

LAMPIRAN A

Listing Program

LAMPIRAN A

LISTING PROGRAM PADA MIKROKONTROLER

```
#include <mega16.h>
#include <delay.h>

// Alphanumeric LCD Module functions
#asm
    .equ __lcd_port=0x18 ;PORTB
#endasm
#include <lcd.h>

// Standard Input/Output functions
#include <stdio.h>

// Declare your global variables here
//=====GLOBAL
VARIABLE=====
unsigned char keypad();
unsigned char masukanpin();
unsigned char masukanpass();
void motor();
unsigned char keypin[6],datapin[6],pass[6],password[6];
int i,j,k;
unsigned char parity, cekpin, cekpass;
unsigned char event;
void main(void)
//=====
=====
{
// Declare your local variables here

PORTA=0xFE;
DDRA=0x1F;

PORTB=0x00;
DDRB=0x00;

PORTC=0x00;
DDRC=0xFF;

PORTD=0x00;
DDRD=0x00;
```

```

TCCR0=0x00;
TCNT0=0x00;
OCR0=0x00;

TCCR1A=0x00;
TCCR1B=0x00;
TCNT1H=0x00;
TCNT1L=0x00;
ICR1H=0x00;
ICR1L=0x00;
OCR1AH=0x00;
OCR1AL=0x00;
OCR1BH=0x00;
OCR1BL=0x00;

ASSR=0x00;
TCCR2=0x00;
TCNT2=0x00;
OCR2=0x00;

MCUCR=0x00;
MCUCSR=0x00;

TIMSK=0x00;

// USART initialization
// Communication Parameters: 8 Data, 1 Stop, No Parity
// USART Receiver: On
// USART Transmitter: On
// USART Mode: Asynchronous
// USART Baud rate: 9600
UCSRA=0x00;
UCSRB=0x18;
UCSRC=0x86;
UBRRH=0x00;
UBRRL=0x33;

// Analog Comparator initialization
// Analog Comparator: Off
// Analog Comparator Input Capture by Timer/Counter 1: Off
ACSR=0x80;
SFIOR=0x00;

// LCD module initialization
lcd_init(16);

//=====PROGRAM
UTAMA=====

```

```

while (1)
{
    // Place your code here
    label:
    //memasukan pin
    cekpin=masukanpin();

    if (cekpin=='1')
    {
        goto pass;
    }
    else if (cekpin=='0')
    {
        goto label;
    }

    else if (cekpin=='2')
    {
        lcd_clear();
        lcd_gotoxy(0,0);
        lcd_putsf("Sistem error");
        delay_ms(2000);
        goto label;
    }

    pass:
    cekpass=masukanpass();
    if (cekpass=='1')
    {
        motor();
    }

    else if (cekpass=='0')
    {
        goto label;
    }

};
}
//=====
=====

unsigned char keypad()
{
    PORTA=0b11111100;
    if (PINA.5==0) return (*);
    if (PINA.6==0) return (2);
    if (PINA.7==0) return (3);
    //===== I
    PORTA=0b11111010;
    if (PINA.5==0) return (1);

```

```

    if (PINA.6==0) return ('5');
    if (PINA.7==0) return ('6');
    //=====
    PORTA=0b11110110;
    if (PINA.5==0) return ('4');
    if (PINA.6==0) return ('8');
    if (PINA.7==0) return ('9');
    //=====
    PORTA=0b11101110;
    if (PINA.5==0) return ('7');
    if (PINA.6==0) return ('0');
    if (PINA.7==0) return ('#');
}

```

```

void motor()
{
    int i=0;
    int j=0;
    lcd_clear();
    lcd_gotoxy(0,0);
    lcd_putsf("Pintu Terbuka");

    for (i=0;i<6;i++) {
        PORTC=~0x01;
        delay_ms(100);
        PORTC=~0x02;
        delay_ms(100);
        PORTC=~0x04;
        delay_ms(100);
        PORTC=~0x08;
        delay_ms(100);
    };
    delay_ms(1000);

    for (j=0;j<6;j++) {
        PORTC=~0x08;
        delay_ms(100);
        PORTC=~0x04;
        delay_ms(100);
        PORTC=~0x02;
        delay_ms(100);
        PORTC=~0x01;
        delay_ms(100);
    };

}

```

//=====FUNGSI
MEMASUKAN

UNTUK

```

PIN1=====
==
unsigned char masukanpin()
{
    lcd_clear();
    lcd_gotoxy(0,0);
    lcd_putsf("Masukan PIN1 =");
    i=0;
    j=0;
    while(i<=5)
    {
        datapin[j]='a';
        while(datapin[j]!='a')
        {
            keypin[i]=keypad();
            lcd_gotoxy(i,1);
            switch(keypin[i])
            {
                case '1' : lcd_putsf("1");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '2' : lcd_putsf("2");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '3' : lcd_putsf("3");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '4' : lcd_putsf("4");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '5' : lcd_putsf("5");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '6' : lcd_putsf("6");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '7' : lcd_putsf("7");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '8' : lcd_putsf("8");
                    datapin[j]="";
                    delay_ms(200);
                    break;
                case '9' : lcd_putsf("9");

```

```

        datapin[j]="";
        delay_ms(200);
        break;
    case '*' : lcd_putsf("*");
        datapin[j]="";
        delay_ms(200);
        break;
    case '0' : lcd_putsf("0");
        datapin[j]="";
        delay_ms(200);
        break;
    case '#' : lcd_putsf("#");
        datapin[j]="";
        delay_ms(200);
        break;
    }
}
i=i+1;
j=j+1;
}
//kirim data=====
for(k=0;k<=5;k++)
{
    printf("%c",keypin[k]);

}
//=====
delay_ms(100);
//terima parity=====
parity="";
parity=getchar();
while(parity=="")
{
    parity=getchar();
}
//=====
if (parity=='a')
{
    lcd_clear();
    lcd_gotoxy(0,0);
    lcd_putsf("PIN ANDA SALAH!");
    lcd_gotoxy(0,1);
    lcd_puts(keypin);
    delay_ms(1000);
    return ('0');
}

else if (parity=='b')
{
    return ('1');
}

```

```

        else
        {
            return('2');
        }
    }
//=====
=====
=====

//=====FUNGSI            UNTUK
MEMASUKAN
PASSWORD=====
unsigned char masukanpass()
{
    lcd_clear();
    lcd_gotoxy(0,0);
    lcd_putsf("PIN2 Anda");
    // membaca keypad

    i=0;
    j=0;
    while(i<=5)
    {
        pass[j]='a';
        while(pass[j]=='a')
        {
            password[i]=keypad();
            lcd_gotoxy(i,1);
            switch(password[i])
            {
                case '1' : lcd_putsf("*");
                    pass[j]="";
                    delay_ms(200);
                    break;
                case '2' : lcd_putsf("*");
                    pass[j]="";
                    delay_ms(200);
                    break;
                case '3' : lcd_putsf("*");
                    pass[j]="";
                    delay_ms(200);
                    break;
                case '4' : lcd_putsf("*");
                    pass[j]="";
                    delay_ms(200);
                    break;
                case '5' : lcd_putsf("*");
                    pass[j]="";
                    delay_ms(200);

```



```

        break;
    case '6' : lcd_putsf("*");
        pass[j]="";
        delay_ms(200);
        break;
    case '7' : lcd_putsf("*");
        pass[j]="";
        delay_ms(200);
        break;
    case '8' : lcd_putsf("*");
        pass[j]="";
        delay_ms(200);
        break;
    case '9' : lcd_putsf("*");
        pass[j]="";
        delay_ms(200);
        break;
    case '*' : lcd_putsf("*");
        pass[j]="";
        delay_ms(200);
        break;
    case '0' : lcd_putsf("*");
        pass[j]="";
        delay_ms(200);
        break;
    case '#' : lcd_putsf("#");
        pass[j]="";
        delay_ms(200);
        break;
    }
}
i=i+1;
j=j+1;
}

```

```
//=====KIRIM DATA=====
```

```
for(k=0;k<=5;k++)
```

```
{
printf("%c",password[k]);
}
```

```
//=====TERIMA DATA=====
```

```
event="";
event=getchar();
while(event=="")
{
    event=getchar();
}
```

```
if (event=='a')
```

```
    {  
        return('1');  
    }  
  
    else if (event=='b')  
    {  
        lcd_clear();  
        lcd_gotoxy(0,0);  
        lcd_putsf("PIN2 SALAH");  
        delay_ms(2000);  
        return('0');  
    }  
}
```

LAMPIRAN B

Listing Program

LAMPIRAN B

LISTING PROGRAM PADA PROGRAM APLIKASI

FORM 1 / FORM UTAMA

```
unit U_Utama;

interface

uses
  Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls, Forms,
  Dialogs, StdCtrls, CPort, Grids, DBGrids, ExtCtrls, CPortCtl, jpeg,
  ComCtrls;

type
  Tformutama = class(TForm)
    ComPort1: TComPort;
    Label1: TLabel;
    Label2: TLabel;
    DBGrid1: TDBGrid;
    RadioButton1: TRadioButton;
    Edit3: TEdit;
    Edit1: TEdit;
    Edit2: TEdit;
    Edit4: TEdit;
    Image1: TImage;
    Label4: TLabel;
    Label3: TLabel;
    Label5: TLabel;
    Button2: TButton;
    DateTimePicker1: TDateTimePicker;
    procedure kirim0;
    procedure kirim1;
    procedure Edit1Change(Sender: TObject);
    procedure FormActivate(Sender: TObject);
    procedure Edit2Change(Sender: TObject);
    procedure ComPort1RxChar(Sender: TObject; Count: Integer);
    procedure Button2Click(Sender: TObject);
    procedure FormCreate(Sender: TObject);

  private
    { Private declarations }
  public
    { Public declarations }
  end;

var
  formutama: Tformutama;
```

```

    var pin, pass, buffpin, buffpass, password :string;
    var waktu, nama : string;
implementation

uses dmTA, U_User;

{$R *.dfm}

procedure Tformutama.Edit1Change(Sender: TObject);
begin

if edit1.GetTextLen =6 then
begin
With dm.qData Do
    Begin
        Close;
        Sql.Clear;
        Sql.Add('select pin from account');
        Sql.Add('Where pin=:km');
        Prepare;
        parambyname('km').AsString := edit1.Text;
        Open;
        edit3.Text:=fields[0].AsString;
        if fields[0].IsNull then
            begin
                comport1.WriteStr('a');
                edit1.Text:="";
            end
        else
            begin
                comport1.WriteStr('b');
                radiobutton1.Checked:=true;
            end
        end;
    end;
end;

end;

procedure Tformutama.FormActivate(Sender: TObject);
begin
    datetimepicker1.DateTime:=now;
    comport1.Open;
end;

procedure Tformutama.Edit2Change(Sender: TObject);
begin

```

```

if edit2.GetTextLen =6 then
begin
With dm.qData Do
Begin
Close;
Sql.Clear;
Sql.Add('select pin, nama from account');
Sql.Add('Where pass=:km');
Prepare;
parambyname('km').AsString := edit2.Text;
Open;
edit4.Text:=fields[0].AsString;
nama:=fields[1].AsString;
if edit1.Text = edit4.Text then
begin
comport1.WriteStr('a');
{-----masukan ke tabel log-----}

With dm.qData Do
Begin
datetimepicker1.DateTime:=now;
Close;
Sql.Clear;
Sql.Add('Insert Into log(PIN,tglakses,nama,pass,waktu_akses) '+
'Values(:np, :nc, :mr, :tp, :ps)');
Prepare;
ParamByName('np').AsString :=edit1.Text;
ParamByname('nc').AsDate := datetimepicker1.Date;
ParamByname('mr').AsString := nama;
ParamByname('tp').AsString := edit2.Text;
parambyname('ps').AsString :=timetostr(datetimepicker1.DateTime);
ExecSql;
End;
radiobutton1.Checked:=false;
edit1.Text:="";
edit2.Text:="";
end
else
begin
comport1.WriteStr('b');
radiobutton1.Checked:=false;
edit1.Text:="";
edit2.Text:="";
end
end;
end;
end;

procedure TFormutama.ComPort1RxChar(Sender: TObject; Count: Integer);
begin
if radiobutton1.Checked =false then
begin

```

```

        comport1.ReadStr(pin,count);
        edit1.Text :=edit1.Text +pin;

    end

    else if radiobutton1.Checked =true then
    begin
        comport1.ReadStr(pass,count);
        edit2.Text :=edit2.Text+pass;

    end;

end;

procedure Tformutama.kirim0;
begin
    comport1.WriteStr('b');
end;

procedure Tformutama.kirim1;
begin
    comport1.WriteStr('a');
end;


procedure Tformutama.Button2Click(Sender: TObject);
begin
    form2.ShowModal;

end;

procedure Tformutama.FormCreate(Sender: TObject);
begin

end;

end.

```

FORM2 / FORM DATA USER

```

unit U_User;

interface

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

```

```

type
  TForm2 = class(TForm)
    DBGrid1: TDBGrid;
    btcari: TButton;
    bttampil: TButton;
    btubah: TButton;
    bthapus: TButton;
    Button6: TButton;
    ComboBox1: TComboBox;
    edcari: TEdit;
    btentrybaru: TButton;
    Panel1: TPanel;
    Button1: TButton;
    Image1: TImage;
    procedure FormShow(Sender: TObject);
    procedure btcariClick(Sender: TObject);
    procedure bttampilClick(Sender: TObject);
    procedure btentrybaruClick(Sender: TObject);
    procedure btubahClick(Sender: TObject);
    procedure bthapusClick(Sender: TObject);
    procedure DBGrid1DblClick(Sender: TObject);
    procedure Button1Click(Sender: TObject);
    procedure Button6Click(Sender: TObject);
    procedure FormCreate(Sender: TObject);
  private
    { Private declarations }
  public
    { Public declarations }
  end;

var
  Form2: TForm2;

implementation

uses dmTA, U_EntryUser, U_Log;

{$R *.dfm}

procedure TForm2.FormShow(Sender: TObject);
begin
  With dm.qProses Do
    Begin
      Close;
      Sql.Clear;
      Sql.Add('select nama, alamat, pin as PIN1, pass as PIN2 from account');
      Open;
      End;
end;

procedure TForm2.btcariClick(Sender: TObject);
begin

```



```

//jika edcari kosong dan combobox1 tidak dipilih
if ((edcari.Text = "") or (combobox1.Text='JENIS PENCARIAN')) then
  begin
    showmessage('Silakan isi kotak pencarian dan pilih jenis pencarian');
  end;

  {-----pencarian berdasarkan nama user-----}
  -----}
  if combobox1.ItemIndex =0 then
    begin
      With dm.qProses Do
        Begin
          Close;
          Sql.Clear;
          Sql.Add('Select nama, alamat, pin as PIN1, pass as PIN2 from account where
nama=:kb order by nama');
          prepare;
          parambyname('kb').asstring:=edcari.text;
          open;
        end
      end;

      {-----pencarian berdasarkan pin1-----}
      -----}
      if combobox1.ItemIndex =1 then
        begin
          With dm.qProses Do
            Begin
              Close;
              Sql.Clear;
              Sql.Add('Select nama, alamat, pin as PIN1, pass as PIN2 from account where pin
=:kb order by pin');
              prepare;
              parambyname('kb').asstring:=edcari.text;
              open;
            end
          end;

          {-----pencarian berdasarkan PIN2/ pass-----}
          -----}
          if combobox1.ItemIndex =2 then
            begin
              With dm.qProses Do
                Begin
                  Close;
                  Sql.Clear;
                  Sql.Add('Select nama, alamat, pin as PIN1, pass as PIN2 from account where
pass=:kb order by pass');
                  prepare;
                  parambyname('kb').asstring:=edcari.text;
                  open;
                end
              end;
            end;
          end;
        end;
      end;
    end;
  end;

```

```

end;
procedure TForm2.bttampilClick(Sender: TObject);
begin
  With dm.qProses Do
    Begin
      Close;
      Sql.Clear;
      Sql.Add('select nama, alamat, pin as PIN1, pass as PIN2 from account');
      Open;
    End;
end;

```

```

procedure TForm2.btentrybaruClick(Sender: TObject);
begin
  form3.cmbnama.Visible:=false;
  form3.ednama.Visible:=true;
  form3.edalamatuser.Visible:=true;
  form3.edpin.Visible:=true;
  form3.edpass.Visible:=true;
  form3.edpin.Enabled:=true;
  form3.edpass.Enabled:=true;
  form3.bttambah.Visible:=true;
  form3.btubah.Visible:=false;
  form3.bthapus.Visible:=false;
  form3.Caption:='Entry New User';
  form3.ShowModal;
end;

```

```

procedure TForm2.btubahClick(Sender: TObject);
begin
  form3.cmbnama.Visible:=true;
  form3.ednama.Visible:=false;
  form3.edalamatuser.Visible:=true;
  form3.edpin.Visible:=true;
  form3.edpass.Visible:=true;
  form3.edpin.Enabled:=true;
  form3.edpass.Enabled:=true;
  form3.bttambah.Visible:=false;
  form3.btubah.Visible:=true;
  form3.bthapus.Visible:=false;
  form3.Caption:='Modify User Data';
  form3.ShowModal;
end;

```

```

procedure TForm2.bthapusClick(Sender: TObject);
begin
  form3.cmbnama.Visible:=true;
  form3.ednama.Visible:=false;
  form3.edalamatuser.Visible:=true;
  form3.edpin.Visible:=true;
  form3.edpass.Visible:=true;

```

```

form3.edpin.Enabled:=false;
form3.edpass.Enabled:=false;
form3.bttambah.Visible:=false;
form3.btubah.Visible:=false;
form3.bthapus.Visible:=true;
form3.Caption:='Delete User';
form3.ShowModal;
end;

procedure TForm2.DBGrid1DblClick(Sender: TObject);
begin
If      MessageDlg('Benar      Mau      Hapus      Data      Ini
?',mtConfirmation,[mbYes,mbNo],0)=mrYes Then
begin
  With dm.qData Do
  Begin
    Close;
    Sql.Clear;
    Sql.Add('Delete From account where nama=:kp');
    prepare;
    parambyname('kp').AsString :=dbgrid1.Fields[0].AsString;
    ExecSql;
  End;
  dm.trTA.Commit;

  With dm.qProses Do
  Begin
    Close;
    Sql.Clear;
    Sql.Add('select * from account order by nama');
    Open;
  End;

end;
end;

procedure TForm2.Button1Click(Sender: TObject);
begin
form4.ShowModal;
end;

procedure TForm2.Button6Click(Sender: TObject);
begin
form2.Close;
end;

procedure TForm2.FormCreate(Sender: TObject);
begin

end;

```

end.

FORM 3

```
unit U_EntryUser;
```

```
interface
```

```
uses
```

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

```
type
```

```
  TForm3 = class(TForm)  
    DataSupplier: TGroupBox;  
    K: TLabel;  
    Label2: TLabel;  
    Label3: TLabel;  
    Label4: TLabel;  
    ednama: TEdit;  
    edalamatuser: TEdit;  
    edpin: TEdit;  
    edpass: TEdit;  
    bttambah: TButton;  
    btubah: TButton;  
    bthapus: TButton;  
    btkeluar: TButton;  
    cmbnama: TComboBox;  
    procedure FormShow(Sender: TObject);  
    procedure bthapusClick(Sender: TObject);  
    procedure btubahClick(Sender: TObject);  
    procedure bttambahClick(Sender: TObject);  
    procedure btkeluarClick(Sender: TObject);  
    procedure FormCreate(Sender: TObject);  
  private  
    { Private declarations }  
  public  
    { Public declarations }  
  end;
```

```
var
```

```
  Form3: TForm3;
```

```
implementation
```

```
uses dmTA;
```

```
{ $R *.dfm }
```

```

procedure TForm3.FormShow(Sender: TObject);
begin
{-----isi cmbnama -----}
cmbnama.Clear;
With dm.QData Do
  Begin
  Close;
  Sql.Clear;
  Sql.Add('Select Distinct nama From account');
  Sql.Add('Order by nama');
  Open;
  while not Eof do
  begin
    cmbnama.Items.Add(Trim(Fields[0].AsString));
    Next;
  end;
end;
{-----}
end;

procedure TForm3.bthapusClick(Sender: TObject);
begin
if (cmbnama.Text='') then
  begin
    showmessage('Nama harus diisi!')
  end
else
  begin
{-----hapus data user-----}
    With dm.qProses Do
      Begin
      Close;
      Sql.Clear;
      Sql.Add('Delete From account');
      Sql.Add('Where nama =:np');
      Prepare;
      ParamByName('np').AsString := cmbnama.Text;

      ExecSql;
      End;
      dm.trTA.Commit;
      ednama.clear;
      edalamatuser.clear;
      edpin.clear;
      edpass.clear;

      showmessage('User Berhasil Dihapus');
    end;
{-----}
  end;
end;

```

```

procedure TForm3.btubahClick(Sender: TObject);
begin
if (cmbnama.Text = "") then
begin
showmessage('Nama harus diisi!');
end

else
begin

{-----mengubah data user-----}
With dm.qData Do
Begin
Close;
Sql.Clear;
Sql.Add('update account set alamat=:mr, pin=:tp, pass=:is where nama=:np');
Prepare;

ParamByName('np').AsString := cmbnama.Text;
ParamByName('mr').AsString := edalamatuser.Text;
ParamByName('tp').AsString := edpin.Text;
ParamByName('is').AsString := edpass.Text;

ExecSql;
dm.trTA.Commit;

edalamatuser.clear;
edpin.clear;
edpass.clear;

End;
showmessage('Data berhasil Diubah')
end;
{-----}

end;

procedure TForm3.bttambahClick(Sender: TObject);
begin
if ((ednama.Text="") or (edpin.Text=") or (edpass.Text=") ) then
begin
showmessage('data harus lengkap!');
end

else
begin

{-----entry user baru-----}
With dm.qData Do

```

```

Begin
  Close;
  Sql.Clear;
  Sql.Add('Insert Into account(nama,alamat,pin,pass) '+
    'Values(:np, :nc, :mr, :tp)');
  Prepare;
  ParamByName('np').AsString := ednama.Text;
  ParamByname('nc').AsString := edalamatuser.Text;
  ParamByname('mr').AsString := edpin.Text;
  ParamByname('tp').AsString := edpass.Text;

  ExecSql;
  End;
  dm.trTA.Commit;
  ednama.clear;
  edalamatuser.clear;
  edpin.clear;
  edpass.clear;

  showmessage('User Baru telah Dimasukan!')
end;
end;

procedure TForm3.btkeluarClick(Sender: TObject);
begin
  form3.Close;
end;

procedure TForm3.FormCreate(Sender: TObject);
begin

end;

end.

```

FORM4/ FORM LOG

```

unit U_Log;

interface

uses
  Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls, Forms,
  Dialogs, StdCtrls, ComCtrls, ExtCtrls, Grids, DBGrids, jpeg;

type
  TForm4 = class(TForm)
    DBGrid1: TDBGrid;
    Panel1: TPanel;
    btcari: TButton;

```

```

bttampil: TButton;
ComboBox1: TComboBox;
edcari: TEdit;
DateTimePicker1: TDateTimePicker;
DateTimePicker2: TDateTimePicker;
Button1: TButton;
Label1: TLabel;
Image1: TImage;
Label2: TLabel;
procedure bttampilClick(Sender: TObject);
procedure btcariClick(Sender: TObject);
procedure ComboBox1Change(Sender: TObject);
procedure FormShow(Sender: TObject);
procedure FormActivate(Sender: TObject);
procedure Button1Click(Sender: TObject);
procedure FormCreate(Sender: TObject);
private
    { Private declarations }
public
    { Public declarations }
end;

var
    Form4: TForm4;

implementation

uses dmTA;

{$R *.dfm}

procedure TForm4.bttampilClick(Sender: TObject);
begin
    With dm.qData Do
        Begin
            Close;
            Sql.Clear;
            Sql.Add('select tglakses, waktu_akses, nama, pin as PIN1, pass as PIN2  from log
order by tglakses, waktu_akses');
            Open;
            End;
        end;

procedure TForm4.btcariClick(Sender: TObject);
begin
    //jika edcari kosong dan combobox1 tidak dipilih
    if ((edcari.Text = '') or (combobox1.Text='JENIS PENCARIAN')) then
        begin
            showmessage('Silakan isi kotak pencarian dan pilih jenis pencarian');
        end;
    end;

```



```

{-----pencarian berdasarkan nama user-----
-----}
if combobox1.ItemIndex =0 then
begin
  With dm.qData Do
  Begin
    Close;
    Sql.Clear;
    Sql.Add('Select * from log where nama=:kb order by nama');
    prepare;
    parambyname('kb').asstring:=edcari.text;
    open;
  end
end;

{-----pencarian berdasarkan pin1-----
-----}
if combobox1.ItemIndex =1 then
begin
  With dm.qData Do
  Begin
    Close;
    Sql.Clear;
    Sql.Add('Select * from log where pin =:kb order by pin');
    prepare;
    parambyname('kb').asstring:=edcari.text;
    open;
  end
end;

{-----pencarian berdasarkan PIN2/ pass-----
-----}

if combobox1.ItemIndex =2 then
begin
  With dm.qData Do
  Begin
    Close;
    Sql.Clear;
    Sql.Add('Select * from log where pass=:kb order by pass');
    prepare;
    parambyname('kb').asstring:=edcari.text;
    open;
  end
end;

//=====pencarian berdasarkan range
tanggal=====
if combobox1.ItemIndex = 3 then
begin
  With dm.qdata Do
  Begin
    Close;
    Sql.Clear;
    sql.Add('Select * from log where TglAkses >=:tglA And tglakses <=:tglB');

```

```

        prepare;
        parambyname('tglA').AsDate:=datetimepicker1.Date;
        parambyname('tglB').AsDate:=datetimepicker2.Date;
        Open;
    End;
    //=====
end
end;

procedure TForm4.ComboBox1Change(Sender: TObject);
begin
if combobox1.ItemIndex= 0 then
begin
    edcari.Enabled:=true;
    datetimepicker1.Enabled:=false;
    datetimepicker2.Enabled:=false;
    edcari.Text:="";
end

else if combobox1.ItemIndex= 1 then
begin
    edcari.Enabled:=true;
    datetimepicker1.Enabled:=false;
    datetimepicker2.Enabled:=false;
    edcari.Text:="";
end

else if combobox1.ItemIndex= 2 then
begin
    edcari.Enabled:=true;
    datetimepicker1.Enabled:=false;
    datetimepicker2.Enabled:=false;
    edcari.Text:="";
end

else if combobox1.ItemIndex= 3 then
begin
    edcari.Enabled:=false;
    datetimepicker1.Enabled:=true;
    datetimepicker2.Enabled:=true;
    edcari.Text:='Pilih range tanggal';
end

end;

procedure TForm4.FormShow(Sender: TObject);
begin
datetimepicker1.Date:=now;
datetimepicker2.Date:=now;
end;

procedure TForm4.FormActivate(Sender: TObject);

```

```

begin
With dm.qData Do
    Begin
        Close;
        Sql.Clear;
        Sql.Add('select tglakses, waktu_akses, nama, pin as PIN1, pass as PIN2  from log
order by tglakses, waktu_akses');
        Open;
        End;
    end;

procedure TForm4.Button1Click(Sender: TObject);
begin
form4.Close;
end;

procedure TForm4.FormCreate(Sender: TObject);
begin

end;

end.

```

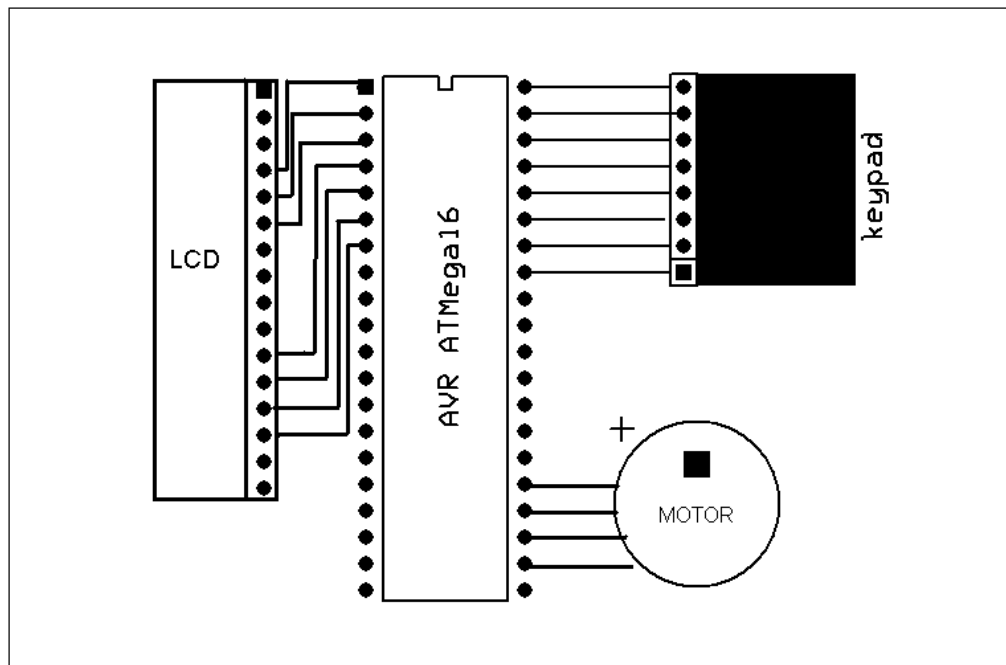
LAMPIRAN C

Skema dan *Datasheet*

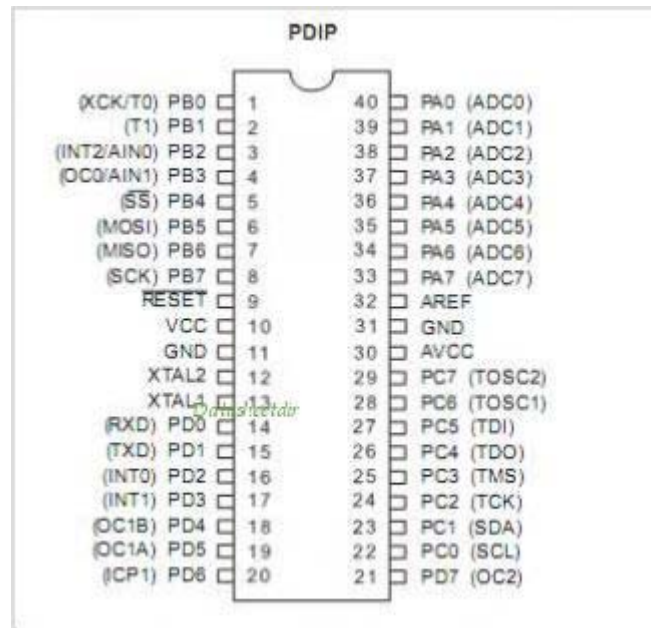
LAMPIRAN C

SKEMA RANGKAIAN DAN DATASHEET

SKEMA RANGKAIAN



DATASHEET AVR ATMEGA16



DATASHEET LCD

