Philadelphia University

Faculty of Engineering

Student Name:

Student Number:

Dept. of Computer Engineering
Final Exam, Second Semester: 2011/2012

Course Title:	Advanced Programming Language	Date:	30/05/2012
Course No:	630521	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 Multiple choices (circle the most appropriate one):   *(10 marks)*

1. NET's collection of prepackaged classes and methods is called ----------
    a) WCL   b) PPCM
    c) NCL   d) FCL

2. _____is a mechanism for converting value data types into reference data types
    a) Casting   b) Boxing
    c) Conversion   d) Transform

3. What is the use of the WebForm.aspx.cs file?
    a)   Holds the C# code for the codebehind module.
    b)   Holds the control configuration for the form.
    c)   Holds the C# code that will be translated into HTML on the client.
    d)   Holds the HTML code for the form.

4. The first parameter of the event handler refers to the object that carries information about
    a) Event   b) Events Counter
    c) The control that triggered the event   d) None of above

5. What is the purpose of the following code segment?
        if (!IsPostBack)
        {   List1.Items.Add("C#")   }
    a)   To populate the DataAdapter every time the web page is displayed.
    b)   To populate the DataSet every time the web page is displayed.
    c)   To populate the DataSet the first time the web page is displayed.
    d)   To populate the DataAdapter the first time the web page is displayed.

6. The attribute that must be specified with all ASP.NET Mobile controls , and the <form> element as well is _____
    a) Text   b) Runat
    c) ID   d) BackColor

7. The maximum number of command objects that the DataAdapter can contain is _____
   a) 1   b) 2
   c) 3   d) 4

8. The CommandBuilder will take the syntax from DataAdapter and generate the corresponding _____ objects.
   a)   UpdateCommand, InsertCommand, and DeleteCommand
   b)   SelectCommand, InsertCommand, and DeleteCommand
   c)   UpdateCommand, InsertCommand and SelectCommand
   d)   UpdateCommand, DeleteCommand and SelectCommand

9. A data provider namespace created to get general access to different data sources is
   _____
   a)   System.Data.ODBC   b)   System.Data.OleDb
   c)   System.Data   d)   System.Data.SqlClient

10. NET Data Managed Provider contains the following objects.
   a)   DataReader, DataAdapter, Connection and DataSet.
   b)   DataReader, Command, Connection and DataSet.
   c)   DataReader, DataAdapter, Command and DataSet.
   d)   DataReader, DataAdapter, Connection and Command.

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.*

Question 2 **According to Figures 1,2,3,4, and 5, do the following**   *(10 marks)*

a) Write WML code (deck) that contains all the cards with the suitable references as shown in figures 1, 2, 3, 4, and 5:
   - When user clicks the **Terminal** link then the Terminal card must be called.
   - When user clicks the **MailBox** link then the MailBox card must be called.
   - When user clicks the **Setting** link then the Setting card must be called.   *(4 marks)*

b) Write WML code to create the right soft key: options key "**Result!**" to get the result of the input values as shown in card "**Result**".   *(3 marks)*

c) Initialize all variables with suitable values within **onenterforward** event.   *(2 marks)*

d) Write WML code to go back to home card "**Personal Services**" after 5 seconds within the output card "**Results**"   *(1 mark)*
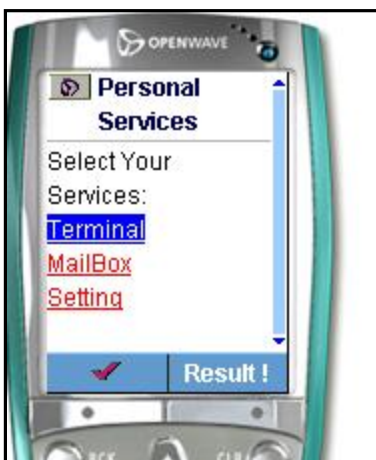

Figure 1   **Figure 2**   **Figure 3**

Figure 4

Figure 5

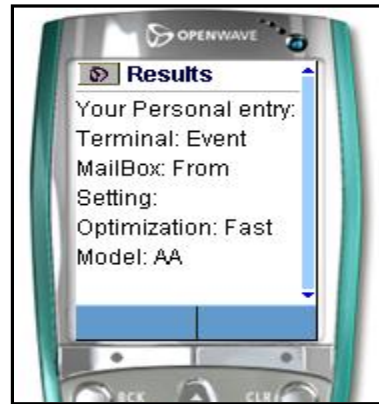## Question 3   *(10 marks)*

Using Database "**DocumentsInformation.mdb**" that contains one table "**Documents**" as shown in **figure 6** do the following:

1. Write "**Populate Object List**" button's event handler to fill the ObjectList control with data from the table "**Documents**" using **DataReader** object (**connected database**) and **binding** mechanism as shown in **figure7.**   *(4 marks)*
2. Write "**Connected Database**" button's event handler to display a report in the Mobile Page as shown in **figure 8** using "**Documents**" table and **DataReader** object.
   Hint (you must create at run time the needed labels for the output)   *(6 marks)*
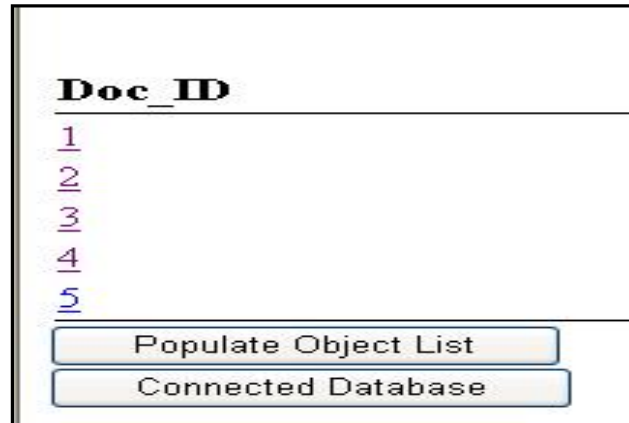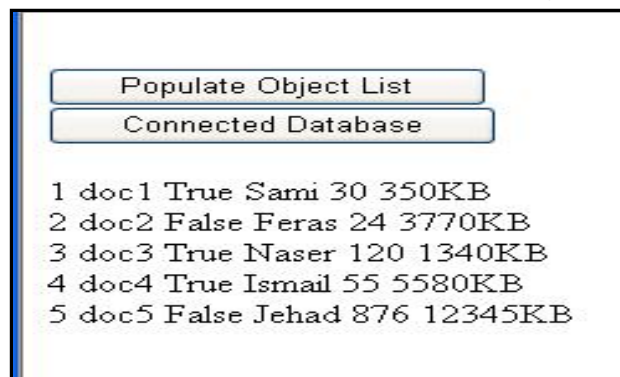

Figure 6

Figure 7

Figure 8

3

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 DataRelations, DataAdapters, and Dataset objects

Question4 According to figure 9 (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 10   *(10 marks)*
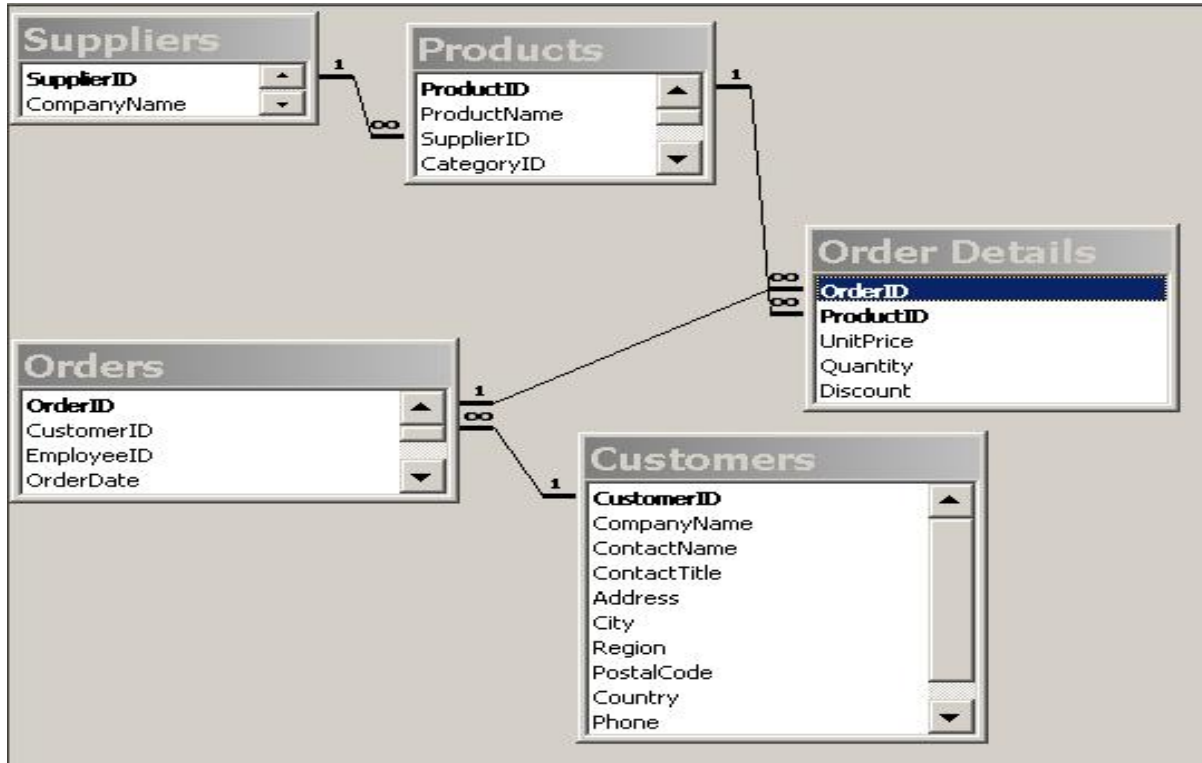

Figure 9

Figure 10

GOOD LUCK