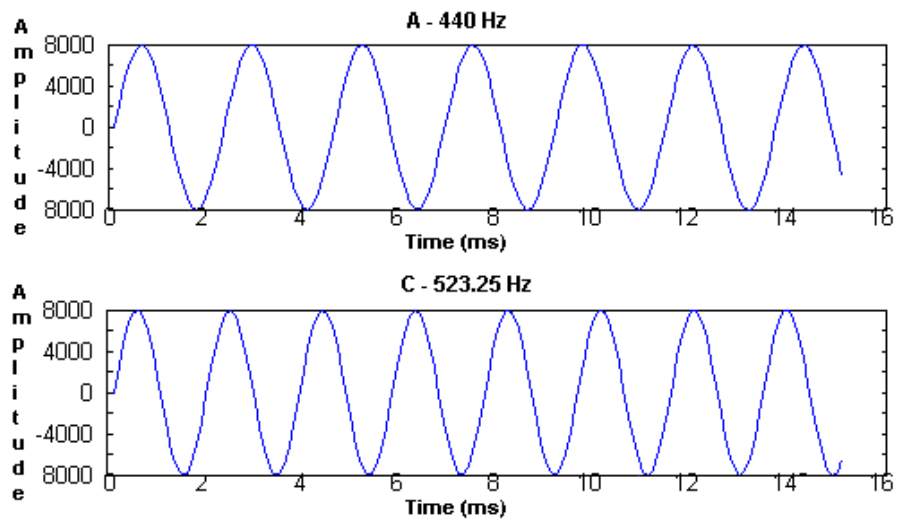


CS126 Precept 6

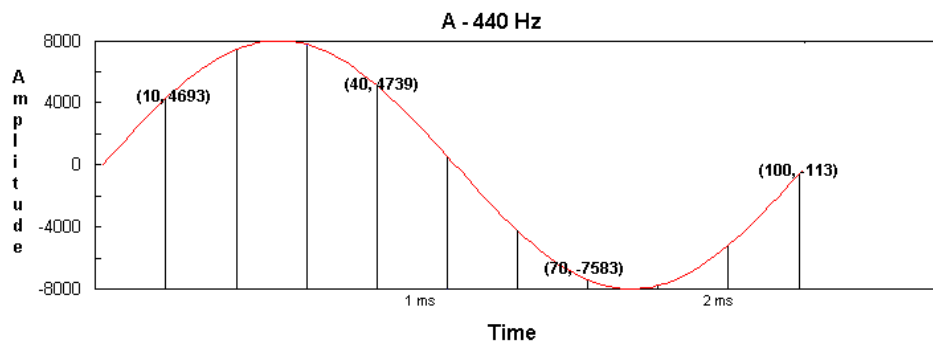
Meeting 11: objects and the DSP Assignment

Randy Wang

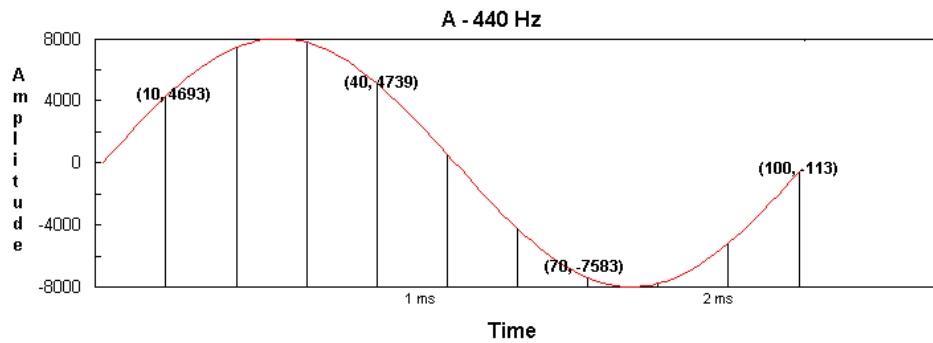
Sound Waves



Representing Sound Waves



Representing Sound Waves

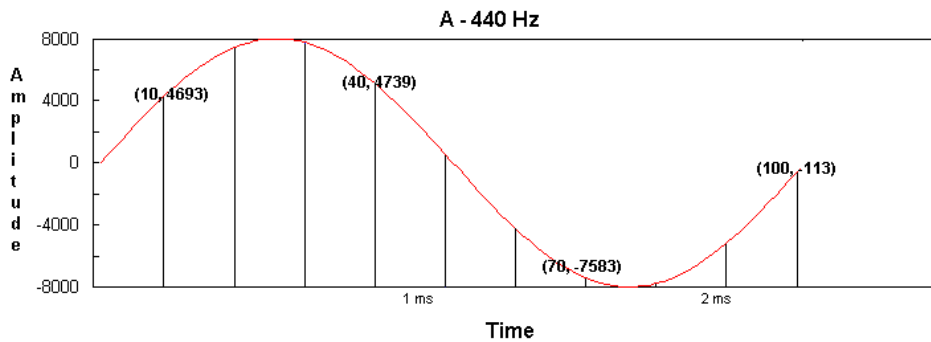


The following arrays contain the short integer representing

```
left = { 0, 501, 1000, 1495, 1985, 24
```

Sample i is given by $8000 \sin(2 \pi * 440 * i / 44,100)$, and

Representing Sound Waves



The following arrays contain the short integer representing

```
left = { 0, 501, 1000, 1495, 1985, 24
```

Sample i is given by $8000 \sin(2 \pi * 440 * i / 44,100)$, and

Amplitude **Frequency** **Which sample** **Sampling rate**

Steps 1

- Download `dsp` directory
- Study `Waechter.java`
- Begin writing `wave.java`
 - Constructor

The following arrays contain the short integer representing

```
left = { 0, 501, 1000, 1495, 1985, 24
right = { 0, 501, 1000, 1495, 1985, 24
```

Sample i is given by $8000 \sin(2 \pi * 440 * i / 44,100)$, and

- `play` method

Step 1 (cont.)

- Test `Wave.java`:
 - Compile and run `A.java`
 - Compile and run `FurElise.java`

Step 2

- Continue to add to `Wave.java`
 - `public Wave(short[] left, short[] right)`
 - `public static Wave add(Wave a, Wave b)`
- Test
 - Compile and run `stairwayToHeaven.java`

Step 3

- Compile, run, and study `MP3Player.java`
- Use pieces of `MP3Player.java` to write `EchoFilter.java`
- No modification to `wave.java` needed

- (draw picture and show template)

Step 4

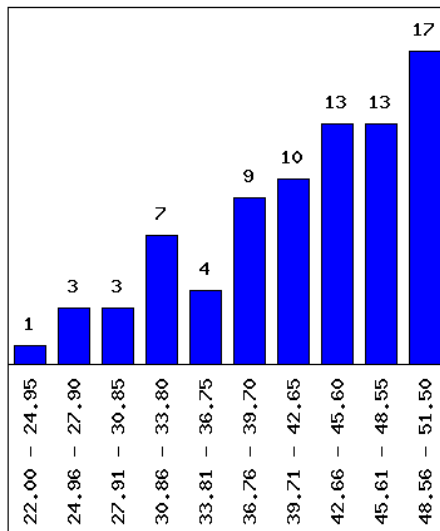
- Turn `MP3Player.java` into `MP3Viewer.java`
- Add `draw()` method to `Wave.java`

Collaboration

- Encouraged to work in pairs
- Turn in one assignment
- Separate readme.txt submissions

Exam Grades

COS126: Exam 1



- $X > 45$ great
- $40 \leq x \leq 45$ very good
- $35 \leq x \leq 40$ satisfactory
- $X < 35$ not good (redo questions, see preceptor etc.)
- Complaints about grading: attach written explanation and give back to me.