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SID:10040

DP ASSIGNMENT 02

CODE: using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

```csharp
namespace DPaSS02_10040
{
    public interface IStrategy
    {
        int GetFinalBill(int BillAmount);
    }
    public class LowDiscountStretegy : IStrategy
    {
        int IStrategy.GetFinalBill(int BillAmount)
        {
            return (int)(BillAmount - (BillAmount * 0.1));
        }


    }
    public class HighDiscountStretegy : IStrategy
    {
        int IStrategy.GetFinalBill(int BillAmount)
        {
            return (int)(BillAmount - (BillAmount * 0.5));
        }


    }
    public class NoDiscountStretegy : IStrategy
    {
        int IStrategy.GetFinalBill(int BillAmount)
        {
            return BillAmount ;
        }


    }
    public class ShoppingMall
    {
        public string CustomerName { get; set; }
        public int BillAmount { get; set; }
        public IStrategy CurrentStrategy;
        public ShoppingMall(IStrategy NewStrategy)
        {
            CurrentStrategy = NewStrategy;
        }
        public int GetFinalBill()
        {
            return CurrentStrategy.GetFinalBill(this.BillAmount);
        }
```

```csharp
    }
    class Program
    {
        static void Main(string[] args)
        {
            ShoppingMall objShoppingMall = new ShoppingMall(new LowDiscountStretegy());
            objShoppingMall.CustomerName = "Customer01";
            objShoppingMall.BillAmount = 1000;
            Console.WriteLine("Final Bill "+objShoppingMall.GetFinalBill());

            ShoppingMall obj1ShoppingMall = new ShoppingMall(new HighDiscountStretegy());
            obj1ShoppingMall.CustomerName = "Customer01";
            obj1ShoppingMall.BillAmount = 1000;
            Console.WriteLine("Final Bill " + obj1ShoppingMall.GetFinalBill());

            obj1ShoppingMall.CurrentStrategy = new NoDiscountStretegy();
            Console.WriteLine("Final Bill " + obj1ShoppingMall.GetFinalBill());

            ShoppingMall objShoppingMallGeneric = new ShoppingMall(null);
            objShoppingMallGeneric.CustomerName = "New Customer";
            objShoppingMallGeneric.BillAmount = 1000;

            switch (DateTime.Now.DayOfWeek)
            {

                case DayOfWeek.Monday:
                    objShoppingMallGeneric.CurrentStrategy = new LowDiscountStretegy();
                    break;
                case DayOfWeek.Tuesday:
                    objShoppingMallGeneric.CurrentStrategy = new HighDiscountStretegy();
                    break;
                default:
                    objShoppingMallGeneric.CurrentStrategy = new NoDiscountStretegy();
                    break;
            }
            Console.WriteLine("Final Bill "+objShoppingMallGeneric.GetFinalBill());

        }
    }
}
```

OUTPUT:

```
Final Bill 900
Final Bill 500
Final Bill 1000
Final Bill 1000
Press any key to continue . . .
```