Appendix A

Doctor Section

```
/***** HEADDER FILES ********/

#include <REGX52.H>
#include <lcd.h>
#include <serial.h>
#include <eeprom.h>
#include <string.h>

/********* PIN CONNECTIONS *********/

sbit dise1=P3^7;
sbit dise2=P3^6;
sbit dise3=P3^5;
sbit dise4=P3^4;

/************** VARIABLE DECLARAIONS ******/

 unsigned char l,b[30],i;
 bit f1,f2;
 unsigned char person[10],dise[13],unit[4],med[12];
 unsigned char k,pulse;

 /************* SERIAL ISR ************/

void serialint( void ) interrupt 4
{
      unsigned char temp;
      if(RI)
      {
          temp=SBUF;
            if(f1==1){b[l++]=temp;if(b[l-1]=='*'){b[l-1]='\0';f2=1;}}
            if(temp=='@'){f1=1;l=0;}
            RI=0;
      }
}

/********* MAIN FUNCTION *************/

void main ( void )
{
      lcdint();
      lcdcmd(0x01);
      disp_str("  WELCOME TO  ");
      disp_loc(0xc0," DOCTOR  SECTION");
      lcddelay(200);
      sconfig();
      lcddelay(20);
      serial("AT");
      serial_tx(0x0d);
      lcddelay(100);
```

```
      serial("AT+DMODE");
      serial_tx(0x0d);
      lcddelay(100);
      ES=1;EA=1;
      f1=0;f2=0;
      while(1)
      {
        if(f2==1)
        {
            lcdcmd(0x01);
            disp_loc(0x80,"RECEIVED DATA");
            k=0;for(i=0;i<8;i++){person[k++]=b[i];}
            k=0;for(i=8;i<20;i++){dise[k++]=b[i];}
      //    k=0;for(i=20;i<23;i++){unit[k++]=b[i];}
      //    unit[i]='\0';
            disp_loc(0xc0,person);
            setestr(0x10,person);
            lcddelay(100);
            lcdcmd(0x01);
            disp_loc(0x80,"DISE:");disp_str(dise);
            setestr(0x20,dise);
      //    disp_loc(0xc0,"PULSE:");disp_str(unit);
      //    setestr(0x30,unit);
            lcddelay(100);
            lcdcmd(0x01);
            disp_loc(0x80,"ENTER MEDICINE");
            dis:

      if(dise1==0){while(dise1==0);strcpy(med,"PARACETAMOL");disp_loc(0xC0,me
d);}
            else if(dise2==0){while(dise2==0);strcpy(med,"CROCIN
");disp_loc(0xC0,med);}
            else if(dise3==0){while(dise3==0);strcpy(med,"NICE
");disp_loc(0xC0,med);}
            else if(dise4==0){while(dise4==0);strcpy(med,"B-COMPLEX
");disp_loc(0xC0,med);}
            else {goto dis;}
            lcddelay(100);
            lcdcmd(0x01);
            disp_loc(0x80,"SENDING DATA");
            lcddelay(50);
            serial_tx('&');serial(med);serial_tx('$');
            setestr(0x40,med);
            disp_loc(0x80,"SENDED  DATA");
            lcddelay(50);
            lcdcmd(0x01);
            disp_str("  WELCOME TO  ");
            disp_loc(0xc0," DOCTOR  SECTION");
            f1=0;f2=0;
        }
      }

}
```

Appendix B

Patients Section

```
/************* HEADDER FILES ***********/

#include <REGX52.H>
#include <lcd.h>
#include <serial.h>
#include <string.h>
/********* PIN DECLARATIONS *********/

sbit dise1=P3^7;
sbit dise2=P3^6;
sbit dise3=P3^5;
sbit dise4=P3^4;

// latch connections

sbit rfid   = P2^1;
sbit zigbee = P2^0;

/************** VARIABLE DECLARAIONS ******/

 unsigned char l,a[13],b[15],i;
 bit flag,f1,f2;
 unsigned char person[10],dise[14],val,unit[5];
 unsigned char pulse;
/********** FUNCTION DECLARATIONS **********/
  void getpulse(void);
  void time(void);
/************* SERIAL ISR ************/

void serialint( void ) interrupt 4
{
      unsigned char temp;
      if(RI)
      {
          temp=SBUF;
            if(zigbee==0)
            {
                  if(f1==1){b[l++]=temp;if(b[l-1]=='$'){b[l-1]='\0';f2=1;}}
                  if(temp=='&'){f1=1;l=0;}
            }
            if(rfid ==0){a[i++]=temp;if((a[i-1]==0x0a)||(i==12)){flag=1;a[i-
2]='\0';}}
            RI=0;
      }
}
void extint (void) interrupt 0
{
      pulse++;
      lcddelay(5);
}
```

```
/********* MAIN FUNCTION *************/

void main ( void )
{
      lcdint();
      lcdcmd(0x01);disp_str("  WELCOME TO  ");
      disp_loc(0xc0," PATIENT SECTION");
      lcddelay(200);
      sconfig();
      lcddelay(20);
      zigbee=0;rfid=1;  //zigbee
      lcddelay(20);
      serial("AT");
      serial_tx(0x0d);
      lcddelay(100);
      serial("AT+DMODE");
      serial_tx(0x0d);
      lcddelay(100);

      rfid=0;zigbee=1;  // rfid
      ES=1;f1=0;f2=0;
      while(1)
      {
            rfid=0;zigbee=1;  // rfid
            lcdcmd(0x01);
      rf:   i=0;flag=0;EA=1;
            disp_loc(0x80,"PLEASE SHOW  ");
            disp_loc(0xc0," YOUR CARD   ");
            while(flag==0);
            lcdcmd(0x01);
      //    disp_loc(0xc0,a);

      if(!(strncmp(a,"3E00D8D780",10))){strcpy(person,"PERSON_1");disp_loc(0x
80,person);}
            else
if(!(strncmp(a,"3E00D90BB0",10))){strcpy(person,"PERSON_2");disp_loc(0x80,per
son);}
            else
if(!(strncmp(a,"3E00D8DCB1",10))){strcpy(person,"PERSON_3");disp_loc(0x80,per
son);}
            else
if(!(strncmp(a,"3E00D909F6",10))){strcpy(person,"PERSON_4");disp_loc(0x80,per
son);}
            else {disp_loc(0x80,"INVALID CARD");lcddelay(100);goto rf;}
            EA=0;
      disp_loc(0xc0,"DISE:");
      dis:
      if(dise1==0){while(dise1==0);strcpy(dise,"FEVER
");disp_loc(0xC6,dise);}
      else if(dise2==0){while(dise2==0);strcpy(dise,"STOMACH
ACHE");disp_loc(0xC6,dise);}
      else if(dise3==0){while(dise3==0);strcpy(dise,"HEAD ACHE
");disp_loc(0xC6,dise);}
      else if(dise4==0){while(dise4==0);strcpy(dise,"COLD
");disp_loc(0xC6,dise);}
      else {goto dis;}
```

```
      lcddelay(5);
      getpulse();
      lcddelay(300);
      lcdcmd(0x01);
      disp_loc(0x80,"PRESS ENTER TO");
      disp_loc(0xc0,"TRANSMIT DATA ");
sw: if(dise4==0)
      {
        while(dise4==0);
        lcdcmd(0x01);
        disp_str("SENDING ......");
        zigbee=0;rfid=1;
        ES=0;
        serial_tx('@');
        serial(person); disp_loc(0xc0,person);
        serial(dise);    disp_loc(0xc0,dise);
        serial(unit);   disp_loc(0xc0,unit);
        serial_tx('*');
        ES=1;
        disp_loc(0x80,"SENT........");lcddelay(100);
        lcdcmd(0x01);
        disp_loc(0x80,"WAITING FOR ");
        disp_loc(0xc0,"MEDICINE ...");EA=1;
        while(f2==0);lcdcmd(0x01);
        disp_loc(0x80,"RX: MEDICINE");
        disp_loc(0xc0,b);
        lcddelay(200);
        f1=0;f2=0;
      }else {goto sw;}


      }
}
```