Coding for Teens





Front-End Development

Front end development is the development of code that creates the visual front-end elements of a software, application or website. Front end languages include HTML, CSS, and Javascript



HTML defines the content of web pages CSS specifies the layout of web pages JS programs the behavior of web pages



CSS (Cascading Style Sheets)

describes how HTML elements are to be displayed on screen, paper, or in other media.

CSS saves a lot of work. It can control the layout of multiple web pages all at once. External stylesheets are better stored in CSS files separately.



Inline Styles

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS Styles</title>
</head>
<body>
    <h1 style="color:red">Hai!</h1>
</body>
</html>
```



Internal Styles

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS Styles</title>
    <style>
         h2 {color: green;}
    </style>
</head>
<body>
    <h2>Halo!</h2>
</body>
</html>
```



External Styles

index.html

style.css

```
p {
    color: blue;
}
```



```
Selector
<!DOCTYPE html>
<html>
                        telling CSS which
<head>
                        elements to style
 <style>
   h2 {color: orange;}
   p {color: red;}
   .mobil {color: blue;}
   #avanza {color: greenyellow}
 </style>
</head>
<body>
  <h2>Halo</h2>
  Hai
  Ini Avanza
  Ini Alya
</body>
</html>
```

```
h2 {color: orange;}
p {color: red;}
.mobil {color: blue;}
#avanza {color: greenyellow}
```

Selector telling CSS which elements to style

```
h2, p, .mobil & #avanza are called Selectors.
{color: orange;} are Property & Value.
```

To select an element to style, simply:

- call its tag e.g h2 {color: orange;}
- call its class e.g .mobil {color: blue;}
- call its id e.g #avanza {color: green;}



```
Attribute
<!DOCTYPE html>
                       Selector
<html>
<head>
  <style>
     a[href] {color: red;}
</style>
</head>
<body>
  <a href="#">Ini link</a>
</body>
</html>
```



```
Color
<!DOCTYPE html>
<html>
<head>
  <style>
    body {background-color: yellow;}
    h1 {color: rgb(0, 0, 255);}
    h2 {color: #00FF00;}
    p {color: hsl(360, 100%, 75%);}
 </style>
</head>
<body>
  <h1>Selamat datang!</h1>
  <h2>Purwadhika</h2>
  Startup & Coding School
</body>
</html>
```

Color

```
body {background-color: yellow;}
h1 {color: rgb(0, 0, 255);}
h2 {color: #00FF00;}
p {color: hsl(360, 100%, 75%);}
```

```
Red, Green, Blue Color Values
{color: rgb(0, 0, 255);}
Hexadecimal Value
{color: #00FF00;}
Hue, Saturation, Lightness Value
[ {color: hsl(360, 100%, 75%);}
Alpha Transparency
[ {color: rgba(0, 0, 255, 0.782);}
\blacksquare {color: hsla(360, 100%, 75%, 0.5);}
```

```
Backgrounds
<head><style>
                                 Color
body {
  background-color:blue;
 //background:
    linear-gradient(blue, yellow);
 //background:
    linear-gradient(90deg, blue, yellow);
 //background:
    radial-gradient(blue, yellow);
</style></head>
<body></body>
```

```
Background
<!DOCTYPE html>
                                Image
<html>
<head>
   <style>
      body {
         background-color: lightgray;
         background: url("lin.jpg");
         background-position: left top;
         background-size: 1280px 720px;
   </style>
</head>
<body>
</body>
</html>
```



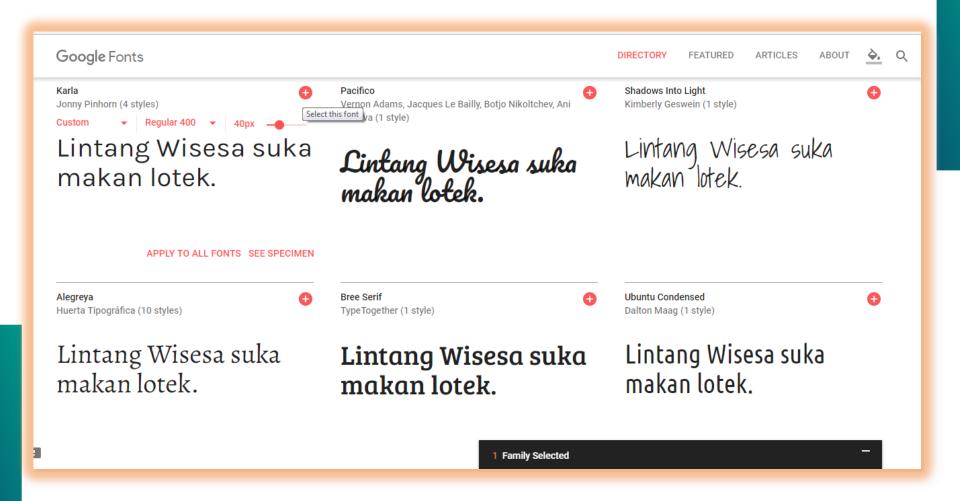
```
<head><style>
    font-family: "Impact", Arial;
    font-style: italic;
    text-transform: uppercase;
    text-decoration: line-through;
    text-shadow: -4px 4px 4px red;
    line-height: 50%;
    letter-spacing: 2px;
    word-spacing: 4px;
                              Font &
    text-align: left;
    text-indent: 2rem;
                               Text
</style></head>
<body>halo kamu!</body>
</html>
```

Font & Text

- font-family (web safe fonts):
 Arial, Helvetica, Times New Roman, Times,
 Courier New, Courier, Verdana, Georgia,
 Palatino, Garamond, Bookman, Comic Sans MS,
 Trebuchet MS, Arial Black, Impact
- font-style:
 normal, italic, oblique
- text-transform:
 capitalize, uppercase, lowercase, none
- text-decoration:
 underline, overline, line-through, none
- text-align: left, center, right



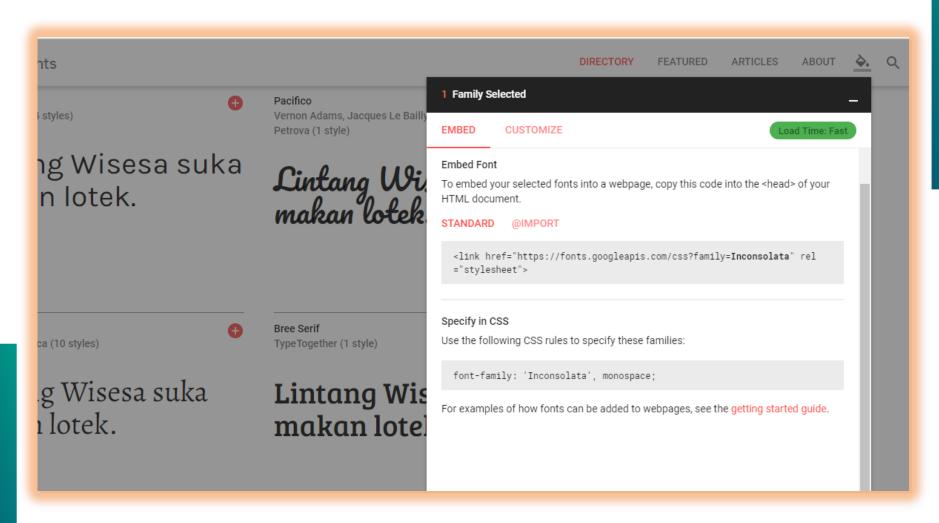
Google Fonts



fonts.google.com



Google Fonts



fonts.google.com



Google Fonts

```
<head>
<link href=</pre>
'https://fonts.googleapis.com/css?family=Tangerine|Sofia'
rel='stylesheet'>
<style>
h1 {
    font-family: 'Sofia';font-size: 50px;
    font-family: 'Tangerine';font-size: 50px;
</style>
</head>
<body>
<h1>Ini Font Sofia</h1>
<h2>Ini Font Tangerine</h2>
```



```
Lists
<head><style>
 ul {
   list-style-type: none;
</style></head>
<body>
 <l
   List #1
   List #2
   List #3
 </body>
```

■ list-style-type:

decimal, decimal-leading-zero, unset, lower-roman, upper-roman, square, etc.

Width & Height

```
<head><style>
   .konten {
      background-color: pink;
      width: 200px;
      height: 100px
</style></head>
<body>
   <div class="konten">
      Halo semuanya!
   </div>
</body>
```



Absolute Lengths

Unit Length

```
px: the unit for pixels
pt: the unit for points
cm: the unit for centimeters
mm: the unit for millimeters
```

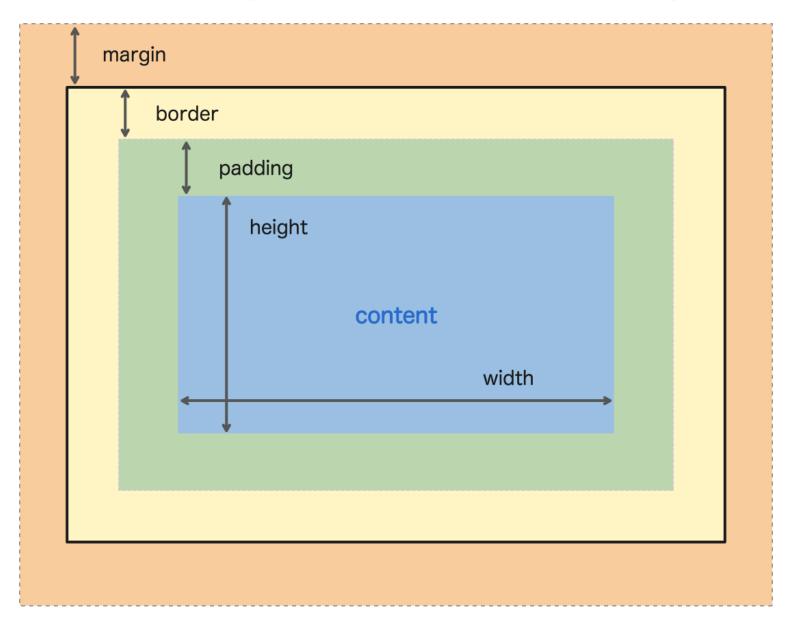
in: the unit for inches
pc: the unit for picas

Relative Lengths

```
%: the unit for percentages
em: relative to current font size
rem: relative to current font size on the element
vw: relative to the width of viewport divided by 100
vh: relative to the height of viewport/100
vmin: relative to the smaller viewport's dimension/100
vmax: relative to the larger viewport's dimension/100
ch: relative to 0
```

ex: relative to the x-height of font

Padding, Border & Margin



Padding

```
<head><style>
   div {
      background-color: lightblue;
   .tanpa-padding {
      padding: 0;
   .pakai-padding {
      padding: 25px;
</style></head>
<body>
   <div class="tanpa-padding">Tanpa padding</div>
   <br>
   <div class="pakai-padding">Pakai padding</div>
</body>
```



Padding

```
<head><style>
   div {
      background-color: lightblue;
      width: 900px;
      height: 500px;
   h1
      color: white;
      background-color: blue;
      padding-top: 10px;
      padding-bottom: 20px;
      padding-left: 25px;
      padding-right: 30px;
</style></head><body>
   <div><h1>Ini Padding</h1></div>
</body>
```



```
Border
<head><style>
   div {
      background-color: lightblue;
      width: 900px; height: 500px;
      color: white; background-color: blue;
      padding: 25px;
      border: 20px ridge yellow;
      border-radius: 10px;
      box-shadow: -0.5rem 0.5rem 1rem gray;
</style></head><body>
   <div><h1>Contoh Border</h1></div>
</body>
Border styles:
     solid, dotted, dashed, double, inset,
     outset, groove, ridge
```

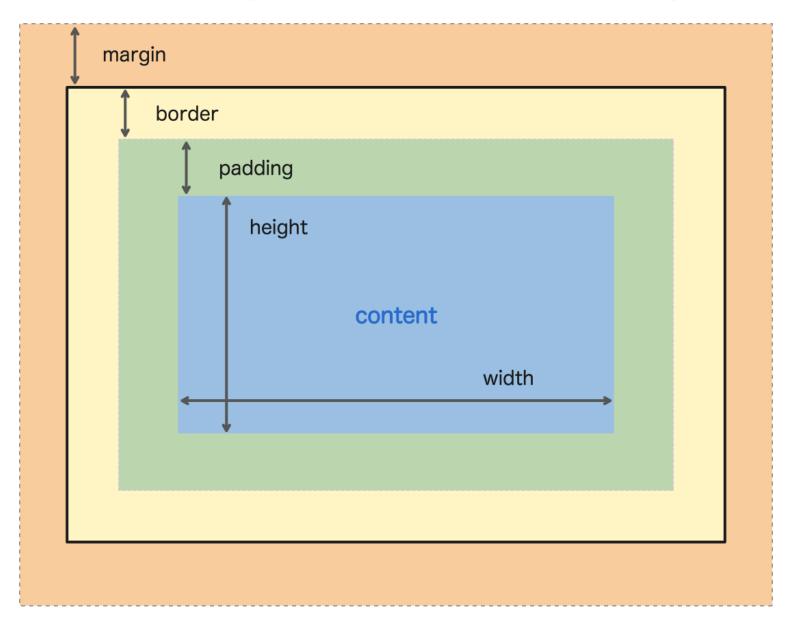
Margin

```
<head><style>
   div {
      background-color: lightblue;
      width: 900px; height: 500px;
      margin-left: 200px;
      color: white; background-color: blue;
      padding: 25px;
      border: 20px ridge yellow;
</style></head><body>
   <div><h1>Contoh Border</h1></div>
</body>
```

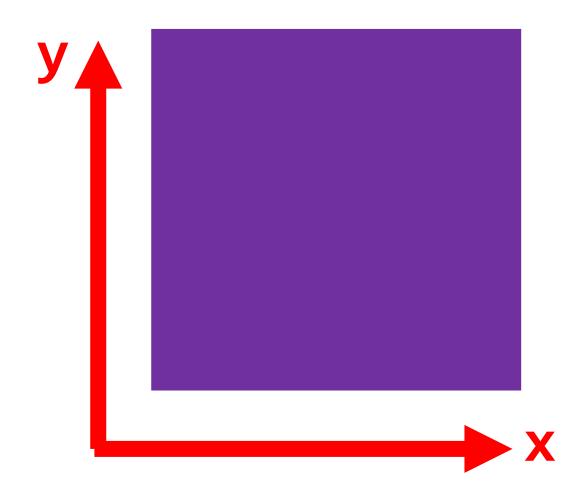
Margin:

margin-top, margin-bottom, margin-right

Padding, Border & Margin



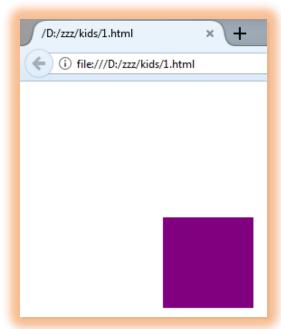
2D Transforms





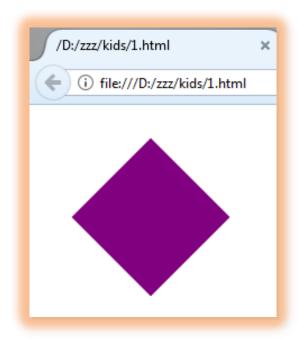
2D Transforms Translate

```
<head><style>
   .box {
      height: 100px;
      width: 100px;
      margin: 50px;
      background-color: purple;
      transform: translate(100px, 100px);
</style>
</head>
<body>
   <div class="box"></div>
</body>
</html>
```



2D Transforms *Rotate*

```
<head><style>
   .box {
      height: 100px;
      width: 100px;
      margin: 50px;
      background-color: purple;
      transform: rotate(45deg);
</style>
</head>
<body>
   <div class="box"></div>
</body>
</html>
```

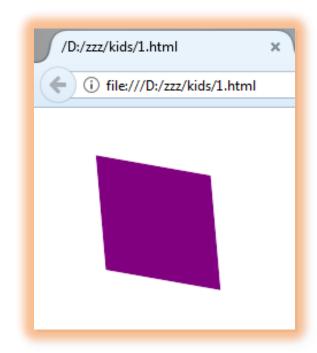


2D Transforms Scale

```
<head><style>
    .box {
       height: 100px;
       width: 100px;
       margin: 50px;
       background-color: purple;
       transform: scale(0.75, 1.25);
</style>
                                     /D:/zzz/kids/1.html
</head>
                                      i file:///D:/zzz/kids/1.html
<body>
   <div class="box"></div>
</body>
</html>
```

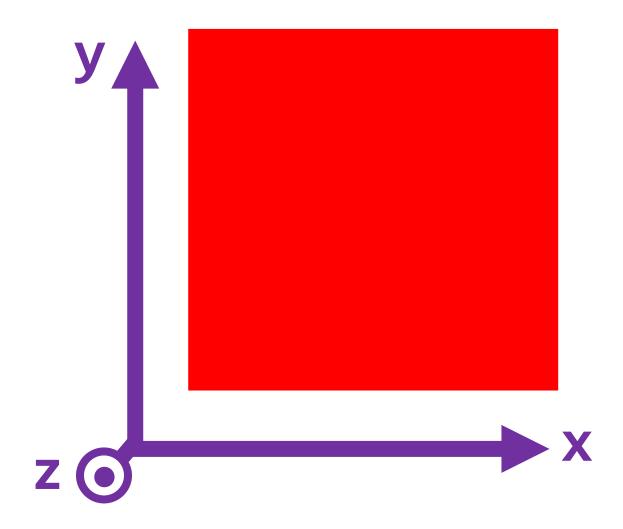
2D Transforms Skew

```
<head><style>
   .box {
      height: 100px;
      width: 100px;
      margin: 50px;
      background-color: purple;
      transform: skew(5deg, 10deg);
</style>
</head>
<body>
   <div class="box"></div>
</body>
</html>
```



```
2D Transforms
<head><style>
                           Multiple Transforms
   .box {
       height: 100px;
       width: 100px;
       margin: 50px;
       background-color: purple;
       transform: skew(15deg, 7deg)
                    rotate(125deg);
</style>
                                   /D:/zzz/kids/1.html
</head>
                                     i) file:///D:/zzz/kids/1.html
<body>
   <div class="box"></div>
</body>
</html>
```

3D Transforms





```
3D Transforms
<head><style>
                                 Translate X
  .box {
    width: 100px;
    height: 100px;
    margin: 50px;
    background-color: red;
    transform:
                   perspective(700px)
                   translateX(100px);
</style></head>
                                         ×
                              /D:/zzz/kids/1.html
<body>
                                → G ⊕
                                            file
  <div class="box"></div>
</body>
```

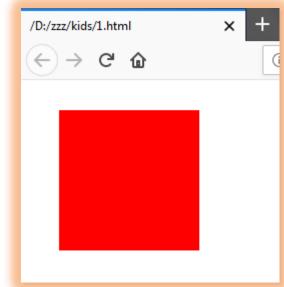
```
3D Transforms
<head><style>
                                 Translate Y
  .box {
    width: 100px;
    height: 100px;
    margin: 50px;
    background-color: red;
    transform: perspective(700px)
                    translateY(100px);
</style></head>
                                 /D:/zzz/kids/1.html
                                          ×
                                 < ) → C û
<body>
  <div class="box"></div>
</body>
```

```
3D Transforms
<head><style>
                              Translate Z
  .box {
    width: 100px;
    height: 100px;
    margin: 50px;
    background-color: red;
    transform:
                 perspective(700px)
                  translateZ(200px);
</style></head>
```

<div class="box"></div>

<body>

</body>



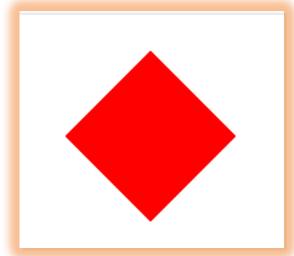
```
3D Transforms
<head><style>
                                Rotate X
  .box {
    width: 100px;
    height: 100px;
    margin: 50px;
    background-color: red;
    transform:
                 perspective(700px)
                  rotateX(45deg);
</style></head>
<body>
  <div class="box"></div>
</body>
```

```
3D Transforms
<head><style>
                                Rotate Y
  .box {
    width: 100px;
    height: 100px;
    margin: 50px;
    background-color: red;
    transform:
                 perspective(700px)
                  rotateY(45deg);
</style></head>
<body>
  <div class="box"></div>
</body>
```

```
3D Transforms
<head><style>
                                Rotate Z
  .box {
    width: 100px;
    height: 100px;
    margin: 50px;
    background-color: red;
    transform:
                 perspective(700px)
                  rotateZ(45deg);
</style></head>
<body>
```

<div class="box"></div>

</body>



Coding for Teens



