Bass_Output

```
// Owen Pearson
// CS276
// Project 2

import processing.sound.*;
import netP5.*;
import oscP5.*;
import java.util.ArrayList;

SoundFile bass;
OscP5 oscP5;
NetAddress myRemoteLocation;
int status = 0;
float length;
float[] samples;

void setup() {
 status = 0;
 size(1400, 900);
 background(255);
 strokeWeight(4);
 line(0, 300, 1400, 300);
 line(0, 600, 1400, 600);
 textSize(32);
 textAlign(CENTER);
 fill(0);
 text("Create file", 700, 150);
 text("Start Recording", 700, 450);
 text("Stop Recording", 700, 750);
 oscP5 = new OscP5(this, 12000);
 myRemoteLocation = new NetAddress("127.0.0.1", 1201);
 oscP5.plug(this, "confirmOpen", "/open");
 oscP5.plug(this, "confirmStart", "/start");
 oscP5.plug(this, "confirmStop", "/stop");
}

void confirmOpen() {
 status = 1;
 System.out.println("Open");
}
```

```
void confirmStart() {
 status = 2;
 System.out.println("Start");
}

void confirmStop() {
 status = 3;
 System.out.println("Stop");
 try {
   Thread.sleep(1000);
 } catch(InterruptedException e) {

 }
 length = play(new SoundFile(this, "bassline.wav"));
}

void draw() {
 if(status == 0) {

 } else if(status == 1) {
   fill(0, 0, 255);
   textSize(32);
   textAlign(CENTER);
   text("Create file", 700, 150);
 } else if(status == 2) {
   fill(0, 255, 0);
   textSize(32);
   textAlign(CENTER);
   text("Start Recording", 700, 450);
 } else if(status == 3) {
   fill(255, 0, 0);
   textSize(32);
   textAlign(CENTER);
   text("Stop Recording", 700, 750);
 } else if(status == 4) {
   fill(255);
   rect(0, 0, 1400, 900);
   status = 5;
 } else if(status == 5) {
   visualize(samples);
```

```
  //status = 6;
  noLoop();
 } else if(status == 6) {
  fill(255);
  rect(0, 0, 1400, 900);
 } else {

 }
}

void mousePressed() {
 if((mouseX > 0 && mouseX < 1400) && (mouseY > 0 && mouseY < 300)) {
  OscMessage myOscMessage = new OscMessage("/open");
  oscP5.send(myOscMessage, myRemoteLocation);
 } else if((mouseX > 0 && mouseX < 1400) && (mouseY > 300 && mouseY < 600)) {
  OscMessage myOscMessage = new OscMessage("/start");
  oscP5.send(myOscMessage, myRemoteLocation);
 } else if((mouseX > 0 && mouseX < 1400) && (mouseY > 600 && mouseY < 900)) {
  OscMessage myOscMessage = new OscMessage("/stop");
  oscP5.send(myOscMessage, myRemoteLocation);
 }
}
```

Play

```
// Owen Pearson
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float play(SoundFile s) {
 //Play Track
 status = 4;
 int size = s.frames();
 samples = new float[size];
 s.read(samples);
 s.play();
 return s.duration();
}
```

Visualize

```
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```

```
// Project 2

void visualize(float[] f) {
 //Sort Data
 int numSamples = f.length/200;
 float[] newSamples = new float[numSamples];
 int j=0;
 for(int i=0; i<f.length; i++) {
  try{
    newSamples[j] = f[i];
    //System.out.println(newSamples[j]);
  } catch(ArrayIndexOutOfBoundsException e) {
    break;
  }
  j++;
  i+=200;
 }

 //Draw Graph
 strokeWeight(1);
 line(0, 450, 1400, 450);
 fill(255, 0, 0);
 for(int i=0; i<newSamples.length; i++) {
  newSamples[i]*=300;
  rect(i*0.25, 450+newSamples[i], 0.5, 0.5);
 }
 textAlign(CENTER);
 textSize(32);
 text("Sound Displacement", 700, 50);
}
```