

```

1: unit SecureFinanceSpreadsheetUnit;
2:
3: {$mode objfpc}{$H+}
4:
5: interface
6:
7: uses
8:   Classes, SysUtils, Forms, Controls, Graphics, Dialogs, StdCtrls,
9:   TheSpreadsheetUnit, mysql56conn;
10:  //all uses that are required for functions
11: type
12:
13:   { TForm1 }
14:
15:   TForm1 = class(TForm)
16:     ExitProgMain: TButton;
17:     CodePad: TButton;
18:     SecureQs: TButton;
19:     EnterUP: TButton;
20:     EnterUsername: TEdit;
21:     EnterPassword: TEdit;
22:     Label1: TLabel;
23:     UsernameLabel: TLabel;
24:     PasswordLabel: TLabel;
25:     procedure CodePadClick(Sender: TObject);
26:     procedure EnterUPClick(Sender: TObject);
27:     procedure ExitProgMainClick(Sender: TObject);
28:     procedure SecureQsClick(Sender: TObject);
29:   private
30:
31:     public
32:
33:   end;
34:  //All buttons, labels and procudures that are being used in this unit
35:
36: var
37:   Form1: TForm1;
38:   Username, Password, Folder, Extension, answer, answertwo, answerthree : string;
39:   myfile : textfile;
40:   Attempt, count : integer;
41:   TheAnswer, TheAnswerTwo : string;
42:
43:  //Variables all listed in one place for quick access
44:
45: implementation
46:
47: {$R *.lfm}
48:
49: { TForm1 }
50:
51: procedure TForm1.EnterUPClick(Sender: TObject);
52: begin
53:
54:   Username := EnterUsername.text;
55:   Password := EnterPassword.text;
56:   Extension := Username + Password;
57:
58:   if (Extension <> 'SteveP3r3ira01') and (Attempt <= 2) then
59:   begin
60:     Attempt := Attempt + 1;
61:     count := count - 1;

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62:     label1.caption := 'You have ' + inttostr(count) + ' attempmt(s)';
63:
64:     if Attempt > 2 then
65:     begin
66:         showmessage('Locked Out');
67:         halt;
68:     end
69:
70:     else
71:
72:     begin
73:         showmessage('Incorrect, try again');
74:         EnterUsername.clear;
75:         EnterPassword.clear;
76:     end;
77: end
78: 79:
else
80:
81: begin
82:     Attempt := 0;
83:     EnterUsername.clear;
84:     EnterPassword.clear;
85:     EnterPassword.PasswordChar := #0;
86:     UsernameLabel.caption := 'What is the name of your dog?';
87:     PasswordLabel.caption := 'What is your fathers name?';
88:     SecureQs.visible := true;
89:     EnterUP.visible := false;
90:     label1.caption := 'You have 2 attempts';
91:     count := 2;
92: end;
93:
94: end;
95: //The first login to check if the username and password is correct
96: //If correct then it will be able to load the file and secuirty questions
97:
98: procedure TForm1.ExitProgMainClick(Sender: TObject);
99: begin
100:     halt;
101: end;
102: //Stops the program
103:
104: procedure TForm1.CodePadClick(Sender: TObject);
105: begin
106:
107:     Folder := 'C:\Users\David Pereira\Documents\P\Project Files\.loginfile\' + Extension + '.
txt';
108:     Assignfile(myfile, Folder);
109:     Reset(myFile);
110:     readln(myfile, answer);
111:     readln(myfile, answertwo);
112:     readln(myfile, answerthree);
113:
114:     if (answerthree <> EnterUsername.text) then
115:     begin
116:         count := count - 1;
117:         label1.caption := 'You have ' + inttostr(count) + ' attempmt(s)';
118:         showmessage('Incorrect, Locked Out');
119:         halt;
120:     end
121:
122:     else

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123:
124:     begin
125:         Attempt := 0;
126:         EnterUsername.visible := false;
127:         EnterPassword.visible := false;
128:         UsernameLabel.visible := false;
129:         PasswordLabel.visible := false;
130:         SecureQs.visible := false;
131:         EnterUP.visible := false;
132:         CodePad.visible := false;
133:         label1.visible := false;
134:         Form2.show;
135:         Form1.visible := false;
136:     end;
137:
138:
139: end;
140: //Final line from the folder holds the keypad answer
141: //If correct then the spreadsheet unit is loaded
142:
143: procedure TForm1.SecureQsClick(Sender: TObject);
144: begin
145:
146:     Folder := 'C:\Users\David Pereira\Documents\P\Project Files\.loginfile\' + Extension + '.
txt';
147:     Assignfile(myfile, Folder);
148:     Reset(myFile);
149:     readln(myfile, answer);
150:     readln(myfile, answertwo);
151:
152:
153:     if (answer <> EnterUsername.text) or (answertwo <> EnterPassword.text) then
154:     begin
155:         Attempt := Attempt + 1;
156:         count := count - 1;
157:         label1.caption := 'You have ' + inttostr(count) + ' attempmt(s)';
158:
159:         if Attempt > 1 then
160:         begin
161:             showmessage('Locked Out');
162:             halt;
163:         end
164:
165:         else
166:
167:         begin
168:             showmessage('Incorrect, try again');
169:             EnterUsername.clear;
170:             EnterPassword.clear;
171:         end;
172:     end
173:
174:     else
175:
176:     begin
177:         Attempt := 0;
178:         EnterUsername.clear;
179:         EnterUsername.PasswordChar := '*';
180:         EnterPassword.visible := false;
181:         UsernameLabel.caption := 'Enter 4 digit passcode';
182:         PasswordLabel.visible := false;
183:         SecureQs.visible := false;

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184:         EnterUP.visible := false;
185:         CodePad.visible := true;
186:         label1.caption := 'You have 1 attempt';
187:         count := 1;
188:     end;
189:
190:     closefile(myfile);
191:
192: end;
193:     //First two lines of the file are read to get the securty questions
194:     //If correct then the final keypad is loaded for the user
195:
196: begin
197:     Attempt := 0;
198:     count := 3;
199: end.
200:     //sets the inital number of attempts for the user
```

```

1: unit TheSpreadsheetUnit;
2:
3: {$mode objfpc}{$H+}
4:
5: interface
6:
7: uses
8:   Classes, SysUtils, mysql56conn, SQLDB, DB, Forms, Controls, Graphics, Dialogs,
9:   StdCtrls, DBGrids, DBCtrls, Menus, ExtCtrls, LockedU;
10:  //uses used for this unit
11:
12: type
13:
14:   { TForm2 }
15:
16:   TForm2 = class(TForm)
17:     BackBut: TButton;
18:     LOCKBUT: TButton;
19:     Label5: TLabel;
20:     UpDatBut: TButton;
21:     EditDataBut: TButton;
22:     Label3: TLabel;
23:     YearTotalCalc: TButton;
24:     Tablecomp1: TEdit;
25:     Tablecomp2: TEdit;
26:     Exithere: TButton;
27:     DataSource1: TDataSource;
28:     DBGrid1: TDBGrid;
29:     DBNavigator1: TDBNavigator;
30:     FindEnt: TButton;
31:     DogU: TButton;
32:     FindB: TEdit;
33:     FireU: TButton;
34:     Label2: TLabel;
35:     MySQL56Connection1: TMySQL56Connection;
36:     OfficersU: TButton;
37:     CivilianU: TButton;
38:     CalcYr: TButton;
39:     CalcBut: TButton;
40:     Label1: TLabel;
41:     SQLQuery1: TSQLQuery;
42:     SQLTransaction1: TSQLTransaction;
43:     YearTotalLabel: TLabel;
44:     WhichMonth: TEdit;
45:     MonthTotalLabel: TLabel;
46:     procedure BackButClick(Sender: TObject);
47:     procedure LOCKBUTClick(Sender: TObject);
48:     procedure CalcButClick(Sender: TObject);
49:     procedure CalcYrClick(Sender: TObject);
50:     procedure CivilianUClick(Sender: TObject);
51:     procedure DogUClick(Sender: TObject);
52:     procedure EditDataButClick(Sender: TObject);
53:     procedure ExithereClick(Sender: TObject);
54:     procedure FindEntClick(Sender: TObject);
55:     procedure FireUClick(Sender: TObject);
56:     procedure IdleTimer1Timer(Sender: TObject);
57:     procedure OfficersUClick(Sender: TObject);
58:     procedure UpDatButClick(Sender: TObject);
59:     procedure YearTotalCalcClick(Sender: TObject);
60:   private
61:

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62:     public
63:
64:     end;
65:     //every procedure and item needed for this unit listed
66:
67: var
68:     Form2: TForm2;
69:     row, answer, column, Tanswer : integer;
70:     Tab, TABONE, TABTWO, DATA, MONTH, EDCOLUMN, EDDATA, x, Foldertwo, dataexp : string;
71:     myfiletwo : textfile;
72:     //all variables needed stored in one place
73:
74: implementation
75:
76: {$R *.lfm}
77:
78: { TForm2 }
79:
80: procedure TForm2.CalcButClick(Sender: TObject);
81: begin
82:
83:     x := WhichMonth.Text;
84:
85:     SQLQuery1.Active := false;
86:     SQLQuery1.SQL.clear;
87:
88:     try
89:         SQLQuery1.SQL.add('SELECT budget-(pay+expenses+overtime) FROM '+Tab+' where month = '+ x)
90:     ;
91:         SQLQuery1.Active := true;
92:     except
93:         Showmessage('Error, try again');
94:
95:     end;
96:
97:     //calculates the total for a month the user wants
98:
99: procedure TForm2.BackButClick(Sender: TObject);
100: begin
101:
102:     SQLQuery1.Active := false;
103:     SQLQuery1.SQL.clear;
104:
105:     label5.visible := false;
106:     UpDatBut.visible := false;
107:     Tablecomp1.caption := 'Table1';
108:     Tablecomp2.caption := 'Table2';
109:     FindB.caption := 'Enter Data';
110:     EditDataBut.visible := false;
111:     YearTotalCalc.visible := false;
112:     Tablecomp1.visible := true;
113:     Tablecomp2.visible := true;
114:     label2.visible := true;
115:     Label1.visible := false;
116:     Label3.visible := false;
117:     WhichMonth.visible := false;
118:     CalcBut.visible := false;
119:     MonthTotalLabel.visible := false;
120:     CalcYr.visible := false;
121:     YearTotalLabel.visible := false;
122:     FindB.visible := true;
123:     FindEnt.visible := true;

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123:
124: end;
125:
126: procedure TForm2.LOCKBUTClick(Sender: TObject);
127: begin
128:
129:     form3.visible := true;
130:     form2.visible := false;
131:
132: end;
133:
134: //takes the user back to the menu
135:
136: procedure TForm2.CalcYrClick(Sender: TObject);
137: begin
138:
139:     SQLQuery1.Active := false;
140:     SQLQuery1.SQL.clear;
141:
142:     SQLQuery1.SQL.add('SELECT (SUM(Budget-(Pay+Expenses+Overtime)))/12 FROM ' + Tab);
143:     SQLQuery1.Active := true;
144:
145: end;
146: //calculates the year average spent for the unit selected
147:
148: procedure TForm2.CivilianUClick(Sender: TObject);
149: begin
150:
151:     SQLQuery1.Active := false;
152:     SQLQuery1.SQL.clear;
153:
154:     label5.visible := false;
155:     UpDatBut.visible := false;
156:     Label3.visible := false;
157:     EditDataBut.visible := true;
158:     YearTotalCalc.visible := true;
159:     Tablecomp1.visible := false;
160:     Tablecomp2.visible := false;
161:     label2.visible := false;
162:     Label11.visible := true;
163:     WhichMonth.visible := true;
164:     CalcBut.visible := true;
165:     MonthTotalLabel.visible := true;
166:     CalcYr.visible := true;
167:     YearTotalLabel.visible := true;
168:     FindB.visible := false;
169:     FindEnt.visible := false;
170:
171:     SQLQuery1.SQL.add('SELECT * FROM civilian');
172:     SQLQuery1.Active := true;
173:
174:     Tab := 'civilian';
175:     YearTotalLabel.caption := Tab;
176:
177: end;
178: //loads the civilian table from the database
179:
180: procedure TForm2.DogUClick(Sender: TObject);
181: begin
182:
183:     SQLQuery1.Active := false;
184:     SQLQuery1.SQL.clear;

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185:
186:     label5.visible := false;
187:     UpDatBut.visible := false;
188:     Label3.visible := false;
189:     EditDataBut.visible := true;
190:     YearTotalCalc.visible := true;
191:     Tablecomp1.visible := false;
192:     Tablecomp2.visible := false;
193:     label2.visible := false;
194:     Label11.visible := true;
195:     WhichMonth.visible := true;
196:     CalcBut.visible := true;
197:     MonthTotalLabel.visible := true;
198:     CalcYr.visible := true;
199:     YearTotalLabel.visible := true;
200:     FindB.visible := false;
201:     FindEnt.visible := false;
202:
203:     SQLQuery1.SQL.add('SELECT * FROM dog');
204:     SQLQuery1.Active := true;
205:
206:     Tab := 'dog';
207:     YearTotalLabel.caption := Tab;
208:
209: end;
210: //loads the dog table from the database
211:
212: procedure TForm2.EditDataButClick(Sender: TObject);
213: begin
214:
215:     Tablecomp1.caption := 'Enter Coloumn';
216:     Tablecomp2.caption := 'Enter data';
217:     FindB.caption := 'Enter Month';
218:     Tablecomp1.visible := true;
219:     Tablecomp2.visible := true;
220:     label3.visible := true;
221:     FindB.visible := true;
222:     UpDatBut.visible := true;
223:
224: end;
225: //Loads the necessary items for the user to be able to edit the tables data
226:
227: procedure TForm2.ExithereClick(Sender: TObject);
228: begin
229:     halt;
230: end;
231: //stops the program
232:
233: procedure TForm2.FindEntClick(Sender: TObject);
234: begin
235:
236:     SQLQuery1.Active := false;
237:     SQLQuery1.SQL.clear;
238:
239:     TABONE := Tablecomp1.text;
240:     TABTWO := Tablecomp2.text;
241:     DATA := FindB.text;
242:
243:     If (DATA = '') OR (DATA = 'Enter Data') then
244:     DATA := '*';
245:
246:     try

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247:     SQLQuery1.SQL.add('SELECT '+TABONE+'.'+DATA+', '+TABTWO+'.'+DATA+' FROM '+TABONE+' JOIN '
+TABTWO+' ON '+TABONE+'.month = '+TABTWO+'.month');
248:     SQLQuery1.Active := true;
249: except
250:     Showmessage('Error, try again');
251: end;
252:
253: label5.visible := true;
254: YearTotalLabel.visible := true;
255: YearTotalLabel.caption := TABONE;
256: label5.caption := TABTWO;
257:
258: end;
259: //finds data from two tables to compare them
260:
261: procedure TForm2.FireUClick(Sender: TObject);
262: begin
263:
264:     SQLQuery1.Active := false;
265:     SQLQuery1.SQL.clear;
266:
267:     label5.visible := false;
268:     UpDatBut.visible := false;
269:     Label3.visible := false;
270:     EditDataBut.visible := true;
271:     YearTotalCalc.visible := true;
272:     Tablecomp1.visible := false;
273:     Tablecomp2.visible := false;
274:     label2.visible := false;
275:     Label11.visible := true;
276:     WhichMonth.visible := true;
277:     CalcBut.visible := true;
278:     MonthTotalLabel.visible := true;
279:     CalcYr.visible := true;
280:     YearTotalLabel.visible := true;
281:     FindB.visible := false;
282:     FindEnt.visible := false;
283:
284:     SQLQuery1.SQL.add('SELECT * FROM firearms');
285:     SQLQuery1.Active := true;
286:
287:     Tab := 'firearms';
288:     YearTotalLabel.caption := Tab;
289:
290: end;
291: //loads the firearms table from the database
292:
293: procedure TForm2.IdleTimer1Timer(Sender: TObject);
294: begin
295:
296: end;
297:
298: procedure TForm2.OfficersUClick(Sender: TObject);
299: begin
300:
301:     SQLQuery1.Active := false;
302:     SQLQuery1.SQL.clear;
303:
304:     label5.visible := false;
305:     UpDatBut.visible := false;
306:     Label3.visible := false;
307:     EditDataBut.visible := true;

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308:   YearTotalCalc.visible := true;
309:   Tablecomp1.visible := false;
310:   Tablecomp2.visible := false;
311:   label2.visible := false;
312:   Label1.visible := true;
313:   WhichMonth.visible := true;
314:   CalcBut.visible := true;
315:   MonthTotalLabel.visible := true;
316:   CalcYr.visible := true;
317:   YearTotalLabel.visible := true;
318:   FindB.visible := false;
319:   FindEnt.visible := false;
320:
321:   SQLQuery1.SQL.add('SELECT * FROM officer');
322:   SQLQuery1.Active := true;
323:
324:   Tab := 'officer';
325:   YearTotalLabel.caption := Tab;
326:
327: end;
328:   //loads the officer table from the database
329:
330:
331: procedure TForm2.UpDatButClick(Sender: TObject);
332: begin
333:
334:   EDCOLUMN := Tablecomp1.text;
335:   EDDATA := Tablecomp2.text;
336:   MONTH := FindB.text;
337:
338:   SQLQuery1.SQL.clear;
339:   SQLQuery1.SQL.add('UPDATE '+TAB+' SET '+EDCOLUMN+' = '+EDDATA+' WHERE Month = '+MONTH);
340:   try
341:     SQLQuery1.ExecSQL;
342:     SQLTransaction1.commit;
343:     showmessage('Changes saved');
344:   except
345:     Showmessage('Error, try again');
346:   end;
347:
348: end;
349:   //Saves the changes the user wants to the database/table
350:
351: procedure TForm2.YearTotalCalcClick(Sender: TObject);
352: begin
353:
354:   SQLQuery1.Active := false;
355:   SQLQuery1.SQL.clear;
356:
357:   SQLQuery1.SQL.add('SELECT SUM(Budget-(Pay+Expenses+Overtime)) FROM ' + Tab);
358:   SQLQuery1.Active := true;
359:
360: end;
361:   //Calculates the total for the year for the table selected
362:
363: end.
364:

```

```

1: unit LockedU;
2:
3: {$mode objfpc}{$H+}
4:
5: interface
6:
7: uses
8:   Classes, SysUtils, Forms,
9:   Controls, Graphics, Dialogs, ExtCtrls, StdCtrls;
10:  //uses used for this unit
11:
12: type
13:
14:   { TForm3 }
15:
16:   TForm3 = class(TForm)
17:     ENT: TButton;
18:     KeyEnt: TEdit;
19:     Label1: TLabel;
20:     tmrlab: TLabel;
21:     Label2: TLabel;
22:     Label3: TLabel;
23:     Timer1: TTimer;
24:     procedure ENTClick(Sender: TObject);
25:     procedure Label3MouseEnter(Sender: TObject);
26:     procedure Timer1Timer(Sender: TObject);
27:   private
28:
29:     public
30:
31:   end;
32:  //every procedure and item needed for this unit listed
33:
34: var
35:   Form3: TForm3;
36:   counter : integer = 180;
37:   Attempt : integer = 1;
38:  //variables needed for this unit
39:
40: implementation
41:
42: uses
43:   TheSpreadsheetUnit;
44:  //allows unit to switch bag to the main unit
45:
46: {$R *.lfm}
47:
48: { TForm3 }
49:
50: procedure TForm3.Timer1Timer(Sender: TObject);
51: begin
52:
53:   counter := counter - 1;
54:   tmrlab.caption := inttostr(counter);
55:
56:   if counter = 0 then
57:   begin
58:     showmessage('Idle for too long, program closing');
59:     Timer1.enabled := false;
60:     halt;
61:   end;
62:

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63: end;
64:    //times out the program after 3 minutes
65:
66: procedure TForm3.Label3MouseEnter(Sender: TObject);
67: begin
68:
69:    Timer1.enabled := true;
70:
71: end;
72:    //starts timer
73:
74: procedure TForm3.ENTClick(Sender: TObject);
75: begin
76:
77:    if (Attempt = 3) and (KeyEnt.text <> '2684') then
78:    begin
79:        showmessage('Too many attempts, terminating');
80:        halt;
81:    end;
82:
83:    if KeyEnt.text = '2684' then
84:    begin
85:        form2.visible := true;
86:        form3.visible := false;
87:        KeyEnt.text := '';
88:        Attempt := 1;
89:        Timer1.enabled := false;
90:        counter := 180;
91:        tmrlab.caption := inttostr(counter);
92:    end
93:    else
94:    begin
95:        showmessage('Incorrect, try again');
96:        Attempt := Attempt + 1;
97:    end;
98:
99: end;
100:    //checks passcode with input
101:    //if correct it returns to main unit
102:    //if three wrong attempts then program closes
103:
104: end.
105:

```