Lab Task 13 – Delegates

1. Desmond Limited is a credit bureau in **Lekki, Lagos**. It provides credit information on individual borrowers. A credit bureau is also referred as Credit Reference Agency. Companies such as **Desmond Limited** are a complete profit entity and have no affiliation with any government agency.

The information that this company provides is very helpful for people who lend money to others. It facilitates the lenders with information such as the ability to pay the loan, and the interest rates etc.

The financial information provided by **Desmond Limited** is provided to all the companies, agencies that request it, in order to do the credit assessment and credit rating. **Desmond Limited** collects personal financial data about the individuals from all the fiscal societies with which the company has a relationship.

The financial statistics that **Desmond Limited** provides, tests the odds that an individual will be able to repay the given debt. Using a mathematical algorithm, they summarize the statistics and render the same to the clients.

For one such client, **Desmond Limited** has to prepare an algorithmic rule that is developed on the end result of various kinds of interests. The interest is computed for a group of people who have borrowed money.

Therefore, as a coder, develop a software that calculates the following:

Simple Interest
Compound Interest

Using the concepts of C# delegates,

1. Create a jagged array **Customers** that holds the details of minimum of 2 customers.
2. Declare a delegate **Interest** and instantiate the same.
3. Declare variables such as:
    - P for storing principal amount
    - R for storing rate of interest
    - T for storing the time
4. Declare three methods **SimpleInterest** and **CompoundInterest**.

The formula for the same are as follows:

Simple Interest : (P*T*R)/100
Compound Interest: $P(1 + R)^T$

Invoke the **Interest** so as to execute the **Simple Interest** and **Compound Interest** of **Customers** earlier stored in the jagged array.

2. Create a console application named **DelegateApp** to implement delegate. Create a delegate called strMyDel that takes one string parameter and returns a string. Create a class named **TestDelegate**, that contains two Non-static methods **Space()** and **Reverse()** having the following signature:

string Space (string str);
string Reverse (string str);

Note: Space() method will insert space between the input characters and **Reverse()** method will reverse the input string.

Test your delegate using **Method group conversion** in the **DelegateApp** driver class.

3. Create a console application named **MulticastDelegateApp** to get two integer numbers from user and perform **addition** and **multiplication** on the input numbers. Use the concept of Multi-Cast Delegate to achieve the above mentioned output.

==========SUBMISSION==========

Please note serious attention is now being drawn to the originality of every task submitted. As it is generally believe that no two persons can reason exactly the way, picking the same variable names, implementing logic exactly the same way etc. Therefore, each student is expected to submit only his/her own authentic work.