INFORMATION SYSTEMS IIA 2015
Block 1 C# Project

For the rest of the block, you will be covering the following:

- building on the project from 10 March
- working with dates
- an introduction to arrays
- working with data across forms

Those that are comfortable with programming may like to develop the solution as they wish. For those less comfortable, I have provided learning sections and code segments starting on the next page.

The "brief" behind the project (I have posted a screen shot of the Booking form on Witse for you to have an idea of the form of the end product):

Clients can book for a show that they choose (with various additional options) and will be shown the cost of the booking and messages of confirmation of the booking.

The Admin(istrator) will enter the names of the shows and their respective costs into 2 arrays from Input Boxes on the Admin form. The show names can be anything you choose (remember last week you added them into the combo box – delete them from the collection now) and specify any cost for the show (these will each correspond to the name of each show).
(You can delete the Clear from this menu, as we won't be using it after all)

The client (on the Booking form) will choose the show (that will appear in a combo box on the Booking form, passed from the arrays of the Admin form) and will input various other items:

- the number of people that the booking is for (numeric up-down)
- the date the client would like to book for (date-time picker)
- whether a limo service is required (add a check box)
- whether a drinks service is required (add a group box with radio buttons) – either wine, malt and soft drinks or soft drinks only

The costs of additional options are:

Limo service	R100 per person, but a maximum of 8 people can be catered for (display a message in a Message Box if they have chosen the Limo service, but there are more than 8 people, but continue as if there will not be a limo service offered)
Wine, malt and soft drinks	R90 per person
Soft drinks only	R50 per person

Then VAT is added (make it 10% to be simple).
The output will be 2 messages:

You are booked to see *the Show Name* **for** *the number of people* **person/people on** *the date in day month format*. **You** *have/have not* **booked a limo service**.
The cost will be *the full cost of the booking, including the cost of the show for all the people plus the cost of the limo service if required plus the cost of the drinks if required, with VAT added at the end* **including VAT**.

The date being booked for may not be less than 1 week than the current date (validation rule).

Your work so far:
You should have the login form, validation of the passwords and passing of control to the correct form depending on the login id. The Admin and Booking forms should have the required menu items, making the changes as specified on the previous page.

Working with dates

Play around with different dates on your Booking form by allowing the client to select a date from the date-time picker and display various formats, such as

17 March 2015
17/03/2015
17 Mar
Adding a week/3 days to the current date, and displaying that date
Displaying the day of the week of a certain date
Comparing dates to each other and displaying the earlier (or the later, or a message saying which of the 1st or 2nd is earlier/later)

See the following links to see how to format/manipulate dates:

http://msdn.microsoft.com/en-us/library/8kb3ddd4.aspx
http://msdn.microsoft.com/en-us/library/az4se3k1.aspx
http://msdn.microsoft.com/en-us/library/efez4684.aspx
http://msdn.microsoft.com/en-us/library/497a406b.aspx

The date format you need for this project is day month (in full), eg., 19 April.

Use the Make a Booking menu item to start the process.

An Introduction to Arrays

You have not learnt to program with arrays. See the additional notes given on Witse and also in Chapter 6 of the textbook. Read these, and then use the code and guidelines below in your solution.

Add a class (right click bold name of your project, choose Add… Class… and give it a name). Within the curly brackets of the class type in

```
Public static string[] ShowName = newstring[3];
Public static double[] ShowCost = newdouble[3];
```

What these statements do is declare 2 arrays (one for the name of the show and one for the cost of the show), with their respective data types and their sizes. They are declared as public so they can be used across the forms.

In the Admin form, code the following under the Add menu item:

```
{
string[] NewShowName = newstring[5];
double[] NewShowCost = newdouble[5];
```

```
int intArrayCount;
for (intArrayCount = 0; intArrayCount<NewShowName.Length; ++intArrayCount)
      {
```

Then code the statements to get the show name and costs using input boxes and place into the 2 arrays (into NewShowName[intArrayCount] and NewShowCost[intArrayCount] respectively).

Then code

```
XXXArrayClass.ShowName = NewShowName;
XXXArrayClass.ShowCost = NewShowCost;

(where XXXArrayClass is the name you gave the array class when you added it)
}
```

This code declares the arrays in this context and uses an integer called intArrayCount to determine the position (index) of the array. The for loop starts at 0 (the first element in an array in C# is at position 0) (initialization). The alteration is the ++ which will mean that intArrayCount is incremented by 1 each time and the termination is when the length of the array is less than intArrayCount. Within the loop, input boxes will get the input and the show name and costs will be placed into the array at the position of intArrayCount. The 2 assign statements "place" the array into the public shared arrays you declared in the new class.

Working with data across forms

As we have declared the arrays as public, we can access them across the forms.

In the Booking form, you should code the following under the form's Load method (to get to the Load method, you double click on the form):

```
int intArrayCount
for (intArrayCount = 0; intArrayCount<XXXArrayClass.ShowName.Length; ++intArrayCount)
      {
cboShowName.Items.Add(XXXArrayClass.ShowName[intArrayCount]);
      }
```

This code is taking the items from the array and putting them in the combo box for the client to use. It takes place in a fixed-count loop as we need to move all the items from the array into the combo box.

You will be able to access the corresponding costs in the ShowCost Array by using the selected index of the combo box item chosen.I am not giving you the code for this; you should determine how to do this yourself.

On Witse, you should upload your complete zipped solution into Block 1 lab project (under Assignment2) by Monday 7 April at 08h00. This project is not for marks, but marks will be deducted from your Test 2 mark if a reasonable attempt is not submitted! The project will help prepare you for the test too.

HAVE FUN ☺ !!