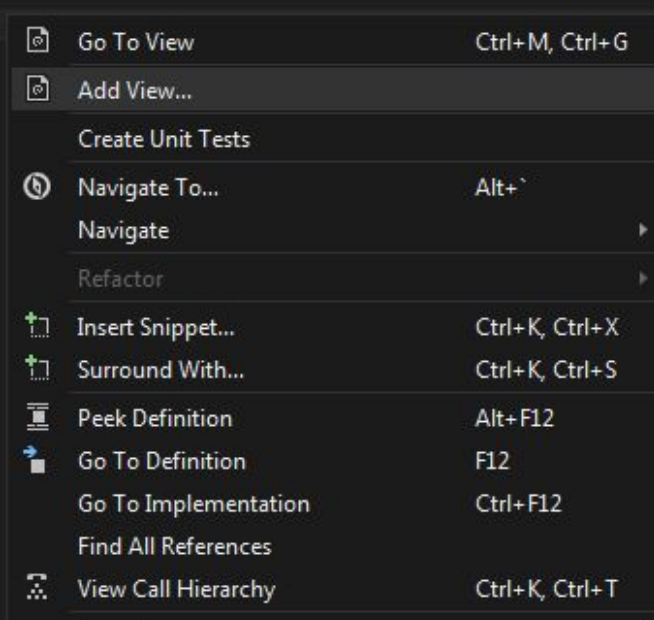


# Название контроллера



# Добавление представления

```
6
7 namespace MyFirstApplication.Controllers
8 {
9     public class CatsController : Controller
10    {
11        // GET: Cats
12        public ActionResult Index()
13        {
14            return View();
15        }
16    }
17 }
```



The screenshot shows a context menu for the `return View();` line in a C# controller. The menu items and their keyboard shortcuts are:

- Go To View (Ctrl+M, Ctrl+G)
- Add View...
- Create Unit Tests
- Navigate To... (Alt+`)
- Navigate
- Refactor
- Insert Snippet... (Ctrl+K, Ctrl+X)
- Surround With... (Ctrl+K, Ctrl+S)
- Peek Definition (Alt+F12)
- Go To Definition (F12)
- Go To Implementation (Ctrl+F12)
- Find All References
- View Call Hierarchy (Ctrl+K, Ctrl+T)

# Выбор модели представления

The image shows a screenshot of the 'Add View' dialog box in Visual Studio. The dialog has a title bar with 'Add View' and a close button (X). The main area contains several fields and options:

- View name:** A text box containing 'Index'.
- Template:** A dropdown menu showing 'List'.
- Model class:** A dropdown menu showing 'CatsViewModel (MyFirstApplication.Models)'.
- Data context class:** A dropdown menu showing 'ApplicationDbContext (MyFirstApplication.Models)'. This dropdown is currently open, showing the selected item.
- Options:** A group of three checkboxes:
  - Create as a partial view
  - Reference script libraries
  - Use a layout page:
- Below the 'Use a layout page:' checkbox is a text box and a button with three dots (...).
- At the bottom of the dialog, there is a note: '(Leave empty if it is set in a Razor \_viewstart file)'. Below this note are two buttons: 'Add' (highlighted in blue) and 'Cancel'.

# Готовое представление

```
CatsViewModel.cs | Index.cshtml | CatsController.cs | ManageViewModels.cs | _Layout.cshtml | Index.cshtml
1  @model IEnumerable<MyFirstApplication.Models.CatsViewModel>
2
3  @{
4      ViewBag.Title = "Index";
5  }
6
7  <h2>Index</h2>
8
9  <p>
10     @Html.ActionLink("Create New", "Create")
11 </p>
12 <table class="table">
13     <tr>
14         <th>
15             @Html.DisplayNameFor(model => model.Name)
16         </th>
17         <th>
18             @Html.DisplayNameFor(model => model.FeetCount)
19         </th>
20         <th>
21             @Html.DisplayNameFor(model => model.IsLikeFish)
22         </th>
23     </tr>
24
25     @foreach (var item in Model) {
26         <tr>
27             <td>
28                 @Html.DisplayFor(modelItem => item.Name)
29             </td>
30             <td>
31                 @Html.DisplayFor(modelItem => item.FeetCount)
32             </td>
33             <td>
34                 @Html.DisplayFor(modelItem => item.IsLikeFish)
35             </td>
36             <td>
37                 @Html.ActionLink("Edit", "Edit", new { /* id=item.PrimaryKey */ }) |
38                 @Html.ActionLink("Details", "Details", new { /* id=item.PrimaryKey */ }) |
39                 @Html.ActionLink("Delete", "Delete", new { /* id=item.PrimaryKey */ })
40             </td>
41         </tr>
42     }
43 </table>
44
45
46
```

# Вопросы по структуре проекта

# Предметная область «Приют бездомных животных»





**Благодарю за внимание**

Вопросы