```
#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;} }}
```