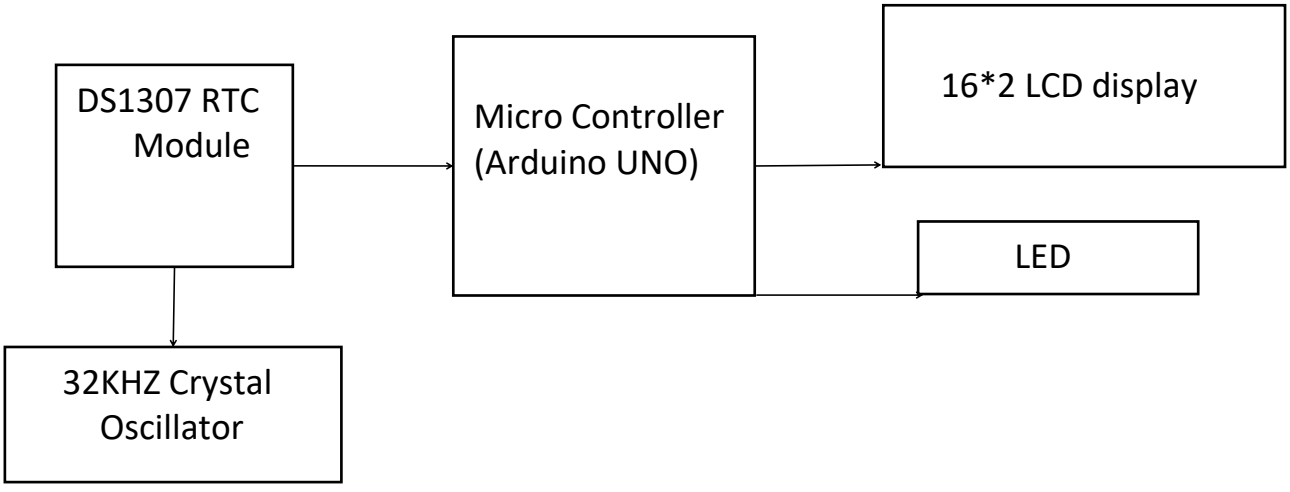
# Arduino Alarm clock

**Objective:** Design a Alarm Clock using DS1307 RTC Module, 16*2 LCD Module , and LED or Buzzer as an alarm Interface with Arduino.

**Description:** Alarm is an application of Real Time Clock. In this Arduino based digital clock circuit, we used 3 major components which are Arduino UNO micro controller, 16*2 LCD display, DS1307 RTC Module. Here Arduino is used for reading time from DS1307 RTC module and display it on LCD module,DS1307 RTC module send time/date using SCL,SDA pins to Arduino. For this alarm clock we use LED as an alarm, LED connect to Arduino. LED will glow when Alarm is activated.

**Required Components:** Arduino UNO,
DS1307 RTC Module,
16*2 LCD Module,
LED.

**Block Diagram:**



## INPUT AND OUTPUTS:

| S.NO | Description | Name | Type | Data Direction | Spec | Remarks |
|---|---|---|---|---|---|---|
| 1 | DS1307 RTC serial clock pin | SCL | INP | DI | 5V DC | active High |
| 2 | DS1307 RTC serial data pin | SDA | INP | DI | 5V DC | active High |
| 3 | LCD Reset pin | RS | OUT | DO | 5V DC | active High |
| 4 | LCD Enable pin | E | OUT | DO | 5V DC | active High |
| 5 | LCD Data pin1 | D4 | OUT | DO | 5V DC | active High |
| 6 | LCD Data pin2 | D5 | OUT | DO | 5V DC | active High |
| 7 | LCD Data pin3 | D6 | OUT | DO | 5V DC | active High |
| 8 | LCD Data pin4 | D7 | OUT | DO | 5V DC | active High |
| 9 | LED | 13 | OUT | DO | 5V DC | active High |

## Flow Chart: