

Pass Task 5.2 Stateful business logic

Client Code

Interface *IShopCartBO* & *IShopCartBOChannel*

```
[System.CodeDom.Compiler.GeneratedCodeAttribute("System.ServiceModel", "3.0.0.0")]
[System.ServiceModel.ServiceContractAttribute(ConfigurationName = "IShopCartBO")]
public interface IShopCartBO
{
    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/AddProduct", ReplyAction =
"http://tempuri.org/IShopCartBO/AddProductResponse")]
    void AddProduct(SwinSchool.CommonShared.Dto.ProductDto product);

    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/ChangeQuantity", ReplyAction =
"http://tempuri.org/IShopCartBO/ChangeQuantityResponse")]
    void ChangeQuantity(SwinSchool.CommonShared.Dto.ProductDto[] updatedCart);

    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/RemoveProduct", ReplyAction =
"http://tempuri.org/IShopCartBO/RemoveProductResponse")]
    void RemoveProduct(SwinSchool.CommonShared.Dto.ProductDto product);

    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/GetCart", ReplyAction =
"http://tempuri.org/IShopCartBO/GetCartResponse")]
    SwinSchool.CommonShared.Dto.ProductDto[] GetCart();

    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/GetAvailableProducts", ReplyAction =
"http://tempuri.org/IShopCartBO/GetAvailableProductsResponse")]
    SwinSchool.CommonShared.Dto.ProductDto[] GetAvailableProducts();

    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/GetTotalCart", ReplyAction =
"http://tempuri.org/IShopCartBO/GetTotalCartResponse")]
    decimal GetTotalCart();

    [System.ServiceModel.OperationContractAttribute(Action =
"http://tempuri.org/IShopCartBO/CheckOut", ReplyAction =
"http://tempuri.org/IShopCartBO/CheckOutResponse")]
    void CheckOut();
}

[System.CodeDom.Compiler.GeneratedCodeAttribute("System.ServiceModel", "3.0.0.0")]
public interface IShopCartBOChannel : IShopCartBO, System.ServiceModel.IClientChannel
{
}
```

ShopCartBOClient proxy class

```
[System.Diagnostics.DebuggerStepThroughAttribute()]
[System.CodeDom.Compiler.GeneratedCodeAttribute("System.ServiceModel", "3.0.0.0")]
public partial class ShopCartBOClient : System.ServiceModel.ClientBase<IShopCartBO>,
IShopCartBO
{
    public ShopCartBOClient()
    {
    }
}
```

```
public ShopCartBOClient(string endpointConfigurationName) :
    base(endpointConfigurationName)
{
}

public ShopCartBOClient(string endpointConfigurationName, string remoteAddress) :
    base(endpointConfigurationName, remoteAddress)
{
}

public ShopCartBOClient(string endpointConfigurationName,
    System.ServiceModel.EndpointAddress remoteAddress) :
    base(endpointConfigurationName, remoteAddress)
{
}

public ShopCartBOClient(System.ServiceModel.Channels.Binding binding,
    System.ServiceModel.EndpointAddress remoteAddress) :
    base(binding, remoteAddress)
{
}

public void AddProduct(SwinSchool.CommonShared.Dto.ProductDto product)
{
    base.Channel.AddProduct(product);
}

public void ChangeQuantity(SwinSchool.CommonShared.Dto.ProductDto[] updatedCart)
{
    base.Channel.ChangeQuantity(updatedCart);
}

public void RemoveProduct(SwinSchool.CommonShared.Dto.ProductDto product)
{
    base.Channel.RemoveProduct(product);
}

public SwinSchool.CommonShared.Dto.ProductDto[] GetCart()
{
    return base.Channel.GetCart();
}

public SwinSchool.CommonShared.Dto.ProductDto[] GetAvailableProducts()
{
    return base.Channel.GetAvailableProducts();
}

public decimal GetTotalCart()
{
    return base.Channel.GetTotalCart();
}

public void CheckOut()
{
    base.Channel.CheckOut();
}
}
```

Cart Controller

```
using SwinSchool.CommonShared.Dto;
using SwinSchool.WebUI.Models;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Mvc;

namespace SwinSchool.WebUI.Controllers
{
    public class CartController : Controller
    {
        /// <summary>
        /// Because MVC Controller is stateless, therefore to achieve a stateful B0
        /// behaviour of the Business Logic Server, the handle or object referencing
        /// of the B0 object have to be maintained over the whole User session. In
        /// order to achieve this, we use the Web Session to store the handle of B0
        /// for each user session in MVC Controller.
        /// </summary>

        ShopCartBOClient _shopCartService
        {
            get
            {
                if (Session["cartBoHandle"] == null)
                {
                    Session["cartBoHandle"] = new
ShopCartBOClient("wsHttpBinding_IShopCartBO");
                }

                return (ShopCartBOClient)Session["cartBoHandle"];
            }
        }

        //
        // GET: /Cart/
        public ActionResult Index()
        {
            var vm = new ProductListViewModel();
            vm.ProductList = _shopCartService.GetAvailableProducts().ToList();
            vm.CartTotal = _shopCartService.GetTotalCart();
            vm.TotalCartQty = _shopCartService.GetCart().Length;
            return View(vm);
        }

        [HttpGet]
        public ActionResult Add(string id)
        {
            ProductDto dto = new ProductDto()
            {
                ProductID = id,
                OrderQuantity = 1
            };
            _shopCartService.AddProduct(dto);
            var a = _shopCartService.GetTotalCart();
            return RedirectToAction("Index");
        }

        public ActionResult View()
        {
            var vm = new CartViewModel();
            vm.ProductList = _shopCartService.GetCart().ToList();
            vm.CartTotal = _shopCartService.GetTotalCart();

            if (Request.QueryString["UpdateSuccess"] != null)

```

```
        {
            vm.Message = "Cart updated successfully";
        }

        return View(vm);
    }

    [HttpPost]
    public ActionResult UpdateCart(List<ProductDto> item, string action)
    {
        if (item == null)
        {
            return RedirectToAction("View");
        }
        if (action == "Update Cart")
        {
            _shopCartService.ChangeQuantity(item.ToArray());

            return RedirectToAction("View", new { UpdateSuccess = true });
        }
        else if (action == "Checkout")
        {
            _shopCartService.CheckOut();
            return RedirectToAction("CheckoutSuccess");
        }
        return RedirectToAction("View");
    }

    public ActionResult CheckoutSuccess()
    {
        return View();
    }
}
```