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#include <Wire.h>
#include<EEPROM.h>
#include <RTCLib.h>
#include <LiquidCrystal.h>
LiquidCrystal lcd(7, 6, 5, 4, 3, 2);
RTC_DS1307 RTC;
int temp,inc,hours1,minut,add=11;
int next=10;
int INC=9;
int set_mad=8;
#define buzzer 13
int HOUR,MINUT,SECOND;
void setup()
{
  Wire.begin();
  RTC.begin();
  lcd.begin(16,2);
  pinMode(INC, INPUT);
  pinMode(next, INPUT);
  pinMode(set_mad, INPUT);
  pinMode(buzzer, OUTPUT);
  lcd.setCursor(0,0);
  lcd.print("Medicin reminder");
  lcd.setCursor(0,1);
  lcd.print(" Using Arduino ");
  delay(2000);
  lcd.setCursor(0,0);
  lcd.print("By Saddam khan ");
  lcd.setCursor(0,1);
  lcd.print("Engineers Garage");
  delay(2000);
  if(!RTC.isrunning())
  {
    RTC.adjust(DateTime(__DATE__,__TIME__));
  }
}
void loop()
{
  int temp=0,val=1,temp4;
  DateTime now = RTC.now();
  if(digitalRead(set_mad) == 0)      //set medicine time
  {
    lcd.setCursor(0,0);

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    lcd.print("  Set Medicine  ");
    lcd.setCursor(0,1);
    lcd.print("  Reminder time ");
    delay(2000);
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Enter Time 1");
    default();
    time(1);
    delay(1000);
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Enter Time 2");
    default();
    delay(1000);
    time(2);
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Enter Time 3");
    default();
time(3);
    lcd.setCursor(0,0);
    lcd.print("Medicin reminder");
    lcd.setCursor(0,1);
    lcd.print("  time has set  ");
    delay(2000);
}
lcd.clear();
lcd.setCursor(0,0);
lcd.print("Time:");
lcd.setCursor(6,0);
lcd.print(HOUR=now.hour(),DEC);
lcd.print(":");
lcd.print(MINUT=now.minute(),DEC);
lcd.print(":");
lcd.print(SECOND=now.second(),DEC);
lcd.setCursor(0,1);
lcd.print("Date: ");
lcd.print(now.day(),DEC);
lcd.print("/");
lcd.print(now.month(),DEC);
lcd.print("/");
lcd.print(now.year(),DEC);

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    match();
    delay(200);
}
void default()
{
    lcd.setCursor(0,1);
    lcd.print(HOUR);
    lcd.print(":");
    lcd.print(MINUT);
    lcd.print(":");
    lcd.print(SECOND);
}
/*Function to set alarm time and feed time into Internal eeprom*/
void time(int x)
{
    int temp=1,minuts=0,hours=0,seconds=0;
    while(temp==1)
    {
        if(digitalRead(INC)==0)
        {
            HOUR++;
            if(HOUR==24)
            {
                HOUR=0;
            }
            while(digitalRead(INC)==0);
        }
    }
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Enter Time ");
    lcd.print(x);
    lcd.setCursor(0,1);
    lcd.print(HOUR);
    lcd.print(":");
    lcd.print(MINUT);
    lcd.print(":");
    lcd.print(SECOND);
    delay(100);
    if(digitalRead(next)==0)
    {
        hours1=HOUR;
        EEPROM.write(add++,hours1);
        temp=2;
    }
}

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        while(digitalRead(next)==0);
    }
}
while(temp==2)
{
if(digitalRead(INC)==0)
    {
        MINUT++;
        if(MINUT==60)
        {MINUT=0;}
        while(digitalRead(INC)==0);
    }
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Enter Time ");
    lcd.print(x);
    lcd.setCursor(0,1);
    lcd.print(HOUR);
    lcd.print(":");
    lcd.print(MINUT);
    lcd.print(":");
    lcd.print(SECOND);
    delay(100);
    if(digitalRead(next)==0)
    {
        minut=MINUT;
        EEPROM.write(add++, minut);
        temp=0;
        while(digitalRead(next)==0);
    }
}
delay(1000);
}
/* Function to chack medication time */
void match()
{
    int tem[17];
    for(int i=11;i<17;i++)
    {
        tem[i]=EEPROM.read(i);
    }
    if(HOUR == tem[11] && MINUT == tem[12])
    {

```

```

beep();
beep();
beep();
beep();
lcd.setCursor(0,0);
lcd.print("  Take Group One  ");
lcd.setCursor(0,1);
lcd.print("    Medicine    ");
beep();
beep();
beep();
beep();
}
if(HOUR == tem[13] && MINUT == tem[14])
{
    beep();
beep();
beep();
beep();
    lcd.setCursor(0,0);
lcd.print("  Take Group Two  ");
lcd.setCursor(0,1);
lcd.print("    Medicine    ");
    beep();
beep();
beep();
beep();
}
if(HOUR == tem[15] && MINUT == tem[16] )
{
    beep();
beep();
beep();
beep();
    lcd.setCursor(0,0);
lcd.print("Take Group Three ");
lcd.setCursor(0,1);
lcd.print("    Medicine    ");
beep();
beep();
beep();
beep();
}

```

```
}  
/* function to buzzer indication */  
void beep()  
{  
    digitalWrite(buzzer,HIGH);  
    delay(500);  
    digitalWrite(buzzer, LOW);  
    delay(500);  
}
```