1)define a function to display the float number on alphanumeric LCD.

#include<reg51.h>

#include"delay.h"

#define LCD\_d P2

sbit rs=P1^0;

sbit rw=P1^1;

sbit en=P1^2;

void init\_lcd(void);

void write\_cmd(unsigned char);

void lcd\_display(unsigned char);

void lcd\_float(float);

void main()

{

init\_lcd();

while(1)

{

Write\_cmd(0X80);

lcd\_float(12345.789);

}

}

void init\_lcd(void)

{

write\_cmd(0x01);

write\_cmd(0x02);

write\_cmd(0x0c);

write\_cmd(0x38);

write\_cmd(0x80);

}

void write\_cmd(unsigned char d)

{

LCD\_d=d;

rs=0;

rw=0;

en=1;

delay\_1ms(2);

en=0;

}

void lcd\_display(unsigned char d)

{

LCD\_d=d;

rs=1;

rw=0;

en=1;

delay\_1ms(2);

en=0;

}

void lcd\_float(float f)

{

long int i=0,a[15],c=1,m,n=0,x;

while(f>1)

{

f=f/10;

c=c\*10;

n++;

}

m=f\*c\*1000;

while(m>0)

{

a[i++]=m%10;

m=m/10;

}

x=i-1-n;

for(--i;i>x;i--)

lcd\_display(a[i]+48);

lcd\_display(‘.’);

for(i=x;i>=0;i--)

lcd\_display(a[i]+48);

while(1);

}

2)write an ECP to rotate the string “EMBEDDED” from left to right on alphanumeric LCD.

#include<reg51.h>

#include"delay.h"

#define LCD\_d P2

sbit rs=P1^0;

sbit rw=P1^1;

sbit en=P1^2;

void init\_lcd(void);

void write\_cmd(unsigned char);

void lcd\_display(unsigned char);

void lcd\_str(unsigned char \*);

void main()

{

unsigned int i;

unsigned char a[]={0x80,0x81,0x82,0x83,0x84,0x85,0x86,0x87,0x88,0x89,0x8A,0x8B,0x8C,0x8D,0x8E,0x8F};

const char \*s="embedded";

init\_lcd();

while(1)

{

for(i=0;i<16;i++)

{

write\_cmd(a[i]);

lcd\_str(s);

if(i>8)

{

write\_cmd(0x80);

lcd\_str(s+(16-i));

}

delay\_1ms(500);

write\_cmd(0x01);

}

}

}

void init\_lcd(void)

{

write\_cmd(0x01);

write\_cmd(0x02);

write\_cmd(0x0c);

write\_cmd(0x38);

write\_cmd(0x80);

}

void write\_cmd(unsigned char d)

{

LCD\_d=d;

rs=0;

rw=0;

en=1;

delay\_1ms(2);

en=0;

}

void lcd\_display(unsigned char d)

{

LCD\_d=d;

rs=1;

rw=0;

en=1;

delay\_1ms(2);

en=0;

}

void lcd\_str(unsigned char \*s)

{

while(\*s)

lcd\_display(\*s++);

}