**University of Technology**
**Computer Engineering Department**
**Final Examinations for Year 2011/2012**

Subject: Programming for Internet
Examiner: Asst. Lec. Saif Ghassan

Class: 4<sup>th</sup> SW
Time allowed: 180 min.

*Note: Answer Only Five Questions*

Q1:/ [14]

A. If you are in "www.grad.compeng.uot.edu.iq/home/main.php" and you want to go to "grad" subdomain that is one of the "compeng" subdomain that exist under "uot" subdomain:
1. Get to "it" subdomain that exist under "grad" subdomain through FQDN and PQDN.
2. How we can get an image called "cat.jpg" that exist under "Images" folder in the "compeng" subdomain site.
3. What is the level of "sw" subdomain that is one of the "grad" subdomain.

B. Using PHP script to create database and table inside "AppDiv" with UN:"Admin" and Pass:"abc123" name the DB "Exam_DB" and the table "Exam_Marks_Tbl" with columns (E_Name varchar(15), E_Degree int). Then the values that were inserted from an HTML "Grades.htm" from the exam select list "EDDL" (PHP, C#, Java) and the Degree select list "DDDL" (30, 35, 40) will be inserted to the "Exam_Marks_Tbl" by clicking the Insert button.

Q2:/ [14]

A. Show the MIME message header for:
1. A partial message from "info@itswtech.org", and it's the 20<sup>th</sup> from 40 totally,
2. An external-body message points to a text file "report.txt" from site www.itswtech.org with access type "ftp".

B. What is the best document type and why if you want to design:
1. A Website to preview Advertisement movies and pictures only,
2. A Social media Website.

Q3:/ [14]

Category_Tbl

| Cat_ID | Cat_Name |
|--------|-----------|
| 1 | Stationary |
| 2 | Electricity |
| 3 | Computers |
| | |
| | |

Product_Tbl

| Prod_ID | Cat_ID | Prod_Name | Prod_Price |
|---------|--------|-----------|------------|
| 1 | 3 | Laptop HP | 700 |
| 2 | 3 | Disk Drive | 60 |
| 3 | 1 | Paper Holder | 5.10 |
| 4 | 1 | Marker | 3.0 |
| 5 | 2 | Cable | 6 |

A. Create a view "Cat_Total_VW" to display this output:

B. Show the SQL script that will select from the view "Cat_Total_VW" the category that has the highest Total_Price value more than the average of the "Total Price" column?

| Category | Total_Price |
|----------|-------------|
| Computers | 760 |
| Electricity | 6 |
| Stationary | 8.10 |

*1 - 2*

إقلب الصفحة

Q4:/ [14]
A. What is the function of SMTP that differs from MTA?

B. Show the PHP script that will analyze the user inputs of Start Sequence (StartS_Txt) and End Sequence (EndS_Txt), in which if the difference between these two sequences is less than or equal to 2000, then the PHP script will directly insert the start and end sequences in the table "Seq_Tbl" with columns (Seq_ID,Seq_Start,Seq_End) in one line as a record, else if the difference is more than 2000, then the whole sequence must be divided into intervals of 2000 sequence each, and the output will be inserted in the table for all the divided intervals one by one.

**Start Sequence**      **End Sequence**

[                ]      [                ]

Get Result

Q5:/ [14]
A. What is the role of MIME when sending an Arabic font email, and what's the function of its components?

B. Illustrate the function of:
1. Pseudo      2. IAC   3. HTML tags    4. Upgrade (General Header)

Q6:/ [14]
A. If we store the entire host file in a single computer and allow access to this centralized information to every computer that needs a mapping would create a huge amount of traffic on the Internet, so what is the solution?

B. Answer the following with **True** or **False**:
1. When using the POST method, variables are displayed in the URL
2. In PHP you can use both single quotes ( ' ' ) and double quotes ( " " ) for strings
3. PHP allows you to send emails directly from a script
4. PHP can be run on Microsoft Windows IIS
5. In PHP, the die() and exit() functions do the exact same thing

*Good Luck*

2 - 2

**Q1:/ Ans.**

**A.**

    1. http://www.grad.compeng.uot.edu.iq/home/main.php
      PQDN: it
      FQDN: it.grad.compeng.uot.edu.iq
    2. http://compeng.uot.edu.iq/Images/cat.jpg
    3. level 5

**B.**

```php
< ?php
$con = mysql_connect("AppDiv","Admin","abc123");
if (!$con)
{
die('Could not connect: ' . mysql_error());
}
// Create database
if (mysql_query("CREATE DATABASE Exam_DB",$con))
{
echo "Database created";
}
else
{
echo "Error creating database: " . mysql_error();
}
// Create table
mysql_select_db("Exam_DB", $con);
$sql = "CREATE TABLE Exam_Marks_Tbl
(
E_Name varchar(15),
E_Degree int
)";
$con = mysql_connect("AppDiv","Admin","abc123");
if (!$con)
{
die('Could not connect: ' . mysql_error());
}
mysql_select_db("Exam_DB", $con);
$sql="INSERT INTO Exam_Marks_Tbl (E_Name, E_Degree)
VALUES
('$_POST[EDDL]','$_POST[DDDL]')";
if (!mysql_query($sql,$con))
{
die('Error: ' . mysql_error());
}
echo "1 record added";
// Execute query
mysql_query($sql,$con);
mysql_close($con);
?>
```

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Q2:/ Ans.

A.

1.

Content-Type: message/partial;
Id="info@itswtech.org";
Number=20;
Total=40

**2.**

Content-Type: message/external-body;
Name="report.txt";
Site="www.itswtech.org";
Access-type="ftp";

B .

1. Static document type cause we don't have to contact with people, so we can take benefit of the speed of the static document like HTML, and we can use with it active document as it could be used embedded with the static document
2. Dynamic Document type cause we have to create forms that enable us to contact with people as it's a social network, and we can't use a static document.

Q3:/Ans.

A.

CREATE VIEW Cat_Total_VW As
SELECT Category_Name as Category, sum(Product_Price) as Total_Price  FROM
Category_Tbl right join Product_Tbl on Category_Tbl. Category_ID = City_Tbl Category_ID
group by Category_Name

B. SELECT Category, Total_Price FROM Cat_Total_VW WHERE Total_Price>(SELECT
AVG(Total_Price) FROM Cat_Total_VW)

Q4:/ Ans.

A.

SMTP: Email delivery protocol
MTA: Program the uses SMTP to deliver emails.

B.

```
Protected Sub GetResult_Click(ByVal sender As Object, ByVal e As System.EventArgs) Handles
Button3.Click
    Dim a As Integer
    Dim b As Integer
    Dim c As Integer
    ' Dim d As Integer
    Dim rsy As New SqlClient.SqlCommand
    Dim con As New SqlConnection
    If From_Txt.Text = "" Or To_Txt.Text = "" Then
```

```
        Label1.Text = "Please Insert the RC range"
    Else

        con.ConnectionString = "server=sql;database=RC_requests; uid=rc; pwd=12345678;"
        rsy.Connection = con
        a = From_Txt.Text
        b = To_Txt.Text
        If To_Txt.Text - From_Txt.Text > 3000 Then
            Do While a <= b

                c = a + 2999
                If c > b Then
                   c = b
                End If
                con.Open()
                rsy.CommandText = "Insert into requests ([From], [to], dealer, process) values ('" +
a.ToString() + "','" + c.ToString + "','" + Dealer_DDL.SelectedValue.ToString() + "','" +
Process_Txt.Text + "')"
                rsy.ExecuteReader()
                con.Close()
                a = c + 1
            Loop
        Else
            con.Open()
            rsy.CommandText = "Insert into requests ([From], [to], dealer, process) values ('" +
From_Txt.Text + "','" + To_Txt.Text + "','" + Dealer_DDL.SelectedValue.ToString() + "','" +
Process_Txt.Text + "')"
            rsy.ExecuteReader()
            con.Close()
        End If
        GridView2.Visible = False
        GridView1.Visible = True
        Label1.Text = "RC Inserted Successfully"
        GridView1.DataBind()
    End If
        End Sub
```

Q5:/ Ans.
   A.
**MIME**: Electronic mail can send messages only in (Network Virtual Terminal) NVT 7-bit ASCII format so it has some limitations and it cannot be used for languages that are not supported by **7-bit ASCII** characters (such as French, German) Also, it cannot be used to send binary files or video or audio data. Multipurpose Internet Mail Extensions is a supplementary protocol that allows **non-ASCII** data to be sent through e-mail. MIME transforms **non-ASCII** data at the sender site to **NVT ASCII** data and delivers them to the client **MTA** to be sent through the Internet. The message at the receiving side is transformed back to the original data.

**MIME** defines five headers that can be added to the original **SMTP** header section to define the transformation parameters:
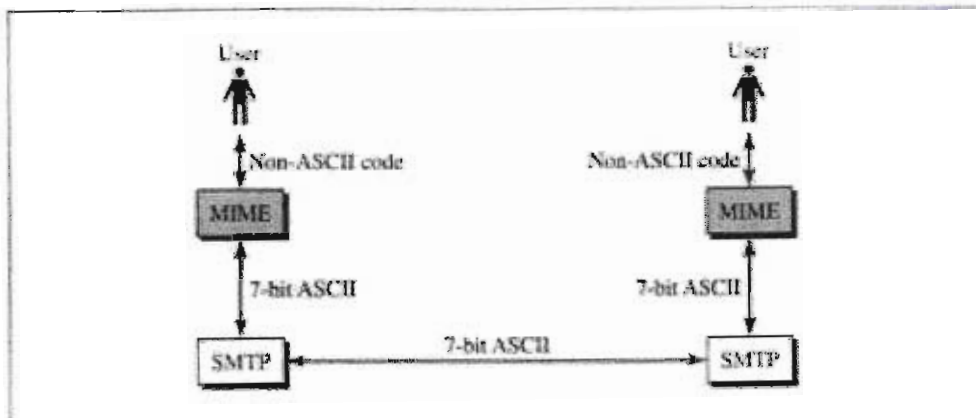
- **MIME – Version:** This header defines the version of MIME used. The current version is 1.1.
- **Content – Type:** This header defines the type of data used in the body of the message. The content type and the content subtype are separated by a slash. Depending on the subtype, the header may contain other parameters. MIME allows seven different types of data. These are listed in table 2.1.
- **Content-Transfer-Encoding:** This header defines the method used to encode the messages into 0s and 1s for transport. The 5 types of encoding methods are listed in table 2.2.
- **Content-Id:** This header uniquely identifies the whole message in a multiple-message environment.
- **Content-Description:** This header defines if the body is image, audio, or video.

B.

**pseudo** terminal driver which pretends that the characters are coming from a terminal. The operating system then passes the characters to the appropriate application program.

**IAC:** TELNET accomplishes this by embedding the control characters in the data stream. However, to distinguish data from control characters, each sequence of control characters is preceded by a special control character called Interpret As Control (**IAC**).

**HTML tags:** Format the output of the body of an HTML page.

**Upgrade (General Header):** Specify the preferred communication protocol.

Q6:/ Ans.

A.

Today, it is impossible to have one single host file relate every address to a name, and vice versa. The host file would be too large to store in every host. In addition, it would be impossible to update all the host files in the world every time there is a change. One solution would be to store the entire host file in a single computer and allow access to this centralized information to every computer that needs a mapping, but we know that this would create a huge amount of traffic on the Internet. Another solution, the one used today, is to divide this huge amount of information into smaller parts and store each part on a different computer. In this method, the host that needs mapping can contact the closest computer holding the needed information. This method is used by the **Domain Name System (DNS)**.

B.

1. False   2. True   3.True   4.True   5. True