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/*the vehicle contains an atmega 16 to which transmitter (through HT12E-PORTD), receiver (through HT12D-PORTB), temperature sensor (LM 35) connected to PORTC and finally the motor control ic L293D connected to PORTA.*/

#include<avr/io.h>

#include<util/delay.h>

void main()

{

 DDRA=0XFF;// motor control output

 DDRB=0X00;// decoder input

 DDRC=0X00;// temperature sensor input

 DDRD=0XFF;// encoder output

 PORTA=0X00;

 PORTB=0X00;

 PORTC=0X00;

 PORTD=0X00;

 unsigned int b,c;// two variables declared

 while(1)

 {

  b=PINB;// value at pinb is assigned to b

        c=PINC;// value at pinc is assigned to c

        if(b==0x0D)// condition checking-

        {PORTA=0x15;}// motor output: FRONT

        else if(b==0x0B)

        {PORTA=0x1A;}// motor output: BACK

        else if(b==0x07)

        {PORTA=0X14;}// motor output: LEFT

        else if(b==0x0E)

        {PORTA=0X11;}// motor output: RIGHT
```

```
else if(b==0x03)// the activation of encoder ic in vehicle
{
PORTA=0x00;
 _delay_ms(246);
switch(c)
{
 case 0x01:
{PORTD=0X01;// encoder output.....the msb bits are used to control the encoder initialization (ACTIVE LOW).
 _delay_ms(1000);
 PORTD=0X10;
 break;}
 case 0x03:
 {PORTD=0X02;
 _delay_ms(1000);
 PORTD=0X10;
 break;}// encoder output
 case 0x43:
 {PORTD=0X04;
 _delay_ms(1000);
 PORTD=0X10;
 break;}// encoder output
 case 0xC3:
 {PORTD=0X08;
 _delay_ms(1000);
 PORTD=0X10;
 break;}// encoder output
 default:
```

```
            {PORTD=0X10;
            _delay_ms(1000);
            break;  }
            _delay_ms(246);
           }
 }
 else if(b==0x06)
 {
  PORTA=0X00;
  }
else
{
PORTA=0X00;
PORTD=0x10;} }}
```