

## Partie pratique - Corrigé

```
unit Unit1;

interface

uses
  Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls, Forms,
  Dialogs, StdCtrls, Grids;

type
  TForm1 = class(TForm)
    lbNoms: TListBox;
    sgEffectif: TStringGrid;
    btnInsérer: TButton;
    btnFréquence: TButton;
    btnArrêt: TButton;
    lblPrenom: TLabel;
    lblNom: TLabel;
    edtPrenom: TEdit;
    edtNom: TEdit;

    procedure btnInsérerClick(Sender: TObject);
    procedure btnFréquenceClick(Sender: TObject);
    procedure btnArrêtClick(Sender: TObject);
  private
    Déclarations privées
  public
    Déclarations publiques
  end;

var
  Form1: TForm1;

implementation

{$R *.dfm}

function FirstLetter(st: string): char;
var res : char;
    i : integer;
    trouve : boolean;
begin
```



```

i:=2;
trouve:=false;
res:=st[i];
while (i<length(st)) and not trouve do
begin
  if res=' ' then trouve:=true
  else begin
    i:=i+1;
    res:=st[i]
  end;

  //fi
end;//while
result:=st[i+1]
end;//FirstLetter

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procedure TForm1.btnInsérerClick(Sender: TObject);
var pn : string;

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  procedure tri_insertion_i(var liste:TListBox; candidat: string);
  var i: integer;

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  begin
    i:=liste.Items.Count;
    while (i>0) and (FirstLetter(liste.Items[i-1]) > FirstLetter(candidat)) do
    begin
      liste.Items[i]:=liste.Items[i-1];
      i:=i-1;
    end;//while
    liste.Items[i]:=candidat
  end;//tri_insertion

```

```

begin
  if(ord(edtNom.Text[1])>=65) and (ord(edtNom.Text[1])<=90) then
  begin
    pn := edtPrenom.Text+' '+edtNom.Text;
    tri_insertion_i(lbNoms,pn);
  end;//if
end;

```

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procedure TForm1.btnFrequenceClick(Sender: TObject);
var i:integer;

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  procedure ShowFirstRow();
  var i:integer;

```



```

begin
  for i:=0 to 25 do
    sgEffectif.Cells[i,0]:=chr(i+65);
  end;//ShowFirstRow

function frequence(liste:TListBox; key:char):integer;
var i, freq: integer;
begin
  freq:=0;
  for i:=0 to liste.Items.Count-1 do
    if FirstLetter(liste.Items[i])=key then freq:=freq+1;
  result:=freq;
  end;//frequence
begin
  ShowFirstRow();
  for i:=0 to 25 do
    sgEffectif.Cells[i,1]:=IntToStr(frequence(lbNoms,chr(i+65)));
  //for
end;

procedure TForm1.btnArretClick(Sender: TObject);
begin
  Application.Terminate;
end;
end.

```