

Simple Clock

WL Hack Club & Hack Club Edison
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Simple Clock

Today's Goal:



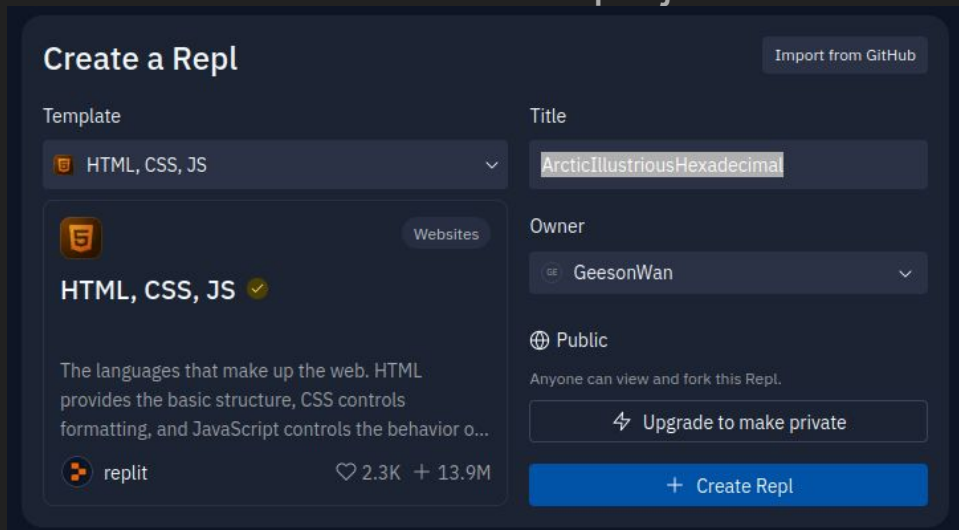
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Getting Started

1. Open up repl.it.

<https://repl.it/languages/html>

2. Create new project



The screenshot shows the 'Create a Repl' interface on the Replit website. The page has a dark theme. At the top left, it says 'Create a Repl' in white text. To the right of this is a button that says 'Import from GitHub'. Below the title, there are two main sections: 'Template' and 'Title'. The 'Template' section has a dropdown menu currently showing 'HTML, CSS, JS'. Below this, there is a preview card for the 'HTML, CSS, JS' template, which includes a description: 'The languages that make up the web. HTML provides the basic structure, CSS controls formatting, and JavaScript controls the behavior o...'. At the bottom of the preview card, it says 'replit' and shows '2.3K + 13.9M' likes. The 'Title' section has a text input field containing 'ArcticIllustriousHexadecimal'. Below the title, there is an 'Owner' dropdown menu showing 'GeesonWan'. Underneath, it says 'Public' with a globe icon and the text 'Anyone can view and fork this Repl.'. At the bottom of the form, there is a button that says 'Upgrade to make private' with a lightning bolt icon, and a large blue button that says '+ Create Repl'.

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Setting Up:

Delete `<meta name="viewport" content="width=device-width">` (line 6) in the HTML file.

```
index.html
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5   <meta charset="utf-8">
6   <meta name="viewport" content="width=device-width">
7   <title>replit</title>
8   <link href="style.css" rel="stylesheet" type="text/css" />
9 </head>
10
11 <body>
12   Hello world
13   <script src="script.js"></script>
14 </body>
15
16 </html>
```

```
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10 <body>
11   Hello world
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14
15 </html>
```

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Setting Up:

Delete line 11 and replace with the following code.

```
<div class="clock">  
  <div class="clock-face">  
    <div class="hand hour-hand"></div>  
    <div class="hand min-hand"></div>  
    <div class="hand second-hand"></div>  
  </div>  
</div>
```

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CSS Part 1

Delete the contents in the `style.css` file and replace it with the following:

```
body {  
  background: #01ed7f;  
  margin: 0;  
  padding: 0;  
  display: flex;  
  align-items: center;  
  justify-content: center;  
  min-height: 100vh;  
}
```

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CSS Part 2

Add the following code in at the end of the previous CSS property.

```
.clock {  
  width: 25rem;  
  height: 25rem;  
  border: 20px solid whitesmoke;  
  border-radius: 50px;  
  background: blanchedalmond;  
  background-image: url(https://bit.ly/2RcERUw);  
  background-size: cover;  
  box-shadow: 0 0 0 4px rgba(0, 0, 0, 0.1), inset 0 0 0 3px #efefef,  
    inset 0 0 10px black, 0 0 10px rgba(0, 0, 0, 0.2);  
}
```

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CSS Part 3

Now we will add the CSS for each element of the clock.

```
.clock-face {  
  position: relative;  
  width: 100%;  
  height: 100%;  
}
```

```
.hand {  
  background:  black;  
  height: 6px;  
  position: absolute;  
  top: 50%;  
  transform-origin: 100%;  
  transform: rotate(90deg);  
  transition: all 0.05s;  
  transition-timing-function: cubic-bezier(0.1, 2.7, 0.58, 1);  
}
```

```
.hour-hand {  
  width: 30%;  
  right: 50%;  
}
```

```
.min-hand {  
  width: 35%;  
  right: 50%;  
}
```

```
.second-hand {  
  width: 40%;  
  right: 50%;  
}
```


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JavaScript: Initializing Variables

Add the following variables in the `script.js` file.

```
const secondHand = document.querySelector('.second-hand')  
const minHand = document.querySelector('.min-hand')  
const hourHand = document.querySelector('.hour-hand')
```

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JavaScript: the setTime function

Add this function below the constants.

```
function setTime() {
  const currentTime = new Date()

  const seconds = currentTime.getSeconds()
  const secondDeg = (seconds / 60) * 360 + 90
  secondHand.style.transform = `rotate(${secondDeg}deg)`

  const mins = currentTime.getMinutes()
  const minsDeg = (mins / 60) * 360 + 90
  minHand.style.transform = `rotate(${minsDeg}deg)`

  const hours = currentTime.getHours()
  const hoursDeg = (hours / 12) * 360 + 90
  hourHand.style.transform = `rotate(${hoursDeg}deg)`

  if (seconds == 0) {
    secondHand.style.transitionDuration = '0s'
    minHand.style.transitionDuration = '0s'
    hourHand.style.transitionDuration = '0s'
  } else {
    secondHand.style.transitionDuration = '0.05s'
    minHand.style.transitionDuration = '0.05s'
    hourHand.style.transitionDuration = '0.05s'
  }

  requestAnimationFrame(setTime)
}
setTime()
```