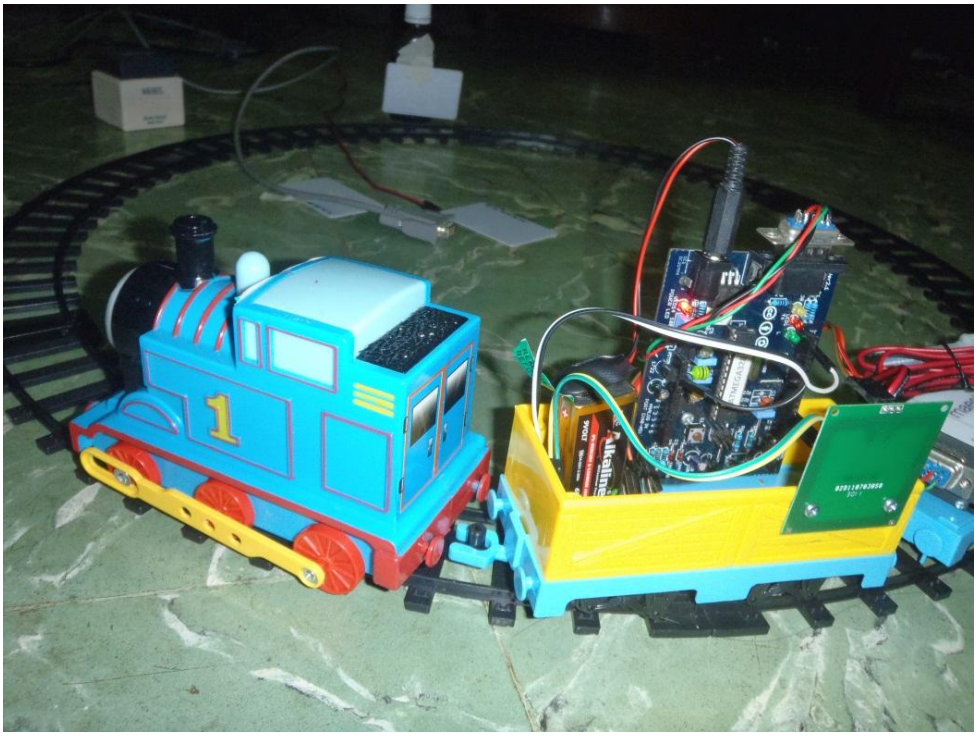
LAMPIRAN A

GAMBAR



Gambar Kereta Api, RFID *reder,* dan mikrokontroler

Gambar modem GPRS

LAMPIRAN B

PERANGKAT LUNAK

Visual Basic6.0

```
Private Declare Sub Sleep Lib "kernel32" (ByVal dwMilliseconds As Long)

Private Sub Form_Load()
MSComm1.CommPort = 1
MSComm1.Settings = "9600,N,8,1"
MSComm1.InputLen = 0
MSComm1.PortOpen = True


End Sub

Private Sub Timer1_Timer()
posisi = MSComm1.Input
If Len(posisi) > 0 Then
        If posisi = "A" Then
           Image1.Visible = True
           Sleep 1000
          Image1.Visible = False
           End If
       If posisi = "B" Then
           Image2.Visible = True
           Sleep 1000
          Image2.Visible = False
           End If
       If posisi = "C" Then
```

```
    Image3.Visible = True
    Sleep 1000
   Image3.Visible = False
    End If
If posisi = "D" Then
    Image4.Visible = True
    Sleep 1000
   Image4.Visible = False
     End If
If posisi = "E" Then
    Image5.Visible = True
    Sleep 1000
   Image5.Visible = False
    End If
```

Program Mikrokontroller

```
#include <SoftwareSerial.h>

SoftwareSerial rfid(4, 3);

//Prototypes
void read_serial(void);
void mifare_request(void);
void get_response(void);
void mifare_anticollision(void);
void parse(void);

int Str1[12];
int Str2[14];

void setup()
{
  Serial.begin(9600);
  rfid.begin(19200);
  delay(300);
Serial.println("AT+IPGPRS=1");
Serial.println("AT+IPGPRS=\"telkomsel\" ,\"wap\",\"wap123\"");
Serial.println("AT+IPTCP=89,\"180.245.224.223\"");
Serial.println("AT+AUTOTCP=1");
delay (20000);
}
```

```
//MAIN
void loop()
{read_serial();}

void mifare_request()
{ rfid.write(0xAA);
  rfid.write(0xBB);
  rfid.write(0x06);
  rfid.write((uint8_t)0);
  rfid.write((uint8_t)0);
  rfid.write((uint8_t)0);
  rfid.write(0x01);
  rfid.write(0x02);
  rfid.write(0x52);
  rfid.write(0x51);
  delay (200);
}

void get_response()
{
  while(rfid.available())
    {for(int i=0;i<12;i++)
      {Str1[i]= rfid.read();
        delay (10);
      }
    }
}
```

```
 void mifare_anticollision()
   {rfid.write(0xAA);
    rfid.write(0xBB);
    rfid.write(0x05);
    rfid.write((uint8_t)0);
    rfid.write((uint8_t)0);
    rfid.write((uint8_t)0);
    rfid.write(0x02);
    rfid.write(0x02);
    rfid.write((uint8_t)0);
    delay (200);
   }

void parse()
{
  while(rfid.available()>0)
    { for(int i=0;i<14;i++)
      {Str2[i]= rfid.read();
       delay(10);
       }
    }
}

void print_serial()
 {
  //print to serial port
```

```
   if (Str2[9] == 0xA3 && Str2[10] == 0xA5 && Str2[11] == 0xBA && Str2[12] == 0xF7
&& Str2[13] == 0x48 )

    {Serial.write("A");

    delay(10);}

   if (Str2[9] == 0x93 && Str2[10] == 0x10 && Str2[11] == 0xBA && Str2[12] == 0xF7
&& Str2[13] == 0xCD )

   {Serial.write("B");

   delay(10);}

   if (Str2[9] == 0x7E && Str2[10] == 0xE3 && Str2[11] == 0xBD && Str2[12] == 0xBD
&& Str2[13] == 0x9E )

   {Serial.write("C");

   delay(10);}

   if (Str2[9] == 0x1E && Str2[10] == 0xEC && Str2[11] == 0xBE && Str2[12] == 0xBD
&& Str2[13] == 0xF2 )

     {Serial.write("D");

    delay(10);}

   if (Str2[9] == 0xFC && Str2[10] == 0xF3 && Str2[11] == 0x30 && Str2[12] == 0x40 &&
Str2[13] == 0x7C )

     {Serial.write("E");

    delay(10);}

  }

void read_serial()

  { mifare_request();

  get_response ();

  mifare_anticollision();

  parse ();

 print_serial();

  delay(100);

  }
```