3. **Create an MVC application to demonstrate extension methods and use layout.**

Ans:

- **Code :**

HomeController.cs :-

```
using System;
using MVCappliaction.Models;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Mvc;
using System.Text;

namespace MVCappliaction.Controllers
{
    public class HomeController : Controller
    {

        public ViewResult AutoProperty()
        {

                Product p1 = new Product();
                p1.ProductID = 100;
                p1.Name = "Kayak";
                p1.Price = 1500;
                return View("AutoProperty", (object)String.Format("Price: {0}", p1.Price));

        }
        public ViewResult CreateCollection()
        {
            string[] stringArray = { "apple", "orange", "plum" };
            List<int> intList = new List<int> { 10, 20, 30, 40 };
            Dictionary<string, int> myDict = new Dictionary<string, int>
            { { "apple", 10 }, { "orange", 20 }, { "plum", 30 } };
            return View("Result", (object)stringArray[1]);
        }
        public ViewResult UseExtension()
        {
            ShoppingCart cart = new ShoppingCart
            {
                Products = new List<Product>
                {
                new Product {Name = "Kayak", Price = 275M},
                new Product {Name = "Lifejacket", Price = 48.95M},
                new Product {Name = "Soccer ball", Price = 19.50M},
                new Product {Name = "Corner flag", Price = 34.95M}
                }
            };
            decimal cartTotal = cart.TotalPrices();
            return View("Result", (object)String.Format("Total: {0:c}", cartTotal));
        }

        public ViewResult CreateAnonArray()
```

```
            {
                var oddsAndEnds = new[] {
                new { Name = "MVC", Category = "Pattern" },
                new { Name = "Hat", Category = "Clothing" },
                new { Name = "Apple", Category = "Fruit" }
                };
                StringBuilder result = new StringBuilder();
                foreach (var item in oddsAndEnds)
                {
                    result.Append(item.Name).Append(" ");
                }
                return View("Result", (object)result.ToString());
            }

            Product myProduct = new Product
            {
                ProductID = 1,
                Name = "Kayak",
                Description = "A boat for one person",
                Category = "Watersports",
                Price = 275M
            };
            public ActionResult Index()

            {
                return View(myProduct);
            }
        }


}
```

Product.cs :-

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;

namespace MVCappliaction.Models
{
    public class Product
    {
        public int ProductID { get; set; }
        public string Name { get; set; }
        public string Description { get; set; }
        public decimal Price { get; set; }
        public string Category { set; get; }
    }
}
```

MyExtensionMethods.cs :-

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;

namespace MVCappliaction.Models
{
    public static class MyExtensionMethods
    {
        public static decimal TotalPrices(this ShoppingCart cartParam)
        {
            decimal total = 0;
            foreach (Product prod in cartParam.Products)
            { total += prod.Price; }
            return total;
        }
    }
          }
```

Index.cshtml :-

```
@model MVCappliaction.Models.Product

@{
    ViewBag.Title = "Product Name";
    Layout = "~/Views/_BasicLayout.cshtml";
}

<!DOCTYPE html>

<html>
<head>
    <meta name="viewport" content="width=device-width" />
    <title>Index</title>
</head>
<body>
    <div>
        Product Name     = @Model.Name<br />
        Product price    = @Model.Price
    </div>
</body>
</html>
```

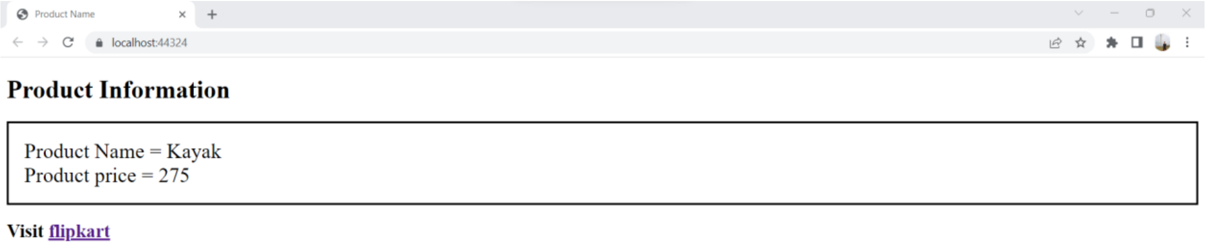
_BasicLayout.cshtml :-

```
<!DOCTYPE html>

<html>
<head>
    <meta name="viewport" content="width=device-width" />
    <title>@ViewBag.Title</title>
</head>
<body>
```

```
    <div>
        <h1>Product Information</h1>
        <div style="padding: 20px; border: solid medium black; font-size: 20pt">
            @RenderBody()
        </div>
        <h2>Visit <a href="http://flipkart.com">flipkart</a></h2>
    </div>
</body>
</html>
```

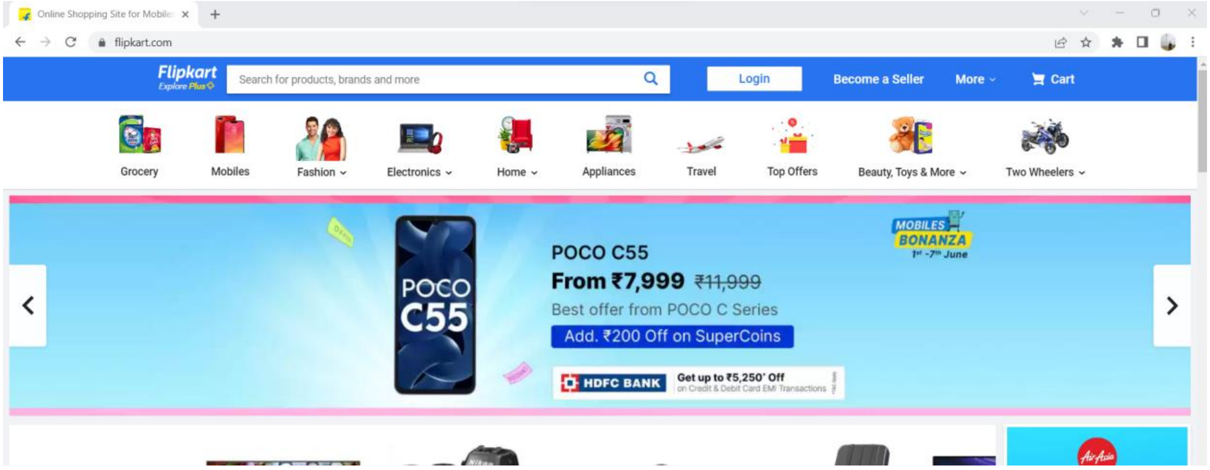
- **Output**



Product Information

Product Name = Kayak
Product price = 275

Visit flipkart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