



Province of the  
**EASTERN**  
**CAPE**  
EDUCATION

## **NATIONAL SENIOR CERTIFICATE**

**GRADE 11**

**NOVEMBER 2011**

### **INFORMATION TECHNOLOGY P1 INLIGTINGSTEGNOLOGIE V1 MEMORANDUM**

**MARKS/PUNTE: 120**

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This memorandum consists of 11 pages.  
Hierdie memorandum bestaan uit 11 bladsye.

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**QUESTION/VRAAG 1****DATABASE AND DELPHI (30 marks/punte)**

LO/LU 11.4.15

```
procedure TForm1.Button1Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select *✓ from Fixtures✓ order by pool, date✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;

procedure TForm1.Button2Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select *✓ from Fixtures✓ where MatchDetails like
"%South Africa%"✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;

procedure TForm1.Button3Click(Sender: TObject);
var
  sdate : string;
begin
  sdate := inputbox('Enter date',''); ✓
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select date,location✓ from Fixtures✓ where Day✓ (Date)
= "'+sdate+'"'✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;

procedure TForm1.Button4Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select distinct location✓ from Fixtures✓ order by
location✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;

procedure TForm1.Button5Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select count(location) ✓ as [Total Matches played in
Wellington] ✓ from Fixtures✓ where location = "Wellington"✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;
```

```
procedure TForm1.Button6Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select MatchDetails, Date, CategoryBAdult✓ from
  Fixtures✓, TicketPrices✓ where CategoryBAdult <= 500✓ and Fixtures.MatchNo=
  TicketPrices.MatchNo✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;
```

```
procedure TForm1.Button7Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select
  Fixtures.matchNo, categoryAAAdult, categoryBAAdult, categoryCAAdult, categoryDAAdult,
  categoryGAAdult✓ from Fixtures✓, TicketPrices✓ where fixtures.Matchno =
  Ticketprices.Matchno✓ and MatchDetails like "%South Africa%"✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;
```

```
procedure TForm1.Button8Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select Fixtures.matchNo, MatchDetails✓,
  format(2*CategoryDAAdult+2*CategoryDChild✓, "Currency")✓ as [Family Price] ✓
  from Fixtures✓, TicketPrices ✓ where fixtures.Matchno = Ticketprices.Matchno
  ✓ and Location = "Auckland"✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;
```

```
procedure TForm1.Button9Click(Sender: TObject);
begin
  qryworldcup.Active := false;
  qryworldcup.SQL.text := 'select count (*)✓ as [Number of Matches Namibia will be
  playing] ✓ from Fixtures✓ where MatchDetails like "%Namibia%"✓';
  qryworldcup.Active := true;
  SetGridColumnWidths(DBGrid1);
end;
```

end.

**QUESTION/VRAAG 2                      DELPHI PROGRAMMING                      (40 marks/punte)**

LO/LU 11.4.8, 11.4.9, 11.4.10

2.1	Declare other arrays (global)	2
	Loop	1
	Get Name	1
	Get Team	1
	Get Matches	1
	Separate tries, conversions, penalties, drop goals	4
	Calculate points and assign to array	3
		<b>13</b>
2.2	Set up tabs/paragraph in richedit	3
	Heading	1
	Loop	1
	Display name and points	2
		<b>7</b>
2.3	Sorting code (1 for descending order, 3 for swapping matches, 1 mark each for other arrays, 2 for loops, 1 for if)	10
	For loop 1 – 5	1
	Display player	1
	Display team	1
	Display matches	1
	Add line in between	1
		<b>15</b>
2.4	Inputbox	1
	For loop	1
	If statement	1
	Display name and points	2
		<b>5</b>

**Possible Solution**

```
unit question2memo_u;
```

```
interface
```

```
uses
```

```
Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls, Forms,  
Dialogs, StdCtrls, ComCtrls, Buttons, ExtCtrls;
```

```
type
```

```
TForm1 = class(TForm)  
  Panel1: TPanel;  
  Button1: TButton;  
  Button3: TButton;  
  Button2: TButton;  
  BitBtn1: TBitBtn;  
  RichEdit1: TRichEdit;  
  Label1: TLabel;  
  procedure Button1Click(Sender: TObject);  
  procedure FormCreate(Sender: TObject);  
  procedure Button2Click(Sender: TObject);  
  procedure Button3Click(Sender: TObject);  
private  
  { Private declarations }  
public  
  { Public declarations }  
end;
```

```
var
```

```
Form1: TForm1;  
icount : integer;  
arrPlayers : array[1..50] of string;  
arrName : array[1..50] of string;  
arrTeam : array[1..50] of string;      ✓✓  
arrMatches : array[1..50] of integer;  
arrPoints : array[1..50] of integer;
```

```
implementation
```

```
{ $R *.dfm }
```

```
procedure TForm1.Button1Click(Sender: TObject);
```

```
var
```

```
  k : integer;
```

```
begin
```

```
  richedit1.Paragraph.TabCount := 2; ✓  
  richedit1.paragraph.tab[0] := 50; ✓  
  richedit1.paragraph.tab[1] := 100; ✓  
  richedit1.Lines.add('Player'+#9+'Points'); ✓
```

```
  for k := 1 to icount do ✓
```

```
    richedit1.Lines.add(arrName[k] ✓ + #9 + inttostr(arrPoints[k] ✓)); end;
```

```

procedure TForm1.FormCreate(Sender: TObject);
var
  myfile : textfile;
  soneline : string;
  k, ipos, itries, icon, ipen, idg : integer;
begin
  icount := 0;
  if fileexists('PlayerStats.txt') <> true then
    begin
      ShowMessage('File does not exist');
      Exit;
    end;
  Assignfile(myfile, 'PlayerStats.txt');
  Reset(myfile);
  while not eof (myfile) do
    begin
      inc(icount);
      readln(myfile, soneline);
      arrPlayers[icount] := soneline;
    end;
  closefile(myfile);
  {#####}

  for k := 1 to icount do✓
    begin
      ipos := pos(',', arrPlayers[k]);
      arrname[k] := copy(arrPlayers[k], 1, ipos-1); ✓
      delete(arrPlayers[k], 1, ipos);
      ipos := pos(',', arrPlayers[k]);
      arrteam[k] := copy(arrPlayers[k], 1, ipos-1); ✓
      delete(arrPlayers[k], 1, ipos);
      ipos := pos(',', arrPlayers[k]);
      arrMatches[k] := strtoint(copy(arrPlayers[k], 1, ipos-1)); ✓
      delete(arrPlayers[k], 1, ipos);
      ipos := pos(',', arrPlayers[k]);
      itries := strtoint(copy(arrPlayers[k], 1, ipos-1)); ✓
      delete(arrPlayers[k], 1, ipos);
      ipos := pos(',', arrPlayers[k]);
      icon := strtoint(copy(arrPlayers[k], 1, ipos-1)); ✓
      delete(arrPlayers[k], 1, ipos);
      ipos := pos(',', arrPlayers[k]);
      ipen := strtoint(copy(arrPlayers[k], 1, ipos-1)); ✓
      delete(arrPlayers[k], 1, ipos);
      idg := strtoint(arrPlayers[k]); ✓
      arrPoints[k] ✓:= itries*5 + icon*2 + ipen*3 ✓+ idg*3; ✓
    end;

  end;

```

```
procedure TForm1.Button2Click(Sender: TObject);
var
  k, l, itemp : integer;
  stemp : string;
begin
  richedit1.Clear;
  for k := 1 to icount - 1 do✓
    begin
      for l := k+1 to icount do✓
        begin
          if arrMatches[k] < ✓arrMatches[l] then✓
            begin
              itemp := arrMatches[k]; ✓
              arrMatches[k] := arrMatches[l]; ✓
              arrMatches[l] := itemp; ✓

              stemp := arrName[k];
              arrName[k] := arrName[l]; ✓
              arrName[l] := stemp;

              itemp := arrPoints[k];
              arrPoints[k] := arrPoints[l]; ✓
              arrPoints[l] := itemp;

              stemp := arrTeam[k];
              arrTeam[k] := arrTeam[l]; ✓
              arrTeam[l] := stemp;
            end;
          end;
        end;

      for k := 1 to 5 do✓
        begin
          richedit1.Lines.add('Player '+inttostr(k)+' : '+arrName[k]); ✓
          richedit1.Lines.add('Team: '+ arrTeam[k]); ✓
          richedit1.Lines.add('Matches: '+inttostr(arrMatches[k])); ✓
          richedit1.Lines.add(""); ✓
        end;
      end;
    end;
  procedure TForm1.Button3Click(Sender: TObject);
  var
    steam : string;
    k : integer;
  begin
    richedit1.Clear;
    steam := Inputbox('Enter Team:',' ','');
    richedit1.Lines.add('Player Name' + #9+#9 + 'Points');
    for k := 1 to icount do
      if arrTeam[k] = steam then
        richedit1.Lines.add(arrName[k] + #9 + inttostr(arrPoints[k]));
    end;

  end.
```

**QUESTION/VRAAG 4****DELPHI PROGRAMMING****(40 marks/punte)**

LO/LU 11.4.8, 11.4.9, 11.4.10

3.1	Sending correct parameters	3
	Function Heading	1
	Initialise variable	1
	If statements to check losing team	1
	Loss within 7 points?	1
	Increase counter	1
	Check 4 or more tries	1
	Increase counter	1
	Assign to Result/function Name	1
		<b>11</b>
3.2	Procedure Heading	1
	Public Declaration	1
	Initialise counters for each team	2
	Find winner	1
	Assign 4 points	1
	Find loser	1
	Assign 0 points	1
	Draw?	1
	Assign 2 points to each team	2
	Add bonus points for each team	2
		<b>13</b>
3.3	Get input from editboxes	6
	Call function twice	2
	Call procedure	1
	Output for team 1	1
	Output for team 2	1
		<b>11</b>
3.4	Clear editboxes	2
	Setfocus	1
	Clear panels	2



**Possible Solution**

unit Q3\_u;

interface

uses

Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls, Forms,  
Dialogs, Buttons, StdCtrls, ExtCtrls;

type

TForm1 = class(TForm)

Panel1: TPanel;

Panel2: TPanel;

Edit1: TEdit;

Edit2: TEdit;

Edit3: TEdit;

Label1: TLabel;

Label2: TLabel;

Label3: TLabel;

Label4: TLabel;

Label5: TLabel;

Label6: TLabel;

Edit4: TEdit;

Label7: TLabel;

Edit5: TEdit;

Label8: TLabel;

Edit6: TEdit;

Panel3: TPanel;

Panel4: TPanel;

Button1: TButton;

BitBtn1: TBitBtn;

BitBtn2: TBitBtn;

procedure Button1Click(Sender: TObject);

procedure BitBtn1Click(Sender: TObject);

private

{ Private declarations }

public

procedure CalcPoints (iscore1,iscore2,ibonus1,ibonus2 : integer; var ipoints1,  
ipoints2 : integer); ✓

end;

var

Form1: TForm1;

implementation

{ \$R \*.dfm }

```
function CalcBonusPoints(iscore1✓, iscore2✓, itries✓ : integer) : integer; ✓
var
  ibonus : integer;
begin
  ibonus := 0; ✓
  if (iscore1 < iscore2) then✓
    if (iscore2 - iscore1 <= 7) then✓
      inc(ibonus); ✓
  if itries >= 4 then✓
    inc(ibonus); ✓
  Result := ibonus; ✓
end;
```

```
procedure TForm1.Button1Click(Sender: TObject);
var
  steam1, steam2 : string;
  iscore1, itries1, iscore2, itries2, ipoints1, ipoints2, ibonus1, ibonus2 : integer;
begin
  steam1 := edit1.text; ✓
  iscore1 := strtoint(edit2.Text); ✓
  itries1 := strtoint(edit3.Text); ✓
  steam2 := edit4.text; ✓
  iscore2 := strtoint(edit5.Text); ✓
  itries2 := strtoint(edit6.Text); ✓
  ibonus1 := CalcBonusPoints(iscore1, iscore2, itries1); ✓
  ibonus2 := CalcBonusPoints(iscore2, iscore1, itries2); ✓
  CalcPoints(iscore1, iscore2, ibonus1, ibonus2, ipoints1, ipoints2); ✓
  panel3.caption := 'POINTS: '+inttostr(ipoints1); ✓
  panel4.caption := 'POINTS: '+inttostr(ipoints2); ✓
end;
```

```
procedure TForm1.CalcPoints (iscore1, iscore2, ibonus1, ibonus2 : integer; var
ipoints1, ipoints2 : integer); ✓
begin
  ipoints1 := 0; ✓
  ipoints2 := 0; ✓
  if iscore1 > iscore2 then✓
    ipoints1 := ipoints1 + 4✓
  else
    if iscore1 < iscore2 then✓
      ipoints2 := ipoints2 + 4✓
    else
      if iscore1 = iscore2 then✓
        begin
          ipoints1 := ipoints1 + 2; ✓
          ipoints2 := ipoints2 + 2; ✓
        end;
      ipoints1 := ipoints1 + ibonus1; ✓
      ipoints2 := ipoints2 + ibonus2; ✓
  end;
```

```
procedure TForm1.BitBtn1Click(Sender: TObject);
begin
  edit1.Clear;
  edit2.Clear;
  edit3.clear; ✓✓
  edit4.Clear;
  edit5.clear;
  edit6.Clear;
  edit1.setfocus; ✓
  panel3.caption := 'POINTS: ???'; ✓
  panel4.caption := 'POINTS: ???'; ✓
end;

end.
```

**TOTAL/TOTAAL: 120**