

COSC 4319 Fall 2004 Assignment 1  
Due: Oct. 25<sup>th</sup> 6:00PM (Submit electronically using the web.  
No hard copy and no email submissions please)

In this assignment you will create a web service that lets a merchant charge a credit card. It is important that you layer your application well. For the purpose of this test, we will assume only five credit cards with following details:

Card Number	Credit	First Name	Last Name	Expiration Date
1111-1111-1111-0001	1000	John	Smith	1/1/2006
1111-1111-1111-0002	2000	Bob	Smith	5/1/2006
1111-1111-1111-0003	1000	Sara	Williams	6/1/2006
1111-1111-1111-0004	2000	Kate	Camel	8/1/2006
1111-1111-1111-0005	10000	Jimmy	Johnson	9/1/2006

The web service will allow a merchant to either pre-approve a charge or simply charge. The web service looks like this when viewed in IE:

## CreditProcessService

Service that allows a merchant to charge Credit Cards

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [ChargePreApproved](#)  
Charges amount for pre-approved charge
- [Approve](#)  
Approves future charge for given amount
- [Charge](#)  
Charges credit card for the given amount

Each of the methods may throw an exception if the card information given is not valid or if the credit limit is less than the amount being charged or approved.

A sample client that uses this service is given below:

```
static void Main(string[] args)
{
    try
    {
        CreditProcessService service =
            new CreditProcessService();
        service.Credentials =
            System.Net.CredentialCache.
                DefaultCredentials;

        service.Charge("1111-1111-1111-0001",
            "John", "Smith",
            DateTime.Parse("1/1/2006"),
```

```

        "Books", 100);

    int approveCode =
        service.Approve(
            "1111-1111-1111-0001",
            "John", "Smith",
            DateTime.Parse("1/1/2006"),
            "Gasoline", 100);

    service.ChargePreApproved(
        approveCode, 90);

    approveCode =
        service.Approve(
            "1111-1111-1111-0001",
            "John", "Smith",
            DateTime.Parse("1/1/2006"),
            "Gasoline", 100);

    service.ChargePreApproved(
        approveCode, 110);

    try
    {
        approveCode =
            service.Approve(
                "1111-1111-1111-0001",
                "John", "Smith",
                DateTime.Parse("1/1/2006"),
                "Stocks", 2000);
    }
    catch(Exception ex)
    {
        Console.WriteLine(
            "Error: " + ex.Message);
    }

    approveCode =
        service.Approve(
            "1111-1111-1111-0001",
            "John", "Smith",
            DateTime.Parse("1/1/2006"),
            "Stocks", 690);

    service.ChargePreApproved(
        approveCode, 690);

    Console.WriteLine("OK");
}
catch(Exception ex)
{
    Console.WriteLine(
        "Error: " + ex.Message);
}
}
}

```

A sample of output is shown below:

```
Error: Server was unable to process request. --> Unable to approve  
OK
```

Please feel free to ask any questions. Note this is not a group project. Beware of academic honesty policy.