WEB PROGRAMMIRLEMESI

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MAZMUNY

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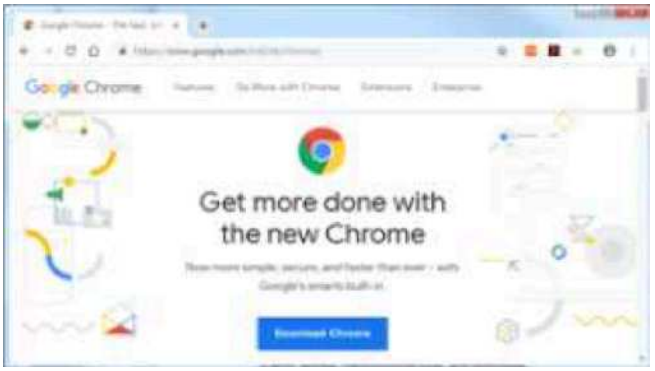
1. Adaptirleme web dizaýny

1.1 Web brauzerini ulanmak

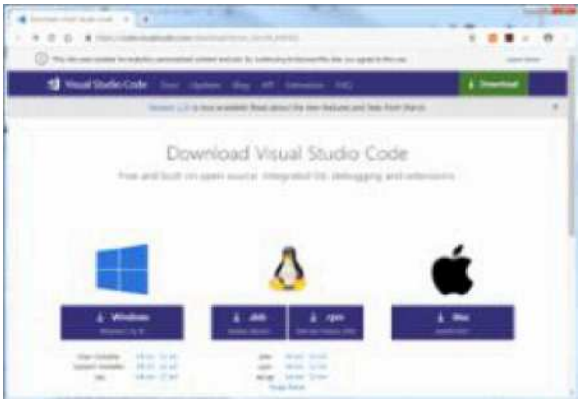
1.1.1 Google Chrome brauzeri

- https://www.google.com/intl/tm/chrome/



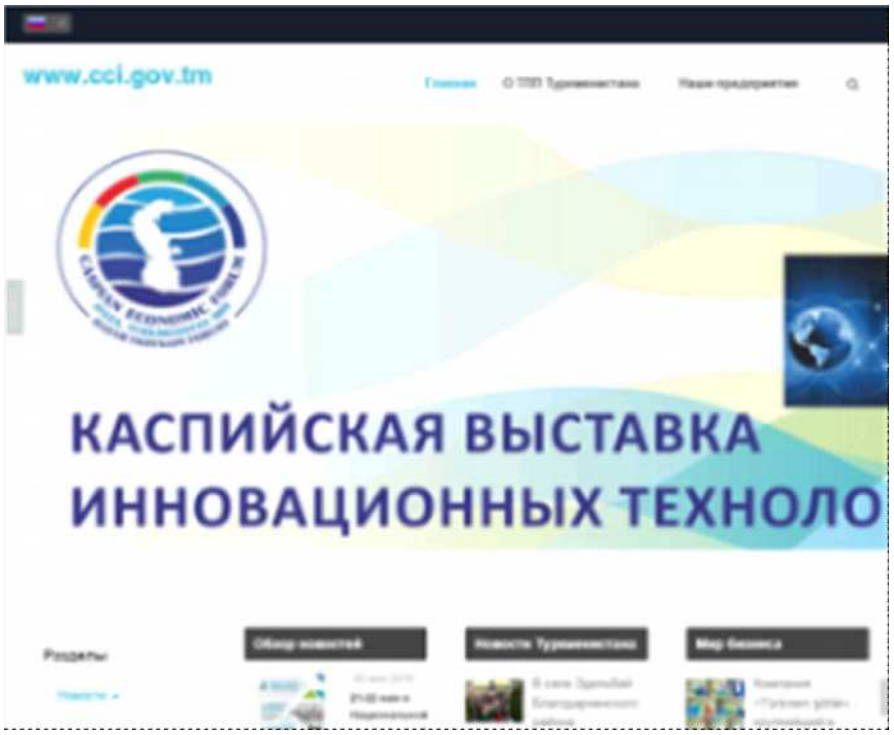
1.1.2 Tekst redaktoryny ýa-da IDE ulgamyny ulanmak

- https://code.visualstudio.com/



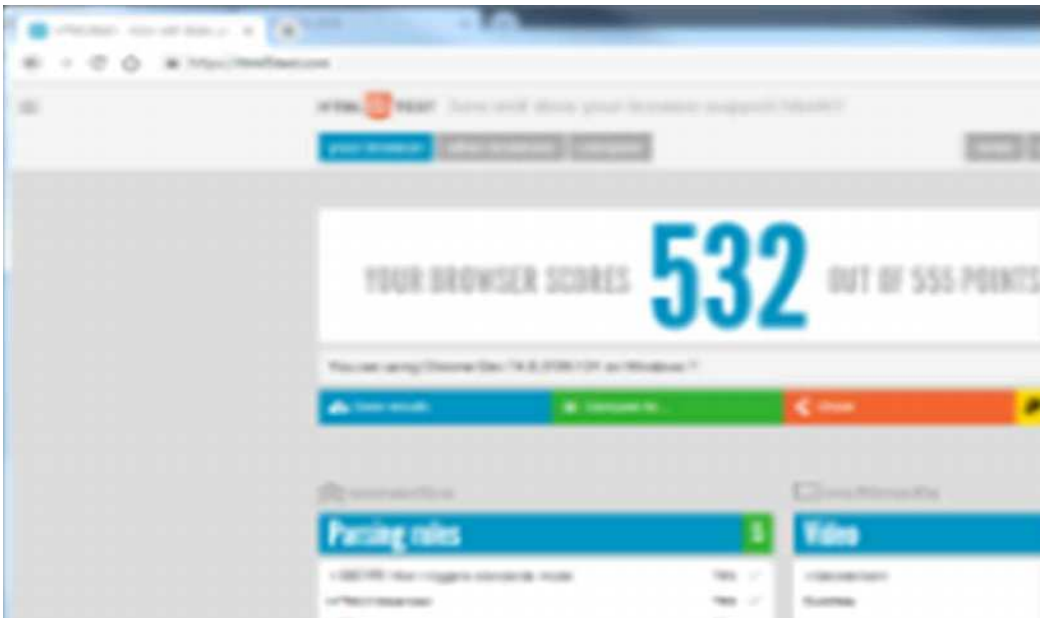
1.1.3 Adaptirleme web dizaýnyny kesgitlemek

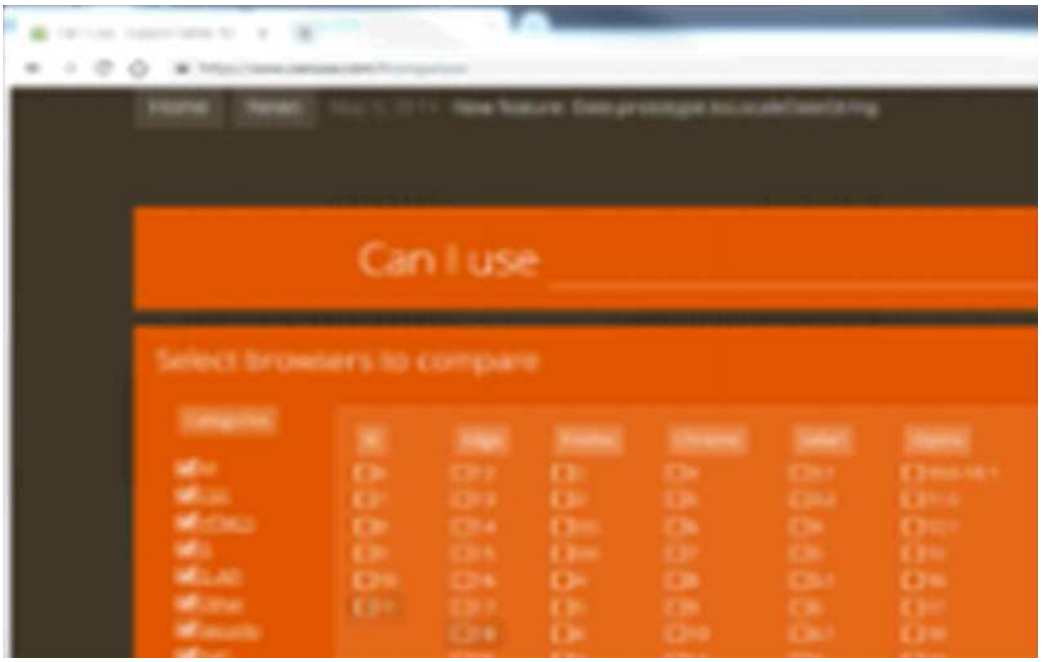
Bir bitewi çemeleşmede bar bolan üç usuly (flexible grid layout, flexible images/media, we media queries) birleşdirdi.



1.1.4 Brauzer goldaw derejelerini düzmek (HTML5, CSS3 ..)

- https://www.caniuse.com/#comparison
- https://html5test.com/





1.1.5 Ilkinji duýgur mysalymyz

1.1.6 Mediýa talaplarynyň sintaksisi

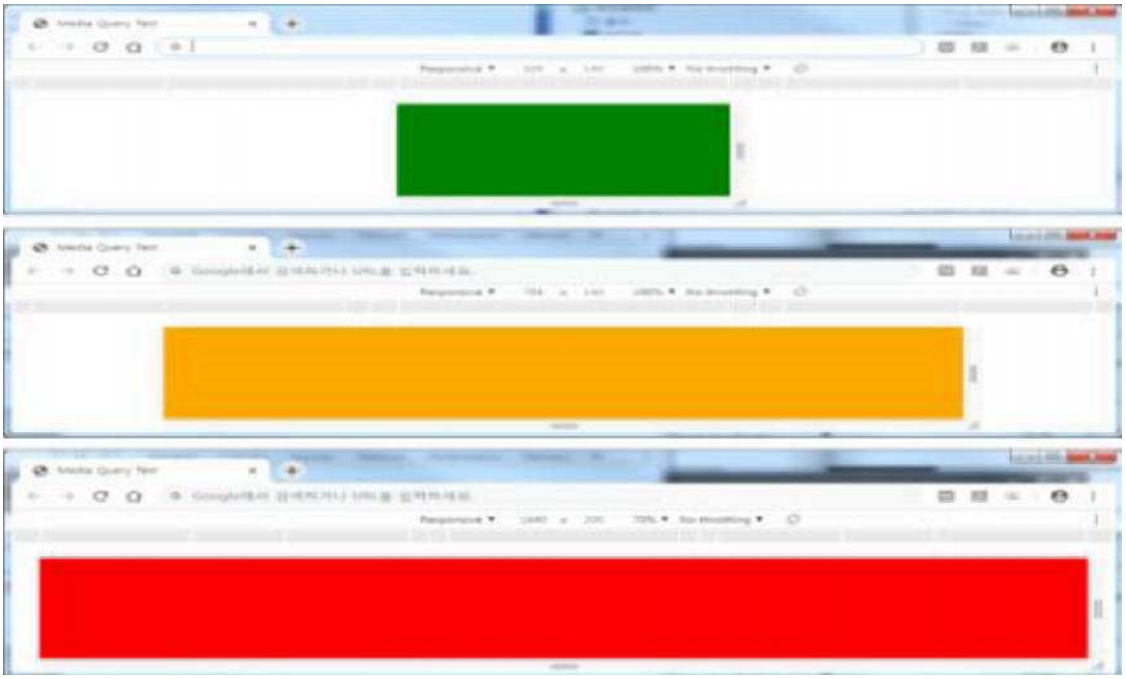
- **CSS mediýa talaplary**

```
<!doctype html>
<html class="no-js" lang="en">
    <head>
        <meta charset="utf-8">
        <title>Media Query Test</title>
        <meta name="viewport" content="width=device-width, initial-scale=1.0,
            minimum-scale=1.0, user-scalable=no">
        <link rel="stylesheet" href="main.css" type="text/css" media="all" />
    </head>
    <body>
    </body>
</html>
```

```
body {
  background-color: grey;
}
@media screen and (min-width: 320px) {
  body {
    background-color: green;
  }
}
@media screen and (min-width: 550px) {
  body {
    background-color: yellow;
  }
}
@media screen and (min-width: 768px) {
  body {
    background-color: orange;
  }
}
@media screen and (min-width: 960px) {
  body {
    background-color: red;
  }
}
```

1.1.7 Mediýa talaplarynyň sintaksisi

- **CSS Mediýa talaplary – Netije**



- **Mediýa talaplarynyň sintaksisi**

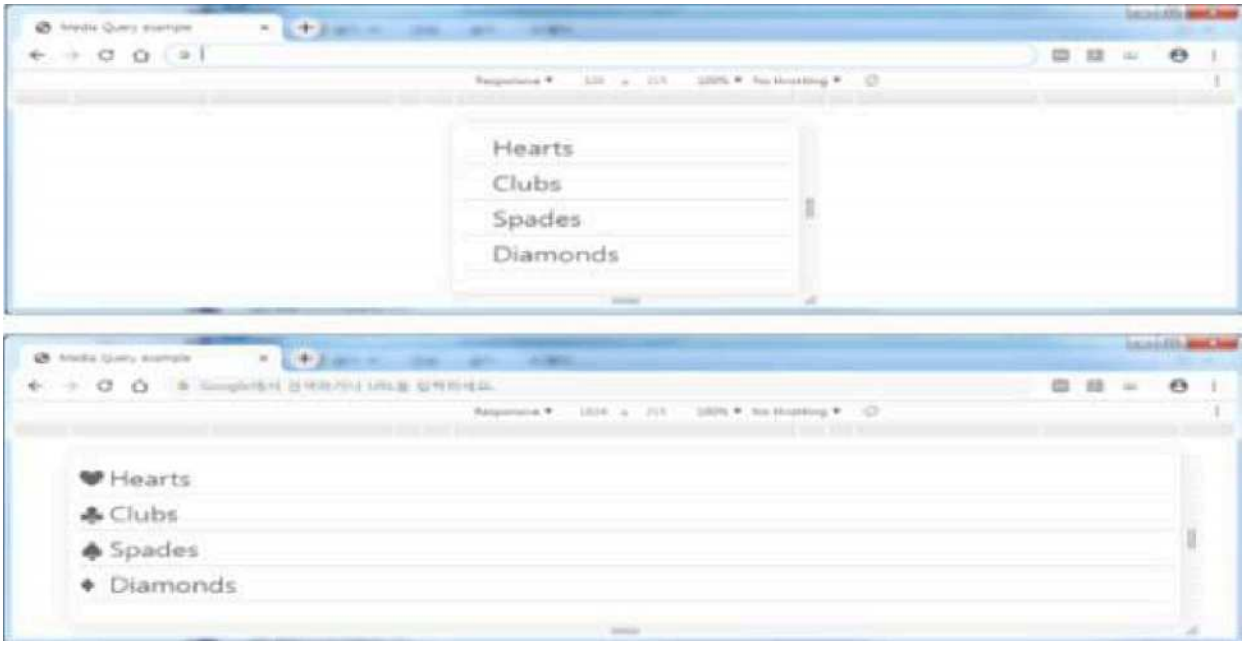
- Dizaýnlary üýtgetmek üçin media talaplaryny ulanmak

- Basgançakly stil tablisasy, ýokardaky ekwiwalent stilleri ýok edýär (ýokardaky stiller has anyk bolmadyk ýagdaýynda).

```html
<!doctype html>
<html class="no-js" lang="en">
    <head>
        <meta charset="utf-8">
        <title>Media Query example</title>
        <meta name="viewport" content="width=device-width">
        <link rel="stylesheet" href="main.css"/>
    </head>
    <body>
        <a href="#" class="CardLink CardLink_Hearts">Hearts</a>
        <a href="#" class="CardLink CardLink_Clubs">Clubs</a>
        <a href="#" class="CardLink CardLink_Spades">Spades</a>
        <a href="#" class="CardLink CardLink_Diamonds">Diamonds</a>
    </body>
</html>
```

```css
.CardLink {
    display: block;
    color: #666;
    text-shadow: 0 2px 0 #efefef;
    text-decoration: none;
    height: 2.75rem;
    line-height: 2.75rem;
    border-bottom: 1px solid #bbb;
    position: relative;
}

@media (min-width: 300px) {
    .CardLink {
        padding-left: 1.8rem;
        font-size: 1.6rem;
    }
}

.CardLink:before {
    display: none;
    position: absolute;
    top: 50%;
    transform: translateY(-50%);
    left: 0;
}

.CardLink_Hearts:before {
    content: "♥";
}

.CardLink_Clubs:before {
    content: "♣";
}

.CardLink_Spades:before {
    content: "♠";
}

.CardLink_Diamonds:before {
    content: "♦";
}

@media (min-width: 800px) {
    .CardLink:before {
        display: block;
    }
}
```

- Dizaýny üýtgetmek üçin mültimediýa talaplaryny ulanmak - Netije



- Mediýa talaplary bilen dürli CSS faýllaryna birikmek
- Meta belligini görkeziş penjiresi

```html
<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>Media Query test - which browser downloads which asset?</title>
  <meta name="description" content="Quick test to determine which browsers download all media queries">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <style type="text/css">
    div {
      display: none;
      background-color: green;
      height: 1rem;
      line-height: 1rem;
      font-size: 1rem;
      text-align: center;
    }
  </style>
  <link rel="stylesheet" media="(min-width: 300px)" href="w300.css" />
  <link rel="stylesheet" media="(min-width: 600px)" href="w600.css" />
  <link rel="stylesheet" media="(min-width: 900px)" href="w900.css" />
  <link rel="stylesheet" media="(min-width: 1200px)" href="w1200.css" />
</head>
<body>
  <div class="w300">width 300px file downloaded</div>
  <div class="w600">width 600px file downloaded</div>
  <div class="w900">width 900px file downloaded</div>
  <div class="w1200">width 1200px file downloaded</div>
</body>
</html>
```

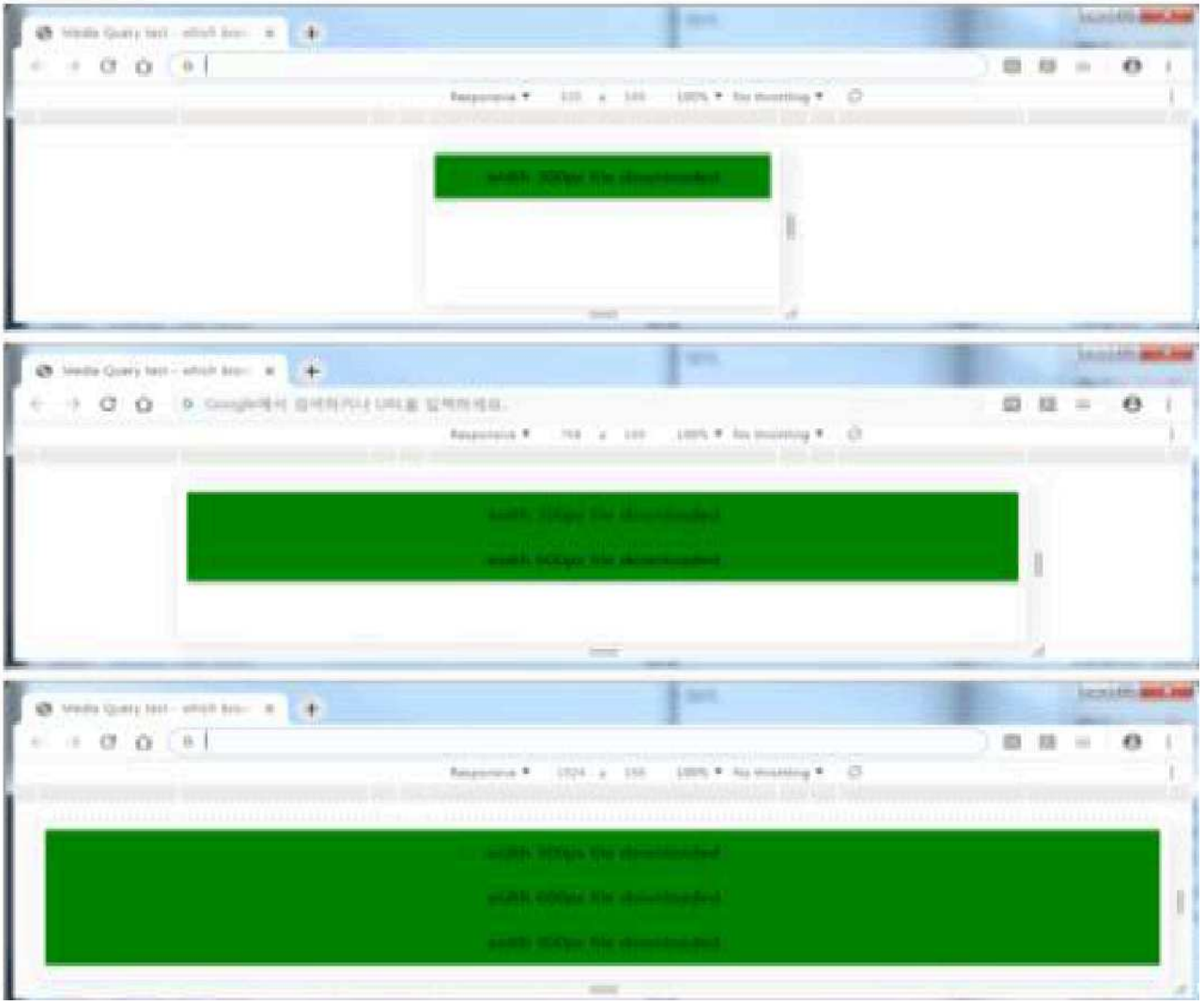
```css
.w300 {
    display: block;
}
```

```css
.w600 {
    display: block;
}
```

```css
.w900 {
    display: block;
}
```

```css
.w1200 {
    display: block;
}
```

- Mediýa soraglaryny ulanyp dürli CSS faýllaryna birikmek – Netije

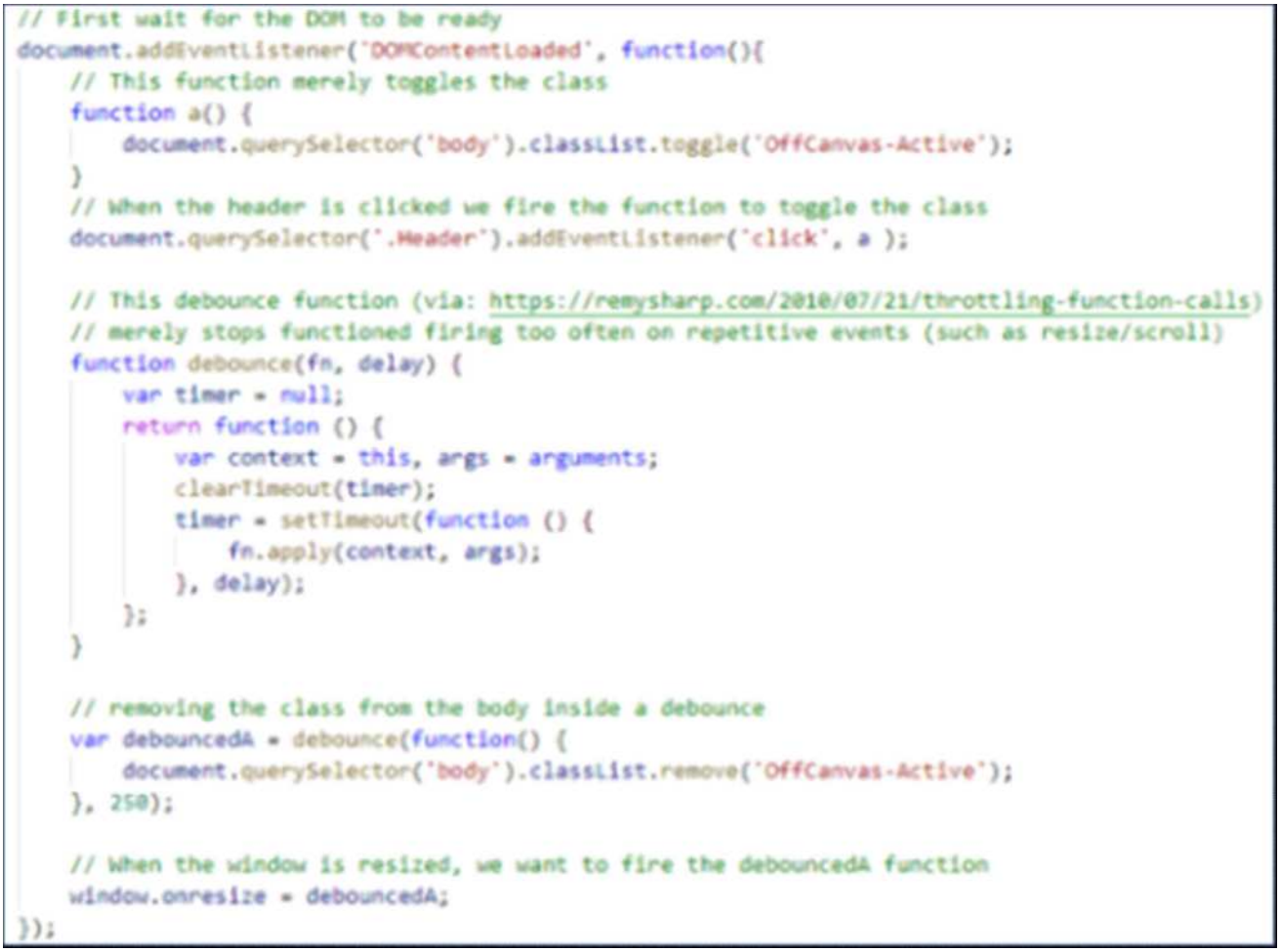


1.1.8 Kesgitlenen piksel dizaýnyny suwuk proporsional makete öwürmek

- Ethan Markott, Fluid Grids atly 2009-njy ýylda çap edilen makalasynda ýazylan (http://alistapart.com/article/FLUIDGRIDS)

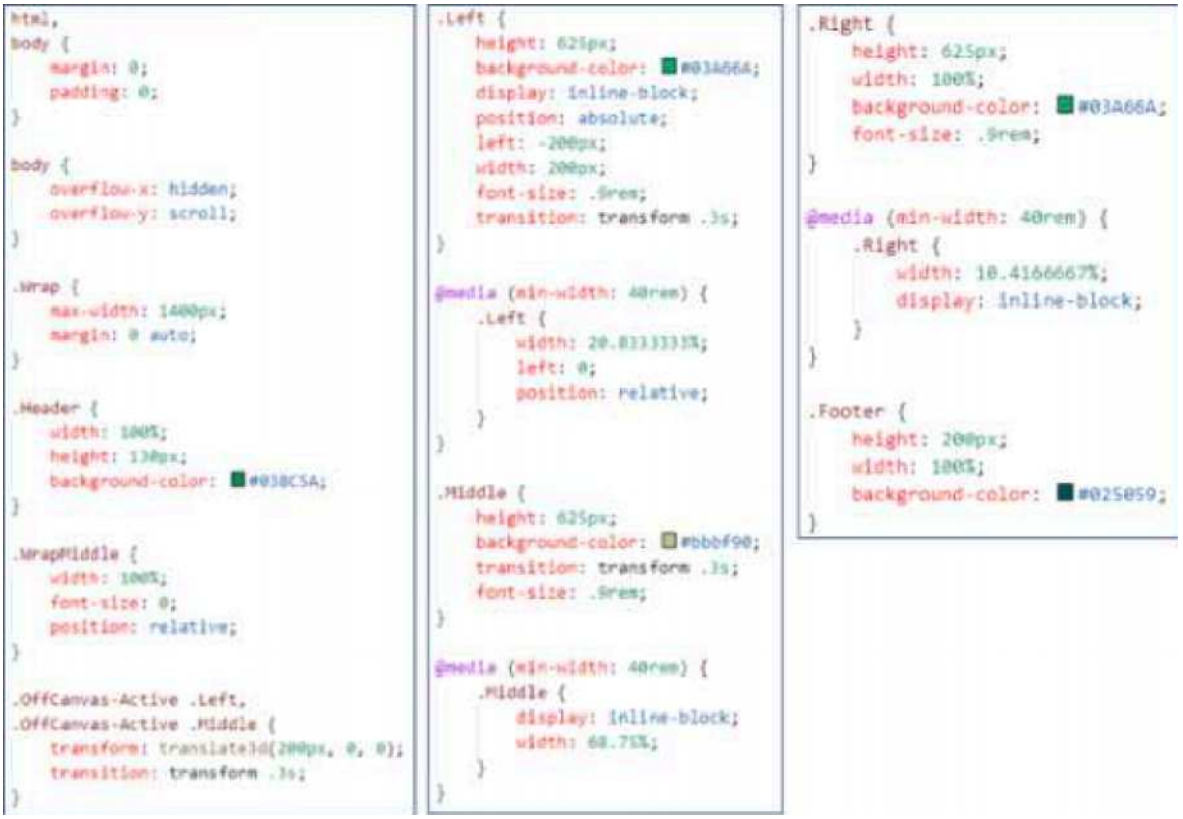
- maksat / kontekst = netije

[Mysal çeşmesi (index.html)]



```
// First wait for the DOM to be ready
document.addEventListener('DOMContentLoaded', function(){
    // This function merely toggles the class
    function a() {
        document.querySelector('body').classList.toggle('OffCanvas-Active');
    }
    // When the header is clicked we fire the function to toggle the class
    document.querySelector('.Header').addEventListener('click', a );

    // This debounce function (via: https://remysharp.com/2010/07/21/throttling-function-calls)
    // merely stops functioned firing too often on repetitive events (such as resize/scroll)
    function debounce(fn, delay) {
        var timer = null;
        return function () {
            var context = this, args = arguments;
            clearTimeout(timer);
            timer = setTimeout(function () {
                fn.apply(context, args);
            }, delay);
        };
    }

    // removing the class from the body inside a debounce
    var debouncedA = debounce(function() {
        document.querySelector('body').classList.remove('OffCanvas-Active');
    }, 250);

    // When the window is resized, we want to fire the debouncedA function
    window.onresize = debouncedA;
});
```

[Mysal çeşmesi (main.s)]

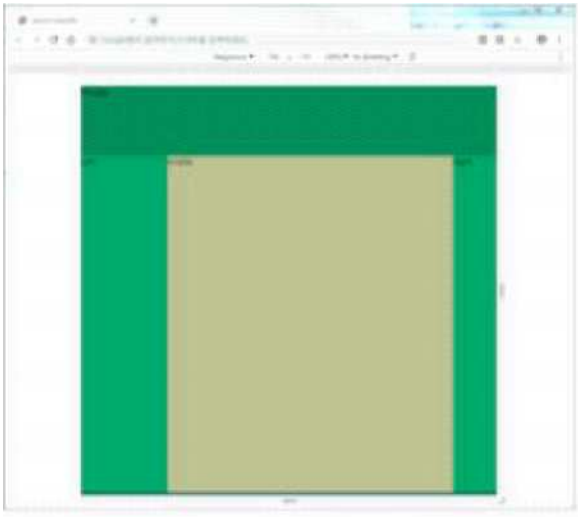


```
html,
body {
    margin: 0;
    padding: 0;
}

body {
    overflow-x: hidden;
    overflow-y: scroll;
}

.Wrap {
    max-width: 1400px;
    margin: 0 auto;
}

.Header {
    width: 100%;
    height: 130px;
    background-color: #038C5A;
}

.WrapMiddle {
    width: 100%;
    font-size: 0;
    position: relative;
}

.OffCanvas-Active .Left,
.OffCanvas-Active .Middle {
    transform: translateX(200px, 0, 0);
    transition: transform .3s;
}
```

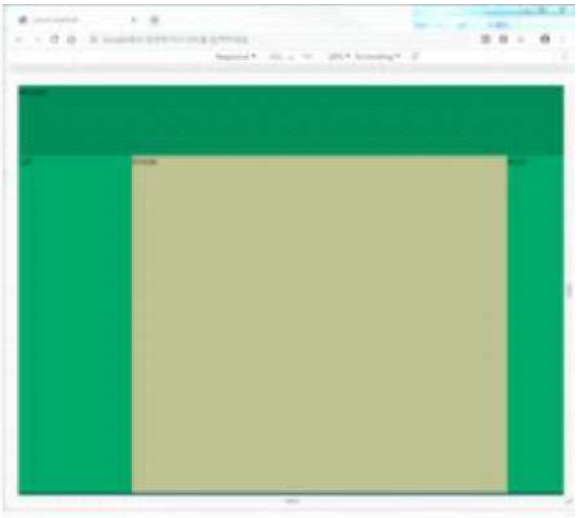
```
.Left {
    height: 625px;
    background-color: #03A66A;
    display: inline-block;
    position: absolute;
    left: -200px;
    width: 200px;
    font-size: .9rem;
    transition: transform .3s;
}

@media (min-width: 40rem) {
    .Left {
        width: 20.8333333%;
        left: 0;
        position: relative;
    }
}

.Middle {
    height: 625px;
    background-color: #bbbf90;
    transition: transform .3s;
    font-size: .9rem;
}

@media (min-width: 40rem) {
    .Middle {
        display: inline-block;
        width: 68.75%;
    }
}
```

```
.Right {
    height: 625px;
    width: 100%;
    background-color: #03A66A;
    font-size: .9rem;
}

@media (min-width: 40rem) {
    .Right {
        width: 10.4166667%;
        display: inline-block;
    }
}

.Footer {
    height: 200px;
    width: 100%;
    background-color: #025059;
}
```

[Mysal çeşmesi (styles.css)]



768 x 759



1024 x 759

[Mysal çeşmesiniň netijesi]

1.2 Flexbox

1.2.1 Näme üçin Flexbox gerek?

- **Setiriň içindäki bloklar we boşluklar**

1. Bir setiriň içindäki blokda dikligine ortaça mazmuny düzmegiň aňsat usuly ýok.
2. Iki meňzeş elementiniň bolmagy mümkin däl, olaryň biriniň giňligi, beýlekisiniň galan boşlugyny hiç hili kynçylyksyz doldurýar.

- **Ýüzýän**

1. Ýüzýän elementleriň giňligini göterim hökmünde kesgitläniňizde, hasaplanan giňlik brauzerleriň arasynda yzygiderli tegeleklenmeýär (käbir brauzerler ýokaryl, käbirleri aşak tegelenýär)
2. Köplenç ýokarky gutularyň / elementleriň daralmagynyň öňüni almak üçin ýüzýän sanlary "arassalamagyňyz" hökmanydyr.
3. Elemetleriň biri-biriniň içindäki yzygiderli we ygtybarly dik merkezleşdirilmesini üpjün ediň.

- **Tablisa we tablisanyň öýjügi**

1. Elementleriň töweregine goşmaça elementi gurşamak zerur (iň oňat dik merkezi nokadyny bellemek üçin, tablisa öýjügi tablisa formasyndaky elementleriň toplumynda bolmalydyr).
2. Displeý hökmünde düzülen elementler saralmaýar: köp hatarly tablisa öýjügi

1.2.2 Flexbox bilen başlamak

- **Ýokary ukyplylygyna umumy garaýyş**

1. Mazmuny dikligine aňsatlyk bilen merkezleşdirip biler.
2. Elementleriň wizual tertibini üýtgedip biler.
3. Gutynyň içindäki elementleri awtomatiki görnüşde paýlap we olaryň arasyndaky bar bolan ýeri awtomatiki belläp we deňleşdirip biler.
4. Sizi 10 ýaş kiçi edip görkezip biler (mümkin bolmadyk, ýöne stressi azaltmak üçin az sanly barlag synaglarynda (me) görkezildi).

1.2.3 Flexy almak (Flexbox)

2. Dört esasy aýratynlygy bar:
3. Ugry, deňleşdirilmegi, yzygiderliligi we çeýeligi.

1.2.4 Ideal dik merkezleşdirilen tekst - nusga çeşmesi

```
<!doctype html>
<html lang="en">
<head>
    <link href='http://fonts.googleapis.com/css?family=Oswald:700'
          rel='stylesheet' type='text/css'>
    <meta charset="utf-8">
    <title>Layout example</title>
    <meta name="viewport" content="width=device-width">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="CenterMe">
        Hello, I'm centered with Flexbox!
    </div>
</body>
</html>
```

```
html,
body {
    margin: 0;
    padding: 0;
}

.CenterMe {
    background-color: indigo;
    color: #ebebeb;
    font-family: 'Oswald', sans-serif;
    font-size: 2rem;
    text-transform: uppercase;
    height: 200px;
    display: flex;
    align-items: center;
    justify-content: center;
}
```

- **Gyzyklanmagyň üç aýratynlygy:**

- display: flex: Bu elementi Flexbox hökmünde düzýär (gutynyň ýerine, setiriň içindäki gutusy we ş.m.).
- align-item: Bu Flexbox-yň içindäki elementleri diagonaly ok boýunça deňleşdirýär (mysalymyzdaky teksti dikligine merkezleşdirýär).
- justify-content: Bu, esasy mazmun okunyň merkezleşdirilmegini düzýär.)

1.2.5 Ideal dik merkezleşdirilen tekst

- Dikligine merkezleşdirilen ideal tekst – Mysal çeşmesiniň netijesi

1.2.6 Ýerini üýtgetme (Offset) elementleri

- Ýerini üýtgetme elementleri - Çeşme mysaly

```html
<!doctype html>
<html lang="en">
<head>
    <link href='http://fonts.googleapis.com/css?family=Oswald:700'
          rel='stylesheet' type='text/css'>
    <meta charset="utf-8">
    <title>Layout example</title>
    <meta name="viewport" content="width=device-width">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="MenuWrap">
        <a href="#" class="ListItem">Home</a>
        <a href="#" class="ListItem">About Us</a>
        <a href="#" class="ListItem">Products</a>
        <a href="#" class="ListItem">Policy</a>
        <a href="#" class="LastItem">Contact Us</a>
    </div>
</body>
</html>
```

```css
html, body {
    margin: 0;
    padding: 0;
}

.MenuWrap {
    background-color: indigo;
    font-family: 'Oswald', sans-serif;
    font-size: 1rem;
    min-height: 2.75rem;
    display: flex;
    align-items: center;
    padding: 0 1rem;
}

.ListItem, .LastItem {
    color: #ebebeb;
    text-decoration: none;
}

.ListItem {
    margin-right: 1rem;
}

.LastItem {
    margin-left: auto;
}
```

①

- Ýerini üýtgetme (Offset) elementleri - Çeşmäniň netijesi

1.2.7 Elementleriň tertibini tersine öwürmek: aşakdaky mazmuny redaktirläniňizden soň

- flex-direction goşmak: ters setir;
- margin-left üýtgetmesi: awtomatiki sag gyra boşlygy (margin-right) bilen: awtomatiki

1.2.8 Olaryň dik bolmagyny islesek näme etmeli?

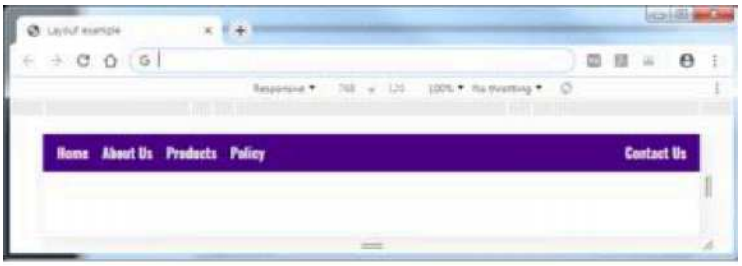
- flex-direction üýtgetmesi: column bilen üýtgetmek
- Öçürmek

1.2.9 Ters garşylykly sütün

Flex-direction bilen üýtgetme: tersine sütün

1.2.10 Dürli media soraglarynda dürli Flexbox maketleri

- **Mysal çeşmäniň netijesi**



- **Mysal çeşmäniň netijesi**

```css
html, body {
    margin: 0;
    padding: 0;
}

.MenuWrap {
    background-color: indigo;
    font-family: 'Oswald', sans-serif;
    font-size: 1rem;
    min-height: 2.75rem;
    display: flex;
    flex-direction: column;
    align-items: center;
    padding: 0 1rem;
}

@media (min-width: 31.25em) {
    .MenuWrap {
        flex-direction: row;
    }
}

.ListItem, .LastItem {
    color: #ebebeb;
    text-decoration: none;
}

@media (min-width: 31.25em) {
    .ListItem {
        margin-right: 1rem;
    }
    .LastItem {
        margin-left: auto;
    }
}
```

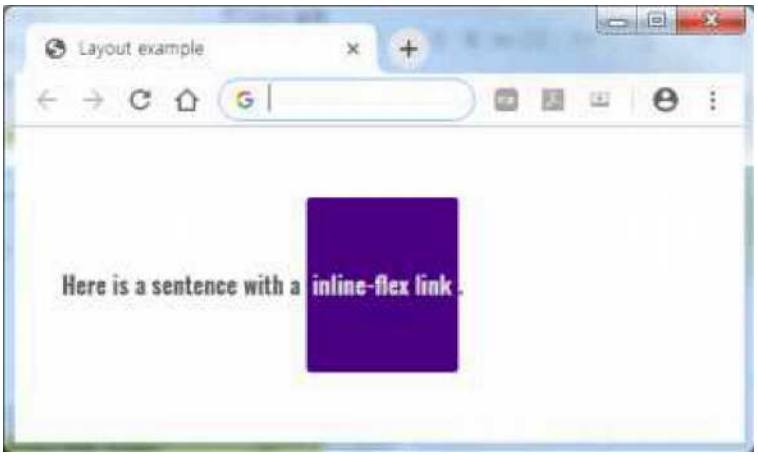
1.2.11 Setir içindäki Flex

- “Flexbox”, setiriň içindäki gutujygy we setiriň içerki tablisany doldurmak üçin içerki görnüşi bar.
- display: inline-flex

```html
<!doctype html>
<html lang="en">
<head>
    <link href='http://fonts.googleapis.com/css?family=Oswald:700'
          rel='stylesheet' type='text/css'>
    <meta charset="utf-8">
    <title>Layout example</title>
    <meta name="viewport" content="width=device-width">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <p>Here is a sentence with a <a href="http://www.w3.org/TR/css-flexbox-1/#flex-containers"
        class="InlineFlex">inline-flex link</a>.</p>
</body>
</html>
```

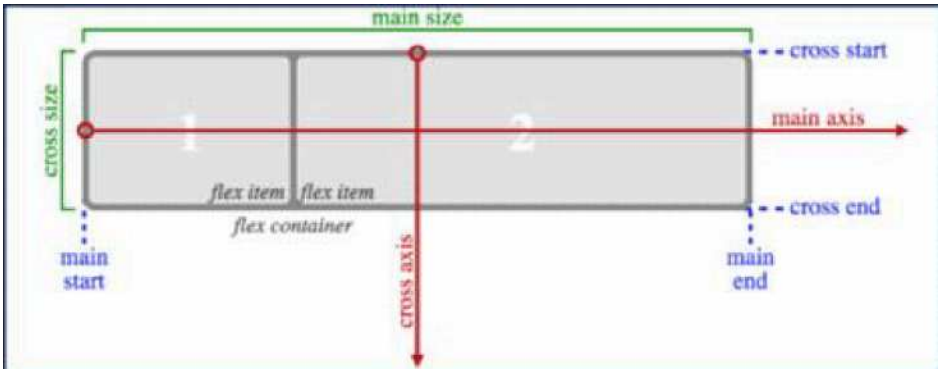
```css
html, body {
    margin: 0;
    padding: 1rem;
    font-family: 'Oswald', sans-serif;
}

p {
    color: #555;
}

.InlineFlex {
    display: inline-flex;
    align-items: center;
    height: 120px;
    padding: 0 4px;
    background-color: indigo;
    text-decoration: none;
    border-radius: 3px;
    color: #ddd;
}
```

- **Inline-flex - Mysal çeşmesiniň netijesi**



1.2.12 Flexbox deňleşdiriş aýratynlyklary

- Flexbox alignment bilen düşünilmegi zerur bolan iň möhüm zat ok düşünjesidir
- Üns berilmegi zerur bolan iki esasy ok bar, "major axis " we "transverse axis"



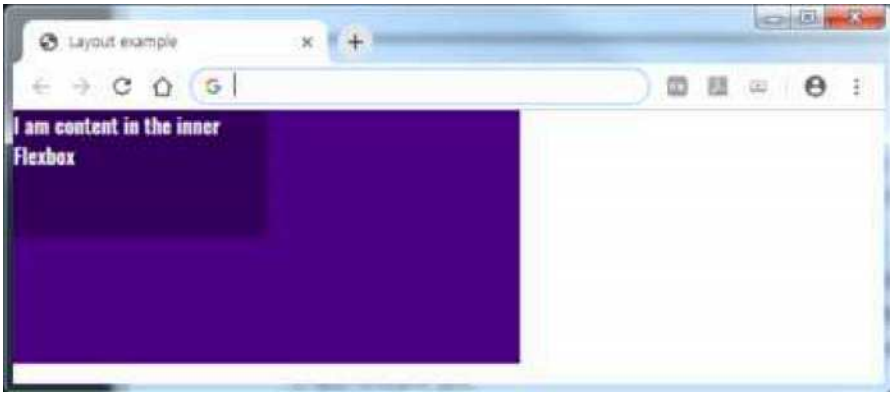
1.2.13 Flexbox deňleşdiriş aýratynlyklary

- **Mysal çeşmesi**

```
<!doctype html>
<html lang="en">
<head>
    <link href='http://fonts.googleapis.com/css?family=Oswald:700'
          rel='stylesheet' type='text/css'>
    <meta charset="utf-8">
    <title>Layout example</title>
    <meta name="viewport" content="width=device-width">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="FlexWrapper">
        <div class="FlexInner">I am content in the inner Flexbox</div>
    </div>
</body>
</html>
```

```css
html, body {
    margin: 0;
    padding: 0;
    font-family: 'Oswald', sans-serif;
    color: #ebebeb;
}

.FlexWrapper {
    background-color: indigo;
    display: flex;
    height: 200px;
    width: 400px;
}

.FlexInner {
    background-color: #34005B;
    display: flex;
    height: 100px;
    width: 200px;
}
```

- **Mysal çeşmesiniň netijesi**



1.2.14 Align-Items aýratynlygy

- Elementleri transwers okda ýerleşdirmek
- Mümkin deňleşdirme derejeleri

1. flex-start: Bir elementi flex-start-a bellemek, flex gutysynyň "Start" gyrasynda başlamagyna sebäp bolýar

2. flex-end: flex-end derejesini bellemek elementiniň sazlamasy, elementi flex konteýneriň ujuna deňleşdirýär

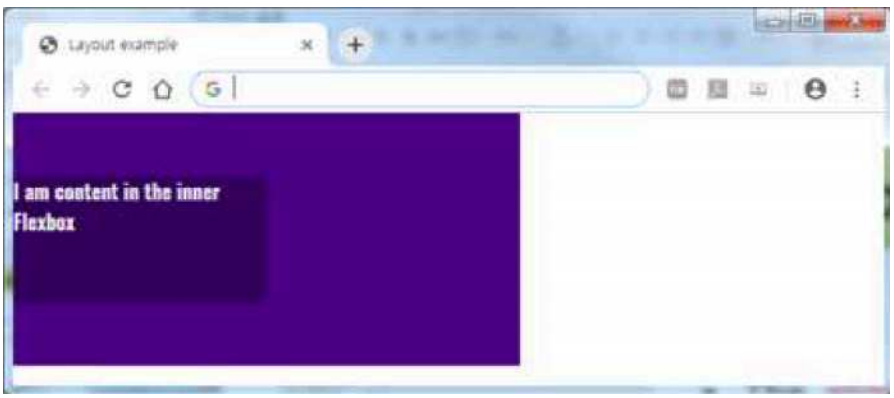
3. center: flex gutysynyň ortasyna goýýar

4. baseline: Gutynyň ähli elementlerini asyl nusgasyna gabat getirmek üçin sazlaýar

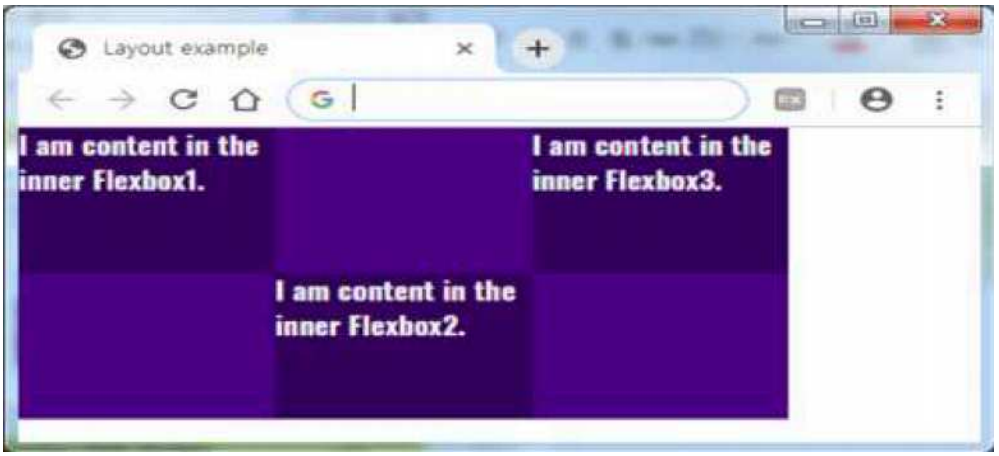
5. stretch: elementleriň flex gutysynyň ululygyna (transwers okda) uzalmagyna mümkinçilik berýär

- Aşakdakylary öňki mysal çeşmesine goşuň .FlexWrapper.align-items: center;

- **Mysal çeşmesiniň netijesi**



- **Mysal çeşmesiniň netijesi**



1.2.15 Justify-Content aýratynlygy

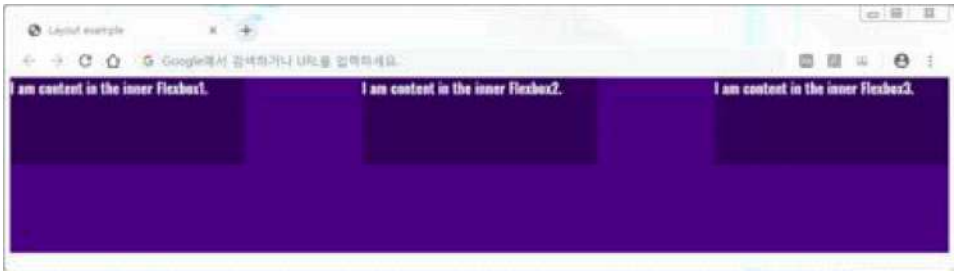
- Esasy oklaryň deňleşdirilmegi justify-content bilen dolandyrylýar.
- flex-start, flex-end, merkez (center).
- space-between: Elementleriň arasynda deň mukdarda boşluk ýerleşdirýär.
- Space-around: öz töweregine boşluk goýýar.

```
<!doctype html>
<html lang="en">
<head>
    <link href='http://fonts.googleapis.com/css?family=Oswald:700'
          rel='stylesheet' type='text/css'>
    <meta charset="utf-8">
    <title>Layout example</title>
    <meta name="viewport" content="width=device-width">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="FlexWrapper">
        <div class="FlexItems">I am content in the inner Flexbox1.</div>
        <div class="FlexItems">I am content in the inner Flexbox2.</div>
        <div class="FlexItems">I am content in the inner Flexbox3.</div>
    </div>
</body>
</html>
```

```css
html, body {
    margin: 0;
    padding: 0;
    font-family: 'Oswald', sans-serif;
    color: #ebebeb;
}

.Flexwrapper {
    background-color: indigo;
    display: flex;
    justify-content: space-between;
    height: 200px;
    width: 100%;
}

.FlexItems {
    background-color: #34005B;
    display: flex;
    height: 100px;
    width: 25%;
}
```

- Justify-content aýratynlygy: Mysal çeşmesiniň netijesi

[justify-content: aralaryndaky boşluk (space-between);]



[justify-content : töweregindäki boşluk (space-around);]

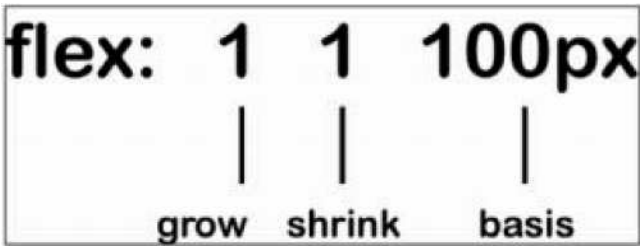
1.2.16 Flex aýratynlygy

- Bu flex elementler üçin “width” aýratynlygyny ulandyk.

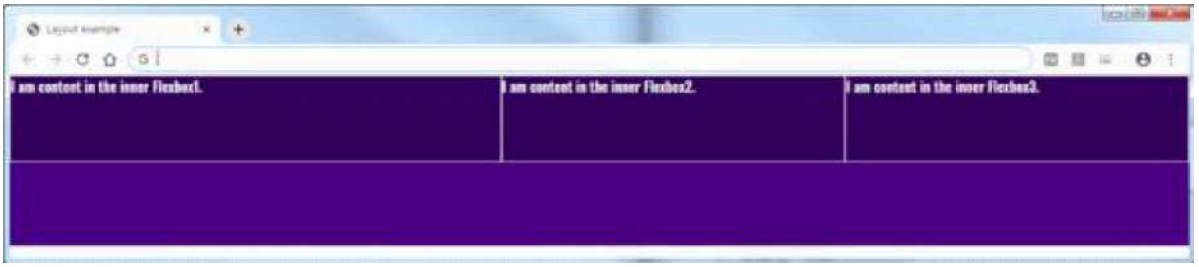
- Şeýle-de bolsa, “width” ýa-da “flex” aýratynlygyny kesgitlemek hem mümkin

- Üç aýratyn aýratynlyk:

1. Flex-grow, boş ýer bar bolsa ulalyp bilýän beýleki flex elementlerine gabat gelýän mukdar.
2. Flex-shrink, ýeterlik boş ýer bolmasa, “flex” elementiň beýleki “flex” elementlere garanyňda kiçelip bilýän mukdarydyr.
3. Flex-basis flex elementiň ululygynyň esasy ölçegidir



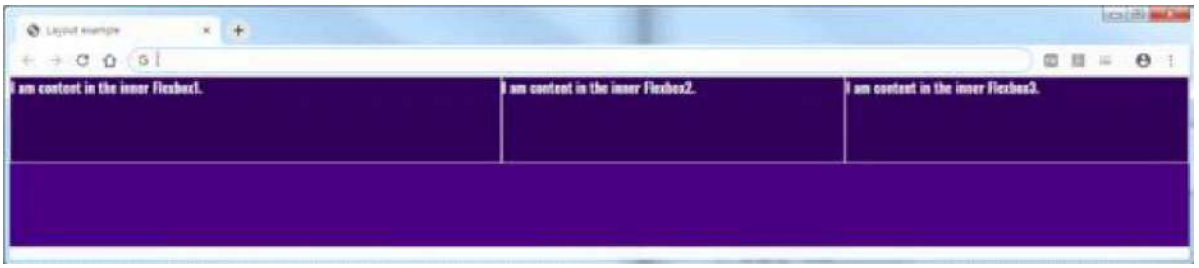
- **Mysal çeşmesiniň netijesi**



- Flex aýratynlygy
- Mysal çeşmesi

```css
html, body {
    margin: 0;
    padding: 0;
    font-family: 'Oswald', sans-serif;
    color: #ebebeb;
}

.FlexWrapper {
    background-color: indigo;
    display: flex;
    justify-content: space-around;
    height: 200px;
    width: 100%;
}

.FlexItems {
    border: 1px solid #ebebeb;
    background-color: #34005B;
    display: flex;
    height: 100px;
}

.FlexOne {
    flex: 2 0 auto;
}

.FlexTwo, .FlexThree {
    flex: 1 0 auto;
}
```

- **Mysal çeşmesiniň görnüşleri**



1.2.17 Ýönekeý ýelmeşýän aşaky sözbaşy

- **Mysal çeşmesi**

```
html, body {
    margin: 0;
    padding: 0;
}

html {
    height: 100%;
}

body {
    font-family: 'Oswald', sans-serif;
    color: #ebebeb;
    display: flex;
    flex-direction: column;
    min-height: 100%;
}

.MainContent {
    flex: 1;
    color: #333;
    padding: .5rem;
}

.Footer {
    background-color: violet;
    padding: .5rem;
}
```

- **Mysal çeşmeleriniň netijesi**

1.2.18 Çeşmeleriň tertibini üýtgetmek

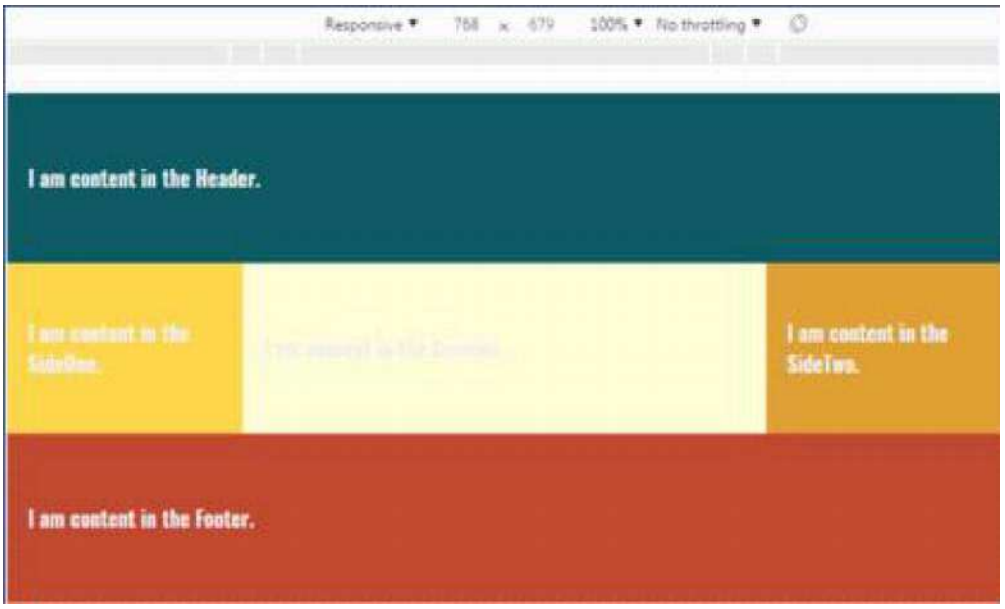
- **Mysal çeşmesi**

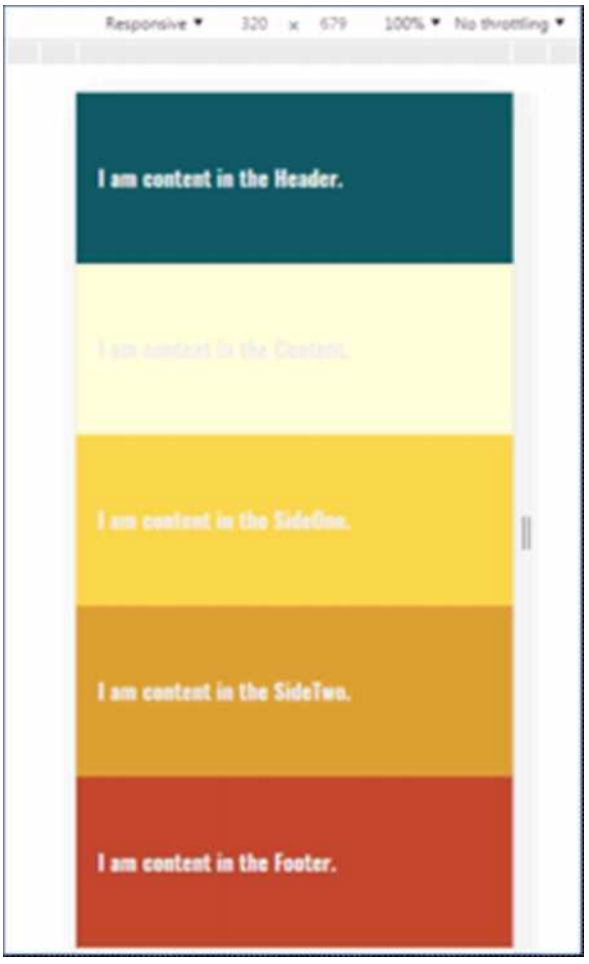
```
<!doctype html>
<html lang="en">
<head>
    <link href="http://fonts.googleapis.com/css?family=Oswald:700"
          rel="stylesheet" type='text/css'>
    <meta charset="utf-8">
    <title>Layout example</title>
    <meta name="viewport" content="width=device-width">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="FlexWrapper">
        <div class="FlexItems FlexContent">I am content in the Content.</div>
        <div class="FlexItems FlexSideOne">I am content in the SideOne.</div>
        <div class="FlexItems FlexSideTwo">I am content in the SideTwo.</div>
        <div class="FlexItems FlexHeader">I am content in the Header.</div>
        <div class="FlexItems FlexFooter">I am content in the Footer.</div>
    </div>
</body>
</html>
```

```css
html, body {
    margin: 0;
    padding: 0;
    font-family: 'Oswald', sans-serif;
    color: #ebebeb;
}

.FlexWrapper {
    background-color: indigo;
    display: flex;
    flex-direction: column;
}

.FlexItems {
    display: flex;
    align-items: center;
    min-height: 6.25rem;
    padding: 1rem;
}

.FlexHeader {
    background-color: #105063;
    order: 1;
}

.FlexContent {
    background-color: #FFFAD5;
    order: 2;
}

.FlexSideOne {
    background-color: #FFD34E;
    order: 3;
}
```

```css
.FlexSideTwo {
    background-color: #DB9E36;
    order: 4;
}

.FlexFooter {
    background-color: #BD4932;
    order: 5;
}

@media (min-width: 30rem) {
    .FlexWrapper {
        flex-flow: row wrap;
    }
    .FlexHeader {
        width: 100%;
    }
    .FlexContent {
        flex: 1;
        order: 3;
    }
    .FlexSideOne {
        width: 150px;
        order: 2;
    }
    .FlexSideTwo {
        width: 150px;
        order: 4;
    }
    .FlexFooter {
        width: 100%;
    }
}
```

- **Mysal çeşmesiniň netijesi**





1.2 Adaptirlenen suratlar

- Ulanyjylara enjamlaryna we daşky gurşawyna görä laýyk görnüşi üpjün etmek;

- **Gizlin içerki aýratynlygy:**

https://html.spec.whatwg.org/multipage/embedded-content.html

- Başga bir çözgüt talap edilende şekilleri üýtgetmek
- Şekili üýtgetmek, doly ýagdaýda elýeterli görnüş meýdanyna baglydyr
- Başga bir çözgüt talap edilende şekilleri üýtgetmek

```
[Srcset bilen ýönekeý çözgüt üýtgemegi]
<img src="scones_small.jpg" srcset="scones_medium.jpg 1.5x,
                scones_ large.jpg 2x" alt="Scones taste amazing">
```

```
- Srcset we ölçegleri bilen ösen kommutirleme
<img srcset="scones-small.jpg 450w, scones-medium.jpg 900w"
                sizes="(min-width: 17em) 100vw, (min-width: 40em) 50vw"
                src="scones-small. jpg" alt="Scones">
```

- şekili üýtgetmek, doly ýagdaýda elýeterli görnüş meýdanyna baglydyr

```
“Picture” elementi bilen surat dolandyryşy;
<picture>
                <source media="(min-width: 30em)" srcset="cake-table.jpg">
                <source media="(min-width: 60em)" srcset="cake-shop.jpg">
                <img src="scones.jpg" alt="One way or another, you WILL get cake.">
</picture>
```

2. HTML5

HTML5?
HTML-iň iň soňky wersiýasy, web sahypalaryny döretmek üçin ulanýan bellik dilimiz.

HTML5 belligi - häzirki zaman brauzerleriň hemmesi tarapyndan düşünilýär.
Ähli döwrebap brauzerler HTML5-iň täze semantik elementlerini ulanýarlar (täze gurluş elementleri, wideo we ses bellikleri).

2.1 HTML5 sahypasyny dogry işletmek

```
<!DOCTYPE html>
<html lang = “en”>
        <head>
            <meta charset = utf-8>
```

2.1.1 Resminamanyň görnüşi

Brauzer üçin resminamanyň görnüşini HTML 4.01 sahypalaryndan geçirmegiň bir usulydyr.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

2.1.2 HTML belligi we lang atributy

- Doctype görnüşi habar berlenden soň, html belligini açýarys; kök belligi

- Lang aýratynlygyny ulanmak

- resminamanyň dilini kesgitlemek üçin;
- elementiň mazmuny we teksti öz içine alýan elementiň islendik atributlary üçin esasy dili kesgitleýär

- <head> bölümini açyň

2.1.3 Simwollary kodlamak

- Simwol kodlamagyny görkeziň
- Kodlamagyň derejesi hemişe diýen ýaly utf-8 bolýar

2.2 HTML5-niň aňsat ulanylyşy

<link href="CSS/main.css" rel="stylesheet" type="text/css" />

<link href=CSS/main.css rel=stylesheet >

<img SRC=frontCarousel.png aLt=frontCarousel>

2.2.1 Hoş geldiňiz habarynyň hemişe <a> belligi bar

- indi <a> belliginde birnäçe elementi gurşap bilersiňiz

```
<h2><a href="index.html">The home page</a></h2>
<p><a href="index.html">This paragraph also links to the home
    page</ a></p>
<a href="index.html"><img src="home-image.png" alt="home-slice"
    /></a>
```

```
<a href="index.html">
    <h2>The home page</h2>
    <p>This paragraph also links to the home page</p>
    <img src="home-image.png" alt="home-slice" />
</a>
```

2.3 HTML5-de täze semantika elementleri

- semantika, belligimizi manyly etmek prosesi

- **<main> elementi**

- sahypanyň esasy mazmunyny ýa-da web programmasynyň esasy bölegini örtmek üçin ulanylýar
- her sahypada birden köp baş sahypa bolmaly däl

- Makala, gyra, ýokarky sözbaşy, aşaky sözbaşy, nawigasiýa ýa-da sözbaşy ýaly käbir beýleki HTML5 semantik elementleri aşaky element hökmünde ulanylmaly däldir. “nav” ýa-da “header”.

- **<section> elementi**
- bir resminamanyň ýa-da goşundynyň umumy bölegini beýan etmek üçin ulanylýar

- **<nav> elementi**
- esasy nawigasiýa baglanyşyklaryny beýleki sahypalara ýa-da bir sahypadaky bölümlere geçirmek üçin ulanylýar

- **<article> elementi**
- <article> elementi <section> elementi bilen bilelikde aňsatlyk bilen bulaşyp biler
- özbaşdak mazmuny gaplamak üçin ulanylýar

- **<aside> elementi**
- tangensial hökmünde mazmun bilen baglanyşykly bolan mazmun üçin ulanylýar
- baha teklipleri, mahabatlar we nawigasiýa elementleri toparlary üçin laýyk hasaplanýar

- **<figure> we <figcaption> elementler**
- <figure> elementi bu kiçijik garaşsyz blogy örtmek üçin ulanylýar.
- t <figcaption>, esasy <figure> elementi üçin sözbaşy üpjün etmek üçin ulanylýar.

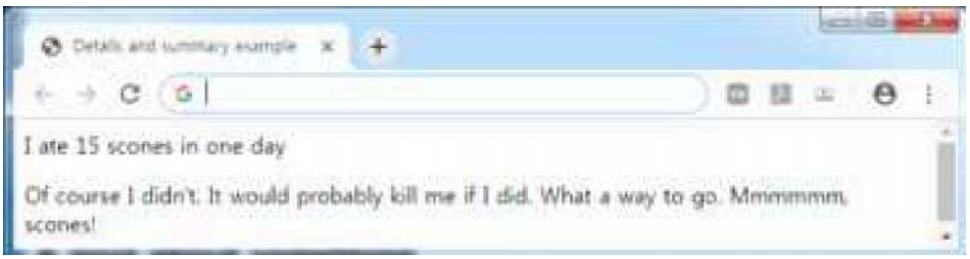
```
<figure class="MoneyShot">
<img class="MoneyShotImg" src="img/scones.jpg" alt="Incredible
scones" />
<figcaption class="ImageCaption">Incredible scones, picture from
```

Wikipedia</figcaption> </figure>

2.3.1 <Details> we <Summary> elementleri

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>Details and summary example</title>
    <meta name="description" content="A basic HTML5 video link">
    <meta name="viewport" content="width=device-width">
    <style>
        summary::-webkit-details-marker {
            display: none;
        }
    </style>
</head>
<body>
    <details>
        <summary>I ate 15 scones in one day</summary>
        <p>Of course I didn't. It would probably kill me if I did. What a way to go. Mmmmm, scones!</p>
    </details>
</body>
</html>
```

- <details open> görnüşinde üýtgedilenden soň



- **<header> elementi**

- saýt atlarynyň "masthead" meýdany üçin ulanylyp bilner
- bir sahypada näçe gezek gerek bolsa ulanyp bilersiňiz

- **<footer> elementi**

- bölüm hakda maglumatlary saklamak üçin ulanylýar
- mysal üçin beýleki resminamalara ýa-da teklip hukugy maglumatlaryna baglanyşyklar bolup biler
- <header> ýaly, zerur bolsa sahypada birnäçe gezek ulanyp bolýar

- < address> elementi

- iň ýakyn <article> ýa-da <body> sözbaşysy üçin aragatnaşyk maglumatlaryny bellemek üçin giňişleýin ulanylyp bilner

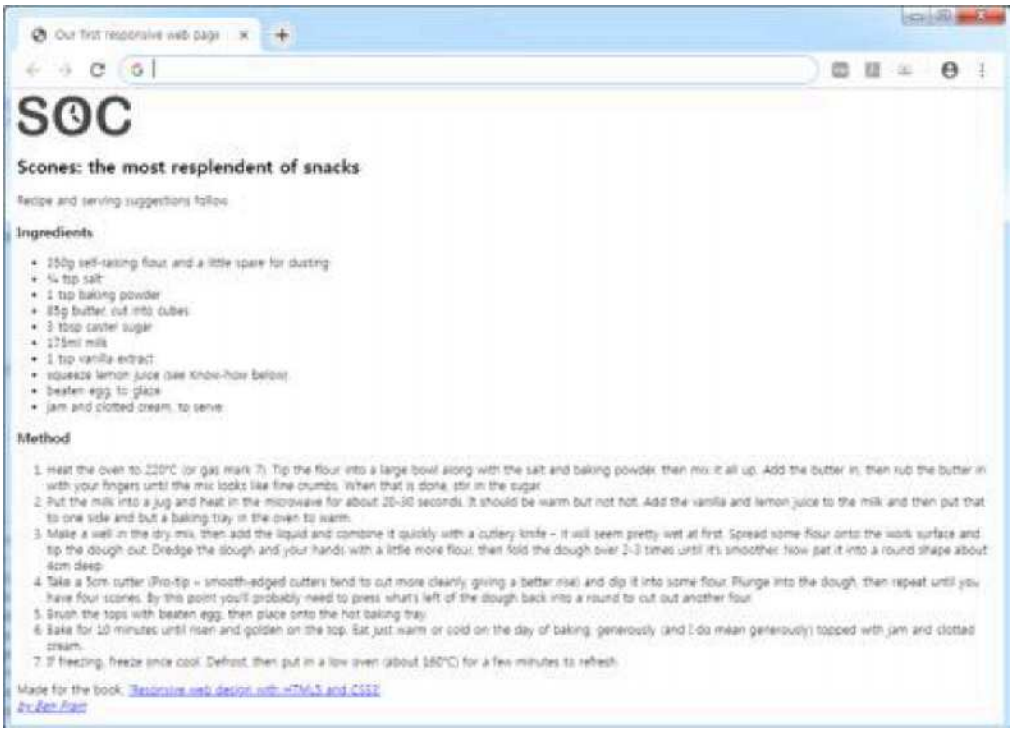
- h1-h6 elementler bilen baglanyşykly bellik

- Sözbaşylary we aşaky sözbaşylary bellemek üçin H1-h6 belliklerini ulanmak maslahat berilmeýär.

2.4 Ulanmak üçin HTML5 elementlerini üpjün etmek

- Mysal çeşmesi

- **Mysal çeşmesiniň netijeleri**



2.4.1 HTML5 usuly bilen wideo we ses goşmak

```
<video src="myVideo.mp4"></video>
```

```
<video src="myVideo.mp4" width="640" height="480">What, do you mean you don't understand HTML5?</video>
```

```
<video src="myVideo.mp4" width="640" height="480" controls autoplay> What, do you mean you don't understand HTML5?</video>
```

```
<video src="myVideo.mp4" width="640" height="480" controls autoplay preload="auto" loop poster="myVideoPoster.png">What, do you mean you don't understand HTML5?</video>
```

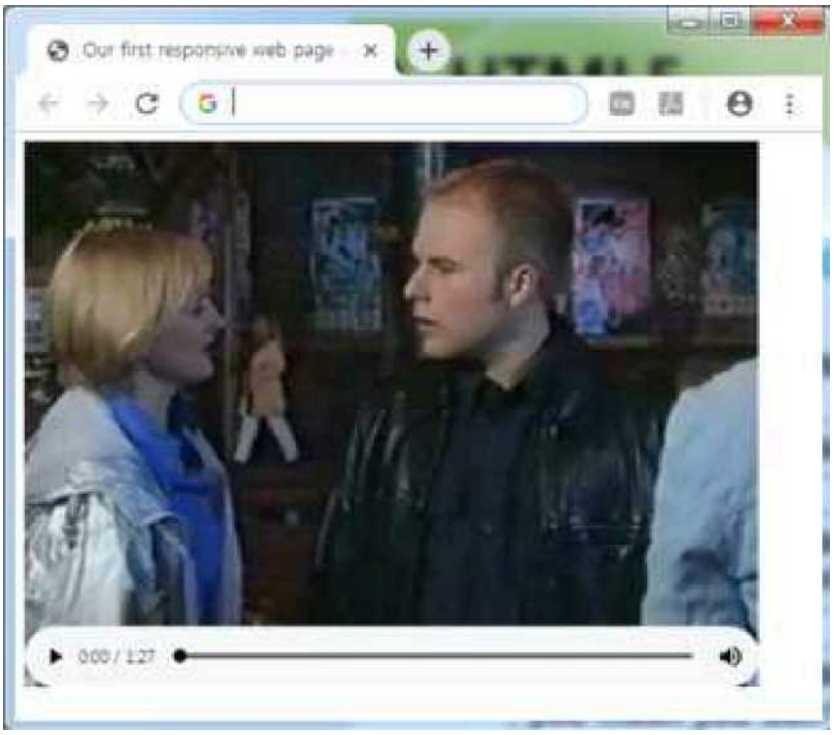
- **Dolandyryş aýratynlygy**

- autoplay:
- preload: alyp baryjynyň öňünden ýüklemesini dolandyrmak üçin,
- loop: wideony gaýtalamak üçin,
- poster: wideonyň afişa çarçuwasyny kesgitlemek üçin,

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
  <meta charset="utf-8">
  <title>Our first responsive web page with HTML5 and CSS3 (amended with HTML5 elements)</title>
  <meta name="description" content="A basic HTML5 video link">
  <meta name="viewport" content="width=device-width">
</head>
<body>
  <video width="640" height="480" controls preload="auto" loop poster="myVideoPoster.png">
      <source src="myVideo.mp4" type="video/mp4">
      <object width="640" height="480" type="application/x-shockwave-flash" data="myFlashVideo.SWF">
        <param name="movie" value="myFlashVideo.swf" />
        <param name="flashvars" value="controlbar=over&amp;image=myVideoPoster.jpg&amp;file=myVideo.mp4" />
        <img src="myVideoPoster.png" width="640" height="480" alt="__TITLE__"
             title="No video playback capabilities, please download the video below" />
      </object>
      <p><b>Download Video:</b>
    MP4 Format:  <a href="myVideo.mp4">"MP4"</a>
      </p>
  </video>
</body>
</html>
```

- **Mysal çeşmesiniň netijesi**



3. CSS3

3.1 CSS düzgüniniň anatomiýasy

3.1.1 CSS düzgüniniň anatomiýasy

- Bu düzgün bir saýlaýjydan (.round) we soň bolsa bildirişden (çarçuwa radiusy: 10 px;) ybaratdyr. Duýduryş goşmaça (çarçuwa radiusy:) aýratynlygy we (10px;) bahasy bilen hem kesgitlenýär.

```
.round { /* selector * /
        border-radius; 10px; /* declaration */
}
```

3.1.2 Çalt we peýdaly CSS hileleri

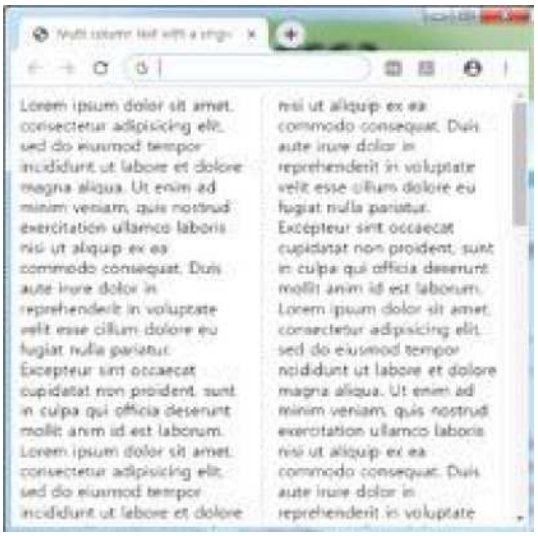
- Adaptiw dizaýn üçin CSS köp sütünli ýerleşişler

- Mysal çeşmesi

```
<!doctype html>
<html class="no-js" lang="en">
<head>
  <meta charset="utf-8">
  <title>Multi column text with a single rule</title>
  <meta name="viewport" content="width=device-width">
  <meta name="theme-color" content="#ff9900">
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <main>
    <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit,
      pariatur.</p>
  </main>
</body>
</html>
```

```
main {
   -webkit-column-gap: 2em;
      -moz-column-gap: 2em;
           column-gap: 2em;
   -webkit-column-rule: thin dotted #999;
      -moz-column-rule: thin dotted #999;
           column-rule: thin dotted #999;
   -webkit-column-width: 12em;
      -moz-column-width: 12em;
           column-width: 12em;
}

p {
   margin: 0;
}
```

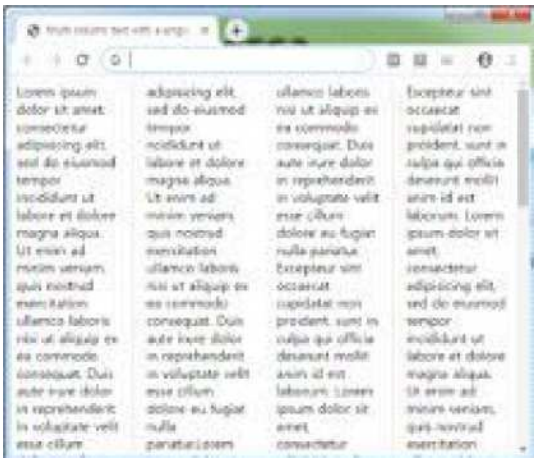
- Mysal çeşmesi – Netijesi



- Durnukly sütünler, üýtgeýän giňlik
- Boşluk we sütün bölüji goşmak

```
main {
    column-gap: 2em;
    column-rule: thin dotted #999;
    column-count: 4;
}

p {
    margin: 0;
}
```

- Mysal çeşmesiniň netijesi



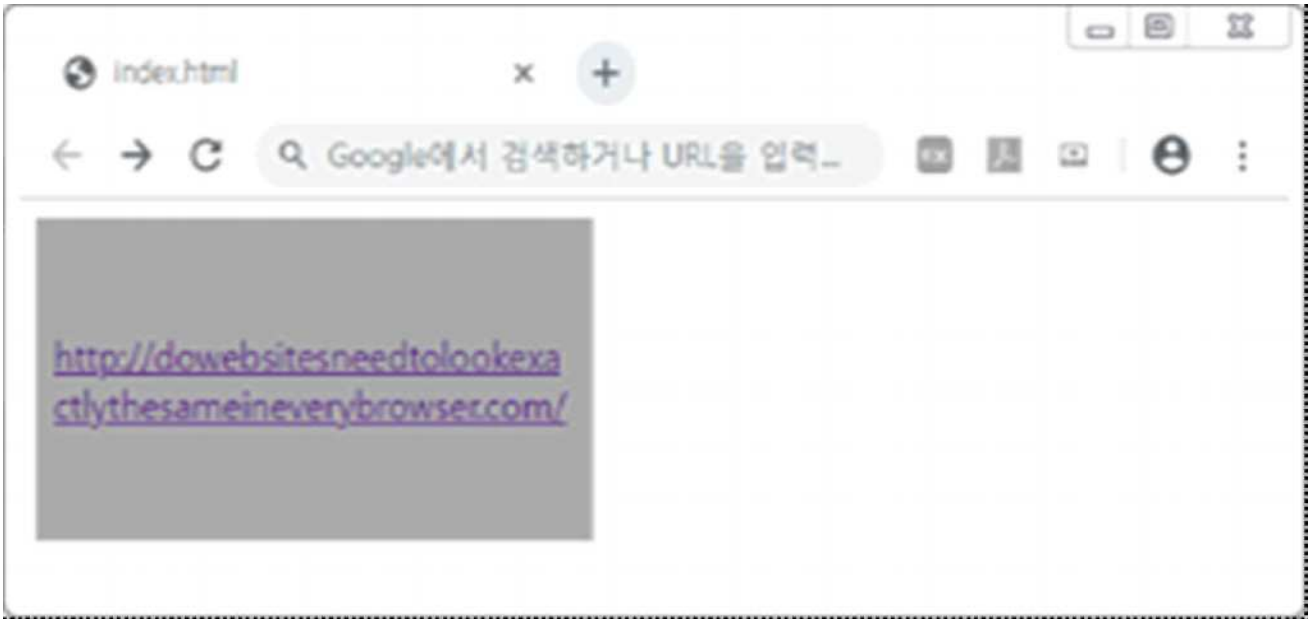
3.1.3 Söz geçirmesi

- **Mysal çeşmesi**

```html
<!doctype html>
<html class="no-js" lang="en">
<head>
  <meta charset="utf-8">
  <title></title>
  <meta name="description" content="">
  <meta name="viewport" content="width=device-width">
  <meta name="theme-color" content="#ff9900">
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <main>
    <a href="http://dowebsitesneedtolookexactlythesameineverybrowser.com/">
      http://dowebsitesneedtolookexactlythesameineverybrowser.com/</a>
  </main>
</body>
</html>
```

```css
main {
    width: 15rem;
    background-color: #aaa;
    padding: 3rem .5rem;
    word-wrap: break-word;
}
```

- **Mysal çeşmesiniň netijesi**



- **Ellipsis (Köpnokat) teksti**

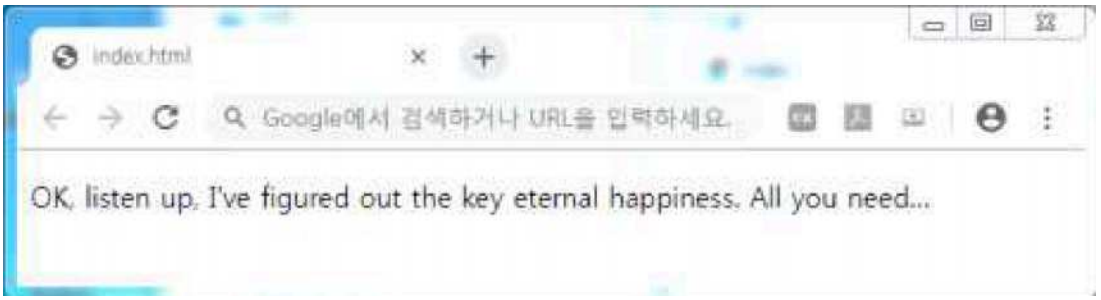
- Teksti kesmek, serwer tehnologiýasynyň ýeke-täk domeni boldy
- Häzirki wagtda diňe CSS bilen tekst ellips / kesiş edip bileris

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
  <meta charset="utf-8">
  <title></title>
  <meta name="description" content="">
  <meta name="viewport" content="width=device-width">
  <meta name="theme-color" content="#ff9900">
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <p class="truncate">OK, listen up, I've figured out the key
    eternal happiness. All you need to do is eat lots of scones.</p>
</body>
</html>
```

```
.truncate {
    width: 520px;
    overflow: hidden;
    text-overflow: ellipsis;
    white-space: nowrap;
}
```

- **Mysal çeşmesiniň netijesi**



3.1.4 Täze CSS3 saýlaýjylary we olaryň ulanylyşlary

- **CSS3 atribut saýlaýjylary**

```
img[alt] {
 border: 3px dashed #e15f5f;
}
```

```
[data-sausage] {
 /* styles */
}
```

```
img[alt="sausages"] {
 /* Styles */
}
```

- **Mysal**

```
<img class="oscarMain" src="img/sausages.png" alt="sausages" />
```

- **CSS3 substring-e deň gelýän atributlaryny saýlaýjylar**

- Substring-e gabat gelýän atributlary saýlaýjy “beginning with”

```
img[alt^="film"] {
 /* Styles */
}
```

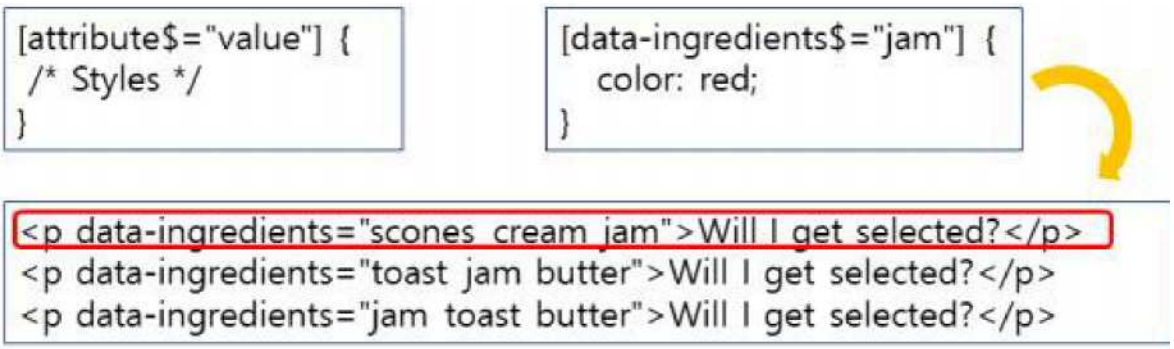
```
<img src="img/ace-film.jpg" alt="film-ace">
<img src="img/rubbish-film.jpg" alt="film-rubbish">
```

- "contains an instance of " substring-e deň gelýän atributyny saýlaýjy

```
[attribute*="value"] {
 /* Styles */
}
```

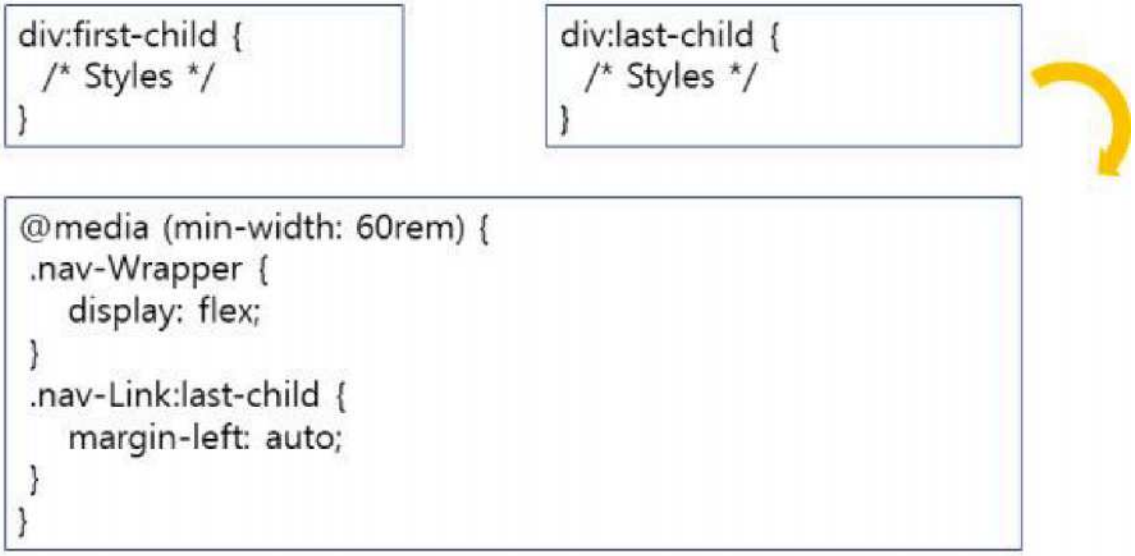
```
<p data-ingredients="scones cream jam">Will I get selected?</p>

We can select that element like this:
[data-ingredients*="cream"] {
   color: red;
}
```

- "ends with" substring-e deň gelýän atributyny saýlaýjy



3.1.5 Pseudo-classes CSS3 gurluşy

- Saýlaýjy: first-child, :last-child
- : only-child, :only-of-type ulanylýan saýlaýjy



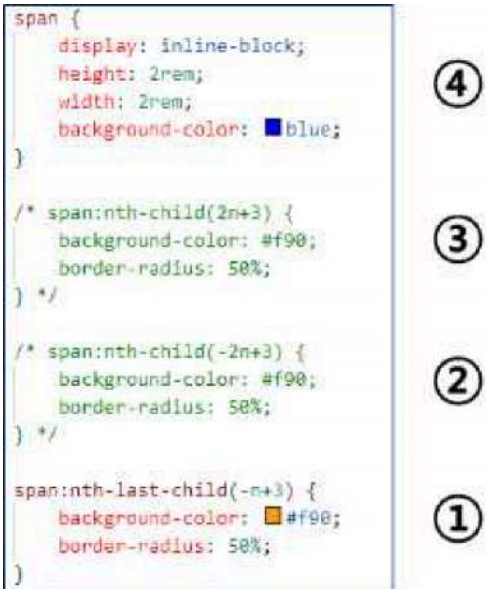
- nth-iň düzgünleriniň nämedigine düşünmek

- nth-child(n)
- nth-last-child(n)
- nth-of-type(n)
- nthlastoftpe(n)

- **Matematika boşlugy**

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title></title>
    <meta name="description" content="">
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
    <span></span>
</body>
</html>
```


span {
display: inline-block;
height: 2rem;
width: 2rem;
background-color: blue;
}
/* span:nth-child(2n+3) {
background-color: #f90;
border-radius: 50%;
} */
/* span:nth-child(-2n+3) {
background-color: #f90;
border-radius: 50%;
} */
span:nth-last-child(-n+3) {
background-color: #f90;
border-radius: 50%;
}
④
③
②
①

- **Mysal çeşmesiniň netijesi**

- **Ýaramazlygy saýlaýjy (: not)**

- başga hiç zat bolmadyk zady saýlamak üçin ulanylýar

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title></title>
    <meta name="description" content="">
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="a-div"></div>
    <div class="a-div"></div>
    <div class="a-div"></div>
    <div class="a-div not-me"></div>
    <div class="a-div"></div>
</body>
</html>
```

```css
div {
    display: inline-block;
    height: 2rem;
    width: 2rem;
    background-color: blue;
}

.a-div:not(.not-me) {
    background-color: #f98;
    border-radius: 50%;
}
```

- **Boş saýlaýjy (: empty)**

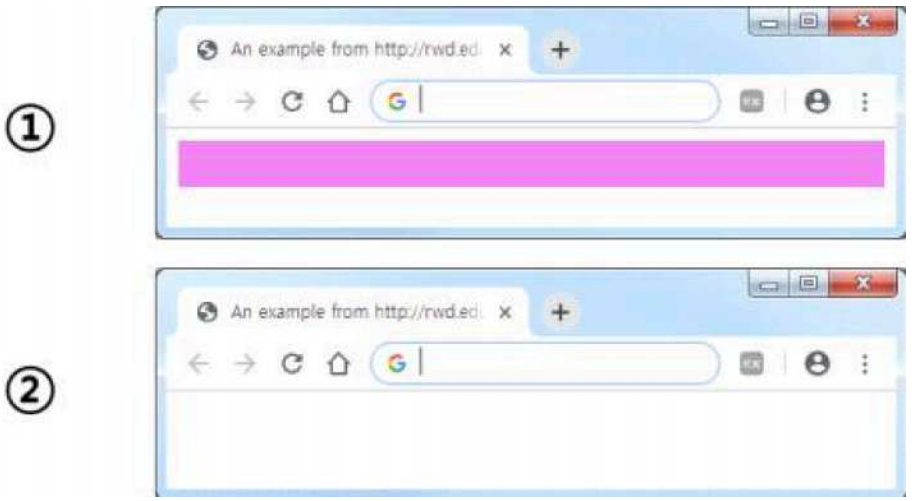
- mazmuny bolmasa-da doldurgyç bar bolanda wagtlaýyn çözgüt

- **Mysal çeşmesi**

```html
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
        'Responsive Web Design with HTML5 and CSS3' by Ben Frain">
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="thing"></div>
</body>
</html>
```

```
.thing {
    padding: 1rem;
    background-color: violet;
}

/**
 * Hide the element if it is empty:;
 */

.thing:empty {
    display: none;
}
```

- **Mysal çeşmesiniň netijesi**



3.2 CSS-niň kemilleşdirilen görnüşi

3.2.1 CSS-niň hasaplaýyş enjamy

Web sahypalarymyzyň görkezjek ekranyň ululygyny hiç wagt bilmeýänligimiz sebäpli bu aýratyn hem täsirli web dizaýnynda ulanylyşlydyr.

Goşmak, aýyrmak, bölmek we köpeltmek goldanýar, şonuň üçin geçmişde JavaScript bolmasa mümkin bolmadyk birnäçe meseläni çözüp bilersiňiz.

```
.thing {
        width: calc(50% - 10px);
}
```

3.2.2 Web tipografiýasy

- @font-face CSS düzgünleri CSS2-den bäri bar
- @font-face bilen web şriftlerini ulanmak

```
@font-face {
  font-family: 'robotoregular';
  src: url('Roboto-Regular-webfont.eot');
  src: url('Roboto-Regular-webfont.eot?#iefix') format('embedded-pentype'),
       url('Roboto-Regular-webfont.woff') format('woff'),
       url('Roboto-Regular-webfont.ttf') format('truetype'),
       url('Roboto-Regular-webfont.svg#robotoregular') format('svg');
  font-weight: normal;
  font-style: normal;
}
```

3.2.2 Täze CSS3-iň reňk formatlary we alfa aýdyňlygy

- **RGB reňki**

- Gyzyl, ýaşyl we gök (RGB) onlarça ýyl bäri bar bolan boýag ulgamy.

```
.redness {
    color: #fe0208;
}
```

```
.redness {
    color: rgb(254, 2, 8);
}
```

- **HSL reňki**

- Reňk derejelerini Hue, doýgunlyk we açyklyk (HSL) diýip yglan ediň.

```
.redness {
    color: hsl(359, 99%, 50%);
}
```

```
.darker-red {
    color: hsl(359, 99%, 40%);
}
```

- **Alfa kanallary**

Ygtybarly on altylyk derejeleriň ýerine HSL ýa-da RGB ulanmagyň sebäbi. Alfa kanalynyň aýyklygyny ulanmaga rugsat beriň.

```
.redness-alpha {
   color: hsla(359, 99%, 50%, .5);
}
```

```
.redness-alpha-rgba {
   color: rgba(255, 255, 255, 0.8);
}
```

3.2.4 CSS3 bilen tekst kölegeleri

- CSS3-iň iň giňden ulanylýan aýratynlyklaryndan biri, onuň esasy sintaksisidir.

```
.element {
   text-shadow: 1px 1px 1px #ccc;
}
```

- **Mysal üçin**

```
.text {
 text-shadow: -4px -4px 0px #dad7d7;
}
```

- **Giriş derejesi**

- Ilkinji dereje, sag tarapdaky kölegäniň mukdarydyr
- Ikinjiden, mukdar az
- üçünji dereje, bulanyklyk mukdarydyr (kölegäniň hiç bir zadyň içinde ýitmezden ozal geçýän aralygy)
- iň soňky dereje, reňk

- Çepe we ýokaryk tarap kölegeleri otrisatel derejeler bilen alyp bolýar.

- **Mysal üçin:**

```
.text {
 text-shadow: -4px -4px 0px #dad7d7;
}
```

- Reňk derejesiniň on altylyk dereje hökmünde görkezilmeli däldir.

- HSL (A) ýa-da RGB (A) ýaly aňsat bolup biler

```
text-shadow: 4px 4px 0px hsla(140, 3%, 26%, 0.4);
```

- Gerek däl wagty bulanyklyk derejesini geçmek.

- **Mysal üçin:**

```
.text {
   text-shadow: -4px -4px #dad7d7;
}
```

- **Birnäçe tekst kölegeleri**

```
.multiple {
   text-shadow: 0px 1px #fff,4px 4px 0px #dad7d7;
}
```

```
.text {
  font-size: calc(100vmax / 40); /* 100 of vh or vw, whichever is larger divided by 40 */
  text-shadow:
      3px 3px #bbb, /* right and down */
      -3px -3px #999; /* left and up */
}
```

3.2.5 Kölege gutusy

Tekst kölegesi bilen birmeňzeş sintaksisini ulanyň: gorizontal ofset, dik ofset we alfa reňk kanallary.

- **Mysal üçin**

```
.shadow {
    box-shadow: 0px 3px 5px #444;
}
```

- **Kölege goşuň**

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="box-shadow">Outer box-shadow</div>
    <div class="inner-box-shadow">Inner box-shadow</div>
</body>
</html>
```

```css
.box-shadow, .inner-box-shadow {
    height: 20vmin;
    width: 20vmin;
    border: 1px solid #111;
    margin: 1em;
    display: inline-flex;
    font-family: sans-serif;
    align-items: center;
    justify-content: center;
}

.box-shadow {
    box-shadow: 0 0 15px blue;
}

.inner-box-shadow {
    box-shadow: inset 0 0 15px violet;
}
```

- **Mysal çeşmesiniň netijesi**

- **Birnäçe kölege**

```
box-shadow: inset 0 0 30px hsl(0, 0%, 0%),  inset 0 0 70px hsla(0, 97%, 53%, 1);
```

- **Düşünjäni ýaýratmak**

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="no-spread">no spread</div>
    <div class="spread">with spread</div>
</body>
</html>
```

```
.no-spread, .spread {
  height: 20vmin;
  width: 20vmin;
  border: 1px solid #111;
  margin: 1em;
  display: inline-flex;
  font-family: sans-serif;
  align-items: center;
  justify-content: center;
}

.no-spread {
  box-shadow: 0 10px 10px;
}

.spread {
  box-shadow: 0 10px 10px -10px;
}
```

- **Mysal çeşmesiniň netijesi**

3.2.6 Fon gradiýentleri

- Çyzykly gradient notasiýasy

```
.linear-gradient {
    background: linear-gradient(red, blue);
}
```

- Gradientiň ugruny kesgitlemek

```
.linear-gradient {
    background: linear-gradient(to top right, red, blue);
}
```

```
.linear-gradient {
    background: linear-gradient(45deg, red, blue);
}
```

```
.linear-gradient {
    background: linear-gradient(red -50%, blue);
}
```

- **Reňk duralgasy**

- Isleýşiňiz ýaly reňk duralgalary bolup biler we reňkler açar sözler, on altylyk dereje, RGBA derejesi ýa-da HSLA derejesi hökmünde ýazylyp bilner.

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="linear-gradient"></div>
</body>
</html>
```

```
.linear-gradient {
    margin: 1rem;
    width: 400px;
    height: 200px;
    background: linear-gradient( #f90 0, #f90 2%,  #555 2%,
        #eee 50%, #555 98%, #f90 98%, #f90 100%);
}
```

- **Mysal çeşmesiniň netijesi**

- **Radial fon gradiýentleri**

- Merkezi nokatdan başlaň we ony elliptik ýa-da tegelek görnüşde deň paýlaň.

- **Mysal neşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="radial-gradient"></div>
</body>
</html>
```

```
.radial-gradient {
    margin: 1rem;
    width: 400px;
    height: 200px;
    background: radial-gradient(12rem circle at bottom,  yellow, orange, red);
}
```

- **Mysal çeşmesiniň netijeleri**

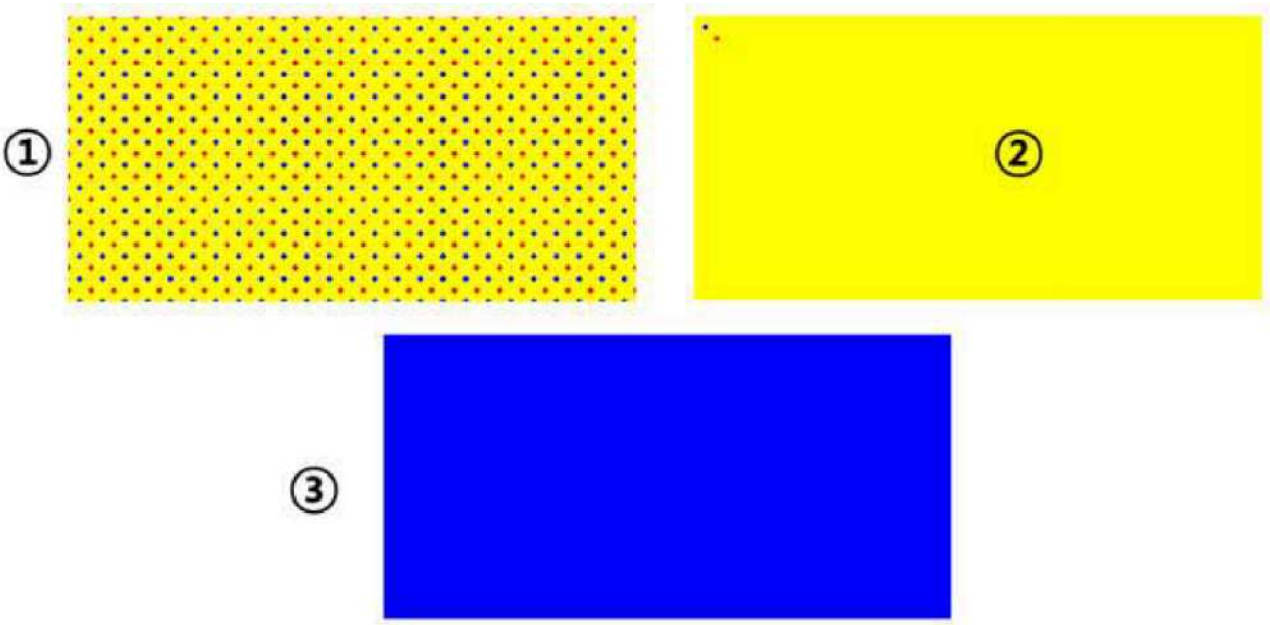
3.2.7 Fon gradient nagyşlary

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="carbon-fibre"></div>
</body>
</html>
```

```
.carbon-fibre {
    margin: 1rem;
    width: 400px;
    height: 200px;
    background:
        radial-gradient(blue 15%, transparent 16%) 0 0,
        radial-gradient(red 15%, transparent 16%) 8px 8px,
        radial-gradient(rgba(255,255,255,.1) 15%, transparent 20%) 0 1px,
        radial-gradient(rgba(255,255,255,.1) 15%, transparent 20%) 8px 9px;
    background-color:yellow;
    background-size:16px 16px;
    /* background-repeat:no-repeat; */
}

@media (min-width: 45rem) {
    .carbon-fibre {
        background: blue
    }
}
```

- **Mysal çeşmesiniň netijesi**



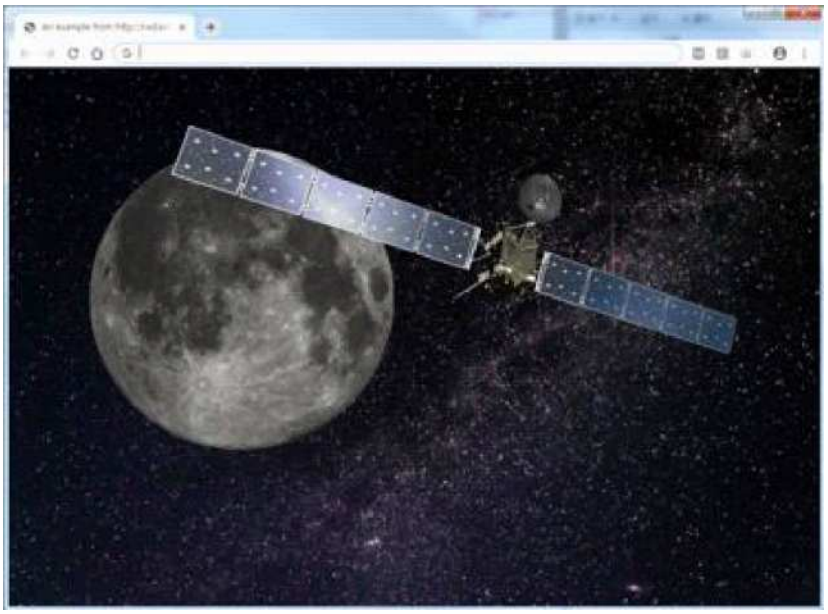
3.2.8 Birnäçe fon suratlary

- **Mysal çeşmesi**

```
<!doctype html>
<html class="no-js" lang="en">
<head>
    <meta charset="utf-8">
    <title>An example from http://rwd.education</title>
    <meta name="description" content="An example from the book,
    <meta name="viewport" content="width=device-width">
    <meta name="theme-color" content="#ff9900">
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="bg-multi"></div>
</body>
</html>
```

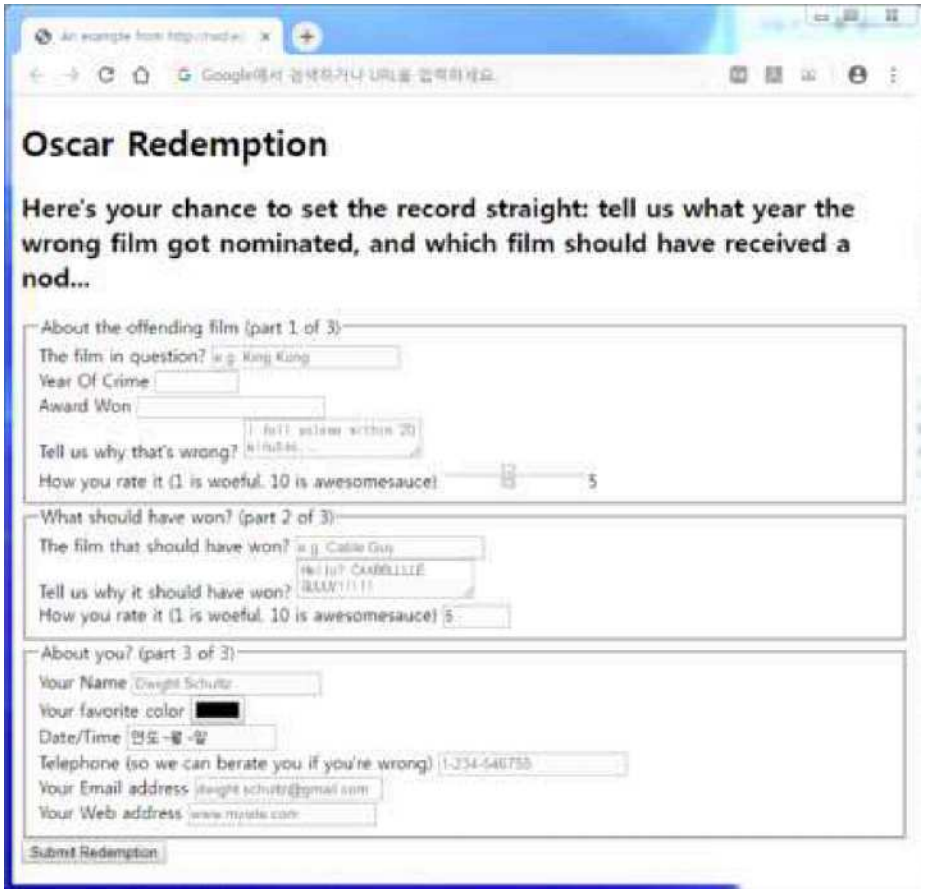
- Fonyň ölçegi: Her görnüş üçin dürli ölçegleri sazlamak üçin
- Fonyň ýerleşýän ýeri: Dürli görnüş ýerleşiş lerlerini kesgitlemek üçin

- **Mysal çeşmesiniň netijesi**



4. Formasy

4.1 HTML5 formasy



4.1.1 HTML5 formasynyň düzüm böleklerine düşünmek

```
<fieldset>
  <legend>About the offending film (part 1 of 3)</legend>
  <div>
    <label for="film">The film in question?</label>
    <input id="film" name="film" type="text" placeholder="e.g. King Kong" required>
  </div>
```

Formanyň üç bölümi hem düşündirişler bilen bilelikde birnäçe meýdanlara geçirildi.

- **Dolduryjy (placeholder)**

- meýdan, fokus alýança borlşy ýaly görkeziler

- **Doldyryjy tekstiniň stilini kesgitlemek**

- Dolduryjy aýratynlygyny aşakdaky ýaly formatlap bilersiňiz: :placeholder-shown pseudo selector

- **Talap edilýän (required)**

- Giriş (input) elementine zerur bolan “boolean” atributyny goşmak bilen bir derejäniň zerurdygyny görkezýär.
- Görnüp duran kadadan çykmalar aralyk, reňk, düwme we gizlin giriş görnüşleri, sebäbi hemişe diýen ýaly “deafult” bolýar.

```
<div>
  <label for="search">Search the site...</label>
  <input id="search" name="search" type="search" placeholder="Wyatt Earp" autofocus>
</div>
```

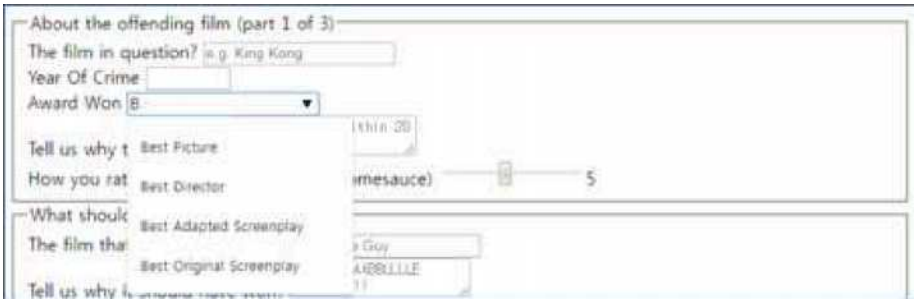
- **Awto fokus (Autofocuse))**

- Giriş (input) elementine zerur bolan “boolean” atributyny goşmak bilen bir derejäniň zerurdygyny görkezýär.

- Görnüp duran kadadan çykmalar aralyk, reňk, düwme we gizlin giriş görnüşleri, sebäbi hemişe diýen ýaly “deafult” bolýar.

```
<div>
  <label for="awardWon">Award Won</label>
  <input id="awardWon" name="awardWon" type="text" list="awards">
  <datalist id="awards">
  <select>
    <option value="Best Picture"></option>
    <option value="Best Director"></option>
    <option value="Best Adapted Screenplay"></option>
    <option value="Best Original Screenplay"></option>
  </select>
  </datalist>
</div>
```

- Sanaw we onyň bilen baglanyşykly “datalist” elementi



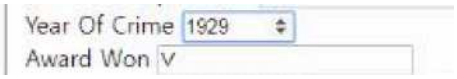
4.2 HTML5 giriş formasy

- E-mail (email)

```
<div>
  <label for="email">Your Email address</label>
  <input id="email" name="email" type="email" placeholder="dwight.schultz@gmail.com" required>
</div>
```

- Belgi (number)

```
<div>
 <label for="yearOfCrime">Year Of Crime</label>
 <input id="yearOfCrime" name="yearOfCrime" type="number" min="1929" max="2015" required>
</div>
```



- Minimum we maksimum aralyklar

```
type="number" min="1929" max="2015"
```

- Artdyrmak ädimini üýtgetmek

```
<input type="number" step="10">
```

- url

```
<div>
  <label for="web">Your Web address</label>
  <input id="web" name="web" type="url" placeholder="www.mysite.com">
</div>
```

- Tel

```
<div>
  <label for="tel">Telephone (so we can berate you if you're wrong)</label>
  <input id="tel" name="tel" type="tel" placeholder="1-234-546758" autocomplete="off" required>
</div>
```

- Gözleme (search)

```
<div>
  <label for="search">Search the site...</label>
  <input id="search" name="search" type="search" placeholder= "Wyatt Earp">
</div>
```

- Şablon

```
<div>
  <label for="name">Your Name (first and last)</label>
  <input id="name" name="name" pattern="([a-zA-Z]{3,30}₩s*)+[a-zA- Z] {3,30}"
         placeholder="Dwight Schultz" required>
</div>
```