

UNIVERSITI TUNKU ABDUL RAHMAN

ACADEMIC YEAR 2014/2015

APRIL EXAMINATION

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIES

WEDNESDAY, 22 APRIL 2015

TIME : 9.00 AM – 11.00 AM (2 HOURS)

BACHELOR OF INFORMATION SYSTEMS (HONS)
INFORMATION SYSTEMS ENGINEERING

Instruction to Candidates :

This question paper consists of TWO (2) questions in Section A and THREE (3) questions in Section B.

Answer **ALL** questions in **Section A** and **ONLY TWO (2)** questions in **Section B**.
Each question carries 25 marks.

Should a candidate answer more than TWO (2) questions in section B, marks will only be awarded for the FIRST TWO (2) questions in that section in the order the candidate submits the answers.

Candidates are allowed to use calculator.

Answer questions only in the answer booklet provided.

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIES**Section A (Answer ALL Questions)**

- Q1. (a) Explain the three views provided by Visual Studio when working with an .aspx page. (9 marks)
- (b) List any **TWO** (2) ASP.NET technologies. (4 marks)
- (c) ASP.NET 4.5 has a new feature called unobtrusive validation and is enabled by default. Briefly explain the problem that may be encountered with unobtrusive validation and how the problem can be resolved. (12 marks)
- [Total : 25 marks]

- Q2. (a) Explain what is meant by HTTP protocol is stateless and describe its implications. (10 marks)
- (b) A web form has the design as shown in Figure 1. When the Save button is clicked, the Name and CGPA will be saved into a myStudent that is a Student object.

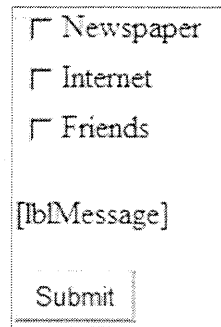
Name:

CGPA:

[lblMessage]

Figure 1: A Web Form

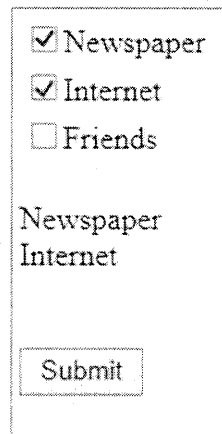
- (i) Write the code for the Page PreRender event to save the value in the myStudent to a ViewState object. (3 marks)
- (ii) Write the code for the Page load event to assign the value from the ViewState object to myStudent only when it is a postback event. (4 marks)
- (c) A web form has the design as shown in Figure 2. Write the code so that when the Submit button is clicked, lblMessage will display all the selections that are made by the user.

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIESQ2. (c) (Continued)

A web form containing a checkbox list with three items: "Newspaper", "Internet", and "Friends". Each item is preceded by an unchecked checkbox. Below the list is a label "[lblMessage]" and a "Submit" button.

Figure 2: Web form with ChekBoxList

The sample output is as shown in Figure 3.



The sample output of the web form. The checkbox list now shows "Newspaper" and "Internet" with checked checkboxes, and "Friends" with an unchecked checkbox. Below the list, the text "Newspaper" and "Internet" is displayed on separate lines. The "Submit" button remains at the bottom.

Figure 3: Sample output

(8 marks)
[Total : 25 marks]

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIES**Section B (Answer Only TWO (2) Questions)**

Q3. (a) Give **FOUR (4)** controls that support repeated-value binding. (4 marks)

(b) The connection string for Halloween.mdf database is defined in the web.config file as follows:-

```
<connectionStrings>
  <add name="HalloweenConnection"
    connectionString="Data Source=(LocalDB)\v11.0;
      AttachDbFilename=|DataDirectory|\Halloween.mdf;
      Integrated Security=True"
    providerName="System.Data.SqlClient" />
</connectionStrings>
```

(i) Write the markup for a data source control that will retrieve ProductID and Name from the Products table. (3 marks)

(ii) A DropDownList control is used to display the data from the data source defined in Q3(b)(i) as shown in Figure 4. A PostBack will be triggered when an option is selected from the DropDownList. Write the markup for the DropDownList control. (2 marks)

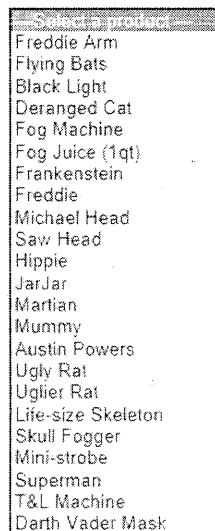


Figure 4: DropDownList displaying data from a data source.

(iii) Write the markup for the validator to ensure that the user must select an option other than the “---Select a product---” option from the DropDownList as shown in Figure 4. (3 marks)

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIESQ3. (b) (Continued)

- (iv) A DetailsView control is used to display the details of the product such as LongDescription and CategoryID from the Products table when an option is selected from the DropDownList. Users are able to edit the details of the product when the Edit button is clicked. Figure 5 shows the output of the DetailsView when a product is selected from the DropDownList and Figure 6 shows the output of the DetailsView when the Edit button is clicked. In Edit mode the DropDownList is displaying ShortName from Category table. Write the markup for the DetailsView. [Note: The data source for DetailsView is SqlDataSource1 and the data source for the DropDownList in Edit mode is SqlDataSource2.] (13 marks)

ProductID	cat01
LongDescription	This cat provides its own light and is perfect for a backyard haunting.
Category	props
Edit	

Figure 5: A DetailsView control.




ProductID	cat01
LongDescription	This cat provides its own light and  
Category	Props 
Update Cancel	

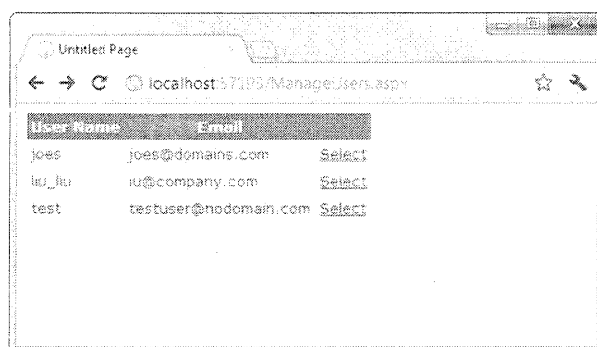
Figure 6: Editing with DetailsView control.

[Total : 25 marks]

- Q4. (a) There are two types of authentication to secure an ASP.NET website namely Forms Authentication and Windows Authentication. Compare and contrast between these two authentication methods. (6 marks)

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIESQ4. (Continued)

- (b) Write the code statement that uses Membership class to create a user record with user name, password and e-mail information. (3 marks)
- (c) Write the code that uses the Membership class to get all the users that will then be displayed in a GridView control as shown in Figure 7. The ID for the GridView is gridUsers.



User Name	Email	
joes	joes@domains.com	Select
lu_jlu	lu@company.com	Select
test	testuser@nodomain.com	Select

Figure 7: Displaying all users in GridView

(3 marks)

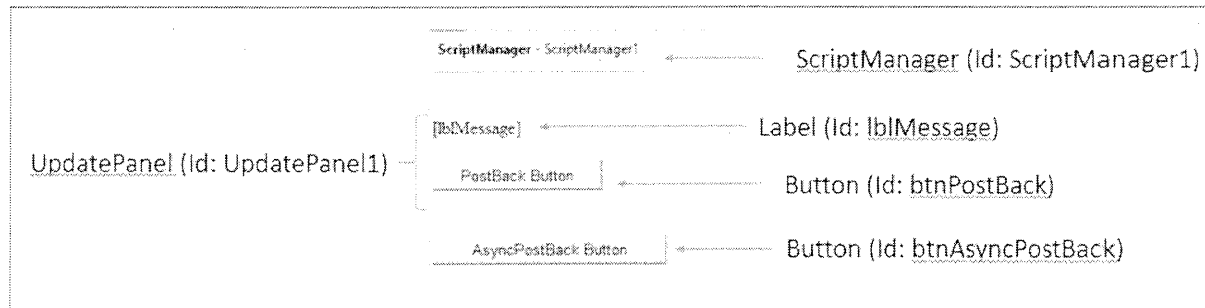
- (d) A web developer has created a subfolder called WebContent. Only logged in users are allowed to access the contents of this subfolder except for the WebForm1.aspx that is accessible to all users. Write the markup in the web.config file to configure for this security setting. (8 marks)
- (e) Give the **ONE (1)** function provided by the LoginView control and write the markup to show the use of LoginView control. (5 marks)
- [Total : 25 marks]

Q5. (a) With the aid of a diagram, illustrate the architecture of ASP.NET Ajax. (15 marks)

- (b) A web form has the design as shown in Figure 8. "PostBack Button" should not cause an asynchronous postback whereas "AsyncPostBack Button" will cause an asynchronous postback. Both buttons will display some message in the Label control when they are clicked by the users. Write the markup for the web form. [Note: The markup should start from <form> tag.] (10 marks)

UCCA3224 WEB APPLICATIONS AND TECHNOLOGIES

Q5. (b) (Continued)

*Figure 8: A web form that incorporates AJAX.*

[Total : 25 marks]