

Program Password Multi User dengan Pascal

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Sesuai dengan judulnya "multi user", program ini akan menampung lebih dari satu password (dapat ditambah dan dikurang), semua password akan disimpan dalam satu file, tentu saja password-password tersebut di encrypt terlebih dahulu sehingga password yang disimpan susah dibaca.

Untuk meng-encrypt data, kita menggunakan cara sederhana dengan menambahkan kode ASCII suatu karakter dengan angka-angka dalam konstanta SEED setelah kata itu dibalik, untuk huruf pertama ditambahkan dengan 2, huruf kedua dengan 1 dan seterusnya. Contoh, kata "TURBO PASCAL" akan dibalik menjadi "LACSAP OBRUT" lalu menjadi "LBEZAX)PIRVL" dengan langkah-langkah :

L = 76 □ 76 + 0 = 76 = L
A = 65 □ 65 + 1 = 66 = B
C = 67 □ 67 + 2 = 69 = E
S = 83 □ 83 + 7 = 90 = Z
A = 65 □ 65 + 0 = 65 = A
P = 80 □ 80 + 8 = 88 = X
[spasi] = 32 □ 32 + 9 = 41 =)
O = 79 □ 79 + 1 = 80 = P
B = 66 □ 66 + 7 = 73 = I
R = 82 □ 82 + 0 = 82 = R
U = 85 □ 85 + 1 = 86 = V
T = 84 □ 74 + 2 = 76 = L

Orang lain akan susah menelusurinya, kecuali dia telah membaca source code programnya. Anda dapat mengubah konstanta SEED menjadi angka-angka yang lain sesuai keinginan. Setelah dikompilasi, panggil program ini melalui AUTOEXEC.BAT, sehingga program ini akan dipanggil setiap anda menyalakan (atau merestart) komputer.

Pertama kali program dijalankan, program akan menanyakan data pertama. Untuk selanjutnya, apabila ingin menambah user baru panggil program dengan parameter "+", dan untuk menghapus gunakan parameter "-".

Program ini bersifat case sensitive, maksudnya untuk USERID dan PASSWORD huruf besar dianggap tidak sama dengan huruf kecil. Contoh, USERID "Hairuddin" berbeda dengan "HAIRUDDIN", hal ini berlaku juga untuk penulisan PASSWORD.

```
Program Password;
Uses Crt;
Const
  Seed : Array[1..9] of Integer = (2,1,0,7,1,9,8,0,7);
Type
  Fields = Record
    UserID : String[33];
    Sandi  : String[33];
  End;
Var
  User, Sandi   : String;
  P, F         : File Of Fields;
  Records      : Fields;
  NoRec        : Integer;
  Opened       : Boolean;

Procedure FillChar(x1,y1,x2,y2 : integer; tembok, attr:byte);
var
  q,w:integer;
begin
  textattr:=attr;
  for q := 0 to x2-x1 do
    for w := 0 to y2-y1 do
      begin
        gotoxy(x1+q, y1+w);
        write(chr(tembok));
      end;
    end;
end;

Function Balik(Kata:String):String;
var
  Hasil : String;
  N : Integer;
Begin
  Hasil := '';
  For n := Length(Kata) Downto 1 do
    Hasil := Hasil+Kata[n];
  Balik := Hasil;
end;

Function Acak(Kata:string):String;
var
  Hasil : string;
  N, I : integer;
  B : Byte;
Begin
  I := 1;
  Hasil := '';
  For n := length(kata) downto 1 do
    begin
      b := ord(kata[n]);
      b := b+seed[i];
      If i < 9 then inc(i) else i:=1;
      Hasil := Hasil + Chr(b);
    end;
end;
```

```
    Acak := Hasil;
End;

Function Pulih(Kata:string):String;
var
    Hasil    : string;
    N, B, I  : Integer;
Begin
    I := 1;
    Hasil := '';
    For n := 1 to length(kata) do
    begin
        b := ord(Kata[n]);
        b := b-seed[i];
        If i < 9 then inc(i) else i:=1;
        Hasil := Hasil + Chr(b);
    end;
    Pulih := Balik(Hasil);
End;

Procedure Input (Wd, X, Y : Byte; Var VarStr : String;
                Kode, Attr : Byte);
var
    I : Integer;
    C : Char;
Begin
    VarStr := '';
    gotoxy(x,y);
    textattr := Attr;
    For I := 1 to Wd do
    begin
        Write(#32);
        gotoxy(x+i,y);
    end;
    gotoxy(x,y);
    I := 0;
    Repeat
        C := Readkey;
        If c = #13 then exit else
        If ((i>0) and (c = #08)) then
        Begin
            I := I-1;
            Delete(Varstr, Length(Varstr), 1);
            Write(c);
            write(#32);
            write(c);
        End else
        If c = #27 then
        Begin
            VarStr := '';
            Exit;
        End else
        If ((c<>#13) and (c<>#08) and (c<>#27)) then
        Begin
            I := I+1;
            VarStr := VarStr + C;
            If Kode = 0 then Write(c) else Write(#254);
        End;
    Until I=Wd;
```

End;

```
Function EFP(Param:String):String; {Extract File Path}
var
```

```
    tempor : string;
    l : integer;
```

Begin

```
    Tempor := Balik(Param);
    L := Pos('\',Tempor);
    If L=0 then Efp := '' else
    Efp := Copy(Param,1,Length(Param)-L+1);
```

end;

```
Procedure Block(x1,y1,x2,y2 : integer; Attr : byte);
```

Begin

```
    window(x1,y1,x2,y2);
    textattr := attr;
    clrscr;
    window(1,1,80,25);
```

end;

```
Procedure Ask(Judul:string);
```

```
var i : integer;
```

Begin

```
    Block(1,1,80,25,$1e);
    Gotoxy(1,1);
    Write(#32#254#32,'PC SECURITY SYSTEM v1.09');
    Gotoxy(56,25);
    Write('Copyright by Hairuddin',#32#254);
    Block(1,2,80,24,$3e);
```

```
    i:=1;
```

```
    repeat
```

```
        FillChar(i,2,i,24,168,$3e);
        inc(i,4);
```

```
    Until i>79;
```

```
    i:=2;
```

```
    repeat
```

```
        FillChar(i,2,i,24,88,$3e);
        inc(i,2);
```

```
    Until i>80;
```

```
    i:=3;
```

```
    repeat
```

```
        FillChar(i,2,i,24,63,$3e);
        inc(i,4);
```

```
    Until i>79;
```

```
    Block(22,7,58,7,$4f);
```

```
    gotoxy(23,7);
```

```
    Write(Judul);
```

```
    Block(24,8,60,19,$8);
```

```
    Block(22,8,58,18,$6f);
```

```
    Gotoxy(24,10); Write('User ID');
```

```
    Gotoxy(24,15); Write('Password');
```

```
    Block(24,11,56,11,$1f);
```

```
    Block(24,16,56,16,$1f);
```

```
    Input(33,24,11,USER,0,$1f);
```

```
    Input(33,24,16,SANDI,1,$1f);
```

end;

```
Procedure OpenPWL;
```

```
Begin
  Assign(f, EFP (Paramstr(0)) + 'PSWPRO.PWL');
  {$I-} Reset(f); {$I+}
  If IOresult <> 0 then
  Begin
    Rewrite(f);
    Ask('Add new record');
    Records.UserID := Acak(User);
    Records.Sandi := Acak(Sandi);
    Write(f, Records);
  end;
  Opened := true;
End;

Procedure ClosePWL;
Begin
  Close(f);
End;

Function SearchList(Nama:String):Integer;
var
  namarec : string;
  i,n:integer;
Begin
  I := 0;
  Seek(f,0);
  For n := 1 to filesize(f) do
  Begin
    Read(f, Records);
    NamaRec := Pulih(Records.UserID);
    If Namarec = Nama then
    begin
      i := n;
    end;
  end;
  SearchList := I;
end;

Procedure AddToList(Add : Fields);
Begin
  Seek(f, filesize(f));
  Records.UserID := Acak(Add.UserID);
  Records.Sandi := Acak(Add.Sandi);
  Write(f, Records);
end;

Procedure DeleteRec(Nama : String);
var
  namarec : string;
  n : integer;
Begin
  Assign(P, EFP (Paramstr(0)) + 'PSWNEW.PWL');
  Rewrite(p);
  Seek(f,0);
  For n := 1 to filesize(f) do
  Begin
    Read(f, records);
    NamaRec := pulih(records.Userid);
    if NamaRec <> Nama then write(p, records);
```

```
end;
Close(f);
Close(p);
Erase(f);
Rename(p, EFP(Paramstr(0))+'PSWPRO.PWL');
Opened := false;
End;

Procedure Pass(kode : integer);
Begin
  If Opened then ClosePWL;
  Textattr := $7;
  Clrscr;
  writeln(#254#32'PC Security System v1.09');
  Write('The USERID and PASSWORD are correct, '#32);
  Case kode of
    0 : writeln('you may continue...');
    1 : writeln('new record added. ');
    2 : writeln('one record deleted. ');
  end;
  Halt;
End;

Procedure Error(Kode:integer);
Begin
  If opened then ClosePWL;
  Textattr := $7;
  Clrscr;
  writeln(#254#32'PC Security System v1.09');
  Case Kode of
    0 : Inline($B8/$00/$00/$50/$1F/$BB/$72/$04/$B8/
              $34/$12/$89/$07/$EA/$00/$00/$FF/$FF);
    1 : Writeln('You have no authority to add a new record. ');
    2 : Writeln('You have no authority to delete a record. ');
    3 : Writeln('Duplicate USERID. No record added. ');
    4 : writeln('The USERID not listed yet. ');
    5 : writeln('I don''t understand that command. ');
  end;
  Halt;
End;

Procedure PlusRec;
var baru : fields;
Begin
  OpenPWL;
  ASK('Login Password');
  NoRec := 0;
  NoRec := SearchList(User);
  If NoRec > 0 then
  begin
    Seek(f, Norec-1);
    Read(f, Records);
    If Pulih(Records.sandi)=Sandi then
    begin
      Ask('Add new user');
      NoRec := 0;
      NoRec := SearchList(User);
      If Norec <> 0 then error(3) else
      begin
```

```
        Baru.userid := user;
        Baru.sandi := sandi;
        AddToList (Baru);
        Pass (1);
    end;
end else Error (1);
end else Error (4);
End;

Procedure MinRec;
Begin
    OpenPWL;
    ASK ('Login Password');
    NoRec := 0;
    NoRec := SearchList (User);
    If NoRec > 0 then
    begin
        Seek (f, Norec-1);
        Read (f, Records);
        If Pulih (Records.sandi) = Sandi then
        begin
            ASK ('Record to delete');
            NoRec := 0;
            NoRec := SearchList (User);
            If NoRec > 0 then
            begin
                Seek (f, Norec-1);
                Read (f, Records);
                If Pulih (Records.sandi) = Sandi then
                begin
                    DeleteRec (Pulih (Records.userid));
                    Pass (2);
                end else error (2);
            end else error (4);
        end else error (2);
    end else error (4);
End;

Begin
    CheckBreak := False;
    If Paramcount < 1 then
    begin
        OpenPWL;
        ASK ('Login Password');
        NoRec := 0;
        NoRec := SearchList (User);
        If (NoRec > 0) and (Norec <= filesize (f)) then
        begin
            Seek (f, Norec-1);
            Read (f, Records);
            If Pulih (Records.sandi) = Sandi then Pass (0) else Error (0);
        end else
        Begin
            if Paramstr (1) = '+' then PlusRec else
            If paramstr (1) = '-' then MinRec else Error (5);
        End;
    End.
End.
```