

## Coding Basics 1

# Song Functions

Learn about song functions.

Music is often analyzed from a computer science point of view. Pop songs, kids' songs, and poetry all share structures and patterns that make good examples of algorithms (specific sets of steps to do things).

### Example 1- "Make New Friends" (2 verses)

Song Lyrics for	Javascript-style code
<p>Make new friends, but keep the old. One is silver, the other is gold.</p> <p>A circle is round, it has no end. That's how long, I will be your friend. Make new friends, but keep the old. One is silver, the other is gold.</p> <p>A circle is round, it has no end. That's how long, I will be your friend.</p>	<pre>var verse1 = "Make new friends,                 but keep the old.                 One is silver,                 the other is gold"  var verse2 = "A circle is round,                 it has no end.                 That's how long,                 I will be your                 friend."  sing(verse1) sing(verse2) sing(verse1) sing(verse2)  //notice that the program is shorter than the original song lyrics when we use functions and variables!</pre>

## Example 2 - "We Shall Overcome"

Song Lyrics for	Javascript-style code
<p>We shall overcome            We shall overcome            We shall overcome, some day</p>	<pre>var verse1 = "We shall overcome" var verse2 = "We'll walk hand in hand" var verse3 = "We shall live in peace" var verse4 = "We are not afraid"</pre>
<p>Oh, deep in my heart            I do believe            We shall overcome, some day</p>	<pre>var chorus = "Oh, deep in my heart               I do believe               We shall overcome, some day"</pre>
<p>We'll walk hand in hand            We'll walk hand in hand            We'll walk hand in hand, some day</p>	<pre>for 1...3     sing(verse1) // this is repeated 3 times sing("some day" + chorus) // no repeat (no indent)</pre>
<p>Oh, deep in my heart            I do believe            We shall overcome, some day</p>	<pre>for 1...3     sing(verse2) sing("some day"+ chorus)</pre>
<p>We shall live in peace            We shall live in peace            We shall live in peace, some day</p>	<pre>for 1..3     sing(verse3) sing("some day"+ chorus)</pre>
<p>Oh, deep in my heart            I do believe            We shall overcome, some day</p>	<pre>for 1..3     sing(verse4) sing("TODAY")</pre>
<p>We are not afraid            We are not afraid            We are not afraid, TODAY</p>	<pre>// With loops, you can make things shorter, and, // if you wanted to change the verse lyric, you // only need to change one line!</pre>

### Learn about song functions.

Fill in the song lyric with a song of your choice on the left side. Then write the Javascript-style code on the right side. Use the examples for guidance!

**Hint:** You're going to use the function `sing()` to write the code. You might use the same `sing` function many times but change the arguments for different lyrics.

Song Lyrics for	Javascript-style code