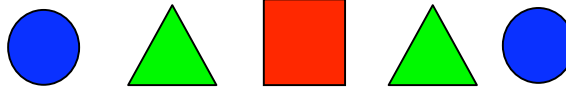


PalindromesemordnilaP

(Palindromes)

A **palindrome** is a word, sentence, sound, picture, or pattern that is identical forward or backward.

Examples:



MOM
DAD
Madam Im Adam

Musical Example: Tabletop Duet: <http://www.youtube.com/watch?v=6r9ftDH6PYk>

Mozart wrote this peice of music in a Mirror. Two players can read the same sheet of music from opposite sides.

Allegro W.A. Mozart (1756-1791)

The Mirror - Duett für zwei Violinen - der Spiegel
based upon an earlier edition by Fred Naxos (fnaxos@attidion.com)

W.A. Mozart (1756-1791) Allegro

Continued? Try playing this from opposite sides of a table

Programming Assignment tmemngissA ginnmargorP:

Given a short sample of sound in .wav format. (You may record this yourself with JES sound tools or Audacity) –

1. Write a Python program in JES that plays the sound in a palindrome (forwards and backwards)
2. Save the code and your sound into your file area.

(go to www.nebomusic.net/palindrome.wav) for an example.

Hints:

1. This process is very similar to making a reflection of a picture (very, Very, VERY . . . similar)
2. Code hints:

```
# Reverse Sound

def playBackward(sound):
    soundSample = getLength(sound)
    dest = makeEmptySound(int(round(getLength(sound) / getSamplingRate(sound))))
    for destSample in range(1, getLength(sound)):
        soundValue = getSampleValueAt(sound, soundSample)
        setSampleValueAt(dest, destSample, soundValue)
        soundSample = soundSample - 1
    return dest

# Copy Sound to longer destination

def copySound(sound):

    soundSample = getLength(sound)
    dest = makeEmptySound(int(round(getLength(sound) / getSamplingRate(sound))) * 2)

    for destSample in range(1, getLength(sound)):
        soundValue = getSampleValueAt(sound, destSample)
        setSampleValueAt(dest, destSample, soundValue)
```

Good Luck!! !!kcuL dooG

Assessment:

1. Does not meet the Standard: Incomplete code and now sound file.
2. Meets the Standard: Program Runs and you have saved the program and the Palindrome sound to your file area.
3. Exceeds the Standard: Detailed comments in code telling how code works. Code and Several examples of sound saved in file area.