```vbnet
 1  Imports System.Data.OleDb
 2
 3  Public Class DMaterias
 4
 5      Inherits DBAdmin
 6
 7      Private nro_legajo As Integer
 8      Private cod_curso As Integer
 9      Private cod_materia As Integer
10      Private nota_t1 As Double
11      Private nota_t2 As Double
12      Private nota_t3 As Double
13      Private dsc As DCursos
14      Private dbCmd As OleDbCommand
15      Private mpcDataReader As OleDbDataReader
16
17      ' Constructores del objeto DMaterias
18      Public Sub New(nlegajo As Integer, codcurso As Integer, codmateria As Integer, nt1 As ⤶
          Double, nt2 As Double, nt3 As Double)
19          nro_legajo = nlegajo
20          cod_curso = codcurso
21          cod_materia = codmateria
22          nota_t1 = nt1
23          nota_t2 = nt2
24          nota_t3 = nt3
25
26      End Sub
27
28      Public Sub New(nlegajo As Integer, codcurso As Integer)
29          nro_legajo = nlegajo
30          cod_curso = codcurso
31          cod_materia = vbNull
32          nota_t1 = ""
33          nota_t2 = ""
34          nota_t3 = ""
35
36      End Sub
37
38      Public Sub New()
39
40      End Sub
41
42
43      ' Propiedades de la clase accesibles/configurables mediante Get/Set
44      Public Property legajoAlumno As Integer
45          Get
46              Return nro_legajo
47          End Get
48          Set(value As Integer)
49              nro_legajo = value
50          End Set
51      End Property
52
53      Public Property codigoCursoAlumno As Integer
54          Get
55              Return cod_curso
56          End Get
57          Set(value As Integer)
58              cod_curso = value
59          End Set
```

```vb
 60          End Property
 61
 62      Public Property codigoMateria As Integer
 63          Get
 64              Return cod_materia
 65          End Get
 66          Set(value As Integer)
 67              cod_materia = value
 68          End Set
 69      End Property
 70
 71      Public Property notaTrimestre1 As String
 72          Get
 73              Return nota_t1
 74          End Get
 75          Set(value As String)
 76              nota_t1 = value
 77          End Set
 78      End Property
 79
 80      Public Property notaTrimestre2 As String
 81          Get
 82              Return nota_t2
 83          End Get
 84          Set(value As String)
 85              nota_t2 = value
 86          End Set
 87      End Property
 88
 89      Public Property notaTrimestre3 As String
 90          Get
 91              Return nota_t3
 92          End Get
 93          Set(value As String)
 94              nota_t3 = value
 95          End Set
 96      End Property
 97
 98      ' ---------------------------------------------- FUNCIONES/SUBS PARA CONFIGURAR VISTAS
          ----------------------------------------------
 99
100
101      ' Funcion que busca los datos de las materias y crea el ComboBox con todas las materias
          disponibles
102      Public Sub CrearComboMaterias(combo_materia As ComboBox, cod_materia As Integer)
103
104          Dim datosMaterias As OleDbDataAdapter
105          Dim dsMaterias As DataSet
106          Dim sqlQuery As String
107
108          sqlQuery = "SELECT * FROM Materias"
109
110          Try
111              datosMaterias = New OleDb.OleDbDataAdapter(sqlQuery, con)
112              dsMaterias = New DataSet
113
114              datosMaterias.Fill(dsMaterias, "Materias")
115
116              If dsMaterias.Tables("Materias").Rows.Count > -1 Then
117                  combo_materia.DataSource = dsMaterias.Tables("Materias")
```

```vb
118                    combo_materia.ValueMember = "cod_materia"
119                    combo_materia.DisplayMember = "materia"
120
121                    If cod_materia <> Nothing Then
122                        combo_materia.SelectedValue = cod_materia
123                    End If
124
125                Else
126                    combo_materia.DataSource = Nothing
127                End If
128            Catch ex As Exception
129                MsgBox(ex.Message)
130            End Try
131
132        End Sub
133
134
135        ' Funcion que busca los datos de las materias y crea el ComboBox con todas las materias  ⇁
               disponibles
136        Public Sub CrearComboMateriasEstadisticas(combo_materia As ComboBox, cod_materia As  ⇁
               Integer)
137
138            Dim datosMaterias As OleDbDataAdapter
139            Dim dtMaterias As DataTable
140            Dim dsMaterias As DataSet
141            Dim sqlQuery As String
142
143            sqlQuery = "SELECT DISTINCT LibrodeAlumnos.cod_materia, Materias.materia
144                        FROM LibrodeAlumnos
145                        LEFT JOIN Materias ON LibrodeAlumnos.cod_materia = Materias.cod_materia"
146
147            Try
148                datosMaterias = New OleDb.OleDbDataAdapter(sqlQuery, con)
149                dsMaterias = New DataSet
150                dtMaterias = New DataTable
151
152                dtMaterias.TableName = "Materias"
153
154                dtMaterias.Columns.Add("cod_materia", GetType(Integer))
155                dtMaterias.Columns.Add("materia", GetType(String))
156
157                dsMaterias.Tables.Add(dtMaterias)
158
159                dsMaterias.Tables("Materias").Rows.Add(0, "TODAS")
160
161                datosMaterias.Fill(dsMaterias, "Materias")
162
163                If dsMaterias.Tables("Materias").Rows.Count > -1 Then
164                    combo_materia.DataSource = dsMaterias.Tables("Materias")
165                    combo_materia.ValueMember = "cod_materia"
166                    combo_materia.DisplayMember = "materia"
167
168                    If cod_materia <> Nothing Then
169                        combo_materia.SelectedValue = cod_materia
170                        combo_materia.DisplayMember = BuscarMateria(cod_materia)
171                    End If
172
173                Else
174                    combo_materia.DataSource = Nothing
175                End If
```

```vb
176                Catch ex As Exception
177                    MsgBox(ex.Message)
178                End Try
179
180        End Sub
181
182        ' Funcion que crea el DataGridView de los Alumnos
183        Public Sub cargarDGVMaterias(DGVMaterias As DataGridView, nro_legajo As Integer)
184
185            Dim dmQuery As String
186            Dim datosMaterias As New OleDb.OleDbDataAdapter
187            Dim dsMaterias As New DataSet
188
189            dmQuery = "SELECT LibrodeAlumnos.cod_curso AS [Curso],Materias.cod_materia,
190              Materias.materia AS Materia, LibrodeAlumnos.nota_t1 AS [1° Trimestre],
                    LibrodeAlumnos.nota_t2 AS [2° Trimestre], LibrodeAlumnos.nota_t3 AS [3° Trimestre],
191                    promedio AS Promedio
192                FROM LibrodeAlumnos
193                INNER JOIN Materias ON Materias.cod_materia = LibrodeAlumnos.cod_materia
                    WHERE LibrodeAlumnos.nro_legajo = " & nro_legajo
194
195            Try
196                If nro_legajo <> 0 Then
197
198                    datosMaterias = New OleDbDataAdapter(dmQuery, con)
199
200                    datosMaterias.Fill(dsMaterias)
201                    If dsMaterias.Tables(0).Rows.Count > 0 Then
202                        DGVMaterias.DataSource = dsMaterias.Tables(0)
203                        DGVMaterias.Columns(0).Visible = False
204                        DGVMaterias.Columns(1).Visible = False
205                        DGVMaterias.Columns(6).Visible = False
206                        DGVMaterias.AutoResizeColumns()
207                    Else
208                        DGVMaterias.DataSource = Nothing
209                    End If
210                Else
211                    DGVMaterias.DataSource = Nothing
212                End If
213            Catch ex As Exception
214                MsgBox("Ocurrio un error al crear la vista de Materias" & vbNewLine & vbNewLine &
                    ex.Message & vbExclamation, "Carga DGVMaterias")
215            End Try
216
217        End Sub
218
219
220        ' Funcion que carga los datos de la materia seleccionada en el formulario de Libro de
            Alumnos
221        Public Sub MostrarMateriaSeleccionada(cod_curso As Integer, cod_materia As Integer, nota_t1
            As Double, nota_t2 As Double,
222      nota_t3 As Double, promedio As Double)
223
224            Try
225                CrearComboMaterias(Alumnos.combo_materia, cod_materia)
226                Alumnos.tBox_nota_t1.Text = nota_t1
227                Alumnos.tBox_nota_t2.Text = nota_t2
228                Alumnos.tBox_nota_t3.Text = nota_t3
229
230                If promedio <> Nothing Then
```

```vb
231                     Alumnos.gpBox_promedio.Text = "Promedio Definitivo"
232                     Alumnos.Lbl_promedio.Text = Math.Round(promedio, 2)
233                 Else
234                     Alumnos.gpBox_promedio.Text = "Promedio Preliminar"
235                     Alumnos.Lbl_promedio.Text = Math.Round(CalcularPromedioMateria(nota_t1,
                          nota_t2, nota_t3), 2)
236                 End If
237
238         Catch ex As Exception
239             MsgBox("Ocurrio un error al intentar mostrar los datos de la Materia")
240         End Try
241
242     End Sub
243
244
245     ' --------------------------------------- FUNCIONES/SUBS DE CREACION/MODIFICACION/BAJA
            ------------------------------------------
246
247
248     ' Funcion que Inscribe el Alumno en un curso. Al momento de la inscripcion se crean todos
            los registros de las materias
249     ' asignadas para cada curso en la tabla Materias_por_Curso en la BD
250     Public Function InscribirAlumno(nro_legajo As Integer, cod_curso As Integer, notat1 As
            Integer, notat2 As Integer,
251         notat3 As Integer, promedio As Integer) As Boolean
252
253         Dim niQuery As String
254
255         Try
256             If nro_legajo <> Nothing And cod_curso <> Nothing Then
257                 ' Busca la lista de materias asignadas a cada Curso
258
259                 Dim materiasEncontradas As List(Of Integer) = BuscarMateriasPorCurso(cod_curso)
260
261
262                 ' Si existen materias asignadas a ese curso
263                 If materiasEncontradas.Count > 0 Then
264                     niQuery = ""
265                     dbConectar()
266
267                     dbCmd = New OleDbCommand(niQuery, con)
268
269                     ' Por cada materia, crea un registro en el libro de alumnos, donde se
                          cargaran las notas
270                     For Each cod_materia As Integer In materiasEncontradas
271
272                         niQuery = "INSERT INTO LibrodeAlumnos(nro_legajo, cod_curso,
                              cod_materia, nota_t1, nota_t2, nota_t3, promedio)
273                         VALUES('" & nro_legajo & "','" & cod_curso & "','" & cod_materia &
                              "','" & notat1 & "','" & notat2 & "','" &
274                         notat3 & "','" & promedio & "')"
275
276                         dbCmd.CommandText = niQuery
277                         dbCmd.ExecuteNonQuery()
278
279                     Next
280                     Return True
281                 Else
282                     MsgBox("No existen materias para el curso seleccionado")
283                     Return False
```

```vb
                End If
            Else

                Return False
            End If
        Catch ex As Exception
            MsgBox("Se produjo un error al inscribir al Alumno" & vbNewLine & vbNewLine &
                ex.Message)
            Return False
        Finally
            dbDesconectar()
        End Try

    End Function


    ' Funcion que modifica los datos de las notas de las materias del alumno en el libro de
        alumnos
    Public Function ModificarNota(nro_legajo As Integer, cod_curso As Integer, cod_materia As
        Integer, nota_t1 As Double,
        nota_t2 As Double, nota_t3 As Double) As Boolean

        Dim mnQuery As String
        Dim dbCmd As New OleDbCommand

        ' Valida que los datos del alumno a modificar no esten vacios
        If nro_legajo <> 0 And cod_curso <> 0 And cod_materia <> 0 And nota_t1 <> Nothing And
          nota_t2 <> Nothing And
            nota_t3 <> Nothing Then

            mnQuery = "UPDATE LibrodeAlumnos SET nota_t1=" & nota_t1 & ", nota_t2=" & nota_t2 &
                ", nota_t3=" &
                    nota_t3 &
                    " WHERE nro_legajo =" & nro_legajo &
                    " AND cod_curso=" & cod_curso &
                    " AND cod_materia=" & cod_materia

            Try
                dbConectar()
                dbCmd = New OleDbCommand(mnQuery, con)

                If dbCmd.ExecuteNonQuery() Then
                    Return True
                Else
                    Return False
                End If

            Catch ex As Exception
                MsgBox("Se produjo un error al modificar la nota del Alumno:" & vbNewLine &
                    vbNewLine & ex.Message, vbExclamation, "Modificar Notas")
                Return False
            Finally
                dbDesconectar()
            End Try

        Else
            MsgBox("Los Campos Obligatorios no pueden estar vacios")
            Return False
        End If

```

```vbnet
338        End Function
339
340        ' Funcion que calcula la nota promedio de una materias dada
341        Public Function CalcularPromedioMaterias(nro_legajo As Integer, cod_curso As Integer) As ⮡
               Boolean
342
343            Dim codmateria As Integer
344            Dim notat1 As Double
345            Dim notat2 As Double
346            Dim notat3 As Double
347            Dim promedio As Double
348
349            Dim cpmQuery As String
350
351            Dim notasEncontradas As List(Of Double()) = BuscarNotasPorAlumno(nro_legajo, cod_curso)
352
353
354            ' Si existen materias asignadas a ese curso
355            If notasEncontradas.Count > 0 Then
356
357                Try
358                    cpmQuery = ""
359                    dbConectar()
360
361                    dbCmd = New OleDbCommand(cpmQuery, con)
362
363                    ' Por cada materia, obtengo las notas para calcular el promedio
364                    For Each notaMateria() As Double In notasEncontradas
365
366
367                        codmateria = notaMateria(0)
368                        Double.TryParse(notaMateria(1), notat1)
369                        Double.TryParse(notaMateria(2), notat2)
370                        Double.TryParse(notaMateria(3), notat3)
371
372                        If notat1 <> 0 And notat2 <> 0 And notat3 <> 0 Then
373                            promedio = Math.Round(CalcularPromedioMateria(notat1, notat2, notat3), ⮡
                                2)
374
375                            cpmQuery = "UPDATE LibrodeAlumnos SET promedio ='" & promedio &
376                                "' WHERE nro_legajo =" & nro_legajo &
377                                " AND cod_curso =" & cod_curso &
378                                " AND cod_materia =" & codmateria
379
380                            dbCmd.CommandText = cpmQuery
381                            dbCmd.ExecuteNonQuery()
382                        Else
383                            MsgBox("No puede haber notas con valor 0 al momento del cierre de ⮡
                                Notas", vbExclamation, "Cierre de Notas")
384                            Return False
385                        End If
386                    Next
387                    Return True
388                Catch ex As Exception
389                    MsgBox("Se produjo un error al guardar el promedio" & vbNewLine & vbNewLine & ⮡
                        ex.Message, vbExclamation, "Guardar Promedio Materia")
390                    Return False
391                Finally
392                    dbDesconectar()
393                End Try
```

```vb
394
395             Else
396                 MsgBox("No existen materias para el curso seleccionado")
397                 Return False
398             End If
399
400         End Function
401
402
403         ' Funcion que calcula la nota promedio segun las notas proporcionadas
404         Public Function CalcularPromedioMateria(nota_t1 As Double, nota_t2 As Double, nota_t3 As ⇥
            Double) As Double
405
406             Dim promedioMateria As Double
407             Dim Contador As Double
408
409             Try
410                 If nota_t1 <> 0 Then
411                     Contador += 1
412                     promedioMateria += nota_t1
413                 End If
414
415                 If nota_t2 <> 0 Then
416                     Contador += 1
417                     promedioMateria += nota_t2
418                 End If
419
420                 If nota_t3 <> 0 Then
421                     Contador += 1
422                     promedioMateria += nota_t3
423                 End If
424
425                 If promedioMateria > 0 Then
426                     promedioMateria = promedioMateria / Contador
427                     Return Math.Round(promedioMateria, 2)
428                 Else
429                     Return Nothing
430                 End If
431             Catch ex As Exception
432                 MsgBox("Se produjo un error al calcular el promedio: " & vbNewLine & vbNewLine & ⇥
                    ex.Message, vbExclamation, "Calcular Promedio Materia")
433                 Return Nothing
434             End Try
435
436         End Function
437
438
439         ' ------------------------------------------------------ FUNCIONES/SUBS DE BUSQUEDA ⇥
            ---------------------------------------------------
440
441
442         ' Funcion que busca el legajo y el curso en la tabla LibrodeAlumnos y devuelve True si la ⇥
            encuentra y False en caso contrario.
443         Public Function BuscarInscripcionAlumno(nro_legajo As Integer, cod_curso As Integer) As ⇥
            Boolean
444
445             Dim biaQuery As String
446             Dim rsIAQuery As String
447
448             biaQuery = "SELECT * FROM LibrodeAlumnos WHERE nro_legajo = " & nro_legajo &
```

```vb
449                 " AND cod_curso = " & cod_curso
450
451         Try
452             dbConectar()
453             dbCmd = New OleDbCommand(biaQuery, con)
454
455             rsIAQuery = dbCmd.ExecuteScalar()
456             If rsIAQuery IsNot Nothing Then
457                 Return True
458             Else
459                 Return False
460             End If
461         Catch ex As Exception
462             Return False
463         Finally
464             dbDesconectar()
465         End Try
466
467     End Function
468
469
470     ' Funcion que busca las materias asignadas a cada curso en la tabla Materias_por_Curso en
            la BD
471     Public Function BuscarMateriasPorCurso(cod_curso As Integer) As List(Of Integer)
472
473         Dim mpcQuery As String
474         Dim materiasEncontradas As New List(Of Integer)
475
476         mpcQuery = "SELECT cod_materia FROM Materias_por_Curso WHERE cod_curso =" & cod_curso
477
478         Try
479             dbConectar()
480             dbCmd = New OleDbCommand(mpcQuery, con)
481
482             mpcDataReader = dbCmd.ExecuteReader(CommandBehavior.CloseConnection)
483
484             If mpcDataReader.HasRows() Then
485
486                 While mpcDataReader.Read()
487                     materiasEncontradas.Add(Int(mpcDataReader(0)))
488                 End While
489
490                 mpcDataReader.Close()
491                 Return materiasEncontradas
492
493             Else
494                 Return Nothing
495             End If
496
497         Catch ex As Exception
498             MsgBox("Se produjo un error en la busqueda de materias por curso" & vbNewLine &
                    ex.Message)
499             Return Nothing
500         Finally
501             dbDesconectar()
502         End Try
503
504     End Function
505
506
```

```vb
507     ' Funcion que busca los datos de la primer materia encontrada de un alumno en la tabla
        LibrodeAlumnos seleccionando por legajo y curso
508     Public Function BuscarDatosMateria(legajo As Integer, cod_curso As Integer, cod_materia As
        Integer) As String()
509
510         Dim aQuery As String
511
512         aQuery = "SELECT nota_t1, nota_t2, nota_t3, promedio FROM LibrodeAlumnos WHERE
513         nro_legajo =" & legajo & "AND cod_curso =" & cod_curso & "AND cod_materia =" &
            cod_materia
514
515         Try
516             dbConectar()
517             dbCmd = New OleDbCommand(aQuery, con)
518
519             mpcDataReader = dbCmd.ExecuteReader(CommandBehavior.CloseConnection)
520
521             If mpcDataReader.Read() Then
522                 Dim materia = New String() {mpcDataReader.Item("nota_t1"), mpcDataReader.Item
                        ("nota_t2"), mpcDataReader.Item("nota_t3"),
523                     mpcDataReader.Item("promedio")}
524
525                 Return materia
526             Else
527                 Return Nothing
528             End If
529
530         Catch ex As Exception
531             MsgBox("Se produjo un error en la busqueda de los datos del Alumno" & vbNewLine &
                    ex.Message)
532             Return Nothing
533         Finally
534             dbDesconectar()
535         End Try
536
537     End Function
538
539     ' Funcion que busca las notas de materias de un alumno asignadas a cada curso en la tabla
        Materias_por_Curso en la BD
540     Public Function BuscarNotasPorAlumno(nro_legajo As Integer, cod_curso As Integer) As List
        (Of Double())
541
542         Dim mpcQuery As String
543         Dim notasEncontradas As New List(Of Double())
544
545         Dim codmateria As Double
546         Dim notat1 As Double
547         Dim notat2 As Double
548         Dim notat3 As Double
549
550         mpcQuery = "SELECT cod_materia, nota_t1, nota_t2, nota_t3 FROM LibrodeAlumnos WHERE
            nro_legajo =" & nro_legajo &
551             " AND cod_curso =" & cod_curso
552
553         Try
554             dbConectar()
555             dbCmd = New OleDbCommand(mpcQuery, con)
556
557             mpcDataReader = dbCmd.ExecuteReader(CommandBehavior.CloseConnection)
558
```

```vb
559                 If mpcDataReader.HasRows() Then
560
561                     While mpcDataReader.Read()
562
563                         Double.TryParse(mpcDataReader.Item("cod_materia"), codmateria)
564                         Double.TryParse(mpcDataReader.Item("nota_t1"), notat1)
565                         Double.TryParse(mpcDataReader.Item("nota_t2"), notat2)
566                         Double.TryParse(mpcDataReader.Item("nota_t3"), notat3)
567
568                         notasEncontradas.Add({codmateria, notat1, notat2, notat3})
569
570                     End While
571
572                     mpcDataReader.Close()
573                     Return notasEncontradas
574
575                 Else
576                     Return Nothing
577                 End If
578
579         Catch ex As Exception
580             MsgBox("Se produjo un error en la busqueda de materias por curso" & vbNewLine &
                    ex.Message)
581             Return Nothing
582         Finally
583             dbDesconectar()
584         End Try
585
586     End Function
587
588     ' Funcion que busca el promedio de las materias de todos los alumnos por curso en la tabla
            Materias_por_Curso en la BD
589     Public Function BuscarPromedioAlumnoPorCurso(cod_curso As Integer, cod_materia As Integer)
            As List(Of Double)
590
591         Dim nacQuery As String
592         Dim nacDataReader As OleDbDataReader
593         Dim promediosEncontrados As New List(Of Double)()
594
595         nacQuery = "SELECT promedio FROM LibrodeAlumnos WHERE cod_curso =" & cod_curso &
596             " AND cod_materia =" & cod_materia
597
598         Try
599             dbConectar()
600             dbCmd = New OleDbCommand(nacQuery, con)
601
602             nacDataReader = dbCmd.ExecuteReader(CommandBehavior.CloseConnection)
603
604             If nacDataReader.HasRows() Then
605
606                 While nacDataReader.Read()
607
608                     promediosEncontrados.Add(nacDataReader.Item("promedio"))
609
610                 End While
611
612             End If
613
614             Return promediosEncontrados
615
```

```vb
616            Catch ex As Exception
617                MsgBox("Se produjo un error en la busqueda de materias por curso" & vbNewLine &
                       vbNewLine & ex.Message)
618                Return promediosEncontrados
619            Finally
620                dbDesconectar()
621            End Try
622
623        End Function
624
625        ' Funcion que busca el nombre de la materia segun su codigo en la tabla Materias
626        Public Function BuscarMateria(cod_materia As Integer) As String
627
628            Dim sqlQuery As String
629
630            sqlQuery = "SELECT materia FROM Materias WHERE cod_materia = " & cod_materia
631
632            Try
633                dbConectar()
634                Dim dbCmd = New OleDbCommand(sqlQuery, con)
635                Dim rsQuery As String
636
637                rsQuery = dbCmd.ExecuteScalar()
638                dbDesconectar()
639                If rsQuery IsNot Nothing Then
640                    Return rsQuery
641                Else
642                    Return Nothing
643                End If
644            Catch
645                MsgBox("No se encontro la materia")
646                dbDesconectar()
647                Return Nothing
648            End Try
649
650        End Function
651
652        Public Function BuscarPromedioMateria(legajo As Integer, cod_curso As Integer, cod_materia
             As Integer) As Double
653
654            Dim bpmQuery As String
655            Dim rsPromQuery As Double
656
657            bpmQuery = "SELECT promedio FROM LibrodeAlumnos WHERE nro_legajo = " & legajo &
658                " AND cod_curso=" & cod_curso &
659                " AND cod_materia=" & cod_materia
660
661            Try
662                dbConectar()
663                dbCmd = New OleDbCommand(bpmQuery, con)
664
665
666                If Not IsDBNull(dbCmd.ExecuteScalar()) Then
667
668                    Double.TryParse(Math.Round(dbCmd.ExecuteScalar(), 2), rsPromQuery)
669
670                    Return rsPromQuery
671                Else
672                    Return Nothing
673                End If
```

```vb
674
675         Catch ex As Exception
676             MsgBox("Se produjo un error al consultar el promedio" & ex.Message)
677             Return Nothing
678         Finally
679             dbDesconectar()
680         End Try
681
682     End Function
683
684     Public Function ListarAlumnosCursoMateriaPromedio(cod_curso As Integer, cod_materia As ⮒
            Integer, condicion As Integer) As List(Of String())
685
686         Dim lacmQuery As String
687         Dim alumnosEncontrados As New List(Of String())
688         Dim lacmDataReader As OleDbDataReader
689
690         lacmQuery = "SELECT Alumnos.nro_legajo AS Legajo, Alumnos.nombre AS Nombre, ⮒
              Alumnos.apellido AS Apellido,Cursos.curso AS Curso, Materias.materia AS Materia,
691                         LibrodeAlumnos.promedio AS Promedio
692                         FROM (
693                               (
694                                 (
695                                  LibrodeAlumnos LEFT JOIN Alumnos ON LibrodeAlumnos.nro_legajo⮒
                    = Alumnos.nro_legajo
696                                 ) LEFT JOIN Cursos ON Cursos.cod_curso = ⮒
                    LibrodeAlumnos.cod_curso
697                                ) LEFT JOIN Materias ON LibrodeAlumnos.cod_materia = ⮒
                    Materias.cod_materia
698                               )"
699
700         If cod_curso <> 0 Or cod_materia <> 0 Or condicion <> 0 Then
701
702             lacmQuery &= " WHERE "
703
704             If cod_curso <> 0 Then
705                 lacmQuery &= "LibrodeAlumnos.cod_curso = " & cod_curso
706             End If
707
708             If cod_materia <> 0 Then
709
710                 If cod_curso <> 0 Then
711                     lacmQuery &= " AND "
712                 End If
713                 lacmQuery &= "LibrodeAlumnos.cod_materia = " & cod_materia
714             End If
715
716             If condicion <> 0 Then
717
718                 If cod_curso <> 0 Or cod_materia <> 0 Then
719                     lacmQuery &= " AND "
720                 End If
721
722                 Select Case condicion
723                     Case 1
724                         lacmQuery &= "LibrodeAlumnos.promedio >= 6.0"
725                     Case 2
726                         lacmQuery &= "(LibrodeAlumnos.promedio BETWEEN 4.0 AND 6.0)"
727                     Case 3
728                         lacmQuery &= "(LibrodeAlumnos.promedio BETWEEN 1.0 AND 4.0)"
```

```vb
729                          Case 4
730                              lacmQuery &= "LibrodeAlumnos.promedio = 0"
731                      End Select
732
733              End If
734
735          End If
736
737          Try
738              dbConectar()
739              dbCmd = New OleDbCommand(lacmQuery, con)
740
741              lacmDataReader = dbCmd.ExecuteReader(CommandBehavior.CloseConnection)
742
743              If lacmDataReader.HasRows() Then
744
745                  While lacmDataReader.Read()
746
747                      alumnosEncontrados.Add({lacmDataReader.Item("Legajo"), lacmDataReader.Item
                             ("Nombre"), lacmDataReader.Item("Apellido"),
748                                          lacmDataReader.Item("Curso"), lacmDataReader.Item
                             ("Materia"), lacmDataReader.Item("Promedio")})
749
750                  End While
751
752                  Return alumnosEncontrados
753              Else
754                  Return Nothing
755              End If
756
757          Catch ex As Exception
758              MsgBox("Se produjo un error al consultar los datos de los alumnos." & vbNewLine &
                     vbNewLine & ex.Message, vbExclamation, "Busqueda de datos de Alumnos")
759              Return Nothing
760          Finally
761              dbDesconectar()
762          End Try
763
764      End Function
765
766  End Class
```