Pre lab week 2

```
+-----------------+            +--------+
|                 |            |LCD     |
|  Arduino      13|---------|data    |
|               12|---------|clk     |
|               11|---------|ss      |
|                 |            |        |
|                 |            +----------+
|                 |            |Bluetooth |
|               19|---------|Rx        |
|               18|---------|Tx        |
|                 |            |          |
|                 |            +----------+
|                 |            |speaker |
|               A1|---------|+       |
|                 |            |-       |
|                 |            +--------+
|                 |            |IR sens |
|              VCC|---------|pwr     |
|              GND|---------|gnd     |
|              A0 |---------|sensor  |
|                 |            |        |
|                 |            +----------+
|                 |            |push button|
|              A3 |---------|          |
|                 |            |          |
|                 |            +--------+--+
|                 |            |Key pad |
|              2  |---------|        |
|              .  |         |        |
|              .  |         |        |
|              9  |---------|        |
|                 |            |        |
|                 |            |        |
|                 |            +--------+
|                 |            |LED     |
|              10 |-------- |+       |
|             GND |---------|-       |
|                 |            |        |
|                 |            +--------+
|              A2|---------|input   |
|                 |            |clk     |
|                 |            +--------+
|                 |
|                 |
|_____|
```

```
                          ┌──────────────┐
                          │    Start     │
                          │   default    │
                          │background music│
                          └──────┬───────┘
                                 │
                                 ▼
        ┌──────────────────►┌──────────────┐◄──────────────────────────┐
        │                   │  Change led  │                            │
        │                   │ brightness to IR│                         │
        │                   │ sensor input │                            │
        │                   └──────────────┘                            │
        │      ┌──────────────┐    │                                    │
        │      │  Change led  │    │                                    │
        │      │ frequency to input│ │                                 │
        │      │    clock     │    ▼                                    │
        │      └──────┬───────┘  ╱◇╲                                   │
        │             │         ╱    ╲                                  │
        │             └───────►◇Bluetooth user◇                        │
        │                       ╲  action? ╱                           │
        │                        ╲        ╱       ┌──────────────┐  ┌──────────────┐
        │                         ╲  ◇   ╱  Yes──►│  play new    │─►│Display bluetooth│─┤
        │                          ╲  ╱           │background music│ │ data on LCD │
        │                         No │            └──────────────┘  └──────────────┘
        │                            ▼
        │                          ╱◇╲
        │                         ╱    ╲
     No │                        ◇Key pad pressed?◇
        │                         ╲        ╱
        └─────────────────────────╲      ╱                              
                                   ╲ ◇  ╱                               
                                     │ Yes──►┌──────────────┐           
                                     │       │play coresponding│────────┘
                                             │ tone or stop led│
                                             │   flashing   │
                                             └──────────────┘
```