```
USE MEI TRAB
2
3
4
    if exists (select * from sys.triggers where Name = 'TR Encomenda I U')
5
6
      DROP TRIGGER TR Encomenda I U
7
    End
    GO
8
9
10
    -- Trigger associado a Insert e Update. O Delete de encomendas é tratado à parte.
11
12
        CREATE TRIGGER TR Encomenda I U
13
        ON Encomenda
14
        FOR INSERT, UPDATE
15
        AS
16
        DECLARE @NumReg int
17
        DECLARE @EventType Char (1)
18
19
        DECLARE @DELETEDCOUNT INT
20
        DECLARE @INSERTEDCOUNT INT
21
22
      DECLARE @EncId int
23
        DECLARE @Objecto
                            varchar(30)
24
        DECLARE @Valor
                            varchar (100)
25
        DECLARE @Referencia varchar (100)
26
27
        SELECT @DELETEDCOUNT = COUNT(*) FROM deleted
        SELECT @INSERTEDCOUNT = COUNT(*) FROM inserted
28
29
        -- Event type
30
31
        IF (@DELETEDCOUNT > 0) AND (@INSERTEDCOUNT > 0 )
          Set @EventType = 'U'
32
33
        ELSE IF (@INSERTEDCOUNT > 0 )
          Set @EventType = 'I'
34
35
        Set @Objecto = 'Encomenda' -- Tabela encomenda
36
        Set @Referencia = NULL -- Para estas operações não é usada a referência
37
38
39
        DECLARE fh cursor CURSOR FOR
        SELECT EncId FROM inserted ORDER by EncId
40
41
42
        OPEN fh cursor
43
44
        FETCH NEXT FROM fh cursor INTO @EncId
45
46
        WHILE (@@fetch status = 0)
47
        BEGIN
48
49
          Set @Valor = CAST(@EncId as nvarchar(100)) -- Convert int to varchar
50
51
          INSERT INTO LogOperations (EventType, Objecto, Valor, Referencia)
52
          Values (@EventType, @Objecto, @Valor, @Referencia)
53
54
55
          FETCH NEXT FROM fh cursor INTO @EncId
56
        END
57
        IF (@@fetch_status = -1)
58
59
          Begin
60
            CLOSE fh cursor
61
            DEALLOCATE fh cursor
62
            RETURN
63
          End
64
65
        on error:
66
         CLOSE fh cursor
67
         DEALLOCATE fh cursor
68
69
70
          RAISERROR ('Can''t insert the record', 16,1)
71
          ROLLBACK TRANSACTION
```

```
73
 74
 75
 76
      if exists (select * from sys.triggers where Name = 'TR Encomenda D')
 77
      Begin
 78
        DROP TRIGGER TR Encomenda D
 79
      End
 80
      GO
 81
 82
 83
          CREATE TRIGGER TR Encomenda D
 84
          ON Encomenda
 85
          FOR DELETE
 86
          AS
 87
          DECLARE @NumReg int
 88
         DECLARE @EventType Char (1)
 89
 90
         DECLARE @EncId int
 91
         DECLARE @ClienteID int
 92
         DECLARE @Nome nvarchar(30)
 93
         DECLARE @Morada nvarchar(30)
 94
 95
         DECLARE @Objecto
                             varchar (30)
          DECLARE @Valor varchar(100)
 96
 97
         DECLARE @Referencia varchar(100)
 98
 99
          Set @EventType = 'D'
100
101
          Set @Objecto = 'Encomenda' -- Tabela encomenda
102
                                     -- Para estas operações não é usada a referência
          Set @Referencia = NULL
103
104
105
      -- with a cursor we can iterate the deleted rows
106
107
108
109
          DECLARE fh cursor CURSOR FOR
110
          SELECT EncId, ClienteId, Nome, Morada FROM Deleted ORDER by EncId
111
112
          OPEN fh cursor
113
114
          FETCH NEXT FROM fh cursor INTO @EncId, @ClienteId, @Nome, @Morada
115
          WHILE (@@fetch status = 0)
116
117
          BEGIN
118
            Set @Valor = CAST(@EncId as nvarchar(10)) + '|'+ @Nome + '|' + @Morada
119
120
            INSERT INTO LogOperations (EventType, Objecto, Valor, Referencia)
121
            Values (@EventType, @Objecto, @Valor, @Referencia)
122
123
           FETCH NEXT FROM fh cursor INTO @EncId, @ClienteId, @Nome, @Morada
124
          END
125
126
          IF (@@fetch status = -1)
127
            Begin
128
              CLOSE fh cursor
129
              DEALLOCATE fh cursor
130
              RETURN
131
            End
132
133
          on error:
134
           CLOSE fh cursor
           DEALLOCATE fh_cursor
135
136
137
138
            RAISERROR ('Can''t insert the record', 16,1)
139
            ROLLBACK TRANSACTION
140
      GO
141
142
      if exists (select * from sys.triggers where Name = 'TR EncLinha I U')
```

72

GO

```
Begin
      DROP TRIGGER TR EncLinha I U
145
     End
146
      GO
147
148
149
          CREATE TRIGGER TR EncLinha I U
150
          ON EncLinha
151
          FOR INSERT, UPDATE
152
153
         DECLARE @EventType Char(1)
154
155
         DECLARE @EncId int
156
         DECLARE @ProdutoID int
157
158
         DECLARE @Objecto varchar(30)
159
         DECLARE @Valor
                              varchar (100)
160
         DECLARE @Referencia varchar(100)
161
       DECLARE @DELETEDCOUNT INT
162
163
         DECLARE @INSERTEDCOUNT INT
164
165
        SELECT @DELETEDCOUNT = COUNT(*) FROM deleted
166
         SELECT @INSERTEDCOUNT = COUNT(*) FROM inserted
167
168
          -- Event type
169
          IF (@DELETEDCOUNT > 0) AND (@INSERTEDCOUNT > 0 )
170
           Set @EventType = 'U'
171
          ELSE IF (@INSERTEDCOUNT > 0 )
172
           Set @EventType = 'I'
173
174
          Set @Objecto = 'EncLinha' -- Tabela encomenda
175
176
177
          DECLARE fh cursor CURSOR FOR
178
          SELECT EncId, ProdutoId FROM inserted ORDER by EncId
179
180
         OPEN fh cursor
181
182
         FETCH NEXT FROM fh cursor INTO @EncId, @ProdutoId
183
184
         WHILE (@@fetch status = 0)
185
          BEGIN
186
187
188
           Set @Valor = CAST(@EncId as varchar(100))
                                                                  -- Convert int to varchar
           Set @Referencia = CAST(@ProdutoId as varchar(100)) -- Convert int to varchar
189
190
191
            INSERT INTO LogOperations (EventType, Objecto, Valor, Referencia)
192
            Values (@EventType, @Objecto, @Valor, @Referencia)
193
194
195
           FETCH NEXT FROM fh cursor INTO @EncId, @ProdutoId
196
         END
197
198
          IF (@@fetch status = -1)
199
           Begin
200
              CLOSE fh cursor
201
              DEALLOCATE fh cursor
202
              RETURN
203
           End
204
205
         on error:
206
          CLOSE fh cursor
207
          DEALLOCATE fh cursor
208
209
210
           RAISERROR ('Can''t insert the record', 16,1)
211
            ROLLBACK TRANSACTION
212
      GO
```

143

213

```
215
216
      if exists (select * from sys.triggers where Name = 'TR EncLinha D')
217
      Begin
218
       DROP TRIGGER TR EncLinha D
219
     End
220
      GO
221
222
223
          CREATE TRIGGER TR EncLinha D
224
          ON EncLinha
225
          FOR Delete
226
227
         DECLARE @EventType Char(1)
228
229
         DECLARE @DELETEDCOUNT INT
230
         DECLARE @INSERTEDCOUNT INT
231
        DECLARE @EncId int
232
233
         DECLARE @ProdutoID int
234
         DECLARE @Designacao nvarchar (50)
235
         DECLARE @Preco Decimal(10,2)
236
         DECLARE @Qtd Decimal(10,2)
237
238
         DECLARE @Objecto
                              varchar(30)
239
         DECLARE @Valor
                             varchar (100)
240
         DECLARE @Referencia varchar (100)
241
242
        Set @EventType = 'D'
243
244
         Set @Objecto = 'EncLinha' -- Tabela encomenda
245
                                    -- Para estas operações não é usada a referência
          Set @Referencia = NULL
246
247
248
          DECLARE fh cursor CURSOR FOR
249
          SELECT EncId, ProdutoId, Designacao, Preco, Qtd FROM Deleted ORDER by EncId
250
251
          OPEN fh cursor
252
          FETCH NEXT FROM fh cursor INTO @EncId, @ProdutoId, @Designacao, @Preco, @Qtd
253
254
255
         WHILE (@@fetch status = 0)
256
          BEGIN
257
            Set @Valor = CAST(@EncId as nvarchar(10)) + '|'+ CAST(@ProdutoId as
           nvarchar(10))
            Set @Referencia = @Designacao + '|'+ CAST(@Preco as nvarchar(10)) + '|'+
258
            CAST(@Qtd as nvarchar(10))
259
260
            INSERT INTO LogOperations (EventType, Objecto, Valor, Referencia)
261
            Values (@EventType, @Objecto, @Valor, @Referencia)
262
263
264
           FETCH NEXT FROM fh cursor INTO @EncId, @ProdutoId, @Designacao, @Preco, @Qtd
265
          END
266
267
          IF (@@fetch status = -1)
268
           Begin
269
              CLOSE fh cursor
270
              DEALLOCATE fh cursor
271
              RETURN
272
           End
273
274
         on error:
275
           CLOSE fh cursor
          DEALLOCATE fh_cursor
276
277
278
279
            RAISERROR ('Can''t insert the record', 16,1)
280
            ROLLBACK TRANSACTION
281
      GO
```

214

282