

"HTML"

```
<body>
<section id="wrap">
  </header>

  <section id="main">
    <div class="nowplaying" id="titleBar"> Virtual Piano </div>
    <div class="keys">
      <div data-key="65" class="key" data-note="C">
        <span class="hints">A</span>
      </div>
      <div data-key="87" class="key sharp" data-note="C#">
        <span class="hints">W</span>
      </div>
      <div data-key="83" class="key" data-note="D">
        <span class="hints">S</span>
      </div>
      <div data-key="69" class="key sharp" data-note="D#">
        <span class="hints">E</span>
      </div>
      <div data-key="68" class="key" data-note="E">
        <span class="hints">D</span>
      </div>
      <div data-key="70" class="key" data-note="F">
        <span class="hints">F</span>
      </div>
      <div data-key="84" class="key sharp" data-note="F#">
        <span class="hints">T</span>
      </div>
      <div data-key="71" class="key" data-note="G">
        <span class="hints">G</span>
      </div>
      <div data-key="89" class="key sharp" data-note="G#">
        <span class="hints">Y</span>
      </div>
      <div data-key="72" class="key" data-note="A">
        <span class="hints">H</span>
      </div>
      <div data-key="85" class="key sharp" data-note="A#">
        <span class="hints">U</span>
      </div>
      <div data-key="74" class="key" data-note="B">
        <span class="hints">J</span>
      </div>
      <div data-key="75" class="key" data-note="C">
        <span class="hints">K</span>
      </div>
      <div data-key="79" class="key sharp" data-note="C#">
        <span class="hints">O</span>
      </div>
      <div data-key="76" class="key" data-note="D">
        <span class="hints">L</span>
      </div>
```

```
</div>
<div data-key="80" class="key sharp" data-note="D#">
  <span class="hints">P</span>
</div>
<div data-key="186" class="key" data-note="E">
  <span class="hints">;</span>
</div>

</div>
```

```
<center><font color="#333456" size="4"><div style = "width:250px" > <br/> Use number 1 to 3 on keyboard to sw
itch the profile </div></font></center>
<div id="k" class="ke"></div>
```

```

  <profile id="mm1" title="Piano Sound">
    <audio data-key="65" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/040%20C.wav">
</audio>
    <audio data-key="87" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/041%20C%23.wa
v"></audio>
    <audio data-key="83" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/042%20D.wav"><
/audio>
    <audio data-key="69" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/043%20D%23.wa
v"></audio>
    <audio data-key="68" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/044%20E.wav"><
/audio>
    <audio data-key="70" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/045%20F.wav"><
/audio>
    <audio data-key="84" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/046%20F%23.wa
v"></audio>
    <audio data-key="71" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/047%20G.wav"><
/audio>
    <audio data-key="89" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/048%20G%23.wa
v"></audio>
    <audio data-key="72" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/049%20A.wav"><
/audio>
    <audio data-key="85" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/050%20A%23.wa
v"></audio>
    <audio data-key="74" src=" https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/051%20B.wav">
</audio>
    <audio data-key="75" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/052%20C.wav"><
/audio>
    <audio data-key="79" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/053%20C%23.wa
v"></audio>
    <audio data-key="76" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/054%20D.wav"><
/audio>
    <audio data-key="80" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/055%20D%23.wa
v"></audio>
    <audio data-key="186" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/1/056.wav"></audi
o>

  </profile>
```

```
<profile id='mm2' title="Dreamy Sound">
  <audio data-key="65" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/c.wav"></audio>
  <audio data-key="87" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/cb.wav"></audio>

  <audio data-key="83" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/d.wav"></audio>
  <audio data-key="69" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/eb.wav"></audio>

  <audio data-key="68" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/e.wav"></audio>
  <audio data-key="70" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/f.wav"></audio>
  <audio data-key="84" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/gb.wav"></audio>
>
  <audio data-key="71" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/g.wav"></audio>
  <audio data-key="89" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/fb.wav"></audio>

  <audio data-key="72" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/a.wav"></audio>
  <audio data-key="85" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003442/bb.wav"></audio>
>
  <audio data-key="74" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003442/b.wav"></audio>
  <audio data-key="75" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003443/c.wav"></audio>
  <audio data-key="79" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/cb.wav"></audio>

  <audio data-key="76" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/d.wav"></audio>
  <audio data-key="80" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/eb.wav"></audio>

  <audio data-key="186" src="https://res.cloudinary.com/hcrnvlizg/video/upload/v1539003444/e.wav"></audio>
</profile>
```

```
<profile id='mm3' title="Classical Guitar">
  <audio data-key="65" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/C3.wav"></audio>
>
  <audio data-key="87" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/C%233.wav"></a
udio>
  <audio data-key="83" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/D3.wav"></audio>
>
  <audio data-key="69" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/D%233.wav"></a
udio>
  <audio data-key="68" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/E3.wav"></audio>
>
  <audio data-key="70" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/F3.wav"></audio>

  <audio data-key="84" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/F%233.wav"></a
udio>
  <audio data-key="71" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/G3.wav"></audio>
>
  <audio data-key="89" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/G%233.wav"></a
udio>
  <audio data-key="72" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/A3.wav"></audio>
>
  <audio data-key="85" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/A%233.wav"></a
udio>
  <audio data-key="74" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/B3.wav"></audio>
>
```

```

<audio data-key="75" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/C4.wav"></audio>
<audio data-key="79" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/C%234.wav"></audio>
<audio data-key="76" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/D4.wav"></audio>
<audio data-key="80" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/D%234.wav"></audio>
<audio data-key="186" src="https://raw.githubusercontent.com/Miladtavakkoli/Piano/main/3/E4.wav"></audio>
</profile>

```

```

</section>
</section>
</body>

```

"CSS"

```

html {
  background: #1f1e1d;
  text-align: center; / (It cause title of "piano sound" be center)
}

.nowplaying { / (refer to class "nowplaying" in HTML)
  font-size: 60px; / (Specifications of piano title)
  line-height: 1;
  color: lightgrey;
  text-shadow: 2px 2px 5px green; / (3 parts 1:Distance 2:Two diferent position of shadow 3:Intensity color)
}

.keys { / (Specifications related to all keys by page benchmark)
  top: 10px;
  width: 70%;
  height: 300px;
  max-width: 880px;
  position: relative;
  margin: 30px auto 5px; / (The keys distance of(Top margine , Right and left margine , Bottom margine))
  cursor: none; / (Pointer does not exist on all keys and does not work on them)
}

.key {
  position: relative;
  border: 3px solid grey;
  border-radius: 0.4rem; / (make corner circle form)
  transition: all 0.09s ease; / (When pushing each keys the size will be change and then become the first size this is that whole time)
  box-sizing: border-box; / (this property allows us to include the pading in an element's total width&height)
  z-index: 2; / (use with the position order and we can set several layers and specify which layer should be up or down or even have overlap)
}

.key:not(.sharp) { / (Specifications related to white keys)
  float: left;

```

```

width: 10%;
height: 100%;
background: white;
}

.key.sharp {      / (Specifications related to black keys)
position: absolute;
width: 6%;
height: 60%;
background: black;
color: white;
z-index: 3;
}

.key[data-key="87"] { / (These presents related to the positions of each relative to the edge of the whole screen,
and the numbers like "87" are the laptop keyboard keys which is each key related to each virtual piano keys)
left: 7%;
}

.key[data-key="69"] {
left: 17%;
}

.key[data-key="84"] {
left: 37%;
}

.key[data-key="89"] {
left: 47%;
}

.key[data-key="85"] {
left: 57%;
}

.key[data-key="79"] {
left: 77%;
}

.key[data-key="80"] {
left: 87%;
}

.playing {
transform: scale(.98);
border-color: lightblue;
box-shadow: 0 0 1rem; / (Psition related to X axis, Position related to Y axis, Amount of opacity)
}

.hints {
display: block; / (For making the letters without moving on the keys)
width: 100%;
opacity: 0;

```

```

position: absolute;
bottom: 7px;
transition: opacity 0.09s ease-out;
font-size: 20px;
}

```

```

.keys:hover .hints { / (Cause goes away the letters on the keys)/(Works when mouse are over the keys)
opacity: 1; / (When your mouse is over them the opacity will be 1)
}

```

"JS"

```

var currentProfile;
switchProfile(1); / (Getting sounds from HTML the Piano Sound effect)

```

```

const keys = document.querySelectorAll(".key"), / (Get all of the keys as element with class of key)
note = document.querySelector(".nowplaying"),
hints = document.querySelectorAll(".hints"); / (Use for hinting)

```

```

function switchProfile(profile) { / (The function called palynote is going to take an (e))

```

```

// switch sound profile
var name = "mm" + profile;

```

```

var elm = document.querySelector(`Profile[id="${name}"]`);

```

```

if (!elm) return; //profile not defined

```

```

currentProfile = profile;
k.innerHTML = "Profile " + profile;
titleBar.innerHTML = elm.title;
return;
}

```

```

function playNote(e) {
if (e.repeat) return;

```

```

if (e.keyCode >= 48 && e.keyCode <= 57) {
// switch the profile
// for numbers on top of keyboard
switchProfile(e.keyCode - 48);
return;
}

```

```

if (e.keyCode >= 96 && e.keyCode <= 105) {
// switch the profile
// for numbers on right of keyboard
switchProfile(e.keyCode - 96);
return;
}

```

```

var name = "mm" + currentProfile; / (The var names are defined for refering to each 'id sound effect name' to work according to conditional orders)

```

```

var elm = document.querySelector(`Profile[id="${name}"]`);

var audio = elm.querySelector(`audio[data-key="${e.keyCode}"]`);
var key = document.querySelector(`.key[data-key="${e.keyCode}"]`);
    / (The query selector() method returns the first element which matches the specified selectors)
if (!key) return;

const keyNote = key.getAttribute("data-note"); / (Get the value of the data-note event attribute of a <button> element)

key.classList.add("playing"); / (For determining the pushed key referred to HTML part)
note.innerHTML = keyNote;
audio.currentTime = 0; / (If play a key note very fast continuously the note can be play with this command)
audio.play();
}

function removeTransition(e) { / (For changing the color when the key push)
  if (e.propertyName !== "transform") return; / (For return to initial state color)
  this.classList.remove("playing");
}

function hintsOn(e, index) {
  e.setAttribute("style", "transition-delay:" + index * 50 + "ms");
}

hints.forEach(hintsOn);

keys.forEach((key) => key.addEventListener("transitionend", removeTransition)); / (As soon as the key done going to fier: "key.addEventListener" an event variable inside of it...)

window.addEventListener("keydown", playNote);

```