CSE 8A Programming Assignment 6

Name should be formatted as (last, first)

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Sound Exploration

```
public static void main(String[] args){

  //sound 1
  CSE8ALib.play(conCAT());
  //sound 2
  CSE8ALib.play(mixingthings());
  //sound 3 is  a famous Chinese song by Jay Chou)
  //it is called GAOBAIQIQIU "love Confession"
  //I played one part of the chorus from it
  int[] part1 = jaychou1();
  int[] part2 = jaychou2();
  CSE8ALib.play(concatSounds(part1, part2));



}
```

```
static int[] conCAT() {
  int[] sound = CSE8ALib.readSound("sounds/UpbeatFunk.wav");
  int[] sub1 = subSamples(sound, 0, 44100);
  int[] sosoft = changeVolume(sub1, 0.5);
  int[] sub2 = subSamples(sound, 44100, 88200);
  int[] soloud = changeVolume(sub2, 5);
  int[] conDOG = concatSounds(sosoft, soloud);
  return conDOG;
}

static int[] mixingthings() {
  int[] sound1 = CSE8ALib.readSound("sounds/UpbeatFunk.wav");
  int[] sound2 = CSE8ALib.readSound("sounds/UpbeatFunk.wav");
  int[] part1 = subSamples(sound1, 0, 100000);
  int[] part2 = subSamples(sound2, 10000, 110000);
  int[] finall = mix(part1, part2);
  return finall;
}

static int[] jaychou1() {
  double B = 987.77;
  double Db = 1108.73;
  double Eb = 1244.51;
  double E = 1318.51;
  double Ab = 830.61;
  double Gb = 1479.98;

  int[] sound1 = cosineSound(8000, B, 10000);
  int[] sound2 = cosineSound(8000, E, 10000);
  int[] sound3 = cosineSound(22000, Eb, 10000);
```

```
int[] sound4 = cosineSound(8000, E, 10000);
int[] sound5 = cosineSound(16000, Eb, 10000);
int[] sound6 = cosineSound(16000, Db, 10000);
int[] sound7 = cosineSound(22000, B, 10000);
int[] sound8 = cosineSound(8000, Db, 10000);
int[] sound9 = cosineSound(16000, Eb, 10000);
int[] sound10 = cosineSound(16000, B, 10000);
int[] sound11 = cosineSound(16000, Ab, 10000);
int[] sound12 = cosineSound(8000, B, 10000);
int[] sound13 = cosineSound(16000, Gb, 10000);
int[] sound14 = cosineSound(8000, B, 10000);
int[] sound15 = cosineSound(8000, Eb, 10000);
int[] sound16 = cosineSound(12000, Eb, 10000);
int[] sound17 = cosineSound(28000, 10, 100);

int[] combines1 = concatSounds(sound1, sound2);
int[] combines2 = concatSounds(sound3, sound4);
int[] combined1 = concatSounds(combines1, combines2);
int[] combines3 = concatSounds(sound5, sound6);
int[] combines4 = concatSounds(sound7, sound8);
int[] combined2 = concatSounds(combines3, combines4);
int[] combcomb1 = concatSounds(combined1, combined2);

int[] combines5 = concatSounds(sound9, sound10);
int[] combines6 = concatSounds(sound11, sound12);
int[] combined3 = concatSounds(combines5, combines6);
int[] combines7 = concatSounds(sound13, sound14);
int[] combines8 = concatSounds(sound15, sound16);
int[] combined4 = concatSounds(combines7, combines8);
int[] combcomb2 = concatSounds(combined3, combined4);
```

```
  int[] combcomb3 = concatSounds(combcomb1, combcomb2);

  int[] SONG = concatSounds(combcomb3, sound17);
  return SONG;

}
static int[] jaychou2() {
  double B = 987.77;
  double Db = 1108.73;
  double Eb = 1244.51;
  double E = 1318.51;
  double Ab = 830.61;
  double Gb = 1479.98;
  double Abup = 1661.22;

  int[] sound1 = cosineSound(8000, B, 10000);
  int[] sound2 = cosineSound(8000, E, 10000);
  int[] sound3 = cosineSound(22000, Eb, 10000);
  int[] sound4 = cosineSound(8000, E, 10000);
  int[] sound5 = cosineSound(16000, Eb, 10000);
  int[] sound6 = cosineSound(16000, Db, 10000);
  int[] sound7 = cosineSound(22000, B, 10000);
  int[] sound8 = cosineSound(8000, Db, 10000);
  int[] sound9 = cosineSound(16000, Eb, 10000);
  int[] sound10 = cosineSound(22000, Abup, 10000);
  int[] sound11 = cosineSound(16000, Eb, 10000);
  int[] sound12 = cosineSound(8000, Ab, 10000);
  int[] sound13 = cosineSound(16000, B, 10000);
  int[] sound14 = cosineSound(16000, Db, 10000);
```

```
  int[] sound15 = cosineSound(16000, B, 10000);

  int[] combines1 = concatSounds(sound1, sound2);
  int[] combines2 = concatSounds(sound3, sound4);
  int[] combined1 = concatSounds(combines1, combines2);
  int[] combines3 = concatSounds(sound5, sound6);
  int[] combines4 = concatSounds(sound7, sound8);
  int[] combined2 = concatSounds(combines3, combines4);
  int[] combcomb1 = concatSounds(combined1, combined2);

  int[] combines5 = concatSounds(sound9, sound10);
  int[] combines6 = concatSounds(sound11, sound12);
  int[] combined3 = concatSounds(combines5, combines6);
  int[] combines7 = concatSounds(sound13, sound14);
  int[] combined4 = concatSounds(combines7, sound15);
  int[] combcomb2 = concatSounds(combined3, combined4);


  int[] SONG = concatSounds(combcomb1, combcomb2);
  return SONG;

}
```

Part 2 Description:
Describe the three sounds you produced and how you produced them. What did you like about this process? What challenges did you run into during this process and how did you resolve them?

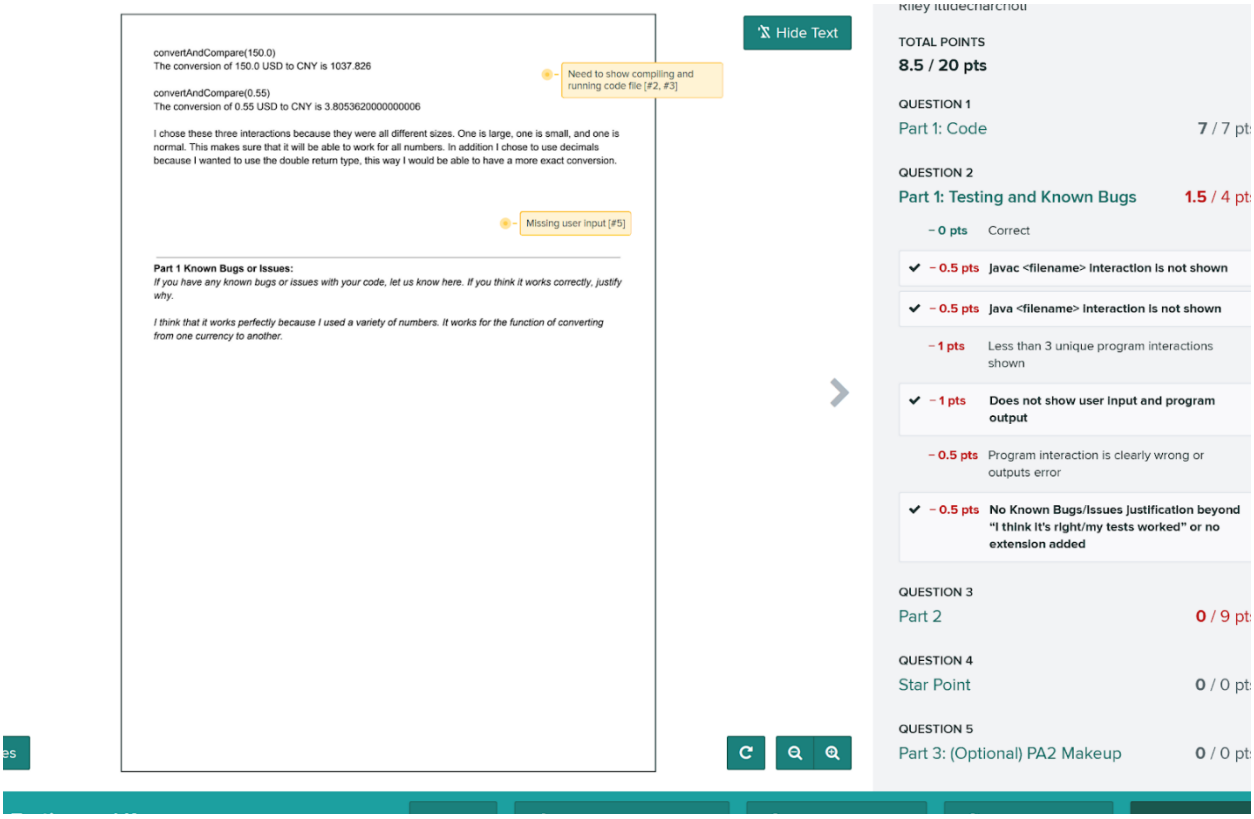
The first sound I produced does a change volume using subSamples and concatenating these two together. I made a first part in which the sound was softer then a second in which the sound was louder. Both having the same length. I did not run into any challenges during this section. I liked that I could created a suddenly change in sound. It could be cool for music when I wanted to add some effects

The second sound I made was mixing two sounds. First I used subSamples to target which part of the sound file I wanted to listen to, then I made two sub samples. The second part being 10000Hz apart from the first one but still having the same length. Then I mixed these sounds and it makes them stagger and I thought it was a fun sound. I liked that I could play something over something else here.

The last sound I made was part of a chorus of a famous chines sound by Jay Chou called 告白气球 gaobaiqiqiu "Love Confession" and I looked up the sound frequency for musical notes because I am a musician and used cosineSounds to create them(being able to adjust length as well). Then I assigned these sounds variables named after note names making it easier to organize each sound. After that I basically had to use concatSounds a bunch of times because I could only do each note two at a time. So for every two times I used cosinesSounds, I used concatSounds once. I thought the challenging part was the number of times I had to do this process because the amount of notes I wanted to make was a lot given that this is a song. I liked that I could make music with this process. Due to this, I decided to make my code out of the main method then call it later in the main method to play it so it would be better organized.

Make-up Credit

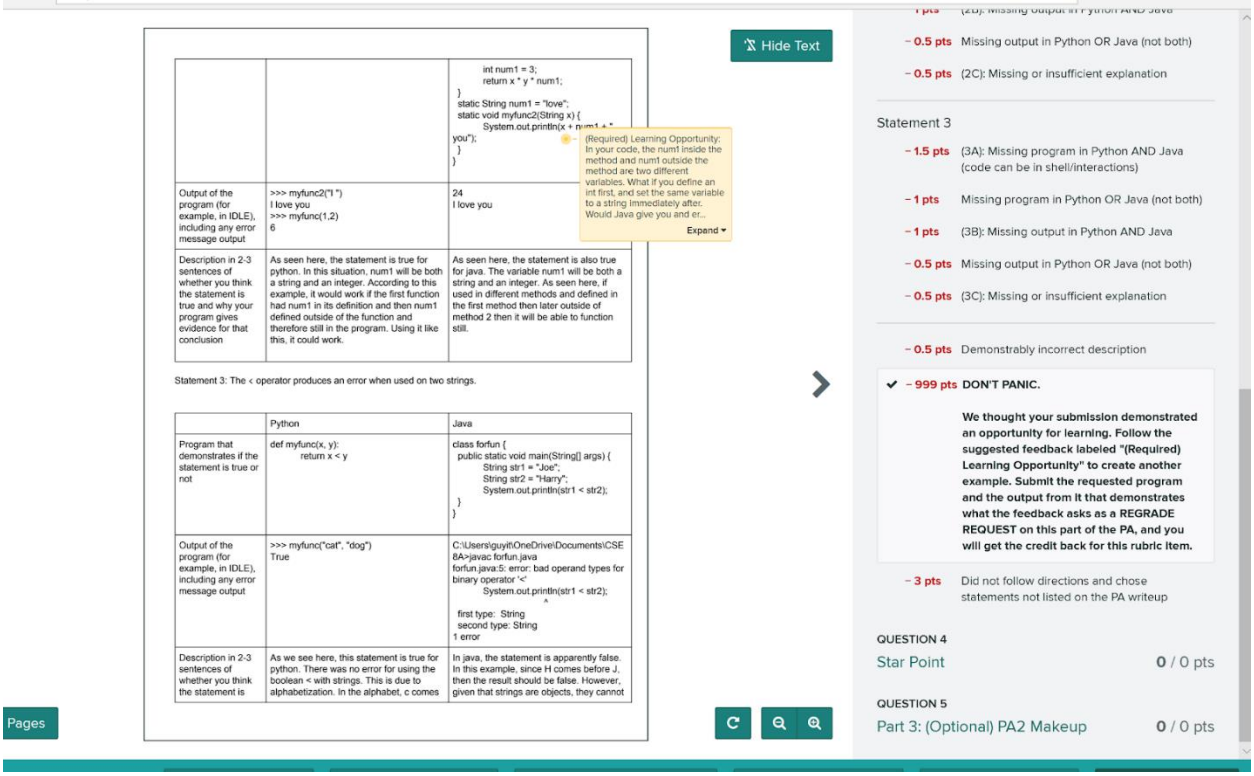
Include screenshots of the rubric item you fixed along with your submission, the update you made to fix it, and a brief description of why the fix works and was necessary.



C:\Users\guyit\OneDrive\Documents\CSE 8A>Java PA4
Enter currency in USD: 9500.0
The conversion of 9500.0 USD to CNY is 65728.98
C:\Users\guyit\OneDrive\Documents\CSE 8A>Java PA4
Enter currency in USD: 150.0
The conversion of 150.0 USD to CNY is 1037.826
C:\Users\guyit\OneDrive\Documents\CSE 8A>Java PA4
Enter currency in USD: 0.55
The conversion of 0.55 USD to CNY is 3.8053620000000006

I had to show the user input and this was a common mistake that I made in previous PAs but this one I showed it the wrong way. This time I believe that I understand what I have to do now.

At the same since I didn't show the interaction this was why I had this problem. I only showed the results previously.




```
class pa4test2{
  public static void main(String[] args) {
    System.out.println(myfunc(2, 4));
    myfunc2("I ");
  }
  static int myfunc(int x, int y) {
    int num1 = 3;
    String num1 = "love";
    return x * y * num1;
  }
  static String num1 = "love";
  static void myfunc2(String x) {
    System.out.println(x + num1 + " you");
  }
}
```

RESULT:

```
C:\Users\guyit\OneDrive\Documents\CSE 8A>javac pa4test2.java
pa4test2.java:8: error: variable num1 is already defined in method myfunc(int,int)
    String num1 = "love";
           ^
1 error
```

The mistake that I made earlier is that I made a num1 inside and a num1 outside the method, this led to the problem of them being two different variables. After I fixed that, I realized that having the variable already defined then defining it again will just simply give me an error.