

# Topalian JavaScript Piano

by  
**Christopher Andrew Topalian**

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# **Dedicated to God the Father**

Topalian JavaScript Piano

file:///D:/\_1Code/0\_JS\_Publish/Topalian\_JavaScript\_Piano/Topalian\_JavaScript\_Pi

Harmonic Minor

Major

c3  
 c7 c#7 d7 d#7 e7 f7 f#7 g7 g#7 a7 a#7 b7  
 c6 c#6 d6 d#6 e6 f6 f#6 g6 g#6 a6 a#6 b6  
 c5 c#5 d5 d#5 e5 f5 f#5 g5 g#5 a5 a#5 b5  
 c4 c#4 d4 d#4 e4 f4 f#4 g4 g#4 a4 a#4 b4  
 c3 c#3 d3 d#3 e3 f3 f#3 g3 g#3 a3 a#3 b3  
 c2 c#2 d2 d#2 e2 f2 f#2 g2 g#2 a2 a#2 b2  
 c1 c#1 d1 d#1 e1 f1 f#1 g1 g#1 a1 a#1 b1

A A# B C  
 C# D D#  
 E F F# G  
 G#

[Topalian JavaScript Piano](#)

Topalian JavaScript Piano

file:///D:/\_1Code/0\_JS\_Publish/Topalian\_JavaScript\_Piano/Topalian\_JavaScript\_Piano

Harmonic Minor

Major

c8  
 c7 c#7 d7 d#7 e7 f7 f#7 g7 g#7 a7 a#7 b7  
 c6 c#6 d6 d#6 e6 f6 f#6 g6 g#6 a6 a#6 b6  
 c5 c#5 d5 d#5 e5 f5 f#5 g5 g#5 a5 a#5 b5  
 c4 c#4 d4 d#4 e4 f4 f#4 g4 g#4 a4 a#4 b4  
 c3 c#3 d3 d#3 e3 f3 f#3 g3 g#3 a3 a#3 b3  
 c2 c#2 d2 d#2 e2 f2 f#2 g2 g#2 a2 a#2 b2  
 c1 c#1 d1 d#1 e1 f1 f#1 g1 g#1 a1 a#1 b1

A A# B C  
 C# D D#  
 E F F# G  
 G#

A A# B C  
 C# D D#  
 E F F# G  
 G#

[Topalian JavaScript Piano](#)

Topalian JavaScript Piano

file:///D:/\_1Code/0\_JS\_Publish/Topalian\_JavaScript\_Piano/Topalian\_JavaScript\_Piano

Harmonic Minor

Major

Topalian JavaScript Piano

Topalian JavaScript Piano

file:///D:/\_1Code/0\_JS\_Publish/Topalian\_JavaScript\_Piano/Topalian\_JavaScript\_Piano

Harmonic Minor

Major

Topalian JavaScript Piano

Octave	c	c#	d	d#	e	f	f#	g	g#	a	a#	b
3	c3											
4	c4	c#4	d4	d#4	e4	f4	f#4	g4	g#4	a4	a#4	b4
5	c5	c#5	d5	d#5	e5	f5	f#5	g5	g#5	a5	a#5	b5
6	c6	c#6	d6	d#6	e6	f6	f#6	g6	g#6	a6	a#6	b6
7	c7	c#7	d7	d#7	e7	f7	f#7	g7	g#7	a7	a#7	b7
8	c8	c#8	d8	d#8	e8	f8	f#8	g8	g#8	a8	a#8	b8

Topalian JavaScript Piano

file:///D:/\_1Code/0\_JS\_Publish/Topalian\_JavaScript\_Piano/Topalian\_JavaScript\_Pi

Harmonic Minor

Major

c8

c7 c#7 d7 d#7 e7 f7 f#7 g7 g#7 a7 a#7 b7

c6 c#6 d6 d#6 e6 f6 f#6 g6 g#6 a6 a#6 b6

c5 c#5 d5 d#5 e5 f5 f#5 g5 g#5 a5 a#5 b5

c4 c#4 d4 d#4 e4 f4 f#4 g4 g#4 a4 a#4 b4

c3 c#3 d3 d#3 e3 f3 f#3 g3 g#3 a3 a#3 b3

c2 c#2 d2 d#2 e2 f2 f#2 g2 g#2 a2 a#2 b2

c1 c#1 d1 d#1 e1 f1 f#1 g1 g#1 a1 a#1 b1

Topalian JavaScript Piano

```
<!-- Dedicated to God the Father -->
<!-- All Rights Reserved Christopher Andrew
Topalian Copyright 2000-2024 -->
<!-- https://github.com/ChristopherTopalian -->
<!--
https://github.com/ChristopherAndrewTopalian
-->
<!--
Topalian_JavaScript_Piano(Online_Version).ht
ml -->
<!-- Version 001 - (2024-09-19) -->
```

```
<html>
```

```
<head>
```

```
<title> Topalian JavaScript Piano </title>
```

```
<style>
```

```
/* style001.css */
```

```
body
```

```
{
```

```
    background-color: rgb(30, 30, 30);
```

```
}
```

```
.natural
```



```
{  
  width: 25px;  
  background-color: rgb(255, 255, 255);  
  border: solid 1px rgb(0, 0, 0);  
  font-family: arial;  
  font-size: 17px;  
  color: rgb(255, 255, 255);  
  text-align: center;  
  text-shadow: 1px 1px black;  
  user-select: none;  
}
```

**.natural:active**

```
{  
  transform: translateY(3px);  
  background-color: rgb(200, 200, 200);  
  border-color: rgb(0, 255, 255);  
  box-shadow: inset 0 4px 5px rgba(0, 0, 0,  
0.5);  
  color: rgb(255, 0, 255);  
}
```

**.sharp**

```
{  
  width: 25px;  
  background-color: rgb(0, 0, 0);
```

```
border: solid 1px rgb(0, 0, 0);
text-align: center;
font-family: Arial;
font-size: 15px;
color: rgb(255, 255, 255);
text-shadow: 1px 1px black;
user-select: none;
}

.sharp:active
{
    transform: translateY(3px);
    background-color: rgb(200, 200, 200);
    border-color: rgb(0, 255, 255);
    color: rgb(255, 0, 255);
    box-shadow: inset 0 4px 5px rgba(0, 0, 0,
0.5);
}

button
{
    background-color: rgb(0, 77, 129);
    margin-left: 2px;
    margin-right: 2px;
    margin-top: 1px;
    margin-bottom: 1px;
```

```
border-style: solid;
border-width: 1px;
border-color: rgb(100, 100, 255);
border-radius: 4px;
padding-left: 7px;
padding-right: 7px;
padding-top: 1px;
padding-bottom: 1px;
opacity: 1.0;
font-size: 14px;
font-weight: bold;
color: rgb(255, 255, 255);
text-align: center;
}
```

```
button:hover
{
    background-color: rgb(6, 31, 47);
    border-color: rgb(0, 255, 255);
    color: rgb(0, 255, 255);
}
```

```
button:active
{
    color: rgb(255, 0, 255);
}
```

```
/* -- */
```

```
/* Dedicated to God the Father */
```

```
/* All Rights Reserved Christopher Andrew  
Topalian Copyright 2000-2024 */
```

```
/* https://github.com/ChristopherTopalian */
```

```
/*
```

```
https://github.com/ChristopherAndrewTopalian  
*/
```

```
</style>
```

```
<script>
```

```
// shortcuts.js
```

```
function ge(whichId)
```

```
{
```

```
    let result =
```

```
document.getElementById(whichId);
```

```
    return result;
```

```
}
```

```
function ce(whichType)
```

```
{
```

```
    let result =  
document.createElement(whichType);  
    return result;  
}
```

```
function ba(whichElement)  
{  
    let result =  
document.body.append(whichElement);  
    return result;  
}
```

```
function ct(whichText)  
{  
    let result =  
document.createTextNode(whichText);  
    return result;  
}
```

```
//--//
```

```
// Dedicated to God the Father  
// All Rights Reserved Christopher Andrew  
// Topalian Copyright 2000-2024  
// https://github.com/ChristopherTopalian
```

```
//  
https://github.com/ChristopherAndrewTopalian  
  
// worldVariables.js  
  
let online = true;  
  
let natural = 'rgb(255, 255, 255)';  
let sharp = 'rgb(0, 0, 0)';  
let highlight = 'rgb(0, 255, 255)';  
  
//--//  
  
// Dedicated to God the Father  
// All Rights Reserved Christopher Andrew  
Topalian Copyright 2000-2024  
// https://github.com/ChristopherTopalian  
//  
https://github.com/ChristopherAndrewTopalian  
  
// notes.js  
  
let notes =  
[  
  {  
    name: 'c1',
```

```
    soundFileOffline:
'src/media/notes/c1.mp4',
    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/c1.mp4',
    octave: 1
},

{
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'src/media/notes/csharp1.mp4',
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{
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    octave: 1
```

```
},  
  
{  
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},  
  
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},  
  
{  
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```

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```

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{
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{  
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},

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},

{
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},

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},  
  
{  
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```
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'https://javascriptbook.weebly.com/uploads/7/6/
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{
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{
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```

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},
```

```
{  
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  soundFileOnline:  
'https://javascriptbook.weebly.com/uploads/7/6/  
4/0/76407657/csharp5.mp4',  
  octave: 5  
},
```

```
{  
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```

```
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{
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4/0/76407657/e5.mp4',
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},
```

```
{  
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4/0/76407657/fsharp5.mp4',  
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{  
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  soundFileOffline:  
'src/media/notes/g5.mp4',
```

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4/0/76407657/g5.mp4',
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4/0/76407657/gsharp5.mp4',
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},

{
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'https://javascriptbook.weebly.com/uploads/7/6/
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},

{
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4/0/76407657/d6.mp4',
    octave: 6
},
```

```
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4/0/76407657/dsharp6.mp4',
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},

{
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{
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'src/media/notes/f6.mp4',
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```
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    octave: 6
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'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/fsharp6.mp4',
    octave: 6
},

{
    name: 'g6',
    soundFileOffline:
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    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
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    octave: 6
},
```

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  octave: 6  
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},
```

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  octave: 7  
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  soundFileOnline:  
'https://javascriptbook.weebly.com/uploads/7/6/  
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  octave: 7  
},  
  
{  
  name: 'dsharp7',  
  soundFileOffline:  
'src/media/notes/dsharp7.mp4',
```

```
    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/dsharp7.mp4',
    octave: 7
},

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    soundFileOffline:
'src/media/notes/e7.mp4',
    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/e7.mp4',
    octave: 7
},

{
    name: 'f7',
    soundFileOffline:
'src/media/notes/f7.mp4',
    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/f7.mp4',
    octave: 7
},
```

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4/0/76407657/asharp7.mp4',
    octave: 7
},
```

```
{
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    soundFileOffline:
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    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/b7.mp4',
    octave: 7
},

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    soundFileOnline:
'https://javascriptbook.weebly.com/uploads/7/6/
4/0/76407657/c8.mp4',
    octave: 8
},
];
```

//--//

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```
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https://github.com/ChristopherAndrewTopalian

// makeNotes.js
```

```
function makeNotes(whichId, whichArray,
whichX, whichY, whichOctave)
{
    let mainDiv = ce('div');
    mainDiv.style.padding = 5 + 'px';
    mainDiv.style.marginBottom = 5 + 'px';
    mainDiv.style.display = 'flex';
    mainDiv.style.flexDirection = 'row';
    ba(mainDiv);

    //-//

    let subDiv = ce('div');
    subDiv.id = whichId;
    subDiv.style.width = 400 + 'px';
    subDiv.style.height = '30px';
    subDiv.style.border = 'solid 1px rgb(0, 200,
200)';
    mainDiv.append(subDiv);
```

//-//

// makeElementDraggable(subDiv);

//-//

```

for (let i = 0; i < whichArray.length; i++)
{
    if (whichArray[i].octave == whichOctave)
    {
        let note = ce('div');
        note.id = whichArray[i].name;
        note.title = whichArray[i].name;
        note.style.position = 'absolute';
        note.style.left = whichX + 'px';
        note.style.width = 20 + 'px';
        note.style.height = 20 + 'px';
        note.style.border = 'solid 2px rgb(0, 0,
0)';
        note.onclick = function()
        {
            audioPlay(whichArray[i].name +
'_note', 1.0);
        };
    }
}

```

//-//

```

    if (whichArray[i].name.length <= 3)
    {
        note.className = 'natural';
        note.textContent =
whichArray[i].name;
    }
    else if (whichArray[i].name.length > 3)
    {
        note.className = 'sharp';

        note.textContent =
whichArray[i].name.replace('sharp', '#');
    }
    subDiv.append(note);

    // move to the next note position
    whichX += 30;
}
}
}

```

```
//--//
```

```
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```

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//  
https://github.com/ChristopherAndrewTopalian  
  
// makeTitleOfApp.js
```

```
function makeTitleOfApp()  
{  
    let titleContainer = ce('div');  
    titleContainer.style.position = 'absolute';  
    titleContainer.style.right = '10px';  
    titleContainer.style.bottom = '10px';  
    titleContainer.style.zIndex = 1;  
    ba(titleContainer);  
  
    //-//  
  
    let titleOfApp = ce('a');  
    titleOfApp.id = 'titleOfApp';  
    titleOfApp.textContent = 'Topalian JavaScript  
Piano';  
    titleOfApp.href =  
'https://github.com/christophertopalian';  
    titleOfApp.target = '_blank';
```

```
titleOfApp.style.fontSize = '17px';  
titleOfApp.style.fontWeight = 'bold';  
titleContainer.append(titleOfApp);  
}
```

```
//--//
```

```
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//  
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```

```
// menuHarmonicMinorScales.js
```

```
function menuHarmonicMinorScales()  
{  
    let theId = 'harmonicMinorScales';
```

```
//-//
```

```
let mainDiv = ce("div");  
mainDiv.id = theId;  
mainDiv.style.position = "absolute";  
mainDiv.style.right = 265 + 'px';
```

```
mainDiv.style.top = 20 + 'px';  
mainDiv.style.width = 150 + 'px';  
mainDiv.style.height = '150px';  
mainDiv.style.zIndex = '3';  
mainDiv.style.overflowY = 'scroll';  
mainDiv.style.display = 'flex';  
mainDiv.style.flexDirection = 'column';  
mainDiv.style.resize = 'both';  
ba(mainDiv);
```

```
makeElementDraggable(mainDiv);
```

```
//-//
```

```
let subDiv = ce('div');  
subDiv.textContent = 'Harmonic Minor';  
subDiv.style.color = 'rgb(255, 255, 255)';  
mainDiv.append(subDiv);
```

```
//-//
```

```
subDiv.append(ce('br'));
```

```
//-//
```

```
let aButton = ce('button');
```

```

aButton.textContent = 'A';
aButton.onclick = function()
{
    clearScales();
    colorScale7(aHarmonicMinorScale);
};
subDiv.append(aButton);

// - //

```

```

let aSharpButton = ce('button');
aSharpButton.id = 'aSharpButton';
aSharpButton.textContent = 'A# ';
aSharpButton.onclick = function()
{
    clearScales();
    colorScale7(aSharpHarmonicMinorScale);
};
subDiv.append(aSharpButton);

// - //

```

```

let bButton = ce('button');
bButton.textContent = 'B ';
bButton.onclick = function()
{

```

```
    clearScales();  
    colorScale7(bHarmonicMinorScale);  
};  
subDiv.append(bButton);  
  
//-//
```

```
let cButton = ce('button');  
cButton.id = 'cButton';  
cButton.textContent = 'C ';  
cButton.onclick = function()  
{  
    clearScales();  
    colorScale7(cHarmonicMinorScale);  
};  
subDiv.append(cButton);  
  
//-//
```

```
let csharpButton = ce('button');  
csharpButton.textContent = 'C# ';  
csharpButton.onclick = function()  
{  
    clearScales();  
    colorScale7(csharpHarmonicMinorScale);  
};
```



```
subDiv.append(csharpButton);
```

```
//-//
```

```
let dButton = ce('button');  
dButton.textContent = 'D ';  
dButton.onclick = function()  
{  
    clearScales();  
    colorScale7(dHarmonicMinorScale);  
};  
subDiv.append(dButton);
```

```
//-//
```

```
let dsharpButton = ce('button');  
dsharpButton.textContent = 'D#';  
dsharpButton.onclick = function()  
{  
    clearScales();  
    colorScale7(dsharpHarmonicMinorScale);  
};  
subDiv.append(dsharpButton);
```

```
//-//
```

```
let eButton = ce('button');  
eButton.textContent = 'E ';  
eButton.onclick = function()  
{  
    clearScales();  
    colorScale7(eHarmonicMinorScale);  
};  
subDiv.append(eButton);  
  
//-//
```

```
let fButton = ce('button');  
fButton.textContent = 'F ';  
fButton.onclick = function()  
{  
    clearScales();  
    colorScale7(fHarmonicMinorScale);  
};  
subDiv.append(fButton);  
  
//-//
```

```
let fsharpButton = ce('button');  
fsharpButton.textContent = 'F# ';  
fsharpButton.onclick = function()  
{
```

```
    clearScales();  
    colorScale7(fsharpHarmonicMinorScale);  
};  
subDiv.append(fsharpButton);  
  
//-//
```

```
let gButton = ce('button');  
gButton.textContent = 'G ';  
gButton.onclick = function()  
{  
    clearScales();  
    colorScale7(gHarmonicMinorScale);  
};  
subDiv.append(gButton);  
  
//-//
```

```
let gsharpButton = ce('button');  
gsharpButton.textContent = 'G# ';  
gsharpButton.onclick = function()  
{  
    clearScales();  
    colorScale7(gsharpHarmonicMinorScale);  
};  
subDiv.append(gsharpButton);
```

```
}
```

```
//--//
```

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//  
https://github.com/ChristopherAndrewTopalian
```

```
// menuMajorScales.js
```

```
function menuMajorScales()
```

```
{
```

```
    let theId = 'menuScales';
```

```
//-//
```

```
    let mainDiv = ce("div");  
    mainDiv.id = theId;  
    mainDiv.style.position = "absolute";  
    mainDiv.style.right = 100 + 'px';  
    mainDiv.style.top = 20 + 'px';  
    mainDiv.style.width = 150 + 'px';  
    mainDiv.style.height = '150px';
```

```
mainDiv.style.zIndex = '3';  
mainDiv.style.overflowY = 'scroll';  
mainDiv.style.display = 'flex';  
mainDiv.style.flexDirection = 'column';  
mainDiv.style.resize = 'both';  
ba(mainDiv);
```

```
makeElementDraggable(mainDiv);
```

```
//-//
```

```
let subDiv = ce('div');  
subDiv.textContent = 'Major';  
subDiv.style.color = 'rgb(255, 255, 255)';  
mainDiv.append(subDiv);
```

```
//-//
```

```
subDiv.append(ce('br'));
```

```
//-//
```

```
let aButton = ce('button');  
aButton.textContent = 'A';  
aButton.onclick = function()  
{
```

```
    clearScales();  
    colorScale7(aMajorScale);  
};  
subDiv.append(aButton);
```

```
//-//
```

```
let aSharpButton = ce('button');  
aSharpButton.textContent = 'A# ';  
aSharpButton.onclick = function()  
{  
    clearScales();  
    colorScale7(aSharpMajorScale);  
};  
subDiv.append(aSharpButton);
```

```
//-//
```

```
let bButton = ce('button');  
bButton.textContent = 'B ';  
bButton.onclick = function()  
{  
    clearScales();  
    colorScale7(bMajorScale);  
};  
subDiv.append(bButton);
```

//-//

```
let cButton = ce('button');
cButton.textContent = 'C ';
cButton.onclick = function()
{
    clearScales();
    colorScale7(cMajorScale);
};
subDiv.append(cButton);
```

//-//

```
let csharpButton = ce('button');
csharpButton.textContent = 'C# ';
csharpButton.onclick = function()
{
    clearScales();
    colorScale7(csharpMajorScale);
};
subDiv.append(csharpButton);
```

//-//

```
let dButton = ce('button');
```

```
dButton.textContent = 'D';  
dButton.onclick = function()  
{  
    clearScales();  
    colorScale7(dMajorScale);  
};  
subDiv.append(dButton);
```

```
//-//
```

```
let dsharpButton = ce('button');  
dsharpButton.textContent = 'D#';  
dsharpButton.onclick = function()  
{  
    clearScales();  
    colorScale7(dsharpMajorScale);  
};  
subDiv.append(dsharpButton);
```

```
//-//
```

```
let eButton = ce('button');  
eButton.textContent = 'E ';  
eButton.onclick = function()  
{  
    clearScales();
```



```
    colorScale7(eMajorScale);  
};  
subDiv.append(eButton);  
  
//-//
```

```
let fButton = ce('button');  
fButton.textContent = 'F ';  
fButton.onclick = function()  
{  
    clearScales();  
    colorScale7(fMajorScale);  
};  
subDiv.append(fButton);  
  
//-//
```

```
let fsharpButton = ce('button');  
fsharpButton.textContent = 'F# ';  
fsharpButton.onclick = function()  
{  
    clearScales();  
    colorScale7(fsharpMajorScale);  
};  
subDiv.append(fsharpButton);
```

//-//

```
let gButton = ce('button');
gButton.textContent = 'G ';
gButton.onclick = function()
{
    clearScales();
    colorScale7(gMajorScale);
};
subDiv.append(gButton);
```

//-//

```
let gsharpButton = ce('button');
gsharpButton.textContent = 'G# ';
gsharpButton.onclick = function()
{
    clearScales();
    colorScale7(gsharpMajorScale);
};
subDiv.append(gsharpButton);
}
```

//--//

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https://github.com/ChristopherAndrewTopalian
```

```
// whichKeyPressed.js
```

```
function clickColor(whichId)  
{  
    ge(whichId).click();  
  
    ge(whichId).style.borderColor = highlight;  
  
    setTimeout(function()  
    {  
        ge(whichId).style.borderColor = sharp;  
    }, 500);  
}
```

```
let controlFlag = 1;
```

```
function whichKeyPressed(event)  
{  
    let level1 = 1;  
    let level2 = 2;
```

```
let level3 = 3;  
let level4 = 4;
```

```
if (controlFlag == 1)  
{  
    level1 = 1;  
    level2 = 2;  
    level3 = 3;  
    level4 = 4;  
}
```

```
else if (controlFlag == 2)  
{  
    level1 = 4;  
    level2 = 5;  
    level3 = 6;  
    level4 = 7;  
}
```

```
/*  
else if(controlFlag == 3)  
{  
    level1 = 3;  
    level2 = 4;  
    level3 = 5;  
    level4 = 6;
```

```
}
```

```
else if(controlFlag == 4)
```

```
{
```

```
    level1 = 4;
```

```
    level2 = 5;
```

```
    level3 = 6;
```

```
    level4 = 7;
```

```
}
```

```
else if(controlFlag == 5)
```

```
{
```

```
    level1 = 5;
```

```
    level2 = 6;
```

```
    level3 = 7;
```

```
    level4 = 8;
```

```
}
```

```
*/
```

```
event.preventDefault();
```

```
if (event.code === 'ShiftLeft')
```

```
{
```

```
    clickColor('c' + level1);
```

```
}
```

```
else if (event.code === 'KeyZ')  
{  
    clickColor('csharp' + level1);  
}
```

```
else if (event.code === 'KeyX')  
{  
    clickColor('d' + level1);  
}
```

```
else if (event.code === 'KeyC')  
{  
    clickColor('dsharp' + level1);  
}
```

```
else if (event.code === 'KeyV')  
{  
    clickColor('e' + level1);  
}
```

```
else if (event.code === 'KeyB')  
{  
    clickColor('f' + level1);  
}
```

```
else if (event.code === 'KeyN')  
{  
    clickColor('fsharp' + level1);  
}
```

```
}  
else if (event.code === 'KeyM')  
{  
    clickColor('g' + level1);  
}  
else if (event.code === 'Comma')  
{  
    clickColor('gsharp' + level1);  
}  
else if (event.code === 'Period') // slash  
{  
    clickColor('a' + level1);  
}  
else if (event.code === 'Slash') // slash  
{  
    clickColor('asharp' + level1);  
}  
  
else if (event.code === 'ShiftRight')  
{  
    clickColor('b' + level1);  
}  
  
// - //
```

```
else if (event.code === 'CapsLock')
```

```
{  
    clickColor('c' + level2);  
}  
  
else if (event.code === 'KeyA')  
{  
    clickColor('csharp' + level2);  
}  
  
else if (event.code === 'KeyS')  
{  
    clickColor('d' + level2);  
}  
  
else if (event.code === 'KeyD')  
{  
    clickColor('dsharp' + level2);  
}  
  
else if (event.code === 'KeyF')  
{  
    clickColor('e' + level2);  
}  
  
else if (event.code === 'KeyG')  
{
```



```
    clickColor('f' + level2);  
}  
  
else if (event.code === 'KeyH')  
{  
    clickColor('fsharp' + level2);  
}  
  
else if (event.code === 'KeyJ')  
{  
    clickColor('g' + level2);  
}  
  
else if (event.code === 'KeyK')  
{  
    clickColor('gsharp' + level2);  
}  
  
else if (event.code === 'KeyL')  
{  
    clickColor('a' + level2);  
}  
  
else if (event.code === 'Semicolon')  
{  
    clickColor('asharp' + level2);  
}
```

```
}
```

```
else if (event.code === 'Quote')  
{  
    clickColor('b' + level2);  
}
```

```
//-//
```

```
else if (event.code === 'Tab')  
{  
    clickColor('c' + level3);  
}
```

```
else if (event.code === 'KeyQ')  
{  
    clickColor('csharp' + level3);  
}
```

```
else if (event.code === 'KeyW')  
{  
    clickColor('d' + level3);  
}
```

```
else if (event.code === 'KeyE')  
{
```

```
    clickColor('dsharp' + level3);  
}  
  
else if (event.code === 'KeyR')  
{  
    clickColor('e' + level3);  
}  
  
else if (event.code === 'KeyT')  
{  
    clickColor('f' + level3);  
}  
  
else if (event.code === 'KeyY')  
{  
    clickColor('fsharp' + level3);  
}  
  
else if (event.code === 'KeyU')  
{  
    clickColor('g' + level3);  
}  
  
else if (event.code === 'KeyI')  
{  
    clickColor('gsharp' + level3);  
}
```

```
}

else if (event.code === 'KeyO')
{
    clickColor('a' + level3);
}

else if (event.code === 'KeyP')
{
    clickColor('asharp' + level3);
}

else if (event.code === 'BracketLeft')
{
    clickColor('b' + level3);
}

// - //

else if (event.code === 'Backquote') // ~
{
    clickColor('c' + level4);
}

else if (event.code === 'Digit1')
{
```

```
    clickColor('csharp' + level4);  
}  
  
else if (event.code === 'Digit2')  
{  
    clickColor('d' + level4);  
}  
  
else if (event.code === 'Digit3')  
{  
    clickColor('dsharp' + level4);  
}  
  
else if (event.code === 'Digit4')  
{  
    clickColor('e' + level4);  
}  
  
else if (event.code === 'Digit5')  
{  
    clickColor('f' + level4);  
}  
  
else if (event.code === 'Digit6')  
{  
    clickColor('fsharp' + level4);
```

```
}

else if (event.code === 'Digit7')
{
    clickColor('g' + level4);
}

else if (event.code === 'Digit8')
{
    clickColor('gsharp' + level4);
}

else if (event.code === 'Digit9')
{
    clickColor('a' + level4);
}

else if (event.code === 'Digit0')
{
    clickColor('asharp' + level4);
}

else if (event.code === 'Minus')
{
    clickColor('b' + level4);
}
```

```
//-//
```

```
else if (event.code === 'ArrowUp')  
{  
    if (controlFlag < 2)  
    {  
        controlFlag += 1;  
    }  
}
```

```
else if (event.code === 'ArrowDown')  
{  
    if (controlFlag > 1)  
    {  
        controlFlag -= 1;  
    }  
}  
}
```

```
//--//
```

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```
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```
// clearScales.js
```

```
function clearScales()  
{  
    color('c1', natural);  
    color('csharp1', sharp);  
    color('d1', natural);  
    color('dsharp1', sharp);  
    color('e1', natural);  
    color('f1', natural);  
    color('fsharp1', sharp);  
    color('g1', natural);  
    color('gsharp1', sharp);  
    color('a1', natural);  
    color('asharp1', sharp);  
    color('b1', natural);
```

```
//-//
```

```
    color('c2', natural);  
    color('csharp2', sharp);  
    color('d2', natural);  
    color('dsharp2', sharp);
```



```
color('e2', natural);  
color('f2', natural);  
color('fsharp2', sharp);  
color('g2', natural);  
color('gsharp2', sharp);  
color('a2', natural);  
color('asharp2', sharp);  
color('b2', natural);
```

```
//-//
```

```
color('c3', natural);  
color('csharp3', sharp);  
color('d3', natural);  
color('dsharp3', sharp);  
color('e3', natural);  
color('f3', natural);  
color('fsharp3', sharp);  
color('g3', natural);  
color('gsharp3', sharp);  
color('a3', natural);  
color('asharp3', sharp);  
color('b3', natural);
```

```
//-//
```

```
color('c4', natural);  
color('csharp4', sharp);  
color('d4', natural);  
color('dsharp4', sharp);  
color('e4', natural);  
color('f4', natural);  
color('fsharp4', sharp);  
color('g4', natural);  
color('gsharp4', sharp);  
color('a4', natural);  
color('asharp4', sharp);  
color('b4', natural);
```

//-//

```
color('c5', natural);  
color('csharp5', sharp);  
color('d5', natural);  
color('dsharp5', sharp);  
color('e5', natural);  
color('f5', natural);  
color('fsharp5', sharp);  
color('g5', natural);  
color('gsharp5', sharp);  
color('a5', natural);  
color('asharp5', sharp);
```

**color**('b5', natural);

//-//

**color**('c6', natural);

**color**('csharp6', sharp);

**color**('d6', natural);

**color**('dsharp6', sharp);

**color**('e6', natural);

**color**('f6', natural);

**color**('fsharp6', sharp);

**color**('g6', natural);

**color**('gsharp6', sharp);

**color**('a6', natural);

**color**('asharp6', sharp);

**color**('b6', natural);

//-//

**color**('c7', natural);

**color**('csharp7', sharp);

**color**('d7', natural);

**color**('dsharp7', sharp);

**color**('e7', natural);

**color**('f7', natural);

**color**('fsharp7', sharp);

```
color('g7', natural);  
color('gsharp7', sharp);  
color('a7', natural);  
color('asharp7', sharp);  
color('b7', natural);
```

```
//-//
```

```
color('c8', natural);  
}
```

```
//--//
```

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```

```
// color.js
```

```
function color(whichId, whichColor)  
{  
    let element = ge(whichId);
```

```
if (element)
{
    element.style.backgroundColor =
whichColor;
}
else
{
    console.log("Element with id " + whichId +
" not found.");
}
}
```

```
//--//
```

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```

```
// colorScale7.js
```

```
function colorScale7(whichArray)
{
    color(whichArray[0] + 1, highlight);
```

```
color(whichArray[1] + 1, highlight);  
color(whichArray[2] + 1, highlight);  
color(whichArray[3] + 1, highlight);  
color(whichArray[4] + 1, highlight);  
color(whichArray[5] + 1, highlight);  
color(whichArray[6] + 1, highlight);
```

//-//

```
color(whichArray[0] + 2, highlight);  
color(whichArray[1] + 2, highlight);  
color(whichArray[2] + 2, highlight);  
color(whichArray[3] + 2, highlight);  
color(whichArray[4] + 2, highlight);  
color(whichArray[5] + 2, highlight);  
color(whichArray[6] + 2, highlight);
```

//-//

```
color(whichArray[0] + 3, highlight);  
color(whichArray[1] + 3, highlight);  
color(whichArray[2] + 3, highlight);  
color(whichArray[3] + 3, highlight);  
color(whichArray[4] + 3, highlight);  
color(whichArray[5] + 3, highlight);  
color(whichArray[6] + 3, highlight);
```

//-//

```
color(whichArray[0] + 4, highlight);  
color(whichArray[1] + 4, highlight);  
color(whichArray[2] + 4, highlight);  
color(whichArray[3] + 4, highlight);  
color(whichArray[4] + 4, highlight);  
color(whichArray[5] + 4, highlight);  
color(whichArray[6] + 4, highlight);
```

//-//

```
color(whichArray[0] + 5, highlight);  
color(whichArray[1] + 5, highlight);  
color(whichArray[2] + 5, highlight);  
color(whichArray[3] + 5, highlight);  
color(whichArray[4] + 5, highlight);  
color(whichArray[5] + 5, highlight);  
color(whichArray[6] + 5, highlight);
```

//-//

```
color(whichArray[0] + 6, highlight);  
color(whichArray[1] + 6, highlight);  
color(whichArray[2] + 6, highlight);
```

```
color(whichArray[3] + 6, highlight);  
color(whichArray[4] + 6, highlight);  
color(whichArray[5] + 6, highlight);  
color(whichArray[6] + 6, highlight);
```

```
//-//
```

```
color(whichArray[0] + 7, highlight);  
color(whichArray[1] + 7, highlight);  
color(whichArray[2] + 7, highlight);  
color(whichArray[3] + 7, highlight);  
color(whichArray[4] + 7, highlight);  
color(whichArray[5] + 7, highlight);  
color(whichArray[6] + 7, highlight);
```

```
//-//
```

```
color(whichArray[0] + 8, highlight);  
color(whichArray[1] + 8, highlight);  
color(whichArray[2] + 8, highlight);  
color(whichArray[3] + 8, highlight);  
color(whichArray[4] + 8, highlight);  
color(whichArray[5] + 8, highlight);  
color(whichArray[6] + 8, highlight);
```

```
}
```



```

/*
function colorScale7(whichArray)
{
    for (let i = 0; i < whichArray.length; i++) {
        for (let j = 1; j <= 8; j++)
        {
            let idToColor = whichArray[i] + j;
            color(idToColor, highlight);
        }
    }
}
*/

```

```
//--//
```

```

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```

```
// colorScale8.js
```

```

function colorScale8(whichArray)
{

```

```
color(whichArray[0] + 1, highlight);  
color(whichArray[1] + 1, highlight);  
color(whichArray[2] + 1, highlight);  
color(whichArray[3] + 1, highlight);  
color(whichArray[4] + 1, highlight);  
color(whichArray[5] + 1, highlight);  
color(whichArray[6] + 1, highlight);  
color(whichArray[7] + 1, highlight);
```

//-//

```
color(whichArray[0] + 2, highlight);  
color(whichArray[1] + 2, highlight);  
color(whichArray[2] + 2, highlight);  
color(whichArray[3] + 2, highlight);  
color(whichArray[4] + 2, highlight);  
color(whichArray[5] + 2, highlight);  
color(whichArray[6] + 2, highlight);  
color(whichArray[7] + 2, highlight);
```

//-//

```
color(whichArray[0] + 3, highlight);  
color(whichArray[1] + 3, highlight);  
color(whichArray[2] + 3, highlight);  
color(whichArray[3] + 3, highlight);
```

```
color(whichArray[4] + 3, highlight);  
color(whichArray[5] + 3, highlight);  
color(whichArray[6] + 3, highlight);  
color(whichArray[7] + 3, highlight);
```

```
//-//
```

```
color(whichArray[0] + 4, highlight);  
color(whichArray[1] + 4, highlight);  
color(whichArray[2] + 4, highlight);  
color(whichArray[3] + 4, highlight);  
color(whichArray[4] + 4, highlight);  
color(whichArray[5] + 4, highlight);  
color(whichArray[6] + 4, highlight);  
color(whichArray[7] + 4, highlight);
```

```
//-//
```

```
color(whichArray[0] + 5, highlight);  
color(whichArray[1] + 5, highlight);  
color(whichArray[2] + 5, highlight);  
color(whichArray[3] + 5, highlight);  
color(whichArray[4] + 5, highlight);  
color(whichArray[5] + 5, highlight);  
color(whichArray[6] + 5, highlight);  
color(whichArray[7] + 5, highlight);
```

//-//

```
color(whichArray[0] + 6, highlight);  
color(whichArray[1] + 6, highlight);  
color(whichArray[2] + 6, highlight);  
color(whichArray[3] + 6, highlight);  
color(whichArray[4] + 6, highlight);  
color(whichArray[5] + 6, highlight);  
color(whichArray[6] + 6, highlight);  
color(whichArray[7] + 6, highlight);
```

//-//

```
color(whichArray[0] + 7, highlight);  
color(whichArray[1] + 7, highlight);  
color(whichArray[2] + 7, highlight);  
color(whichArray[3] + 7, highlight);  
color(whichArray[4] + 7, highlight);  
color(whichArray[5] + 7, highlight);  
color(whichArray[6] + 7, highlight);  
color(whichArray[7] + 7, highlight);
```

```
color(whichArray[0] + 8, highlight);  
color(whichArray[1] + 8, highlight);  
color(whichArray[2] + 8, highlight);
```

```
color(whichArray[3] + 8, highlight);  
color(whichArray[4] + 8, highlight);  
color(whichArray[5] + 8, highlight);  
color(whichArray[6] + 8, highlight);  
}
```

```
//--//
```

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```

```
// harmonicMinorScale.js
```

```
let aHarmonicMinorScale = [ "a", "b", "c", "d",  
"e", "f", "gsharp" ];
```

```
let asharpHarmonicMinorScale = [ "asharp",  
"c", "csharp", "dsharp", "f", "fsharp", "a" ];
```

```
let bHarmonicMinorScale = [ "b", "csharp", "d",  
"e", "fsharp", "g", "asharp" ];
```

```
let cHarmonicMinorScale = [ "c", "d", "dsharp",  
"f", "g", "gsharp", "b" ];
```

```
let csharpHarmonicMinorScale = [ "csharp",  
"dsharp", "e", "fsharp", "gsharp", "a", "c" ];
```

```
let dHarmonicMinorScale = [ "d", "e", "f", "g",  
"a", "asharp", "csharp" ];
```

```
let dsharpHarmonicMinorScale = [ "dsharp",  
"f", "fsharp", "gsharp", "asharp", "b", "d" ];
```

```
let eHarmonicMinorScale = [ "e", "fsharp", "g",  
"a", "b", "c", "dsharp" ];
```

```
let fHarmonicMinorScale = [ "f", "g", "gsharp",  
"asharp", "c", "csharp", "e" ];
```

```
let fsharpHarmonicMinorScale = [ "fsharp",  
"gsharp", "a", "b", "csharp", "d", "f" ];
```

```
let gHarmonicMinorScale = [ "g", "a", "asharp",  
"c", "d", "dsharp", "fsharp" ];
```

```
let gsharpHarmonicMinorScale = [ "gsharp",  
"asharp", "b", "csharp", "dsharp", "e", "g" ];
```

```
//--//
```

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```
//
```

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```

```
// majorScale.js
```

```
let aMajorScale = [ "a", "b", "csharp", "d", "e",  
"fsharp", "gsharp" ];
```

```
let asharpMajorScale = ["asharp", "c",  
"csharp", "dsharp", "f", "fsharp", "gsharp"];
```

```
let bMajorScale = [ "b", "csharp", "dsharp",  
"e", "fsharp", "gsharp", "asharp" ];
```

```
let cMajorScale = [ "c", "d", "e", "f", "g", "a",  
"b" ];
```

```
let csharpMajorScale = [ "csharp", "dsharp",  
"e", "fsharp", "gsharp", "asharp", "b" ];
```

```
let dMajorScale = [ "d", "e", "fsharp", "g", "a",  
"b", "csharp" ];
```

```
let dsharpMajorScale = [ "dsharp", "f",  
"fsharp", "gsharp", "asharp", "c", "csharp" ];
```

```
let eMajorScale = [ "e", "fsharp", "gsharp", "a",  
"b", "csharp", "dsharp" ];
```

```
let fMajorScale = [ "f", "g", "a", "asharp", "c",  
"d", "e" ];
```

```
let fsharpMajorScale = [ "fsharp", "gsharp",  
"asharp", "b", "csharp", "dsharp", "f" ];
```

```
let gMajorScale = [ "g", "a", "b", "c", "d", "e",  
"fsharp" ];
```

```
let gsharpMajorScale = [ "gsharp", "asharp",  
"b", "csharp", "dsharp", "f", "fsharp" ];
```

```
//--//
```

```
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```

```
// audioPlay.js
```

```
function audioPlay(noteld, volume)  
{  
    let audioElement = ge(noteld);  
  
    if (audioElement)  
    {  
        audioElement.volume = volume;  
        audioElement.currentTime = 0.05;  
        audioElement.play();  
    }  
}
```

```
//--//
```

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```

```
//  
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// loadSounds.js  
  
function loadSounds(whichArray)  
{  
    for (let x = 0; x < whichArray.length; x++)  
    {  
        let theSound = ce('audio');  
  
        if (online == false)  
        {  
            theSound.src =  
whichArray[x].soundFileOffline;  
        }  
        else  
        {  
            theSound.src =  
whichArray[x].soundFileOnline;  
        }  
  
        theSound.id = whichArray[x].name +  
'_note';  
        theSound.loop = false;  
        theSound.volume = 1.0;
```

```
    ba(theSound);
  }
}

//--//

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// sounds.js

let sounds =
[
  {
    name: 'sfx_blip_001',
    soundFileOffline:
'src/media/sounds/sfx_blip_001.mp4',
    soundFileOnline:
'https://collegeofscripting.weebly.com/uploads/
6/4/4/8/64482293/sfx_blip_001.mp4'
  },
```

```
{  
  name: 'sfx_warp_001',  
  soundFileOffline:  
'src/media/sounds/sfx_warp_001.mp3',  
  soundFileOnline:  
'https://collegeofscripting.weebly.com/uploads/  
6/4/4/8/64482293/sfx_warp_001.mp3'  
},  
];
```

```
//--//
```

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```

```
// makeElementDraggable.js
```

```
// creating event handler for mouse down  
function createMouseDownHandler(element,  
state) {  
  return function(e)  
  {
```

```
// ignore mouse down events on textarea  
or input elements
```

```
    if (e.target.tagName === 'TEXTAREA' ||  
e.target.tagName === 'INPUT')  
    {  
        return;  
    }
```

```
e.preventDefault();
```

```
state.startX = e.clientX;  
state.startY = e.clientY;
```

```
document.onmousemove =  
createMouseMoveHandler(element, state);
```

```
document.onmouseup =  
createMouseUpHandler();  
};  
}
```

```
// creating event handler for mouse move  
function createMouseMoveHandler(element,  
state) {  
    return function(e)  
    {
```

```
// ignore mouse move events on textarea  
or input elements
```

```
    if (e.target.tagName === 'TEXTAREA' ||  
e.target.tagName === 'INPUT')  
    {  
        return;  
    }
```

```
e.preventDefault();
```

```
let deltaX = state.startX - e.clientX;
```

```
let deltaY = state.startY - e.clientY;
```

```
state.startX = e.clientX;
```

```
state.startY = e.clientY;
```

```
let newTop = element.offsetTop - deltaY;
```

```
let newLeft = element.offsetLeft - deltaX;
```

```
element.style.top = newTop + "px";
```

```
element.style.left = newLeft + "px";
```

```
};
```

```
}
```

```
// creating event handler for mouse up
```

```
function createMouseUpHandler()
```

```
{  
  return function()  
  {  
    document.onmousemove = null;  
    document.onmouseup = null;  
  };  
}  
  
// make an element draggable  
function makeElementDraggable(element)  
{  
  let state = { startX: 0, startY: 0 };  
  
  element.onmousedown =  
    createMouseDownHandler(element, state);  
}  
  
/--//
```

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```

```
// whenLoaded.js
```

```
function whenLoaded()  
{  
    loadSounds(sounds);  
    loadSounds(notes);  
  
    window.addEventListener("keydown",  
whichKeyPressed, false);  
  
    makeTitleOfApp();  
  
    menuMajorScales();  
    menuHarmonicMinorScales();  
  
    makeNotes('octave8', notes, 20, 340, 8);  
    makeNotes('octave7', notes, 20, 340, 7);  
    makeNotes('octave6', notes, 20, 340, 6);  
    makeNotes('octave5', notes, 20, 340, 5);  
    makeNotes('octave4', notes, 20, 340, 4);  
    makeNotes('octave3', notes, 20, 340, 3);  
    makeNotes('octave2', notes, 20, 340, 2);  
    makeNotes('octave1', notes, 20, 340, 1);  
}
```

```
//--//
```



```
// Dedicated to God the Father  
// All Rights Reserved Christopher Andrew  
Topalian Copyright 2000-2024  
// https://github.com/ChristopherTopalian  
//  
https://github.com/ChristopherAndrewTopalian
```

```
</script>
```

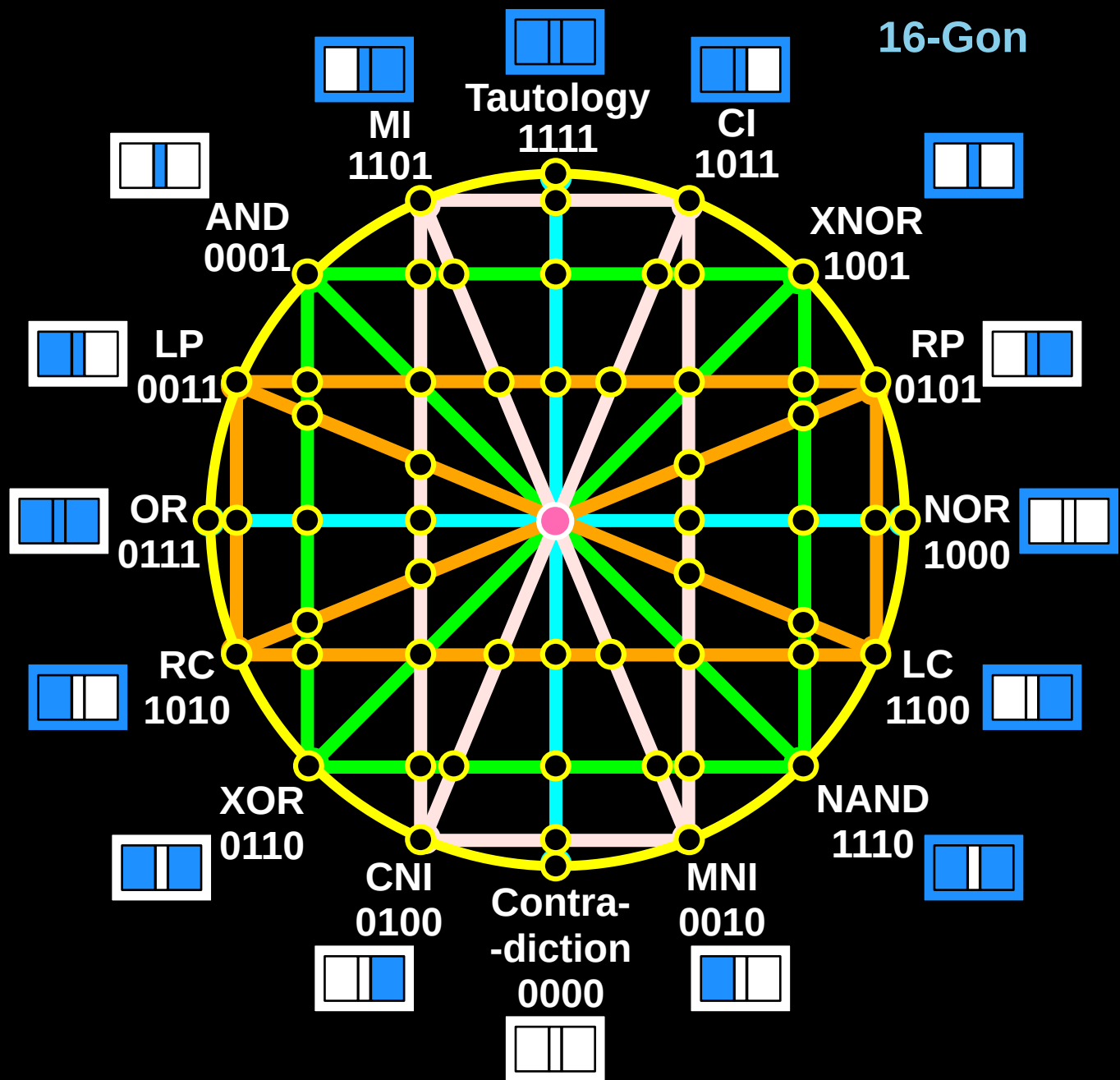
```
</head>
```

```
<body onload = 'whenLoaded();'>
```

```
</body>
```

```
</html>
```

# True Artificial Intelligence System



# For More Tutorials:

[GitHub.com/ChristopherTopalian](https://github.com/ChristopherTopalian)

[GitHub.com/ChristopherAndrewTopalian](https://github.com/ChristopherAndrewTopalian)

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# Dedicated to God the Father

**This book is created by the  
College of Scripting Music & Science.  
Always remember, that each time you write a  
script with a pencil and paper, it becomes  
imprinted so deeply in memory that the  
material and methods are learned extremely  
well.**

**When you Type the scripts, the same is true.  
The more you type and write out the scripts by  
keyboard or pencil and paper, the more you  
will learn programming!**

**Write and Type every example that you find.  
Keep all of your scripts organized.  
Every script that you create increases your  
programming abilities.  
SEEING CODE, is one thing,  
but WRITING CODE is another.  
Write it, Type it, Speak it, See it, Dream it.**

**CollegeOfScripting.weebly.com**