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unit U_Damen;

interface

uses
  SysUtils, WinTypes, WinProcs, Messages, Classes, Graphics, Controls,
  Forms, Dialogs, StdCtrls, Spin;

type
  TForm1 = class(TForm)
    Memo1: TMemo;
    Button1: TButton;
    Label1: TLabel;
    spe_n: TSpinEdit;
    Label2: TLabel;
    procedure Button1Click(Sender: TObject);
    procedure FormCreate(Sender: TObject);
  private
    { Private declarations }
    feld : ARRAY[1..20,1..20] of boolean;
    lcount:integer;
    procedure setze_dame(x,y:integer);
    procedure loesche_dame(x,y:integer);
    function dame_bedroht(x,y:integer):boolean;
    procedure setze_dame_in_spalte(x:integer);
    procedure feld_ausgeben;
  public
    { Public declarations }
  end;

var
  Form1: TForm1;

implementation

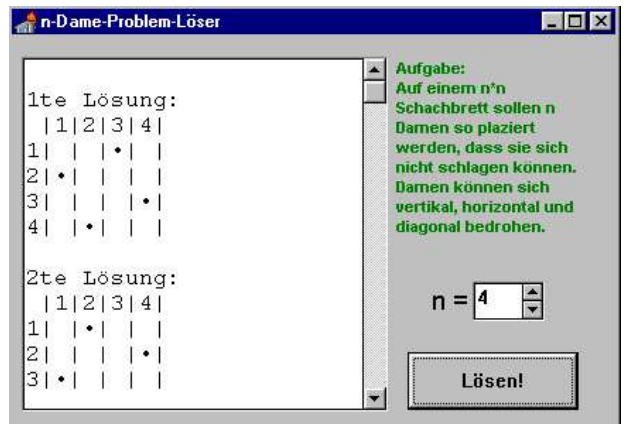
{$R *.DFM}
procedure TForm1.setze_dame_in_spalte(x:integer);
var y:integer;
begin
  if (x = spe_n.value+1)
  then feld_ausgeben
  else for y := 1 to spe_n.value
       do if NOT dame_bedroht(x,y)
          then begin
               setze_dame(x,y);
               setze_dame_in_spalte(x+1);
               loesche_dame(x,y);
             end;
  end;

procedure TForm1.setze_dame(x,y:integer);
begin
  feld[x,y] := true;
end;

procedure TForm1.loesche_dame(x,y:integer);
begin
  feld[x,y] := false;
end;

function TForm1.dame_bedroht(x,y:integer):boolean;
var bedroht:boolean; i,j:Integer;
begin
  {INIT}
  bedroht := false;
  i:=x;
  j:=y;
  {PROC}
  {suche Horizontale nach links}
  while (NOT bedroht) AND (i>0)
  do if (feld[i,j] = true)
     then bedroht := true
     else dec(i);
  {INIT}
  i:=x;
  j:=y;
  {PROC}
  {suche Diagonale nach links oben}

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while (NOT bedroht AND (i>0) AND (j>0))
do
  if (feld[i,j] = true)
    then bedroht := true
    else begin
      dec(i);
      dec(j);
    end;
{INIT}
  i:=x;
  j:=y;
{PROC}
{suche Diagonale nach links unten}
  while (NOT bedroht AND (i>0) AND (j<9))
  do
    if (feld[i,j] = true)
      then bedroht := true
      else begin
        dec(i);
        inc(j);
      end;
{RETURN}
  dame_bedroht := bedroht;
end;

procedure TForm1.feld_ausgeben;
var i,j:integer; fieldnum,outstr:string;
begin
{INIT}
  inc(lcount);
  outstr := '';
  fieldnum:=' |';
  memol.lines.add(' ');
{PROC}
  { Titelzeile für jede Lösung }
  memol.lines.add(IntToStr(lcount)+'te Lösung:');
  for i := 1 to spe_n.value
  do fieldnum := fieldnum+IntToStr(i)+'|';
  memol.lines.add(fieldnum);
  { Ausgabe des Spielfeldes mit Damen }
  for j := 1 to spe_n.value
  do begin
    outstr := IntToStr(j)+'|';
    for i := 1 to spe_n.value
    do if feld[i,j] = true
      then outstr := outstr+char(149)+'|'
      else outstr := outstr+' |';
    memol.lines.add(outstr);
    outstr := '';
  end;
end;

procedure TForm1.Button1Click(Sender: TObject);
begin
  lcount:=0;
  memol.clear;
  setze_dame_in_spalte(1);
end;

procedure TForm1.FormCreate(Sender: TObject);
var i,j:integer;
begin
{INITPROC}
for i := 1 to spe_n.value
do for j := 1 to spe_n.value
do feld[i,j] := false;

{Zeichen für die Damedarstellung suchen
for i := 1 to 255 do
memol.lines.add(IntToStr(i)+' : '+char(i)); }
end;

end.

```