

**ANNEXURE F: SOLUTION FOR QUESTION 2****QUESTION 2.1: SQL code**

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**Question 2.1: 2.1.1(3), 2.1.2(4), 2.1.3(4), 2.1.4(5), 2.1.5 (3)**

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```
2.1.1: SELECT PlayerSurname, PlayerName
        FROM tblPlayers WHERE SkillsLevel = 10

2.1.2: SELECT Coach, TeamName
        FROM tblTeams
        WHERE TeamName Like "%B"

2.1.3: SELECT TeamName, Coach,
        (NumberOfGamesWon/NumberOfGamesPlayed*100)
        AS [PercentageGamesWon]
        FROM tblTeams
        WHERE TeamName = "'" + sTeam + "'"

2.1.4: SELECT TeamName, ROUND(AVG(SkillsLevel),1)
        AS [AverageSkillsLevel]
        FROM tblPlayers
        GROUP BY TeamName HAVING AVG(SkillsLevel) > 6

2.1.5: UPDATE tblTeams
        SET NumberOfGamesWon = NumberOfGamesWon + 1
        WHERE TeamName <> "u/14 B"
```

**QUESTION 2.2: DATABASE MANIPULATION using Delphi Code**

```
// {$REGION 'QUESTION 2.2'}
```

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**Question 2.2.1 = 11 marks**

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```
procedure TfrmDBQuestion2.btnQ2_2_1Click(Sender: TObject);
var
    tFile: textfile;
    iCnt, iYear: integer;
begin
    AssignFile(tFile, 'Junior18A.txt');
    Rewrite(tFile);
    tblPlayers.first;
    iCnt := 0;
    while not tblPlayers.eof do
    begin
        iYear := strToInt(copy(tblPlayers['IDNumber'], 1, 2));
        if (tblPlayers['TeamName'] = 'u/18 A') AND (iYear >= 3) then
            begin
                Writeln(tFile,
                    tblPlayers['PlayerSurname'] + ' ' + tblPlayers['PlayerName']);
                inc(iCnt);
            end;
        tblPlayers.Next;
    end;
end;
```

```
CloseFile(tFile);
lblQ2_2_1.Caption := 'Number of young players: ' + IntToStr(iCnt);

// Provided code
dbCONN.setupGrids(dbgrdONE, dbgrdMANY, dbgrdSQL);
end;
```

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**Question 2.2.2 = 10 marks**

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```
procedure TfrmDBQuestion2.btnQ2_2_2Click(Sender: TObject);
var
    sOut: String; // variable to save selected team

begin
    // -- Provided code ----
    redQ2_2_2.Clear;
    redQ2_2_2.Paragraph.TabCount := 2;
    redQ2_2_2.Paragraph.Tab[0] := 100;
    redQ2_2_2.Paragraph.Tab[1] := 200;
    redQ2_2_2.Lines.Add('TeamName' + #9 + 'Coach' + #9 + 'Goalkeeper');

    // -----
    // Type your code here:

    tblTeams.first;
    while NOT tblTeams.eof do
    begin
        sOut := tblTeams['TeamName'] + #9 + tblTeams['Coach'] + #9;
        tblPlayers.first;
        while NOT tblPlayers.eof do
        begin
            if (tblTeams['TeamName'] = tblPlayers['TeamName']) AND
(tblPlayers['GoalKeeper'] = true)
            then
            begin
                sOut := sOut + tblPlayers['PlayerSurname'] + ', ' + tblPlayers
                ['PlayerName'];
            end;
            tblPlayers.Next;
        end;
        tblTeams.Next;
        redQ2_2_2.Lines.Add(sOut);
    end;
```