

Musical Greeting Card

ECE 312 - Lab 2 - D21 - Tuesday

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Contents

1	Brief Description	1
2	Target Specifications	1
3	Schematic	1
4	Firmware Plan	1
5	Parts Required	2

1 Brief Description

2 Target Specifications

3 Schematic

4 Firmware Plan

```
main():
    initialize_gpio()
    initialize_timer()

    loop forever:
        if playing:
            play_beat()

        if not playing and button_is_pressed:
            delay(debounce_time)
            set flag playing
            enable_interrupts()

        if interrupt_button_press:
            reset flag playing
            play_rest()

// Will play rest of current beat then shut off
button_press_interrupt():
    disable_interrupts()
    set flag interrupt_button_press

// Plays one full beat
play_beat():
    if current_note_has_duration:
        keep playing note
    else:
        read next note
```

```

    play_note(next_note)
    current_note_duration —

delay(on_time)

if current_note_has_duration:
    keep_playing_note
else
    play_rest()

delay_rest_time

```

5 Parts Required

Partno. / Description	Number Required	Return
Attiny2313A	1	<input type="checkbox"/>
Piezoelectric Buzzer	2	<input type="checkbox"/>
Momentary Pushbutton	1	<input type="checkbox"/>