higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

COMPUTER PROGRAMMING
(Second paper)
NQF LEVEL 4

13 March 2020

This marking guideline consists of 9 pages.

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QUESTION 1

1.1 1.1.1

- Public class salary
- Public staffno as integer
- Public surname as string
- Public drate asdecimal
- Public ihour as integer
- Public ipercent as integer (Any 2 × 1) (2)

1.1.2

```
Public Property rate()as decimal✓
    Get
      Return drate
    End Get
    Set(ByVal value as decimal)
      drate = value        ✓
    End Set
  End Property
  Public Property hour() as integer
    Get
      Return ihour
    End Get
    Set(ByVal value as integer)
      ihour = value
    End Set
  End Property
  Public Property percent()as integer
    Get
      Return ipercent
    End Get
    Set(ByVal value as integer)
      If value <= 0 Then
        MessageBox.Show("percent must be greater than 0")
      Else
        ipercent = value
      End If

    End Set
  End Property
```

(Any 2 × 1) (2)

1.2

```
Public Function calsalary() as decimal✓
  Dim salary as decimal
  salary = rate✓ * hour✓
  Return salary

End Function
```

(3)

1.3
```
Public Function calPayee() as decimal✓
    Dim tax As Decimal
    tax = calsalary()✓* ✓ipercent / 100✓
    Return tax
  End Function
```
(4)

1.4
```
  Public Function calnet()as decimal✓
    Dim netsalary As Decimal

    netsalary = calsalary()✓- calPayee()✓
    Return netsalary✓
  End Function
End Class
```
(4)

1.5 1.5.1
```
Private Sub Button1_Click() Handles Button1.Click

Dim objsalary As New salary✓
```
(1)

1.5.2
```
‘Code to assign values to properties

objsalary.rate = txtrate.Text✓
    objsalary.hour = txthour.Text
   objsalary.percent = ntax.Value
    objsalary.staffnr = txtstaffn.Text✓
   objsalary.surname = txtsurname.Text
```
mark any correct 2 (2)

1.5.3
```
                    ‘Code to display
lblstaffnr.Text = objsalary.staffnr✓
lblsurname.Text = objsalary.surname✓
```
(2)

1.5.4
```
lblsalary.Text =✓ FormatCurrency(objsalary.calsalary)✓
lblpayee.Text = FormatCurrency(objsalary.calPayee)✓
```
(3)

1.5.5
```
‘Code to display netsal

lblNetSalary.Text = FormatCurrency(objsalary.calnet) ✓✓

  End Sub
End Class
```
(2)
[25]

QUESTION 2

2.1 2.1.1

```
Private connection As New OleDb.OleDbConnection
Private command As OleDb.OleDbCommand

Private strSalesRepCode As String = ""
Private strSQL As String = ""

Private Sub GetSalesReps()
    'Fetch the Sales Reps from  the SalesRep Table

    command = New OleDb.OleDbCommand
    Dim dtSalesReps As New DataTable ✓

    connection.ConnectionString = ConnectionPath ✓
    connection.Open()
    command.Connection = connection

    command.CommandText = strSQL ✓
    dtSalesReps.Load(command.ExecuteReader()) ✓

    connection.Close()                                                    (4)
```

2.1.2

```
   strSQL = "SELECT SalesRepCode, FirstName, Surname FROM SalesReps" ✓✓   (2)
```

2.1.3

```
    bsSalesReps = New BindingSource
    bsSalesReps.DataSource = dtSalesReps ✓                                (1)
```

2.1.4

```
    lblSalesRepCode.DataBindings.Add("Text", bsSalesReps, "SalesRepCode")
    lblFirstName.DataBindings.Add("Text", bsSalesReps, "FirstName")
    lblSurname.DataBindings.Add("Text", bsSalesReps, "Surname")
                                                          ✓ {all three}
End Sub                                                                   (1)
```

2.2 2.2.1

```
Private Sub GetSales()

    command = New OleDb.OleDbCommand
    Dim dtSales As New DataTable ✓

    connection.ConnectionString = ConnectionPath
    connection.Open()
    command.Connection = connection ✓

    strSalesRepCode = Convert.ToString(bsSalesReps.Current("SalesRepCode")) ✓

    Dim parSalesRepCode As New OleDb.OleDbParameter _
                            ("@SalesRepCode", strSalesRepCode)
    command.Parameters.Add(parSalesRepCode)

    command.CommandText = strSQL ✓
    dtSales.Load(command.ExecuteReader()) ✓

    grvSales.DataSource = dtSales
    Call SetGridFormatting()
```

(5)

2.2.2

```
    strSQL = "SELECT ProductCode, InvoiceNo, Quantity, Price, " & _ ✓
             "Quantity * Price as TotalPrice " & _ ✓
             "FROM Sales " & _ ✓
             "WHERE SalesRepCode = @SalesRepCode" ✓
```

(4)

2.2.3

```
    'Calculate the Total Sales
    strSQL = "SELECT SUM(Quantity * Price) " & _ ✓✓
             "FROM Sales " & _ ✓
             "WHERE SalesRepCode = @SalesRepCode" ✓

    command.CommandText = strSQL ✓
```

(5)

2.2.4

```
    Dim decTotalSales As Decimal = Convert.ToDecimal(command.ExecuteScalar()) ✓
    lblTotalSales.Text = decTotalSales.ToString("C") ✓

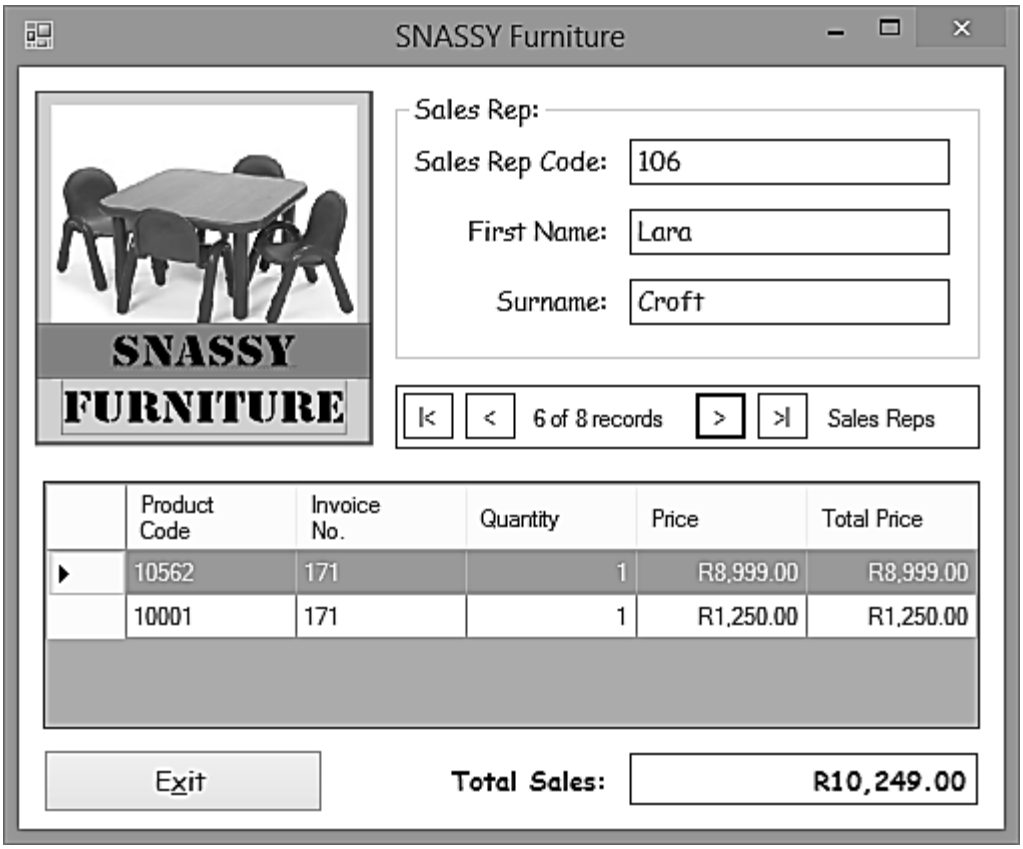
    connection.Close()

End Sub
```

(2)

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2.3



Correct output (1)
[25]

QUESTION 3

3.1 3.1.1

```
<html>
<head>
<title>Online-Order</title>
<link rel="stylesheet" href="style1.css" type="text/css">✓✓
</head>
<body>
```

(2)

3.1.2

```
<body>
<div id="container">✓
```

(1)

3.1.3

```
<div id="header">✓
  <img src="pizza.jpg" ✓width="250" height="100"✓>
</div>
```

(3)

3.1.4 ✓

```
<a href="home.html">Home</a> | <a href="order.html">Order</a>
|<a href="specials.html">Special</a> | <a
href="contactus.html">Contact Us</a> | <a
href="galary.html">Galary</a>✓

</div>
```
(2)

3.1.5
```
<div id="content">✓
<table border="0"✓>
<tr>
```
(2)

(a)
```
<tr>
<td>Contact:</td><td><input type="text" name="cont"></td>✓
</tr>.
<td>Surname::</td><td><input type="text" name="sur"></td>✓
</tr>
<tr>
<td>Address:</td><td><input type="text" name="add"></td>✓
</tr>
```
(3)

(b)
```
<tr><td>Select Size:</td><td><Select name="pizza"> ✓
<option value="0">Select Pizza Size</option>✓
<option value="1">Small</option>
<option value="2">Medium</option>
<option value="3">Large</option>
<option value="5">Extra Large</option>✓

</tr>
```
(3)

(c)
```
<tr>
<td>Extra Topping:</td><td><input type="checkbox"
✓name="studid"> ✓ </td>
</tr>
```
(2)

(d)
```
<tr>
<td colspan="2"✓><fieldset> ✓<legend>Collection
Mode</legend>
<input type="radio" name="campus">Delivery<br>✓
<input type="radio" name="campus">In-Person✓
</fieldset>
</td>
</tr>
```
(4)

(e)
```
<tr>
<td><input type="button"✓ value="Compute Order" onclick
✓="computer()"✓></td>
```
(3)

(f) <td><input type="reset" value="Clear"></td>✓ (1)

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```
</tr>
</table>
</div>
```

3.1.3
```
<div id="footer">
   <p>Insert Examination Number</p>✓
</div>
</div>
</body>
</html>
```
(1)
[27]

QUESTION 4

```
var surname = document.getElementById("surn").value;
var address= document.getElementById("add").value;
var contact = document.getElementById("cont").value;
var size = document.getElementById("pizza");
var optionSize = size.options[size.selectedIndex].value
```

4.1
```
<script type="text/javascript">
//EXAMINATION NUMBER
```
(2)

4.2 4.2.1
```
function computer()
{
```
(1)

4.2.2
```
var surname =✓document.getElementById("surn").value;✓
var address = document.getElementById("add").value;✓
var contact = document.getElementById("cont").value;✓
var size = document.getElementById✓ ("pizza");✓
var optionSize = size.options✓ [size.selectedIndex].value;✓
```
(8)

4.2.3

```
if(surname =="")✓
        {
                alert("Please enter surname");✓
                document.getElementById("surn").focus();✓
        }

if(address =="")✓
        {
                alert("Please enter Adrdress");✓
                document.getElementById("add").focus();✓
        }
if(contact =="")✓
        {
                alert("Please enter contact");✓
                document.getElementById("cont").focus();✓
        }

if(optionSize ==0)✓✓
{
alert("Please select Pizza Size");✓
}

}
</script>
```

ALTERNATIVE If constructs:

```
If (surname.length==0)
If(address.length==0)
If(contact.length==0)
If(optionSize.length==0)
```

Printout of source code (12)
[23]

TOTAL: 100

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