Philadelphia University **Student Name:**

Faculty of Engineering **Student Number:**

Dept. of Computer Engineering

Final Exam, First Semester: 2011/2012

Course Title:	Advanced Programming Language	**Date:**	17/01/2012
Course No:	630501	**Time Allowed:**	2 hours
Lecturer:	Dr. Qadri Hamarsheh	**No. Of Pages:**	4

Information for candidates

1. *This examination paper contains 4 questions totaling 40 marks*
2. *The marks for parts of questions are shown in round brackets.*

Advices to candidates

1. *You should attempt all questions.*
2. *You should write your answers clearly*

Basic Notions*: The aim of the questions in this part is to evaluate the required minimal student knowledge and skills. Answers in the pass category represent the minimum understanding of basic concepts: Components of a Wireless Networks: WAP Browser, WAP Gateway and Web Server; .NET Mobile Technology using C# with ADO.NET and ASP.NET Mobile Programming.*

Question1 **Choose the most appropriate answer among the following**: **(13 marks)**

1. The main functionalities of HTTP Proxy are ----------

   a) Caching and security.

   b) Caching and HTML to WML Conversion.

   c) Security and Protocol Conversion: WSP↔HTTP.

   d) DNS and WMLScript Compilation.

2. The Capability Negotiation Process is the responsibility of ----------

   a) WTP **b) WTLS** **c) WSP** **d) WAE**

3. The WAP protocol that has a bearer specific implementation is

   a) WTP **b) WTLS** **c) WDP** **d) WAE**

4. How many octets (tokens), the WSP representation will contain for the accept header:

   Accept: text/ vnd.wap.wml

   a) 57 **b) 2** **c) 3** **d) 5**

5. The most often used element to create soft keys in WML language is :

   a) <Create > **b) <CreateKey >**

   c) <dokey > **d) None of the above**

6. To send the values of some variables , declared in WML Deck to a WAP Server we use

a) <PostField > **b) <SetVar >**

c) <SendVar > **d) <SnedField >**

7. .NET's collection of prepackaged classes and methods is called ----------

a) NCL **b) WCL** **c) FCL** **d) PPCM**

8. What ASP.NET object encapsulates the state of the client and the browser?

a) The Session object. **b) The Application object.**

c) The Response object. **d) The Request object.**

9. The object model of ADO.NET contains two major components:

a) DataSet classes and the .NET provider classes
b) DataSet classes and connection classes
c) DataSet classes and DataReader classes
d) None of the above

10. To execute the command object that performs some data processing; returns the number of rows affected use the ----------method.

a) ExecuteScalar **b) ExecuteNonQuery**
c) ExecuteReader **d) None of the above**

11. To generate SQL statements (update, insert and delete) from select statement at run time we use

a) DataAdapter **b) Query Builder**
c) Command object **d) Command Builder**

12. You use the ---------- object to create SQL statements for retrieving data from a database.

a) OleDbConnection **b) OleDbDataReader**
c) OleDbCommand **d) None of the above**

13. What is the purpose of the following code segment?

```
if ( !IsPostBack )
     {
          OleDbDataAdpater1.Fill(dataset1);
          ObjectList1.DataBind( );
     }
```

a) To populate the DataAdapter the first time the page is displayed.
b) To populate the DatSet the first time the page is displayed.
c) To populate the DataAdapter every time the page is displayed.
d) To populate the DataSet every time the page is displayed.

***Familiar Problems Solving**: The aim of the questions in this part is to evaluate that the student has some basic knowledge of the key aspects of the lecture material and can attempt to solve familiar problems of advanced WML tags and event programming, .Net Mobile Programming: Run Time Controls, Data Binding and ADO.NET Objects.*

Question2 **(5 marks)**

Write WML Code to create a card that actually prompts the user to fill in three text fields **(user name, password and SSN)** when the user completes the text fields, the values are stored into three variables and passed to a dynamic file called "**user.asp"** to be logged to a database.

Question 3 **According to the `figure 1` do the following:** **(12 marks)**

1. Write code to create a custom class "**`Documents`**" that contains: **(4 marks)**
   - All **`Documents`** table' fields.
   - Set and get properties for **`DOC-ID`**, **`DocumentName`** and **`Pages`** fields.
   - **`Constructor`** with parameters (for all data members).

2. Create 5 objects of **`Documents`**, save these objects in **`Arraylist`** object and Bind arraylist object to the **`list`** mobile control (bind first two fields) to display data in Mobile page when the page is loaded (Hint: Write 1+2 in the same ASPX file where the design of the Mobile page). **(4 marks)**

3. Using database "**`DocumentsInformation.mdb`**" that contains one table "**`Documents`**" as shown in **`figure 1`**, write "**`Page_Load`**" event handler to display a report in the Mobile Page as shown in **`figure 2`** using **`connected`** database mechanism and **`try-catch-finally block`** in your code.
   Hint (you must create at **`run time`** the needed labels for the output) **(4 marks)**

Documents : Table

	Field Name	Data Type
🔑	Doc_ID	Number
	DocumentName	Text
	Status	Yes/No
	Owner	Text
	Pages	Number
	Size	Text

Figure 1

1 doc1 True Sami 30 350KB
2 doc2 False Feras 24 3770KB
3 doc3 True Naser 120 1340KB
4 doc4 True Ismail 55 5580KB
5 doc5 False Jehad 876 12345KB

Figure 2

Unfamiliar Problems Solving: *This part aims to test the student understanding advanced .NET Mobile programming: Dataset Object, and how to create report in the Mobile page using data relations, data adapters, and data set objects*

Question4 **(10 marks)**

According to **figure 3** (relationships between tables: **Suppliers, Products, Order Details, Orders and Customers**) and using ADO.NET objects write a C# Mobile application code to display the contents of "**NorthWind.mdb**" as shown in **figure 4.**
Assume that the **Connection, Dataset and adapters'** objects are already defined; the data set object contains tables with out relations.

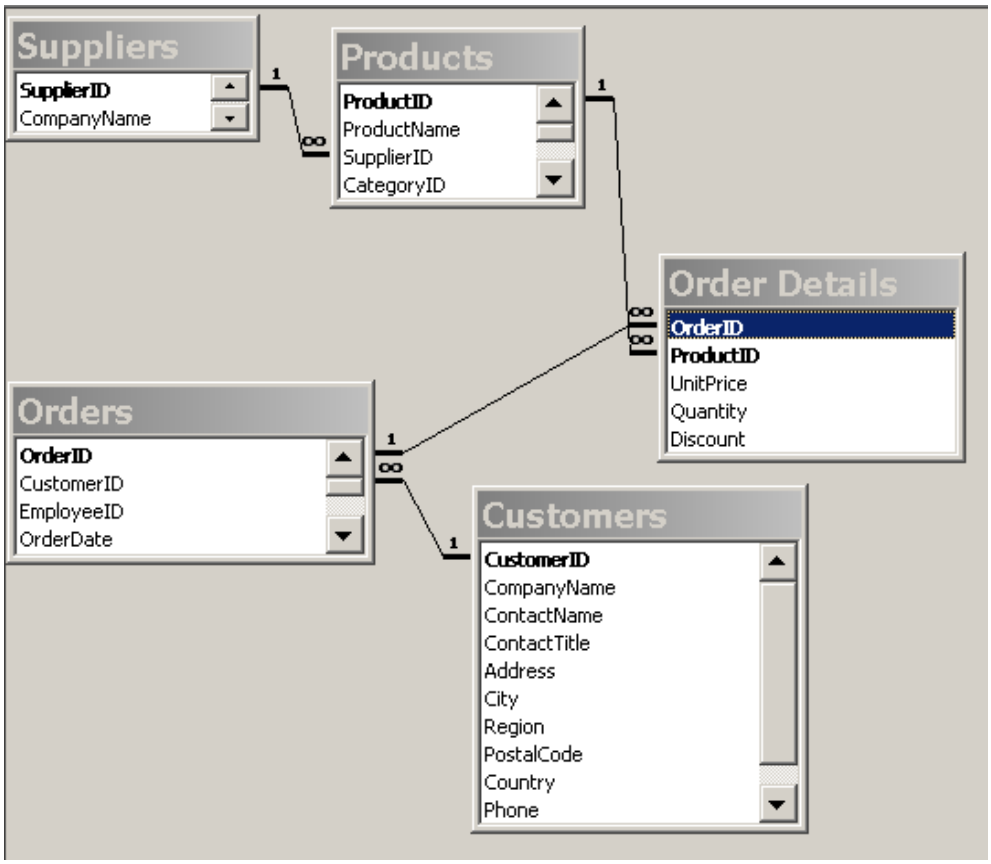

Figure 3

Figure 4

GOOD LUCK