```
#include "mbed.h"
InterruptIn   button (p7Dn);
DigitalOut    led (p7Dm);
DigitalOut  flash( p7D p);
void flip () {
        led = ! led; }
int main( ) {
    button.rise (&flip);
    while (1) {
        flash = ! flash;
        wait (0.25); }
}
```
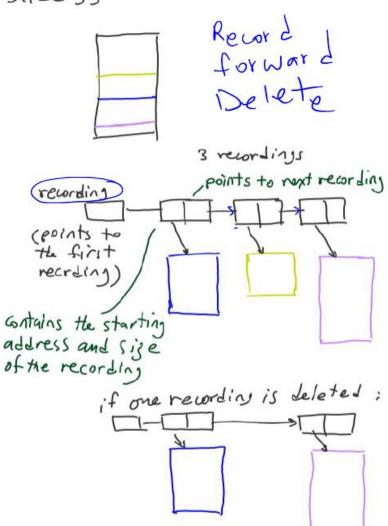
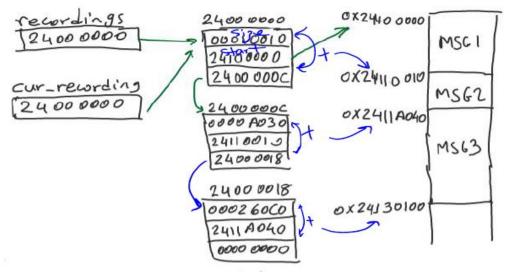ISR ← (pointing to `button.rise (&flip);`)

```c
void GetDateTime(DateTimeType * DT){

        DT->day = TimerVal.day;

        DT->hour = TimerVal.hour;

        DT->minute = TimerVal.minute;

        DT->second = TimerVal.second;

}

void DateTimeISR(void){

        TimerVal.second++;

        if (TimerVal.second > 59){

                TimerVal.second = 0;

        TimerVal.minute++;

        if (TimerVal.minute > 59) {

                TimerVal.minute = 0;

        TimerVal.hour++;

        if (TimerVal.hour > 23) {

                TimerVal.hour = 0;

        TimerVal.day++;

         ... etc.

    }
```

(handwritten annotations):) update ← Tick

(handwritten): 23:59 00:00 day ++

Example C Program : Voice Recorder
ref: "Embedded Systems C review"
Slide 35

Record
forward
Delete

3 recordings

recording   points to next recording

(points to the first recording)

Contains the starting address and size of the recording

if one recording is deleted :

SRAM IS from 0X2000 0000 to 0X3FFFFFFF

recordings
| 2400 0000 |

cur_recording
| 2400 0000 |

2400 0000
| 0080 0010 | size
| 2410 0000 | start
| 2400 000C |

0X2440 0000

0X2411 0010

2400 000C
| 0000 A030 |
| 2411 0010 |
| 2400 0018 |

0X2411 A040

2400 0018
| 0002 60C0 |
| 2411 A040 |
| 0000 0000 |

0X2413 0100

| MSG1 |
| MSG2 |
| MSG3 |

C program in slides 36 - 40
review Slides 41, 43, 44