## CODE

//CODE of lcd interfacing with 8051 microcontroller

#include<reg51.h>

#include<string.h>

void delay(unsigned int i);

void lcd\_cmd(unsigned char a);

void lcd\_data(unsigned char b);

void lcd\_init(void);

void lcd\_str(unsigned char \*str);

void sendser\_char(unsigned char b);

void sendser\_str(unsigned char \*str);

sbit rs=P2^0;

sbit en=P2^1;

unsigned int i;

unsigned char a[100];

sfr ldata=0x90;//port1

void clear(void);

void main()

{

TMOD=0x20;//timer1 mode2 -auto reload mode

TH1=0xfd;//9600 baud rate

SCON=0x50;//8bit data ,1start bit,1stop bit

TR1=1;

lcd\_init();

lcd\_str("   WELCOME TO   ");

lcd\_cmd(0xc0);

lcd\_str("   MY PROJECT   ");

delay(65000);

lcd\_cmd(0x01);

lcd\_cmd(0x80);

lcd\_str("   YT TRAINING   ");

lcd\_cmd(0xc0);

lcd\_str("   INSTITUTE   ");

delay(65000);

while(1)

{

lcd\_cmd(0x01);

lcd\_cmd(0x80);

lcd\_str("   Waiting For    ");

lcd\_cmd(0xc0);

lcd\_str("   RFID Tag   ");

for(i=0;i<10;i++)

{

while(RI==0);//suc 1 char recived

RI=0;

a[i]=SBUF;//a[0]='1',a[1]='0'

}

a[10]='\0';

if(0==strcmp("10003B0CA7",a))

{

lcd\_cmd(0x01);

lcd\_cmd(0x80);

lcd\_str(" EMPLOYEE NO : 1");

lcd\_cmd(0xc0);

lcd\_str(a);

delay(65000);

clear();

}

else if(0==strcmp("10003B0CAE",a))

{

lcd\_cmd(0x01);

lcd\_cmd(0x80);

lcd\_str(" EMPLOYEE NO : 2");

lcd\_cmd(0xc0);

lcd\_str(a);

delay(65000);

clear();

}

else

{

lcd\_cmd(0x01);

lcd\_cmd(0x80);

lcd\_str(" INVALID TAG");

lcd\_cmd(0xc0);

lcd\_str(a);

delay(65000);

clear();

}

}

}

void lcd\_init()

{

lcd\_cmd(0x38);

lcd\_cmd(0x0c);

lcd\_cmd(0x01);

lcd\_cmd(0x80);

}

void delay(unsigned int i)

{

unsigned int j;

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

}

void lcd\_cmd(unsigned char a)

{

  rs=0;//cmd

ldata=a;

en=1;

delay(5);

en=0;

delay(5);

}

void lcd\_data(unsigned char b)

{

  rs=1;//data

ldata=b;

en=1;

delay(5);

en=0;

delay(5);

}

void lcd\_str(unsigned char \*str)

{

while(\*str)

{

lcd\_data(\*str++);

}

}

void sendser\_char(unsigned char b)

{

SBUF=b;

while(TI==0);

TI=0;

}

void sendser\_str(unsigned char \*str)

{

while(\*str)

{

sendser\_char(\*str++);

}

}

void clear(void)

{

unsigned int i;

for(i=0;i<100;i++)

{

a[i]='\0';

}

}

## APPLICATIONS

The applications of an RFID attendance system using an 8051 microcontroller are diverse:

**Schools and Universities:** Streamlining attendance tracking for students and staff.

**Workplaces:** Managing employee attendance in offices, factories, and other workplaces.

**Events:** Keeping track of attendees at conferences, concerts, and exhibitions.

**Access Control:** Integrating with security systems to control access to restricted areas.

**Inventory Management:** Tracking the movement of goods in warehouses and stores.

**Time and Attendance:** Automating timekeeping processes for payroll and HR purposes.

**Asset Tracking:** Monitoring the location and status of valuable assets.

**Library Management:** Monitoring the borrowing and returning of books.

**Transportation:** Managing passenger boarding and alighting in public transportation systems.

**Healthcare Facilities:** Monitoring staff attendance and access to secure areas in hospitals and clinics.

These systems offer efficiency, accuracy, and convenience in various environments.