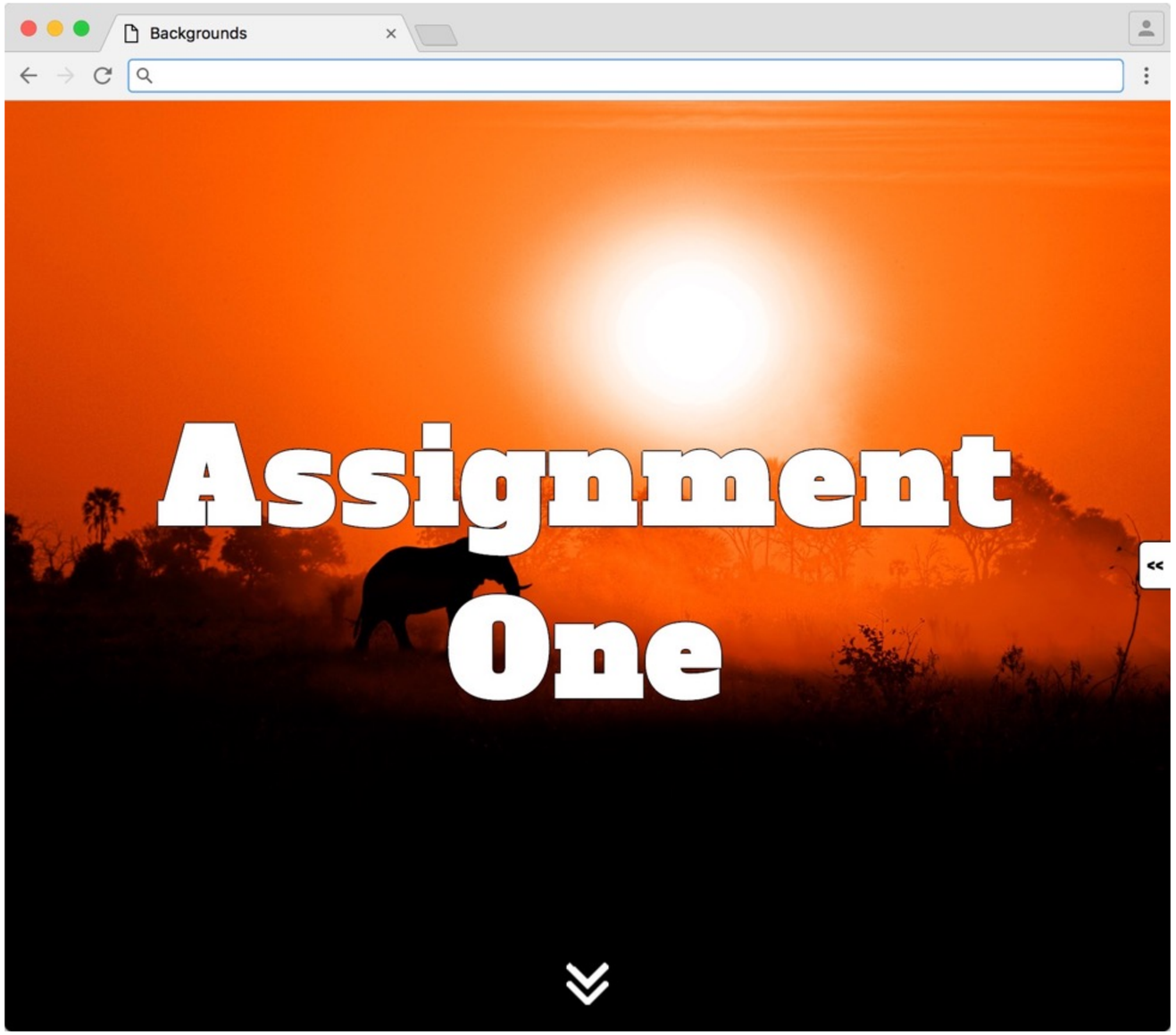
Assignment 1

Advanced Web Development

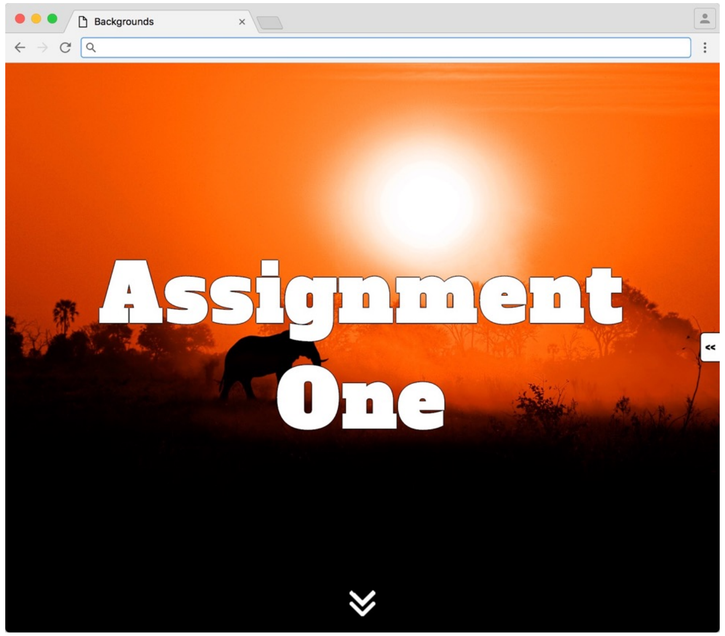
You must create the following page using ***only*** HTML and CSS.

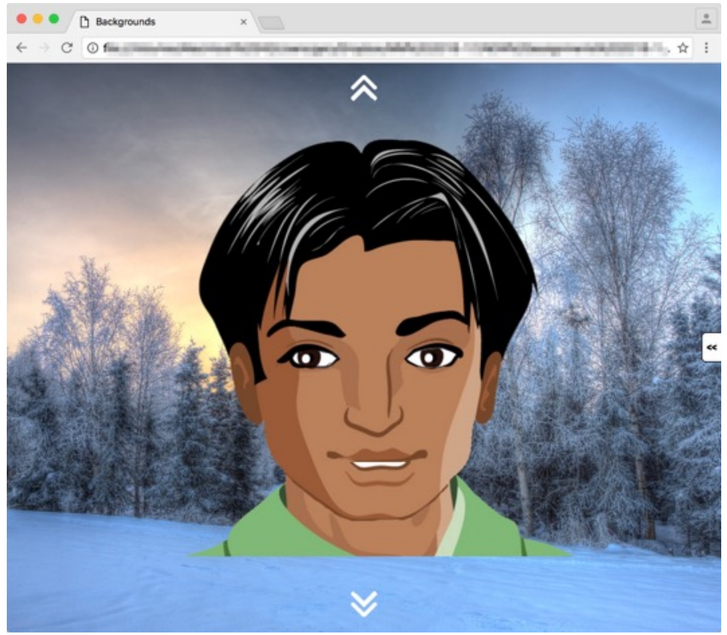


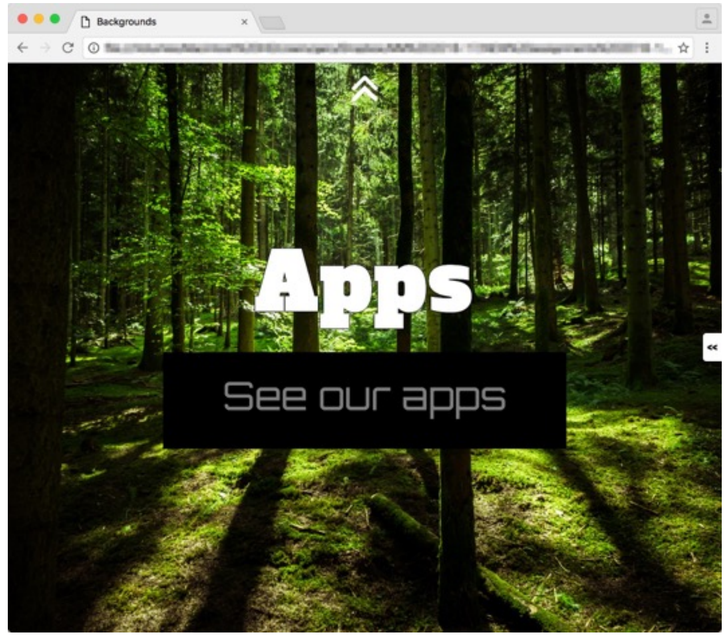
The page contains 3 sections. Each of these sections take up the whole viewport.

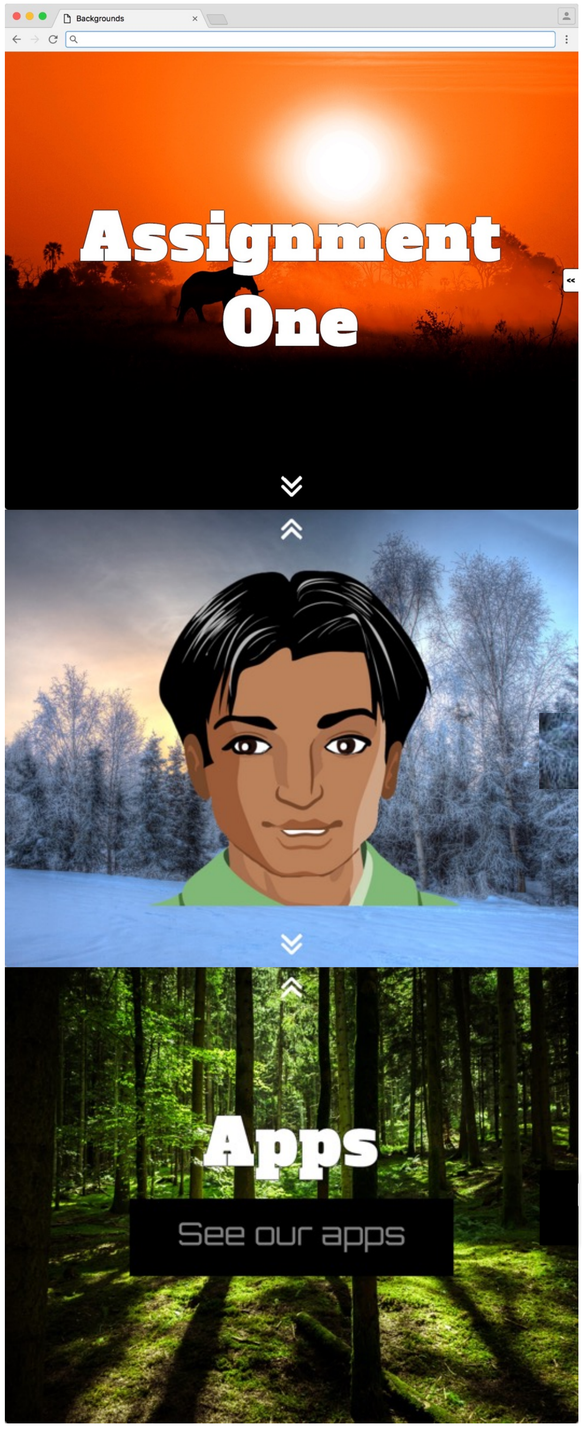
This one web page should contain these three sections.

Each section is exactly the size of the current window.



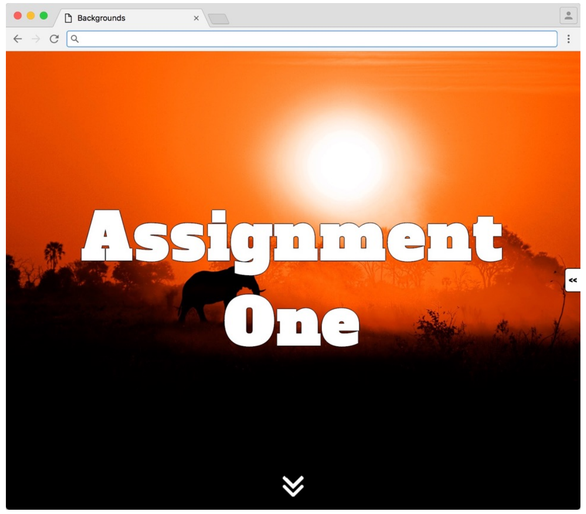


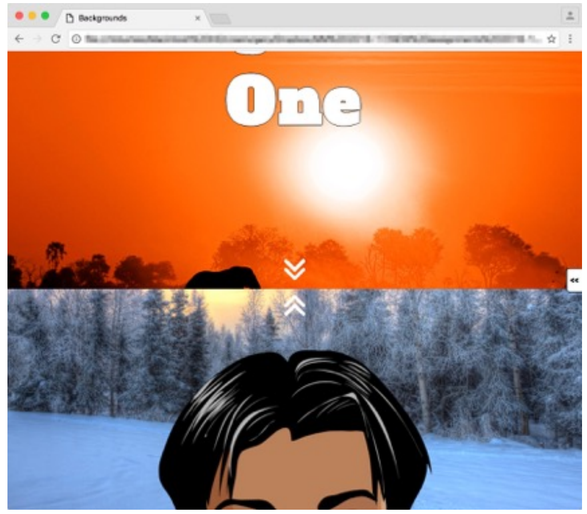


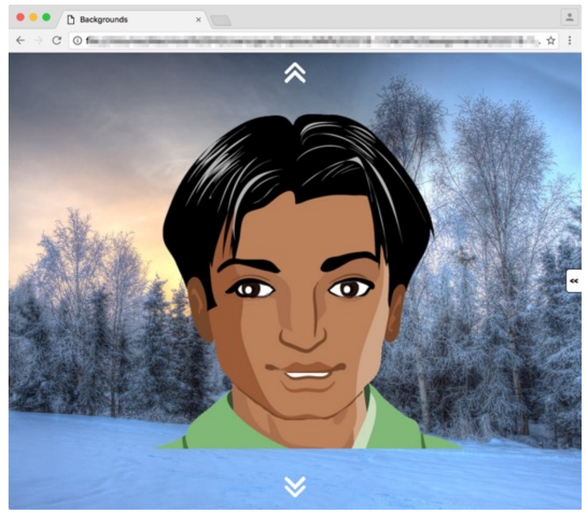


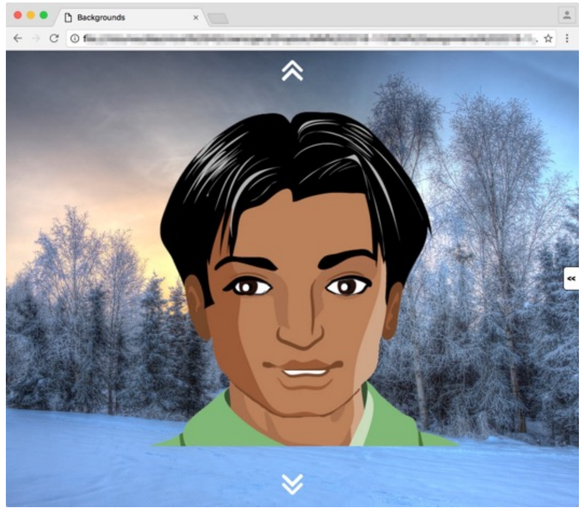
These 3 sections will all be a part of the same page.

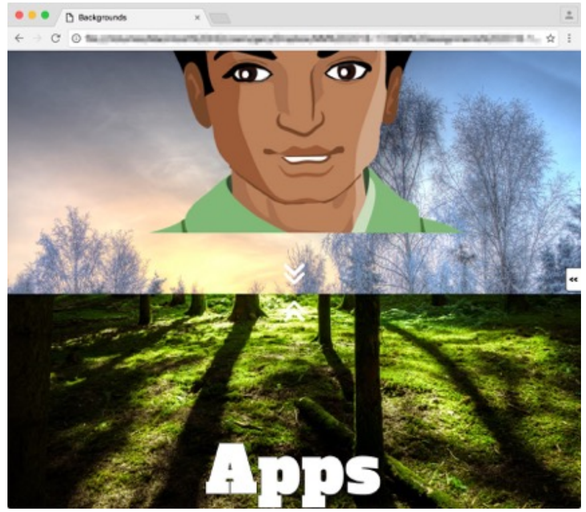
[This image was created to indicate the full layout of the page. In reality only one section will fit in the browser window at a time.]

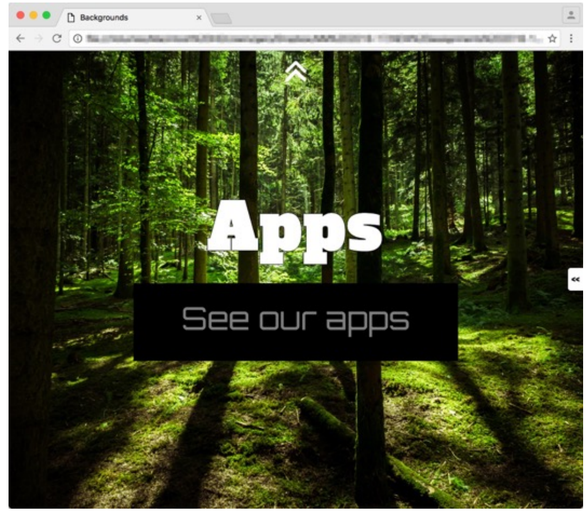








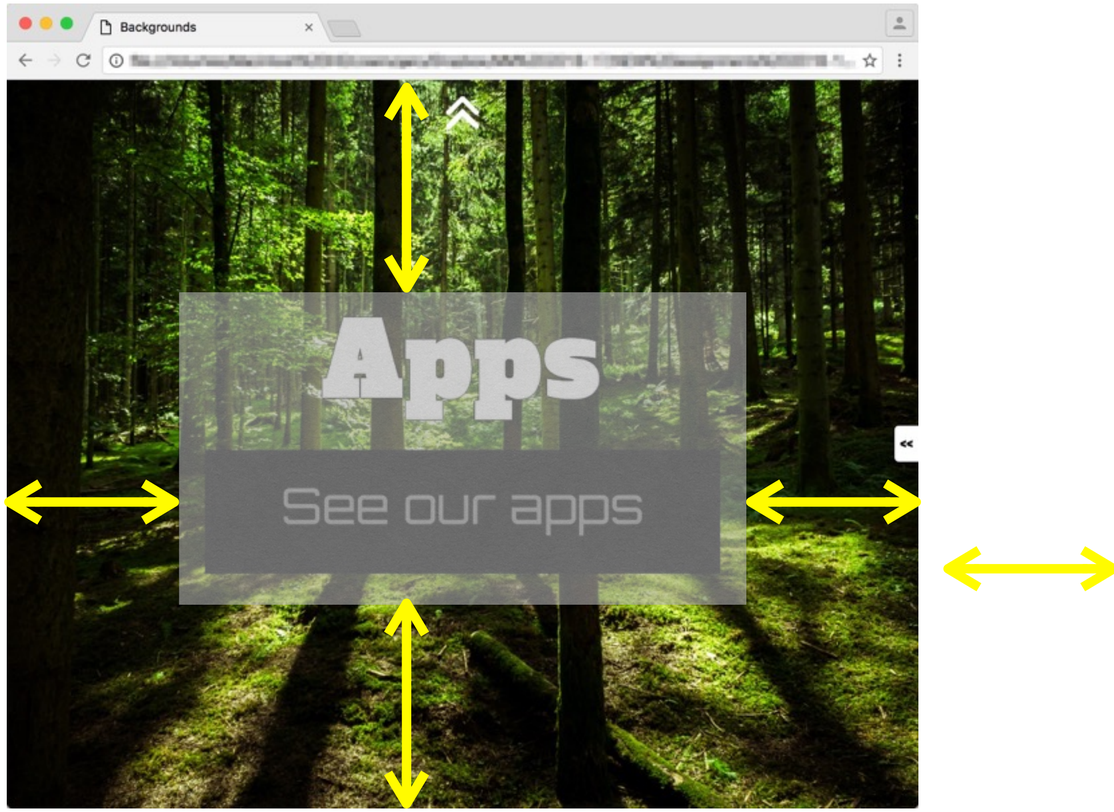




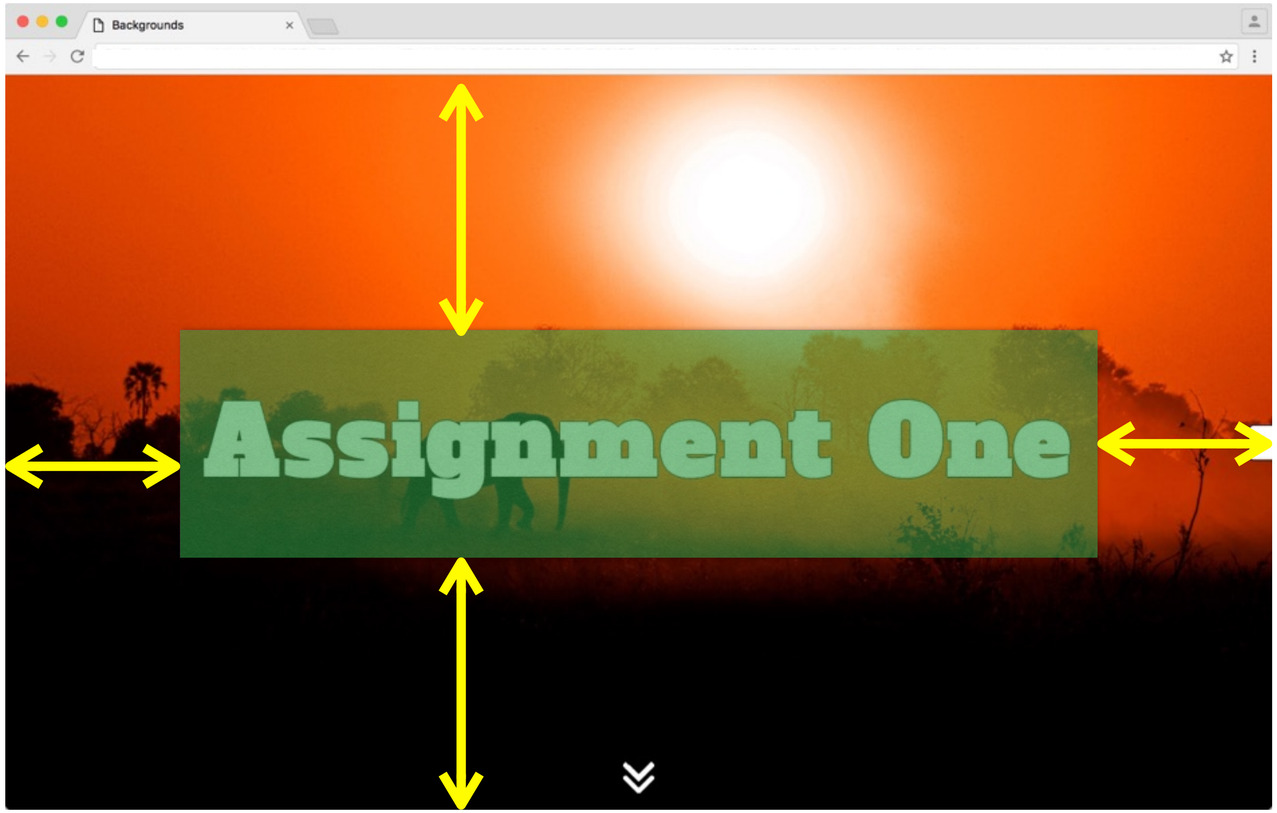
Note how the background images do not scroll as the page scrolls between sections. See the screencasts to see this in action.

You can set the width and height of elements to 100% to fit the viewport. However, for some browsers it will help to set the width and height of the **<html>** and **<body>** elements to 100% as well.

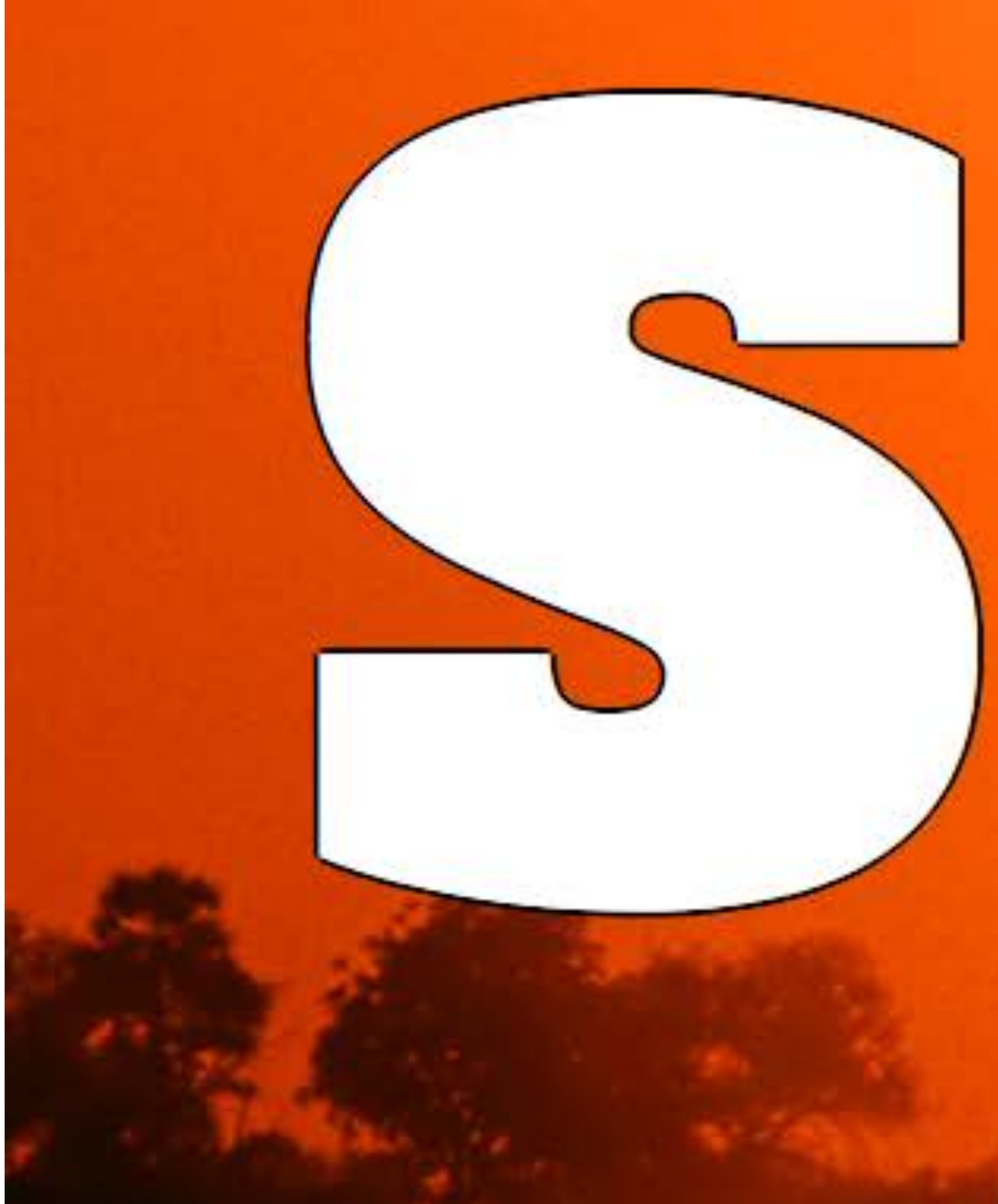
The content on each section should be vertically and horizontally centered in the viewport.



It should be centred regardless of the size of the viewport.



For the text in the main heading you should add some drop shadows to create a stroke effect (i.e. an outline so the text can be seen on lighter backgrounds).

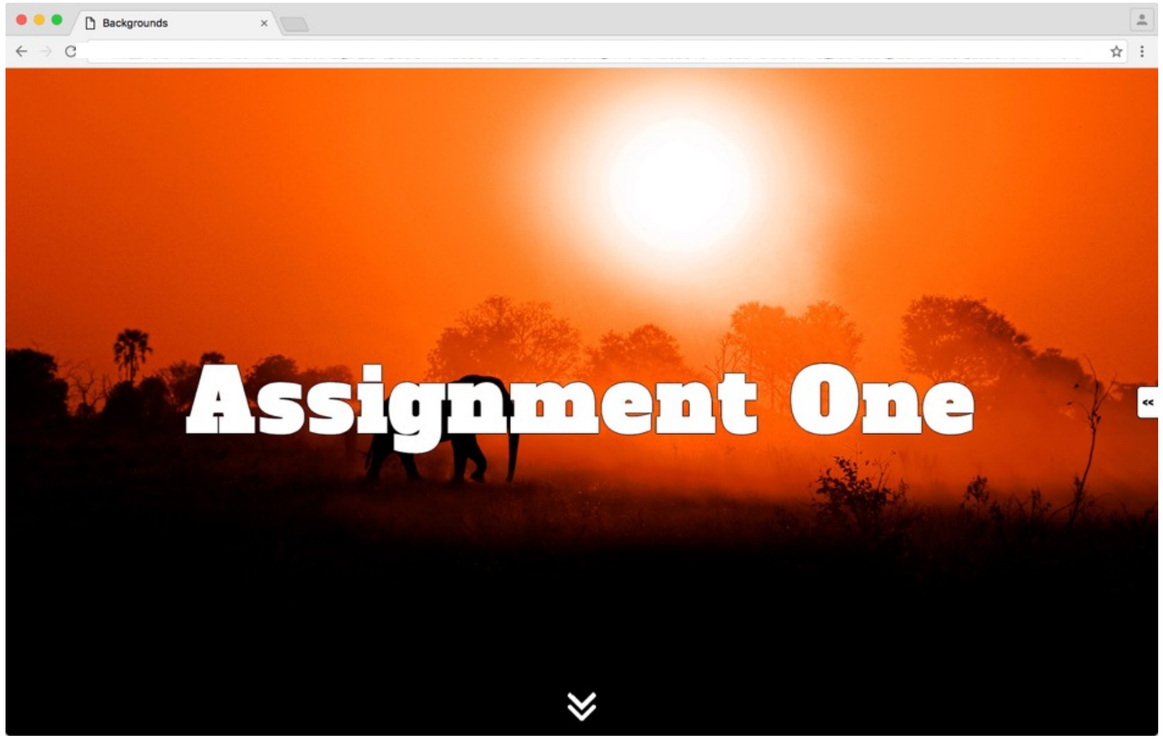


Original Text

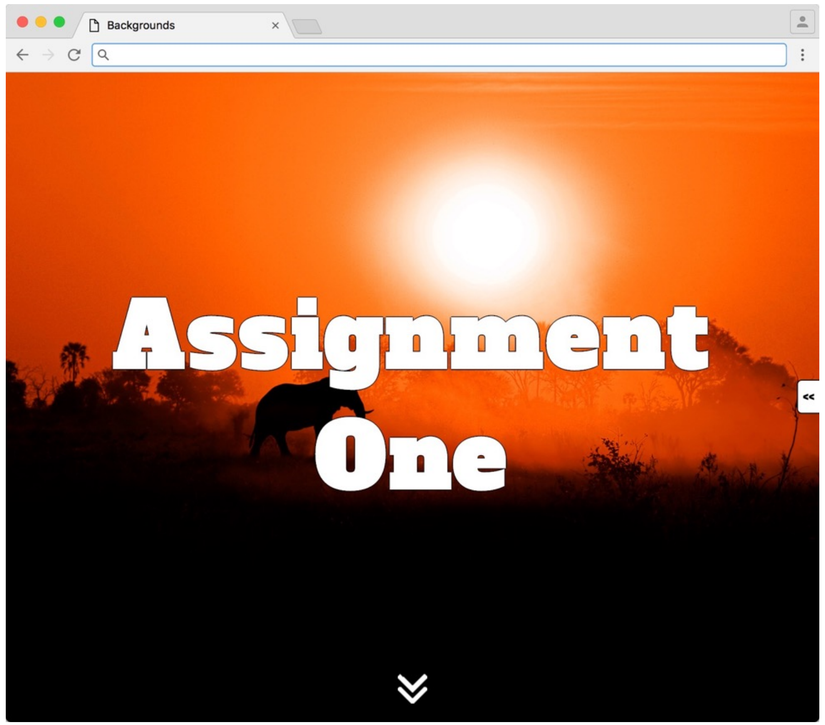
With text shadow on left

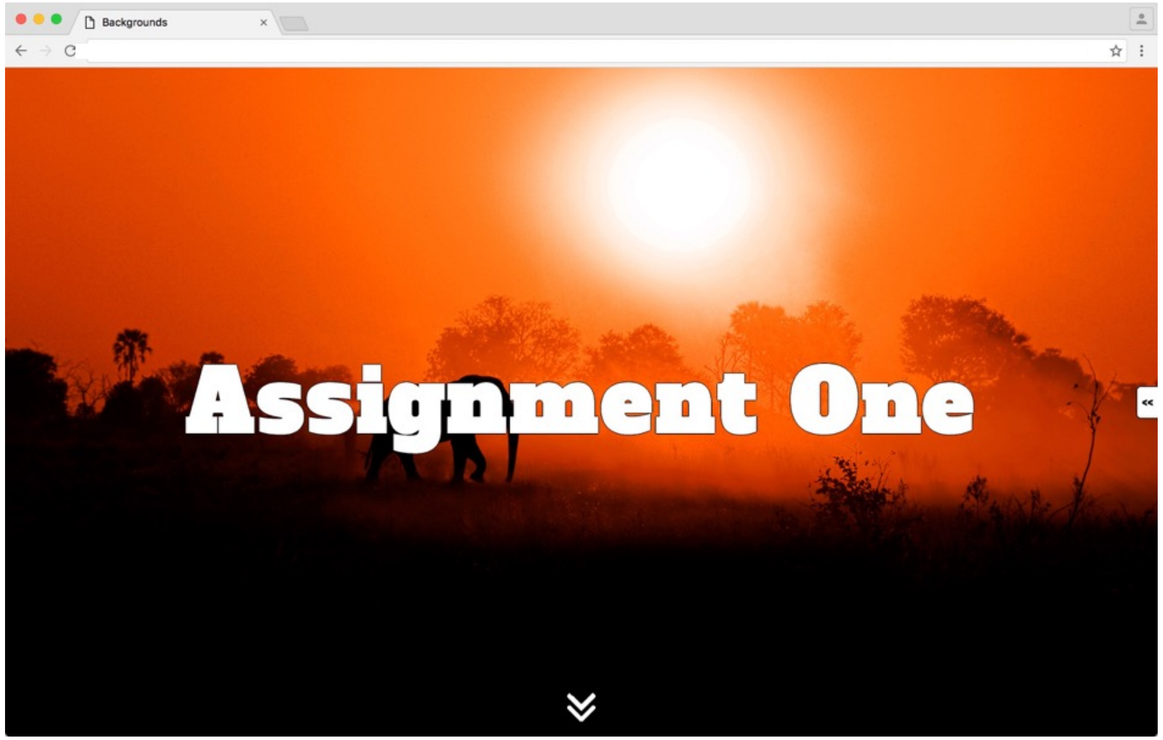
With text shadow on left and right

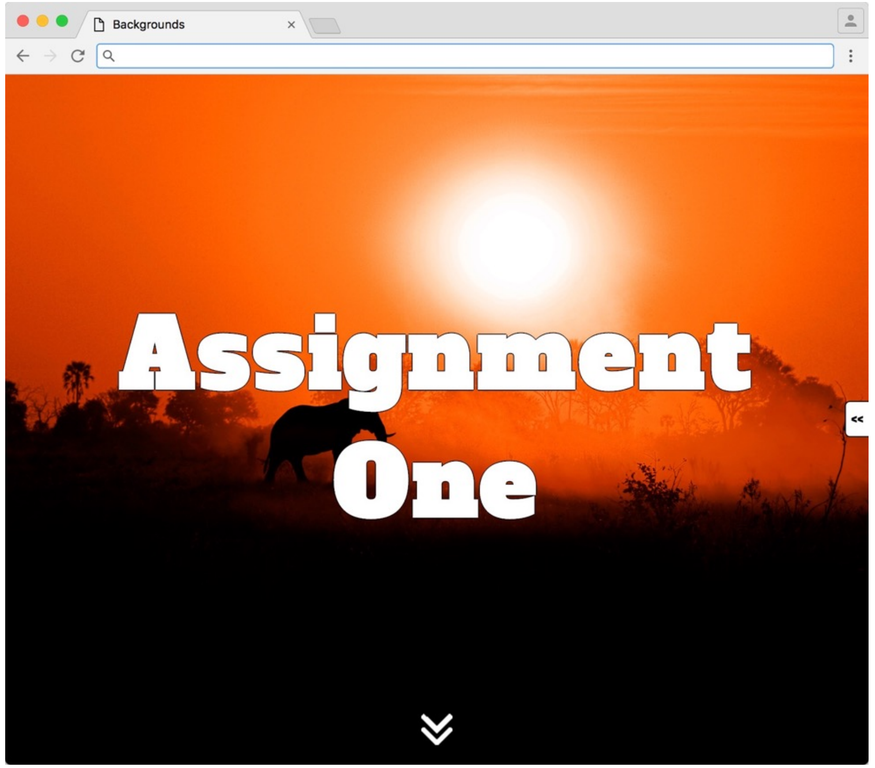
You can also add shadow to the top and bottom.

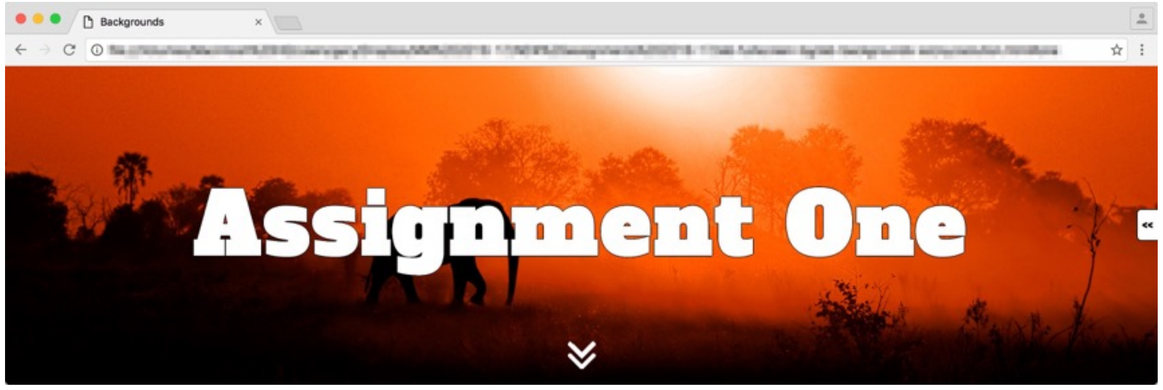


The same background should work for windows of different sizes

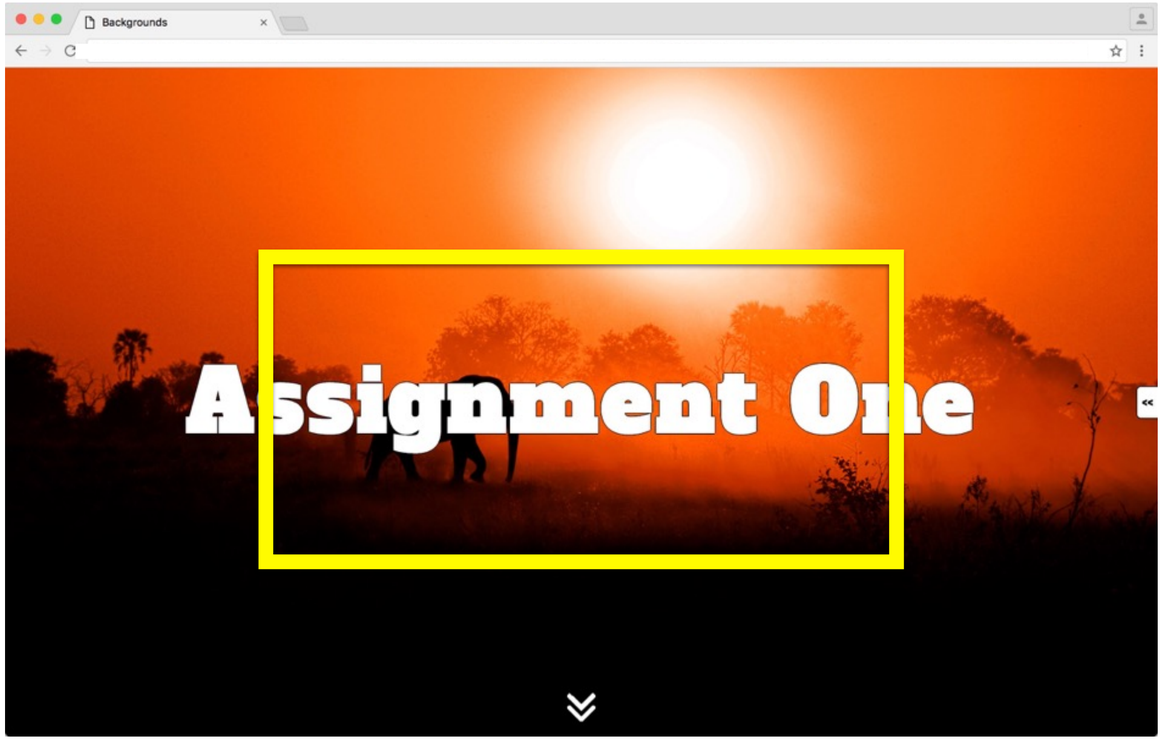


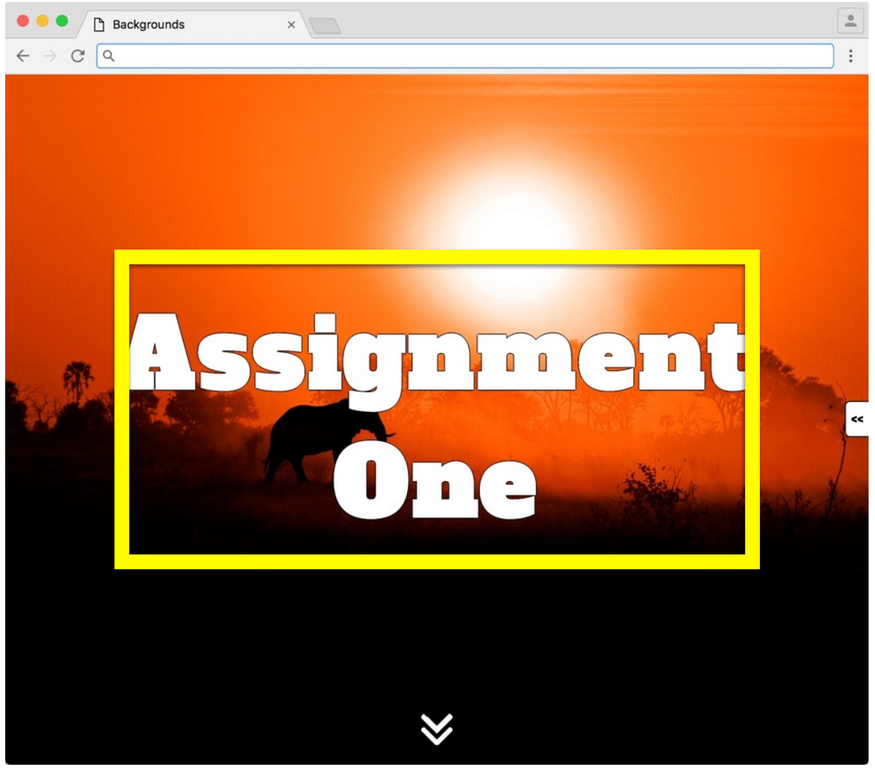


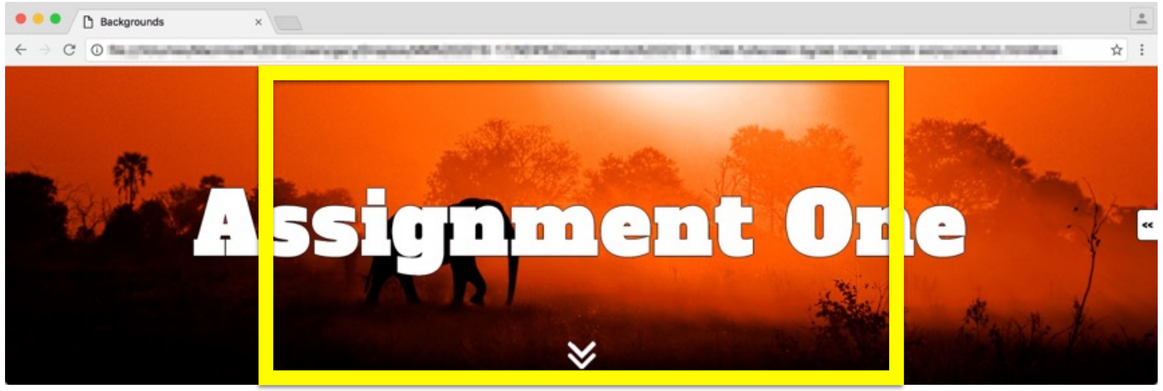




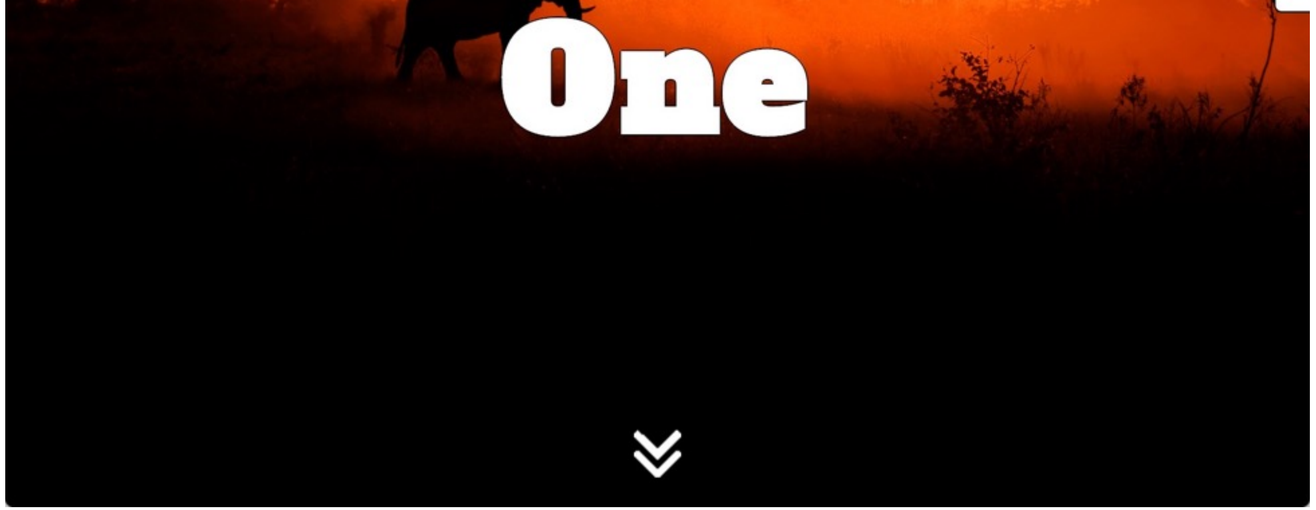
I.e. the background image should be positioned so that the main part of your image is always prominent regardless of the shape/size of the window.







I.e. the background image should be positioned so that the main part of your image is always prominent regardless of the shape/size of the window.

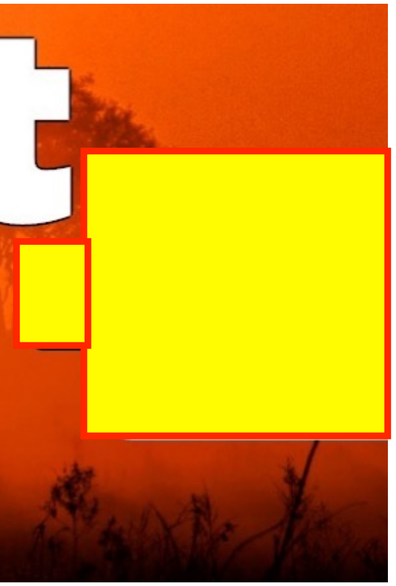


Each page has a graphic link (provided) to the **next** and **previous** sections as appropriate. This link should be positioned and animated as shown in the screencasts.

Navigation Menu

At the edge of the window there should be a tab.

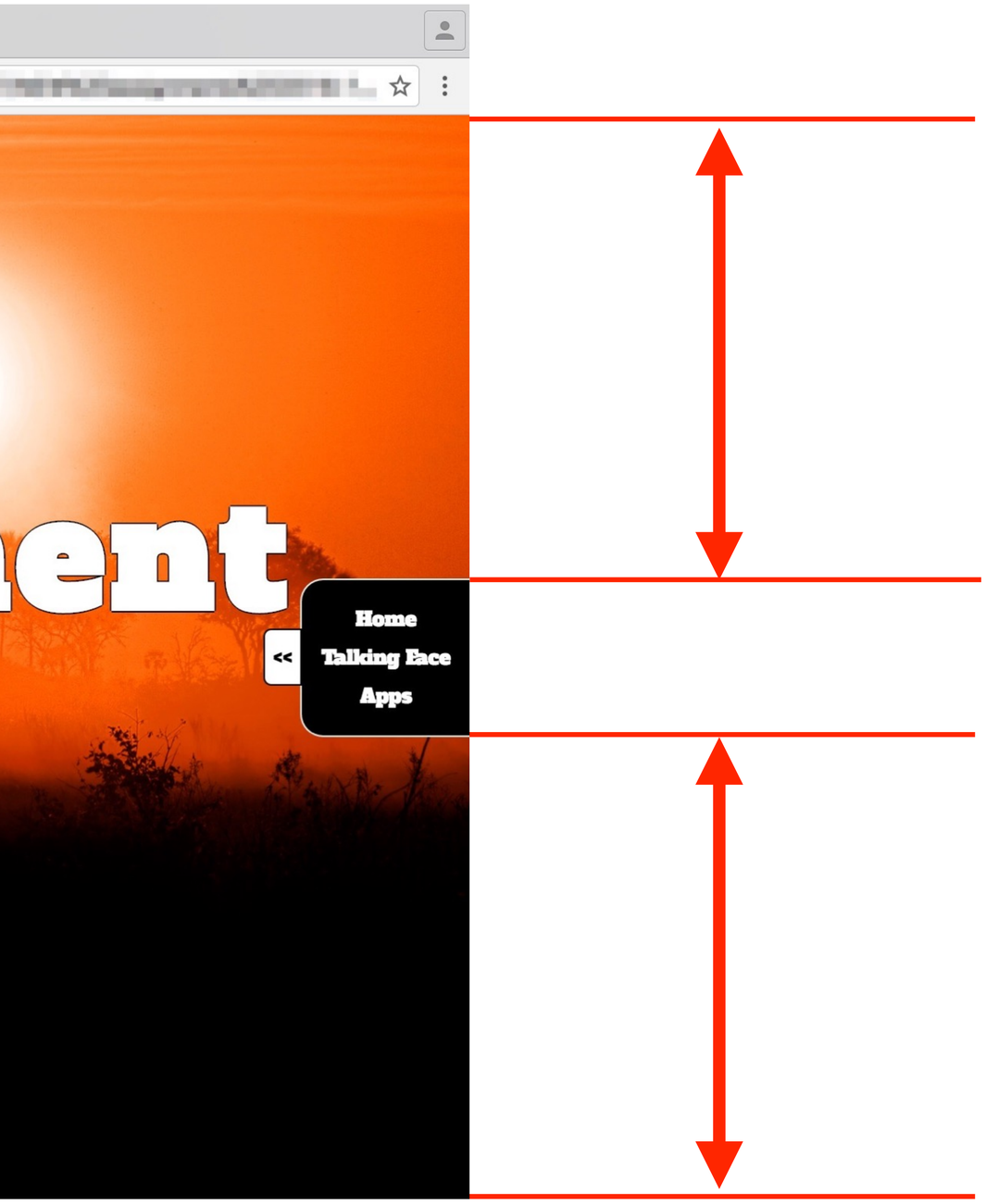
If you hover over the tab a menu will appear. Clicking on one of the links in the menu should display the relevant section on the page (i.e. scroll to that part of the document using anchor tags).



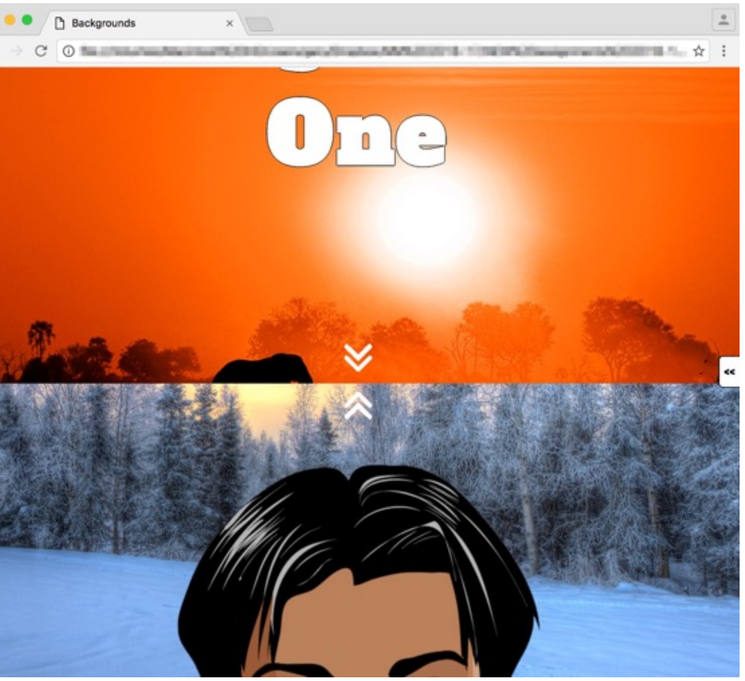
This can easily be implemented as shown

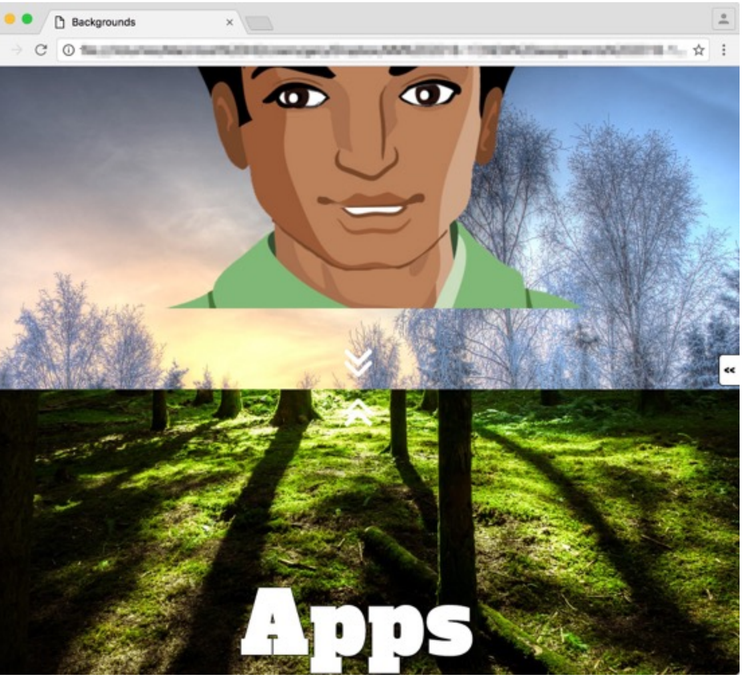
When the menu appears or disappears it should slide in or out via CSS3 animation.

(See screencast for example)



The menu (and tab) should be vertically centered





They should remain in position regardless of how much the document may have been scrolled.

Animated Face

You must animate an image of a face.

(Image source: http://www.designcomics.org)

You start with an image like this.

The image has been broken up into the following components.

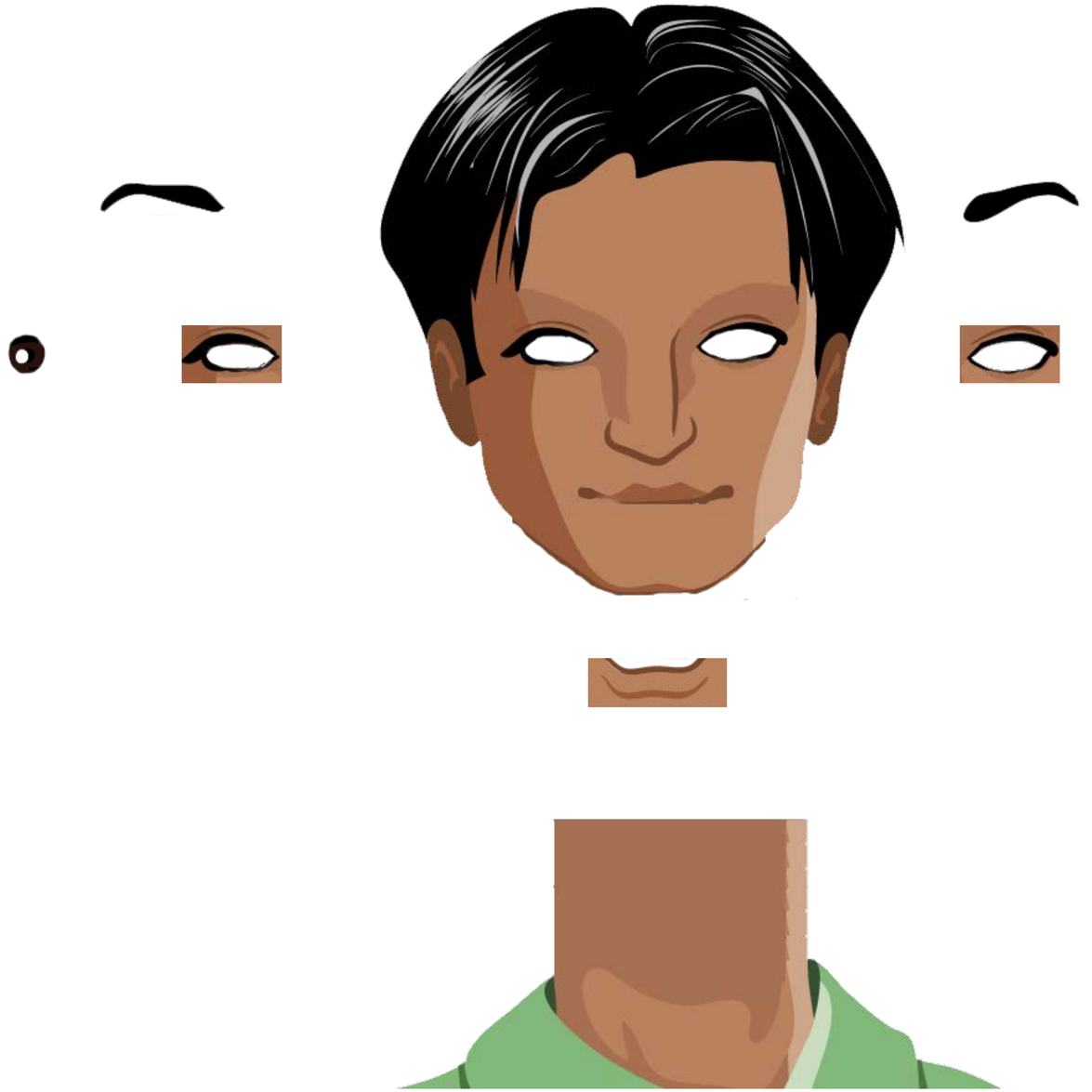
Eyes / Eyeballs

Eyebrows

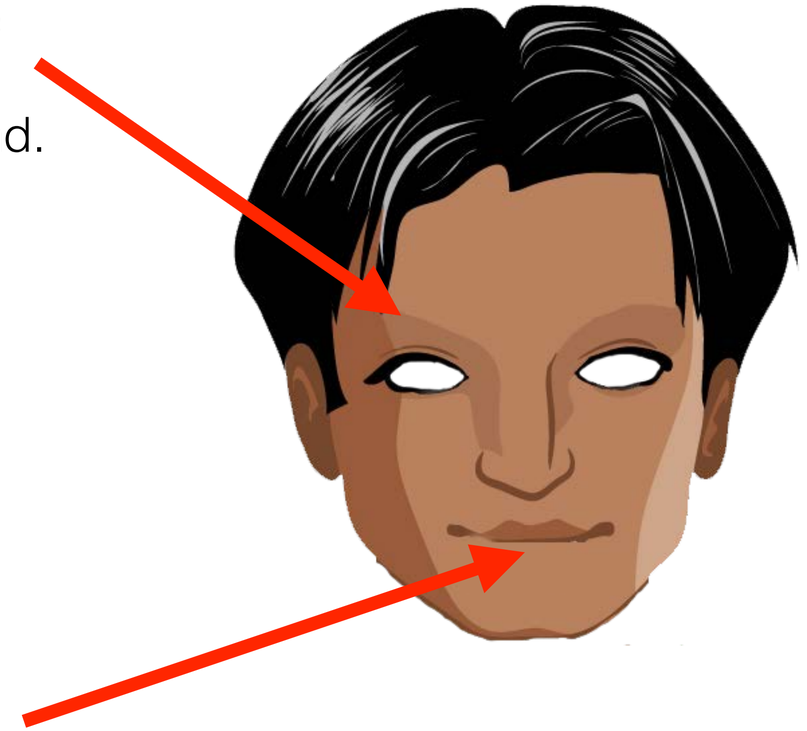
Mouth

Face

Shoulders/Neck



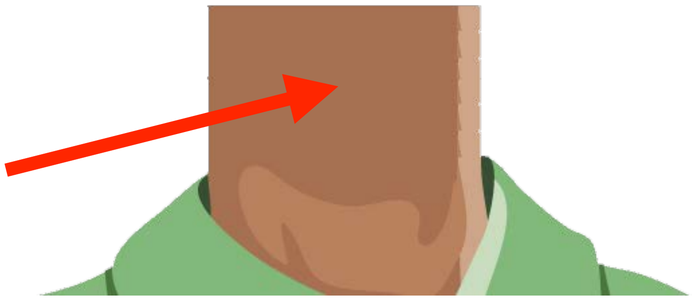
Eyebrows are removed. We have to replace them by creating a blank background.



The part of the mouth you will animate is removed (and replaced by blank background)

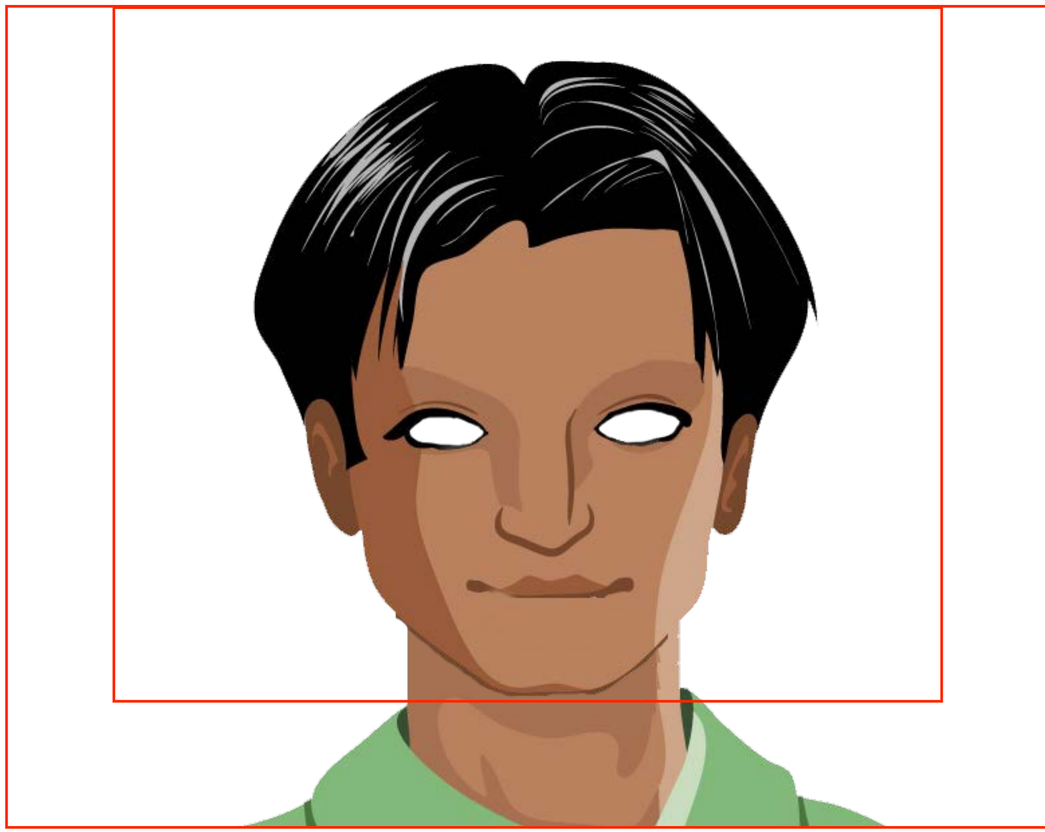
The original image was also altered to facilitate the animation.

The neck is elongated so you have more flexibility in moving the face



Those images will be used as backgrounds for HTML elements that you will position (and animate) on the page.

E.g. you must arrange for the face to appear over the shoulders.



Then you can rotate it from side to side.

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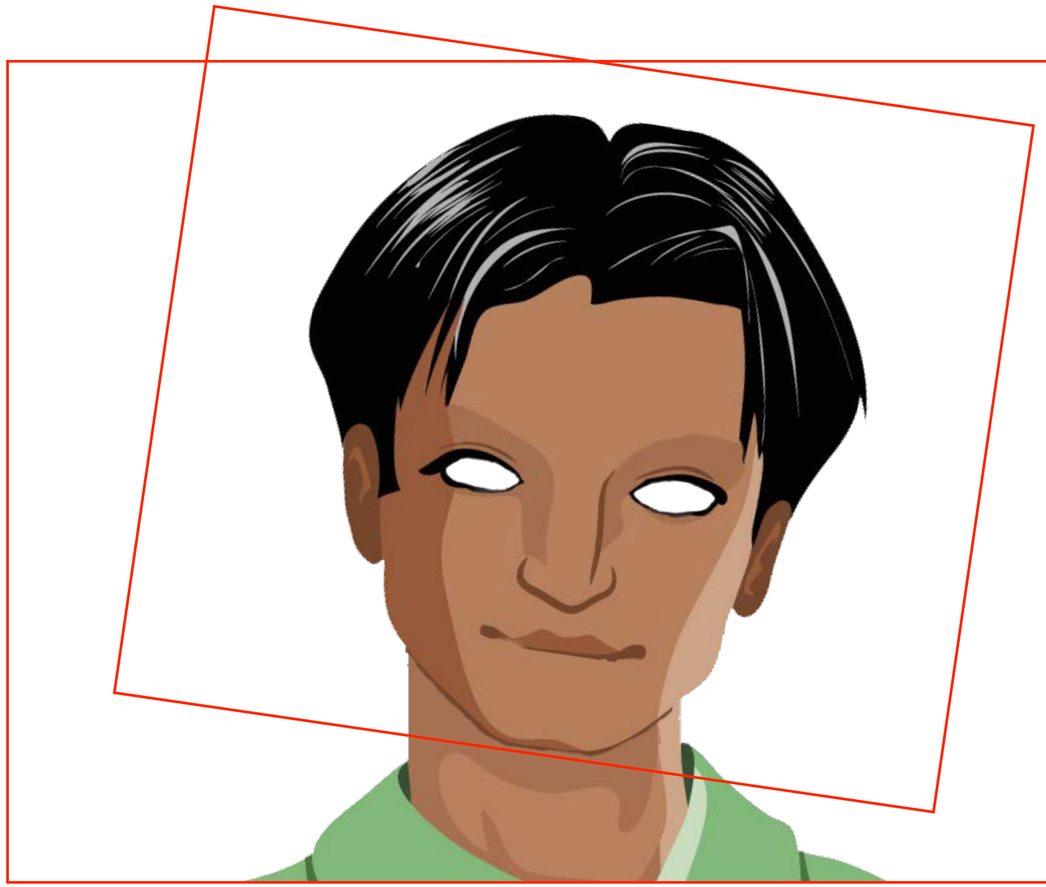
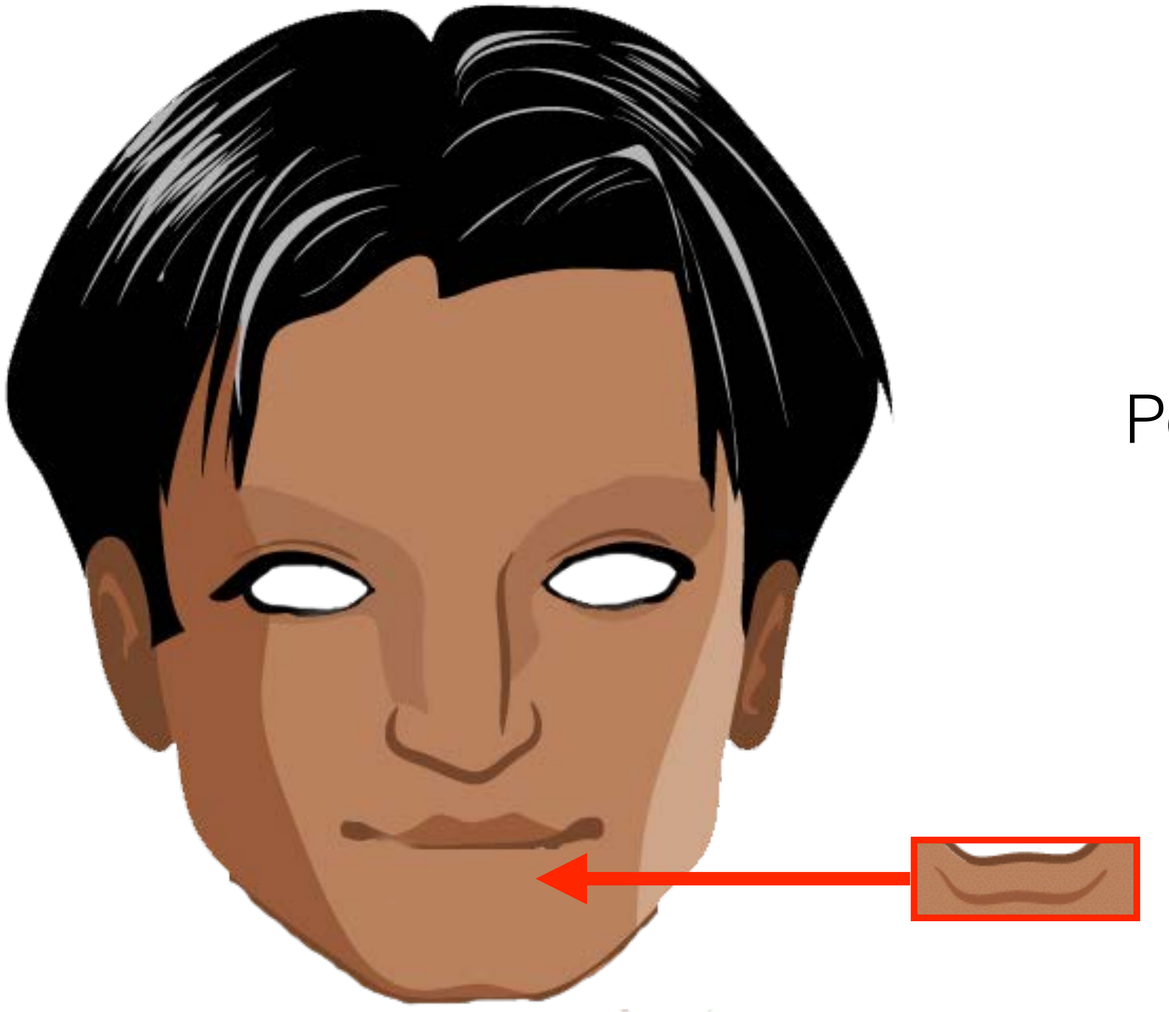
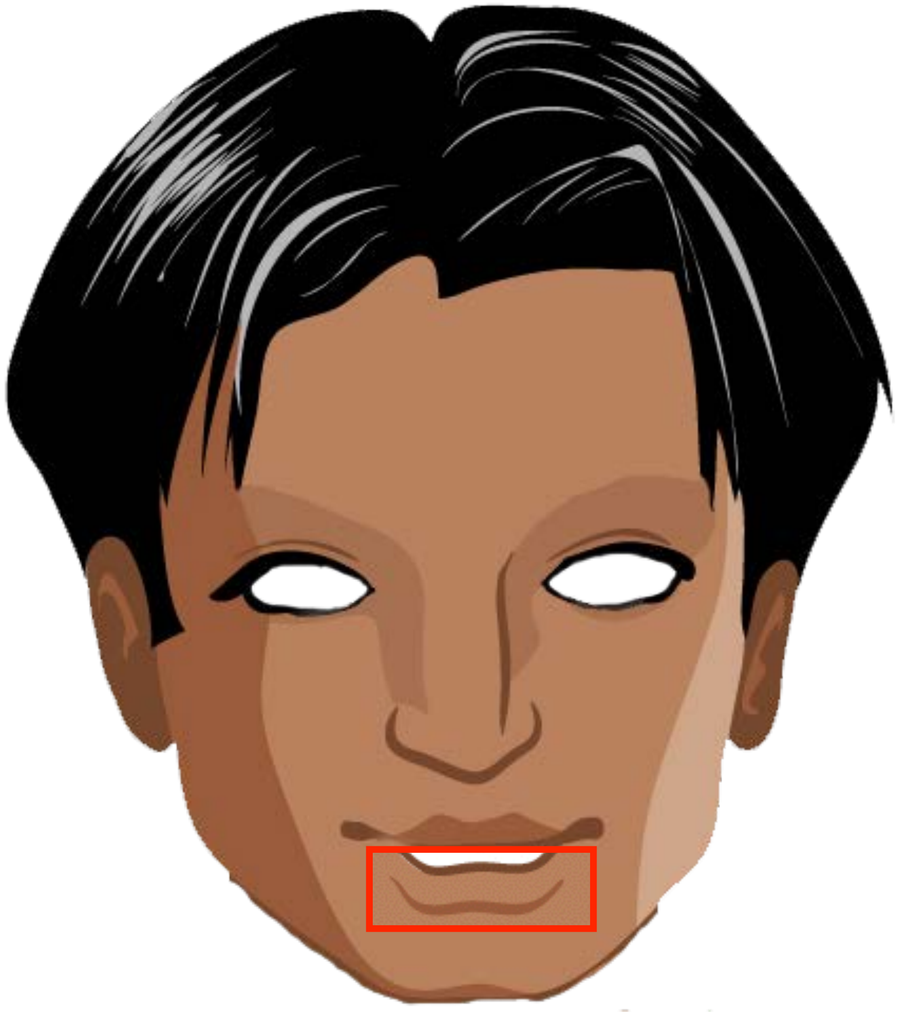




Position the mouth over the face.



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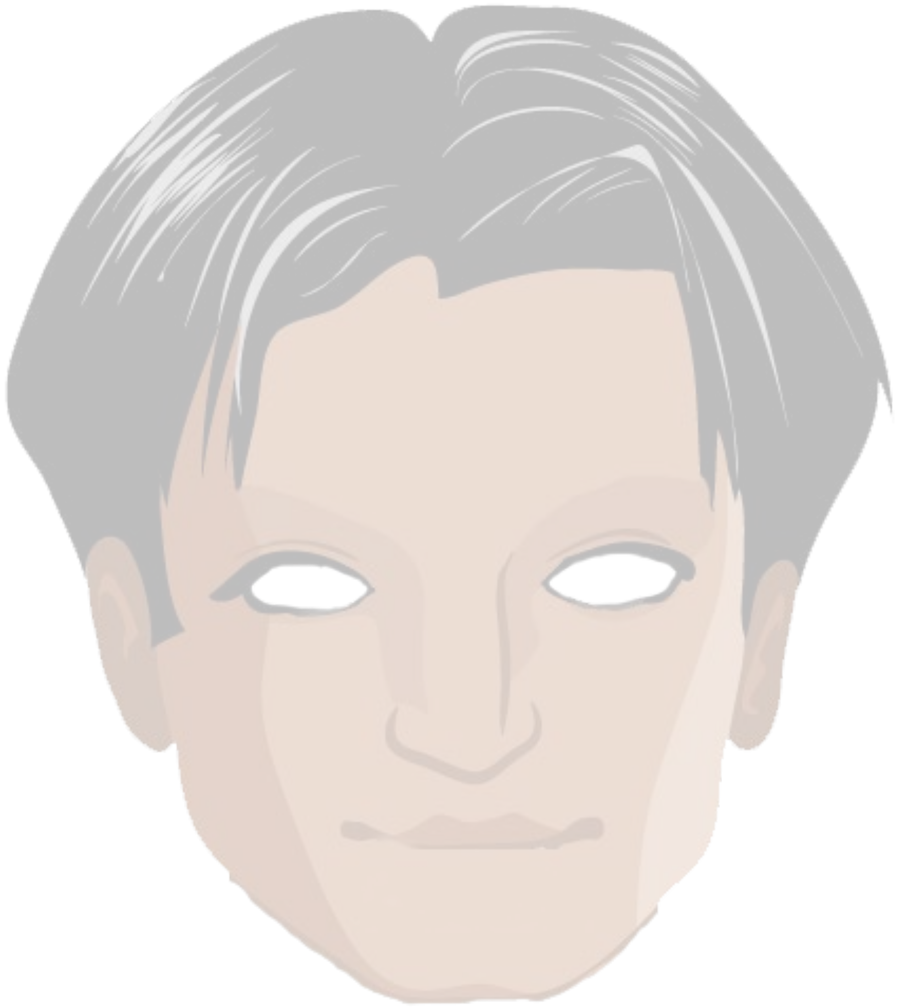
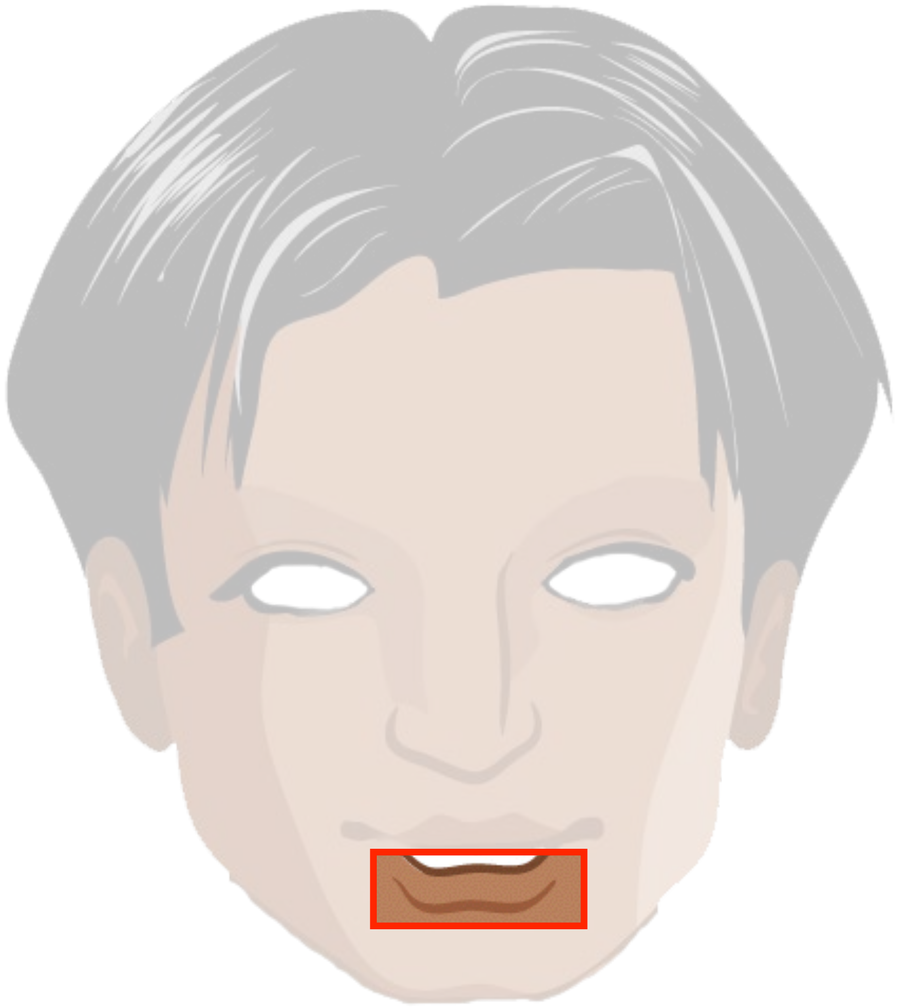
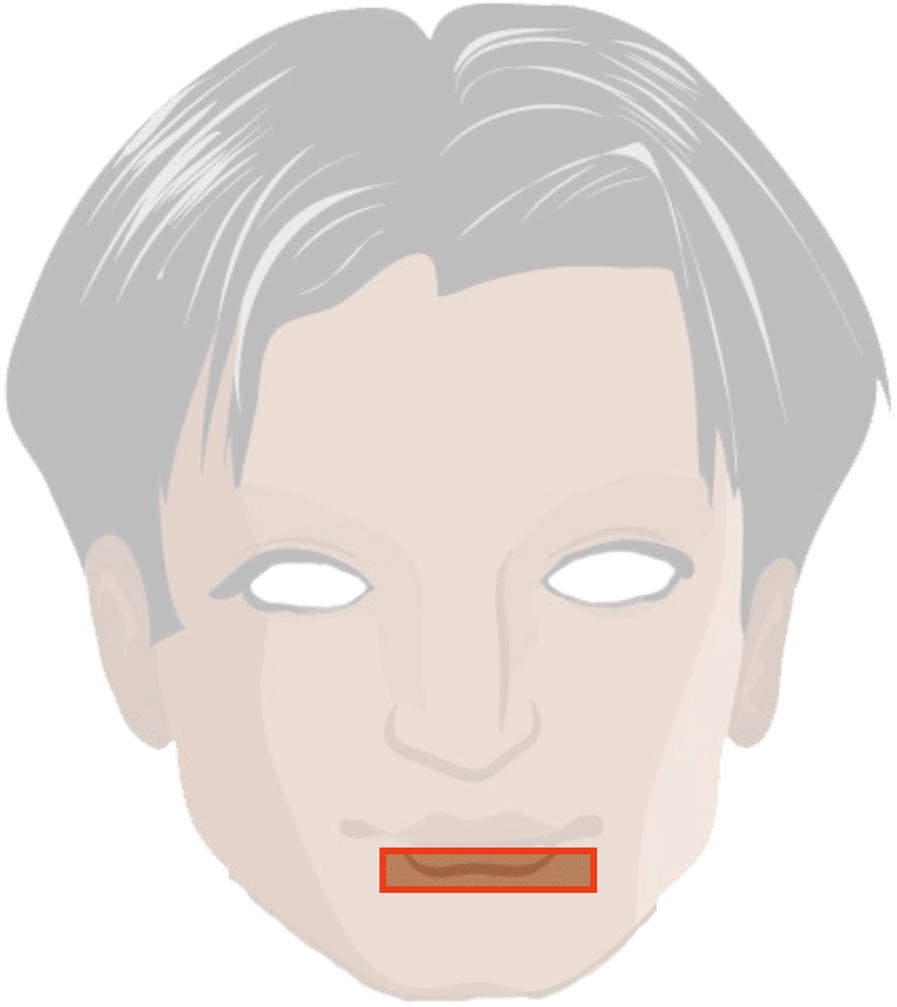


If set up correctly when you change the height of this you will reveal more/less of the background.





If you animate this change in height the mouth will appear to talk.

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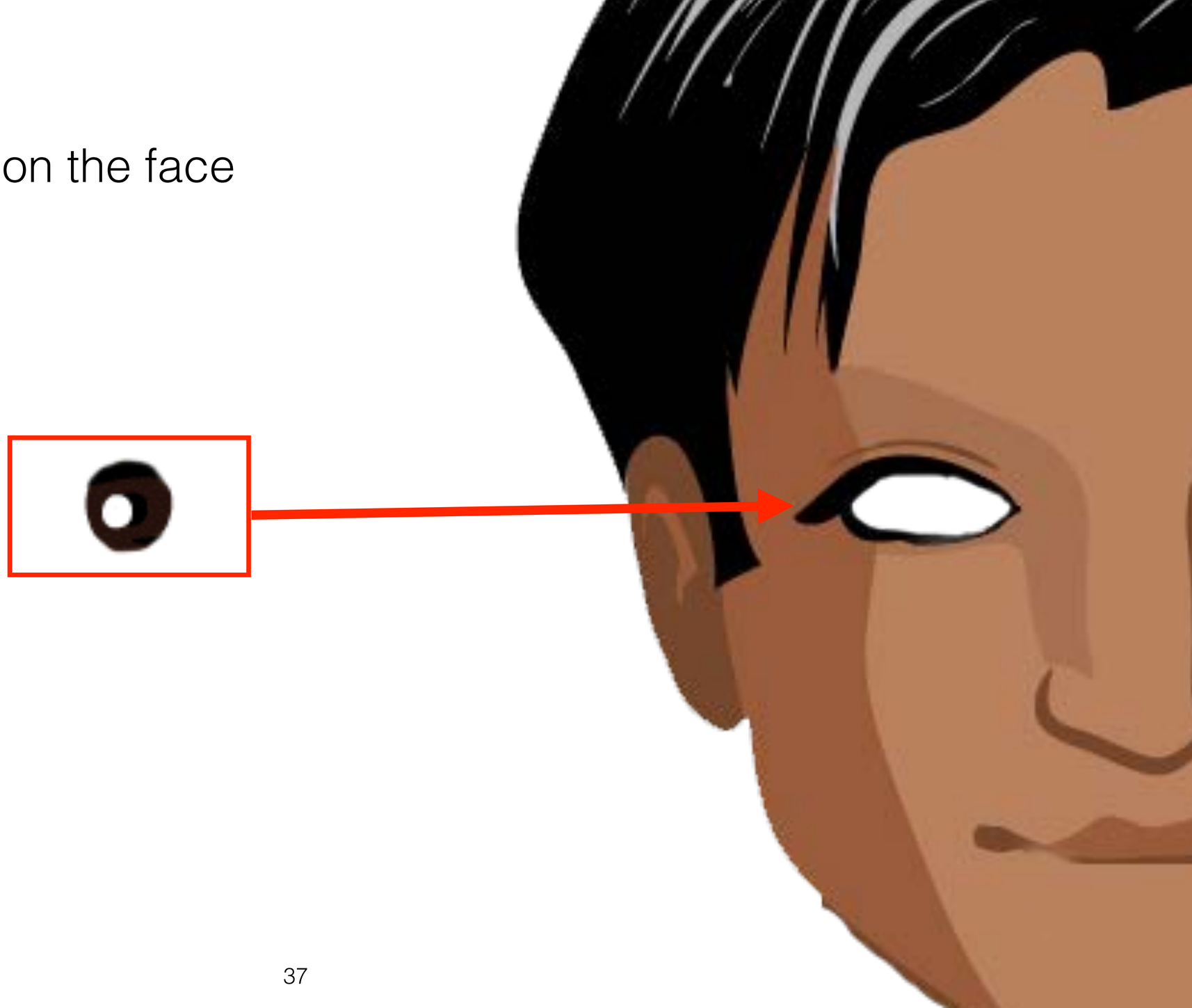
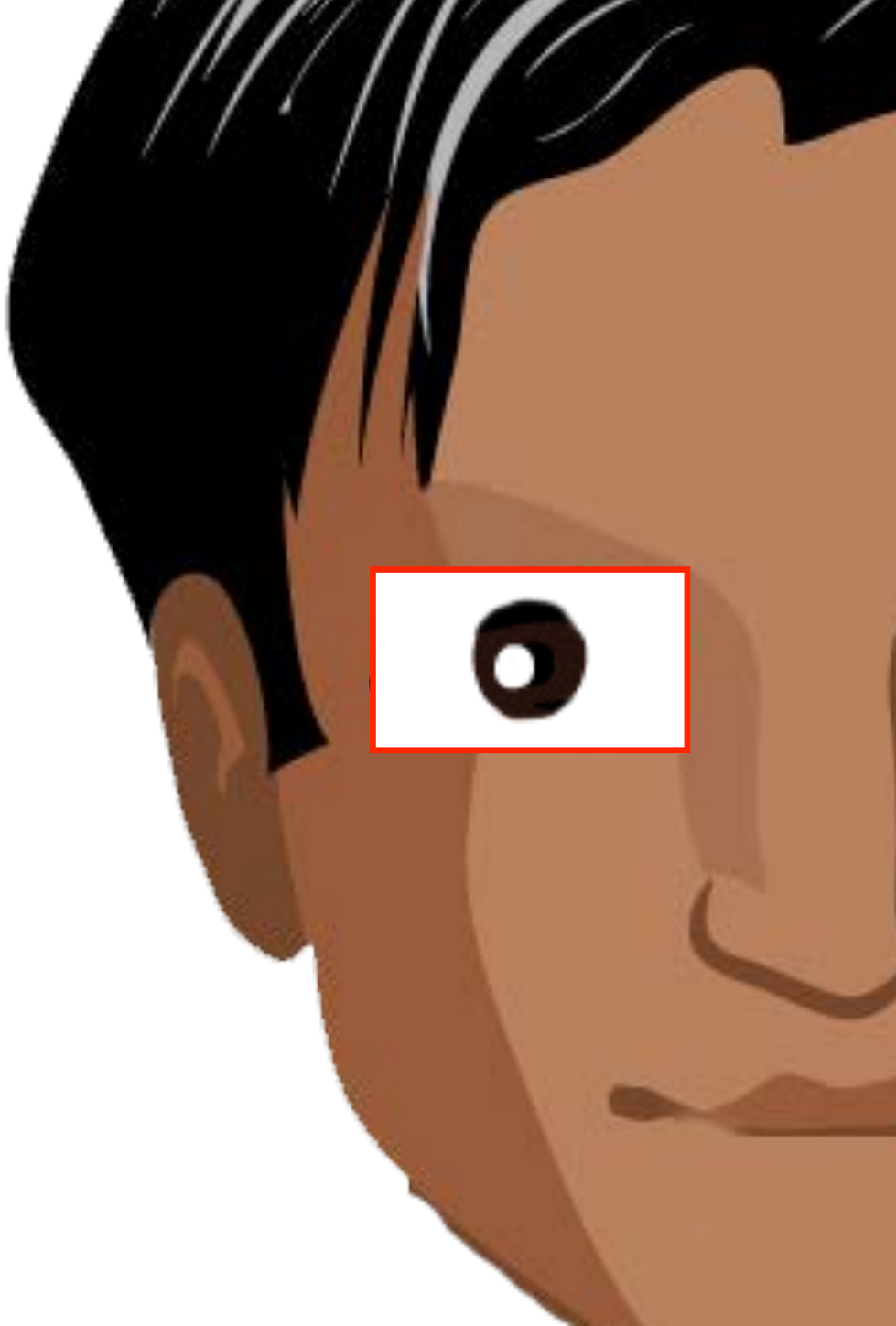
Position the eyeball on the face



Position the eyeball on the face



You can animate the position of the background.

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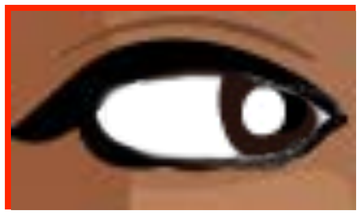
Place a (transparent) eye graphic to cover the eyeball if necessary.



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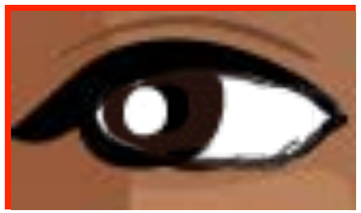

If positioned correctly it will appear seamless on the face.

Note: Another option is to make the eyes on the the face transparent and to animate the eyes behind it.

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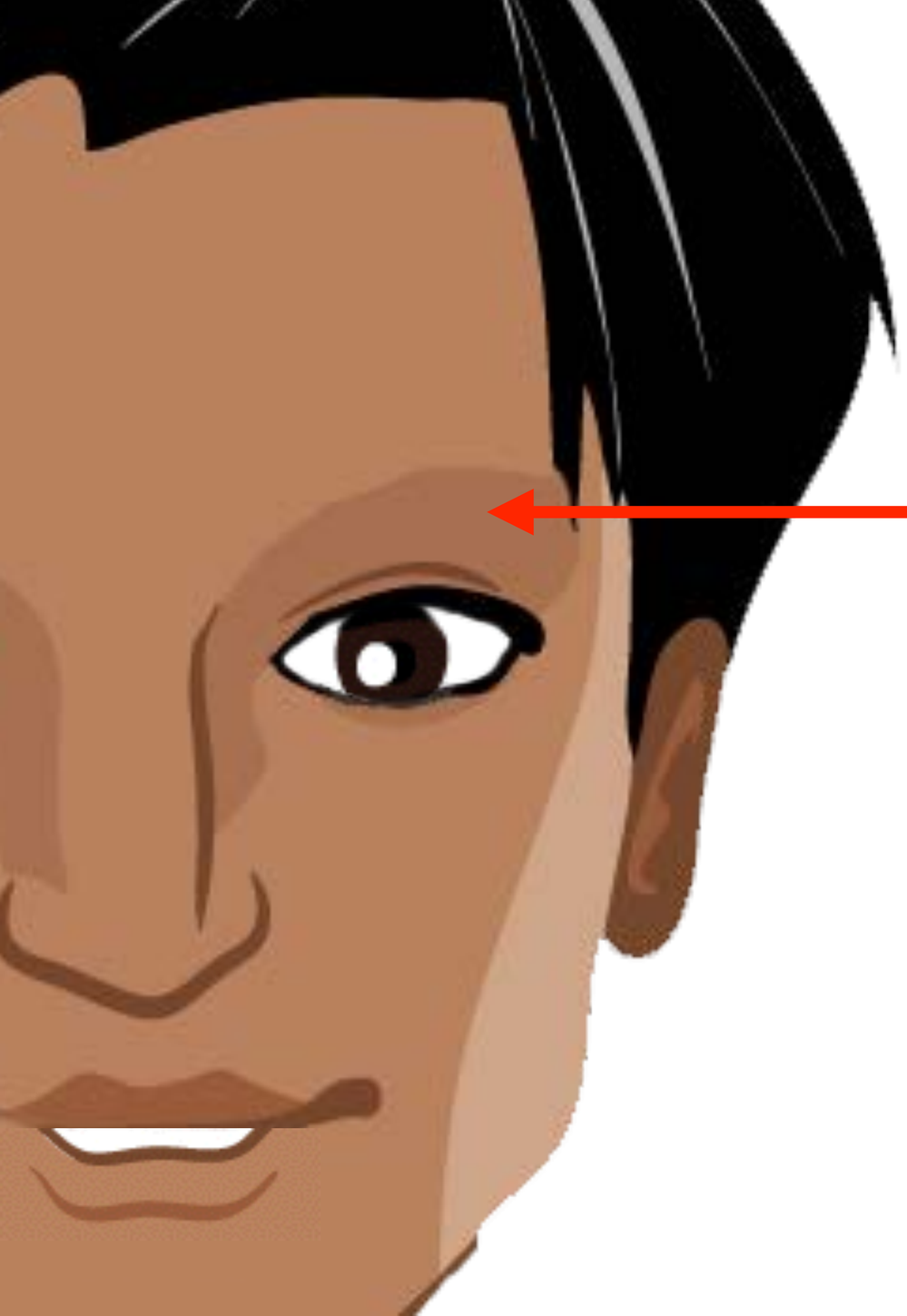
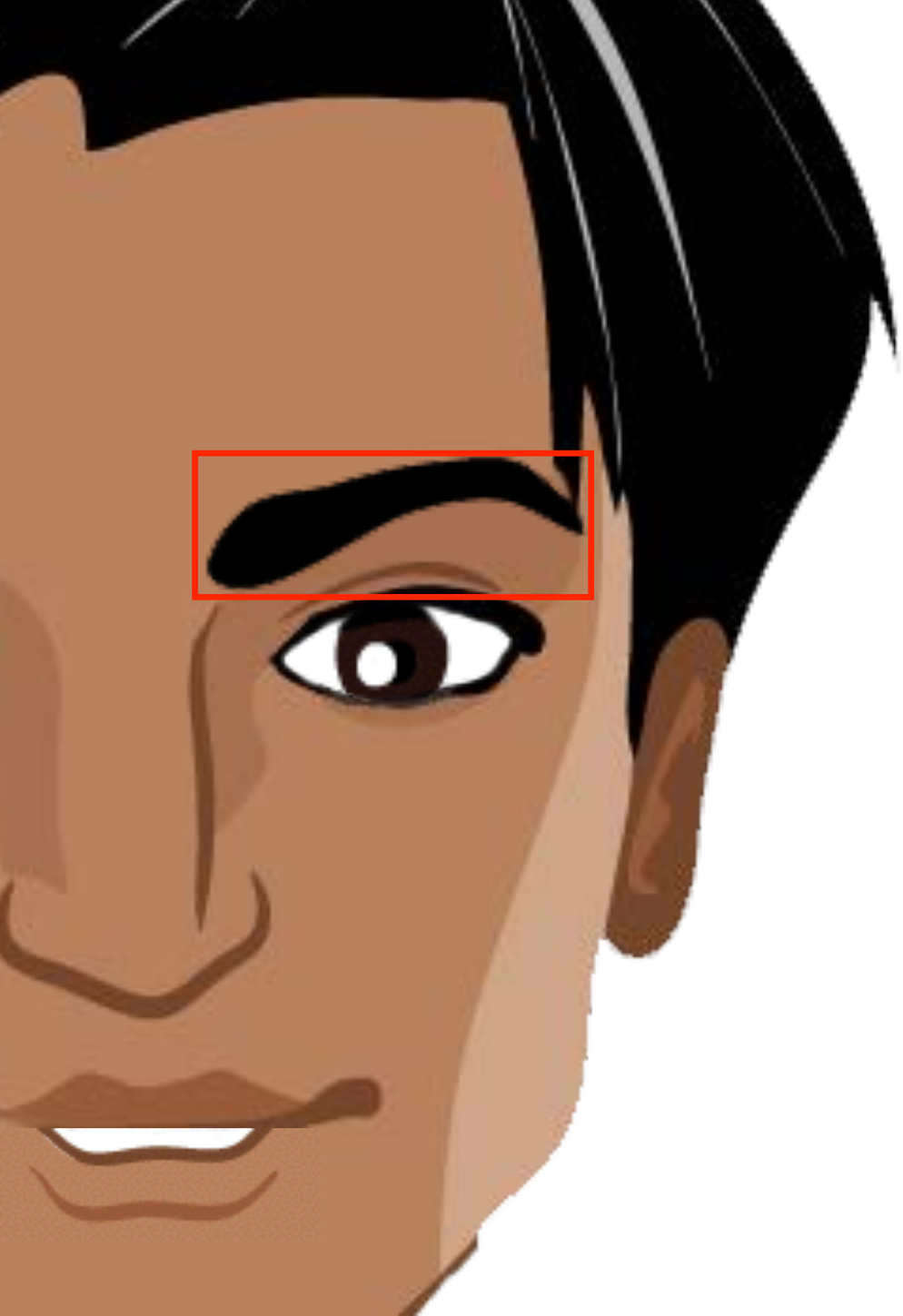


Place the eyebrow over the face.



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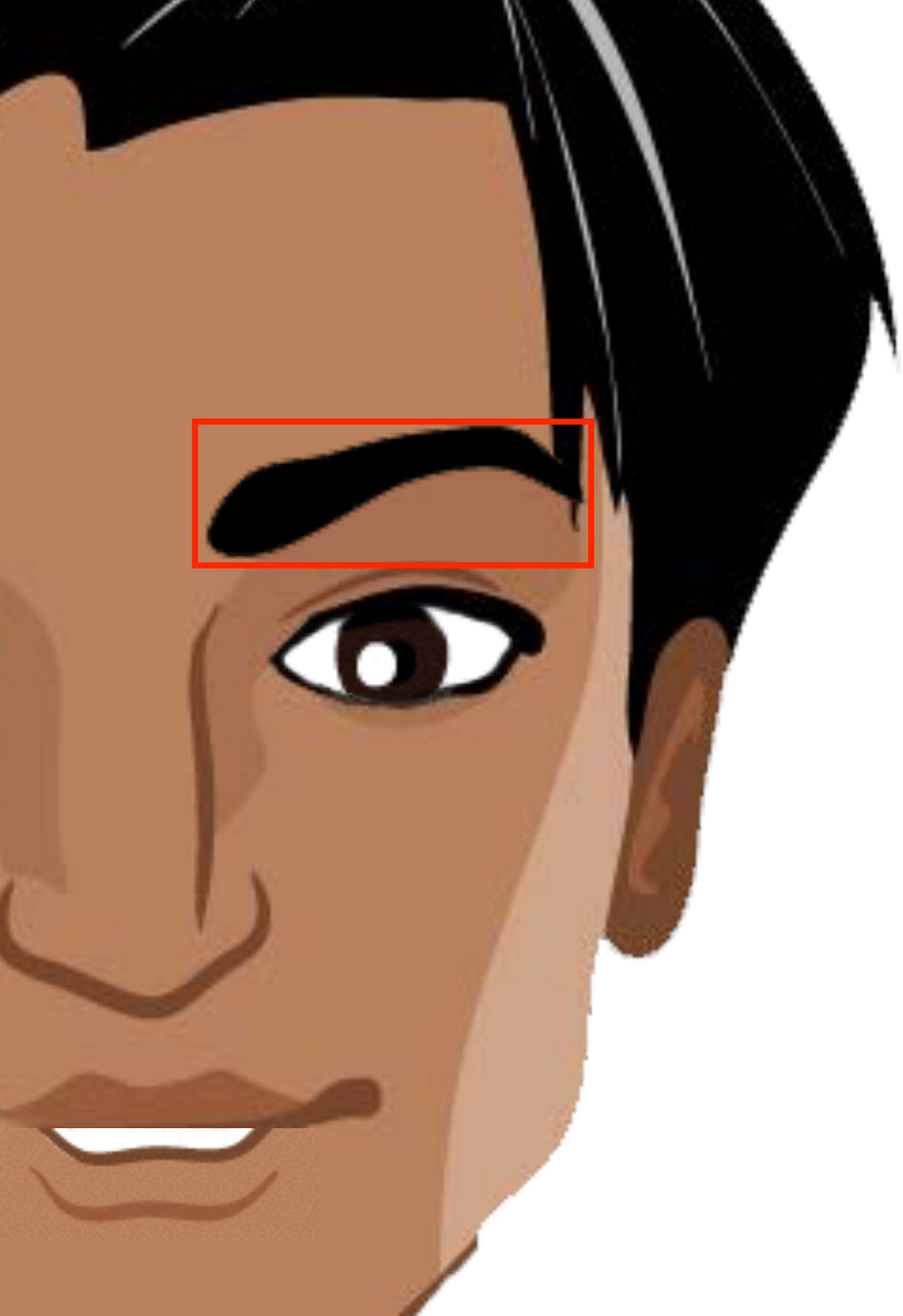
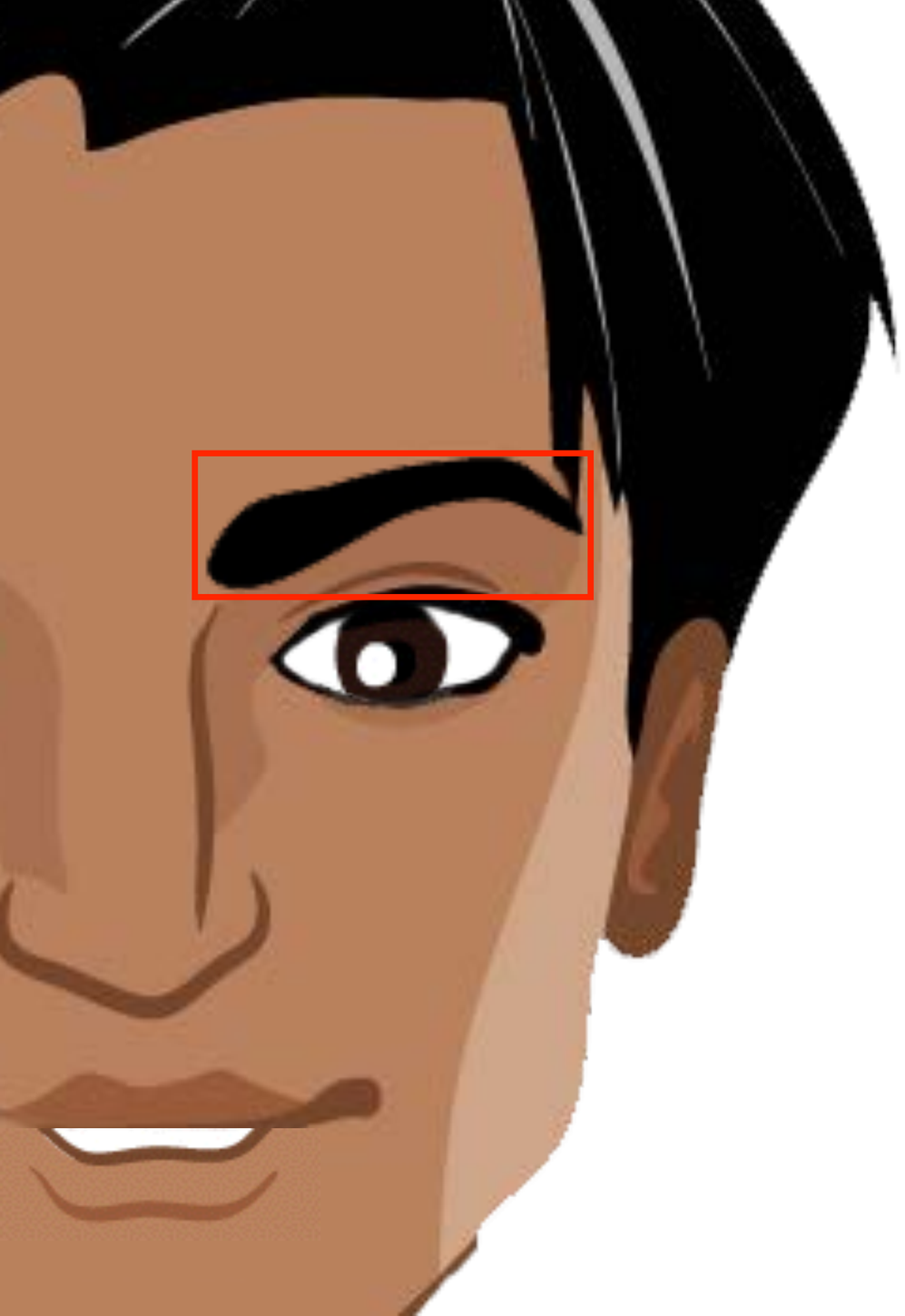


You can move the eyebrow up and down.



You can move the eyebrow up and down.

Creating an Animation Sequence

You must create this sequence in your animation.

There must be a short delay where nothing happens. Then the eyes look to the left and back. You should then raise the eyebrows ***after*** the eyes have moved.

I.e. the eyes looks to the left.

Then back to the center.

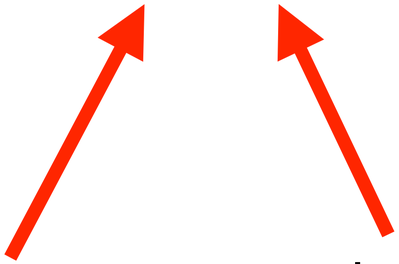
When that animation is finished you can raise the eyebrows.

When that animation is finished you can move the eyebrows up and down.

You can do this by specifying a delay before the eyebrow animation starts.

E.g. In the **eye** elements you can specify the duration of that animation.

```
animation: moveEyes 3s 1;
```

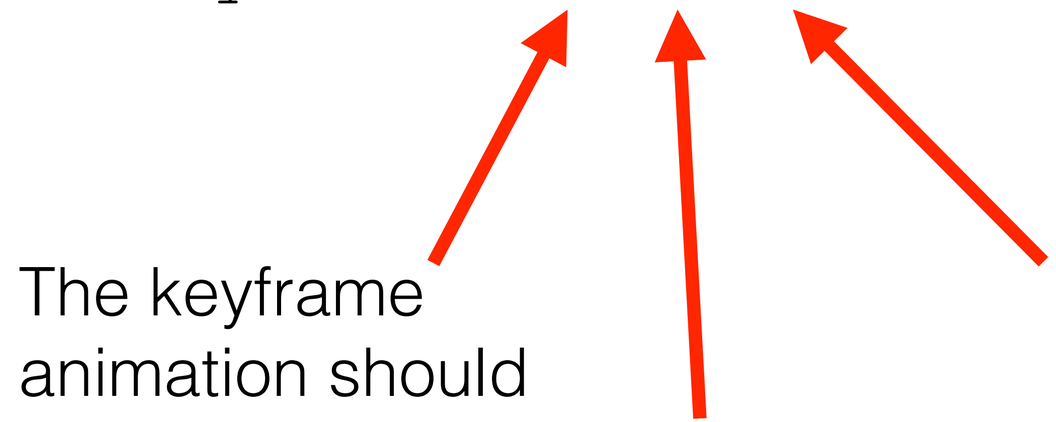


The keyframe animation should last 3 seconds.

It should only animate once

In the **eyebrow** elements you can specify a delay before the animation starts. You can make this the same as the duration of the eye animation so that this animation will wait until the other animation is completed.

```
animation: moveEyebrows 2s 1 3s;
```



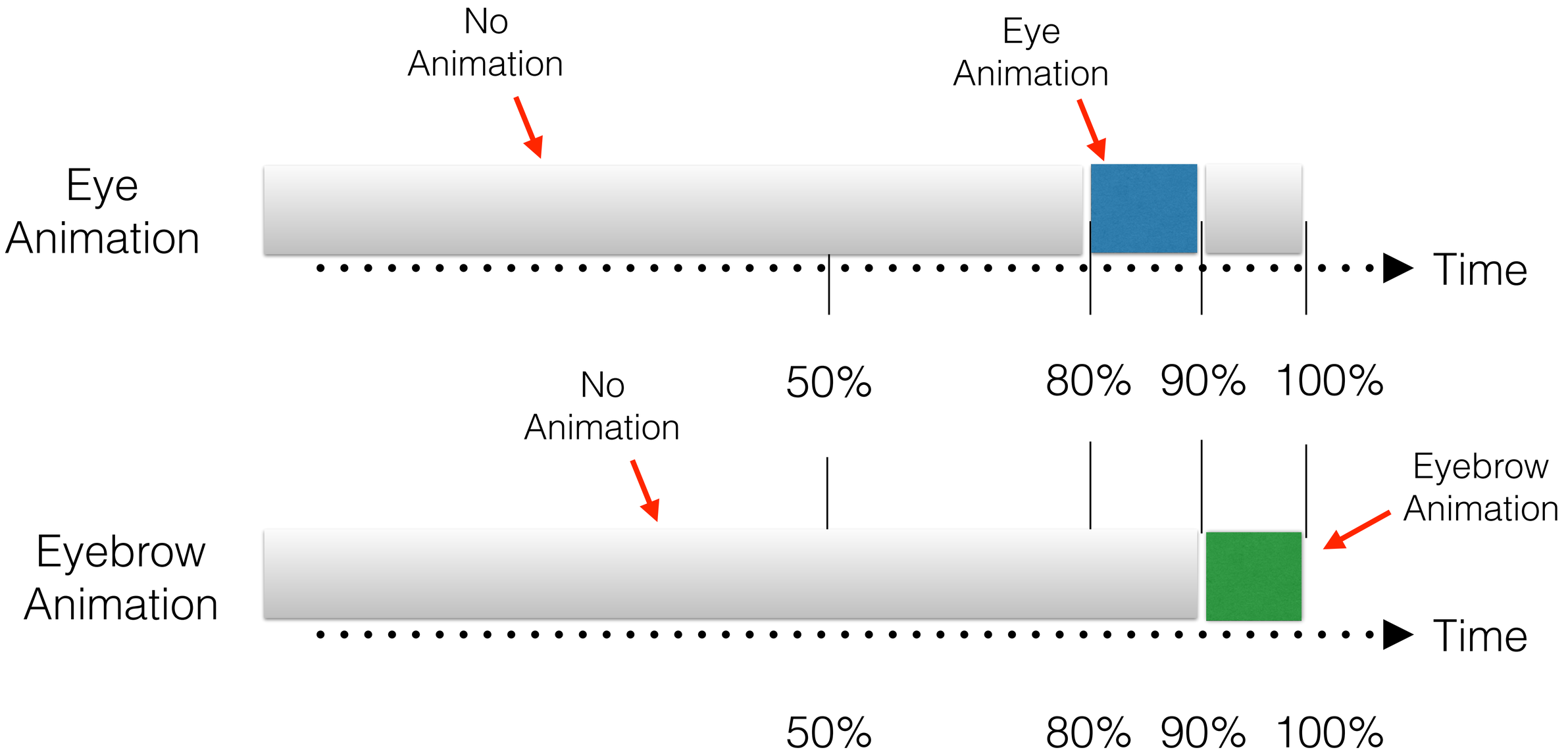
The keyframe animation should last 2 seconds.

It should only animate once

The animation should wait 3 seconds before starting

However, you will want those animations to repeat (instead of just running once) as required by this assignment.

So you can arrange for the actual eye animation to happen in the 80%-90% portion of a keyframe animation and the eyebrow animation to take place in the 90%-100% section of its animation. If they both are taking place over the same time period, then one will follow the other.


No
Animation
Eye
Animation
Eye
Animation
Time
50%
80%
90%
100%
No
Animation
Eyebrow
Animation
Eyebrow
Animation
Time
50%
80%
90%
100%

Eyes

```
@keyframes eyeMovement {

    0% { background-position: top left, 0px 0px; }
    80% { background-position: top left, 0px 0px; }
    85% {background-position: top left, 15px 0px; }
    90% {background-position: top left, 0px 0px;  }
    100% {background-position: top left, 0px 0px;  }
}
```

I.e. the actual movement only occurs in part of the keyframe animation.

Eyebrow

```
@keyframes eyeBrowMovement {

    0% { margin-top: 0px; }
    90% { margin-top: 0px; }
    95% {margin-top: -10px; }
    100% { margin-top: 0px; }

}
```

Eyes

```
@keyframes eyeMovement {

    0% { background-position: top left, 0px 0px; }
    80% { background-position: top left, 0px 0px; }
    85% {background-position: top left, 15px 0px; }
    90% {background-position: top left, 0px 0px;  }
    100% {background-position: top left, 0px 0px;  }
}
```

We can arrange for nothing to change for part of the animation.

Eyebrow

```
@keyframes eyeBrowMovement {

    0% { margin-top: 0px; }
    90% { margin-top: 0px; }
    95% {margin-top: -10px; }
    100% { margin-top: 0px; }

}
```

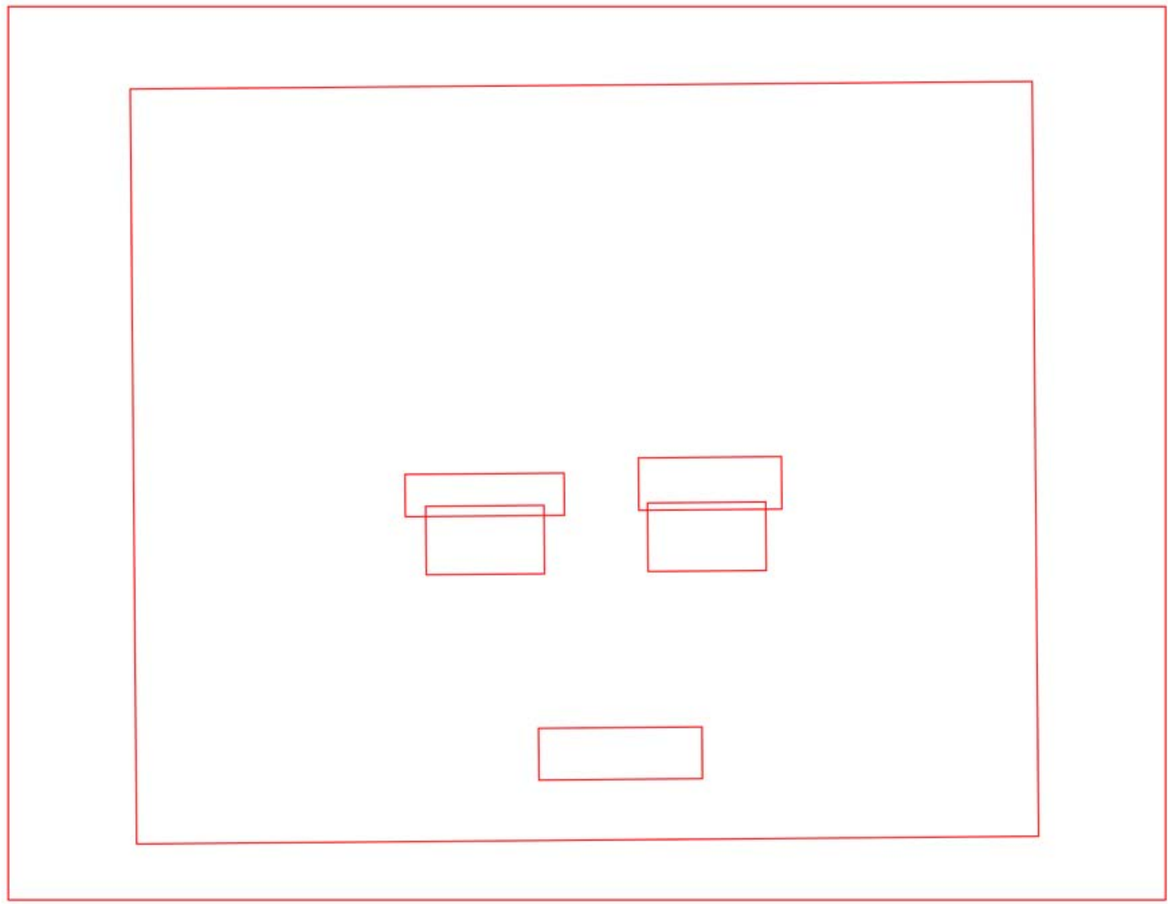
```
@keyframes eyeMovement {

    0% { background-position: top left, 0px 0px; }
    80% { background-position: top left, 0px 0px; }
    85% {background-position: top left, 15px 0px; }
    90% {background-position: top left, 0px 0px;  }
    100% {background-position: top left, 0px 0px;  }
}
```

Note that one of the elements has two backgrounds. The top-most element (the first listed) is not animated but we need to list it as it is set as part of the same property as the one that is animated.

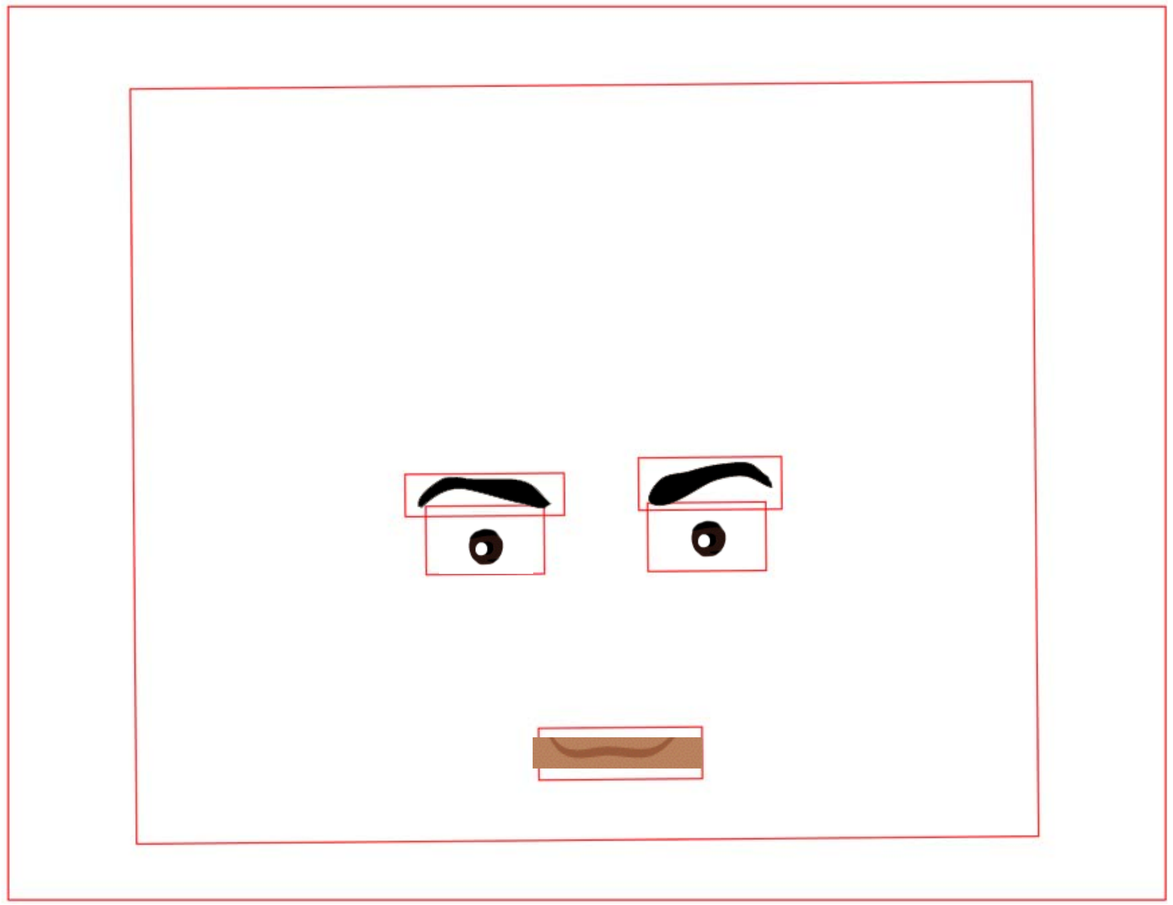
```
85% {background-position: top left, 15px 0px; }
```

The final animation is created by positioning the elements you will be using for the different graphics.

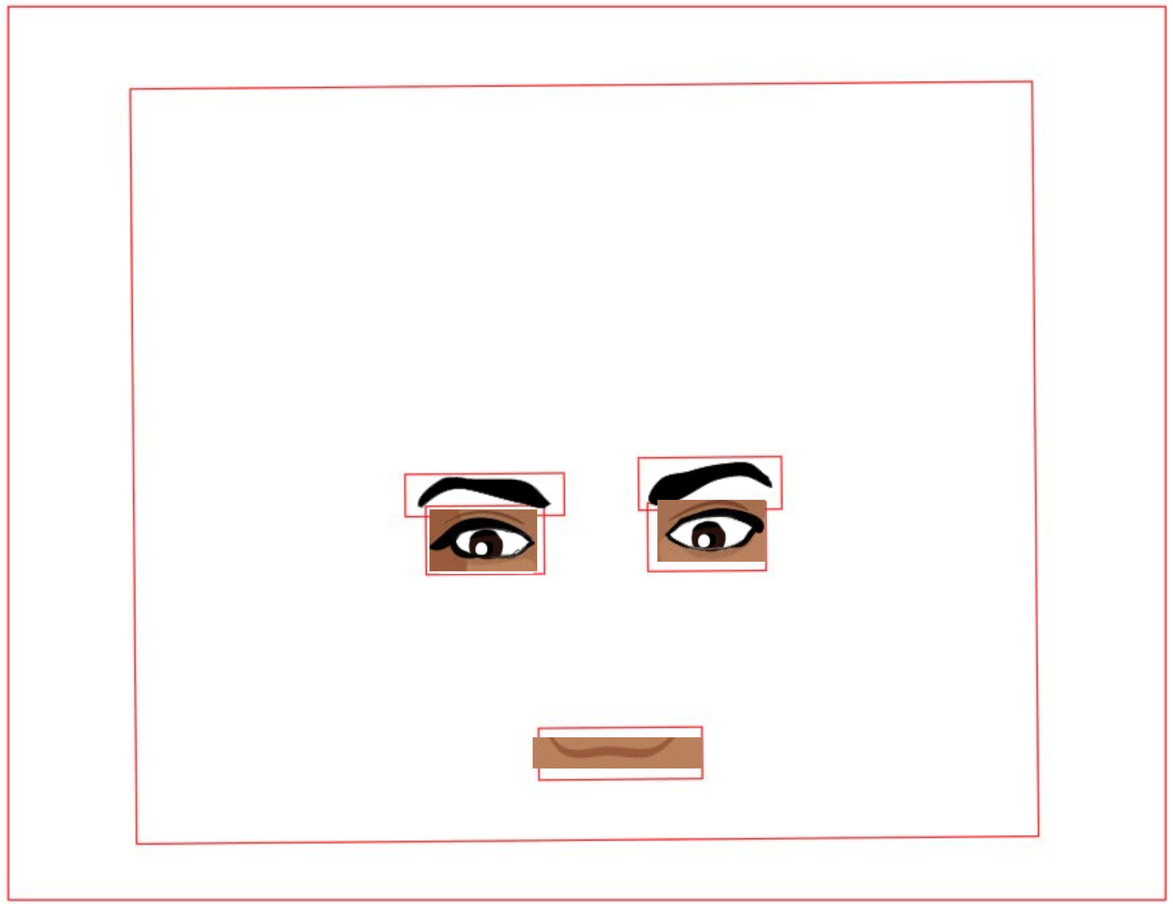
The graphics will be added as backgrounds so you should make sure the elements are the right dimensions to show the full image.



When the elements are the correct size you can display the backgrounds.



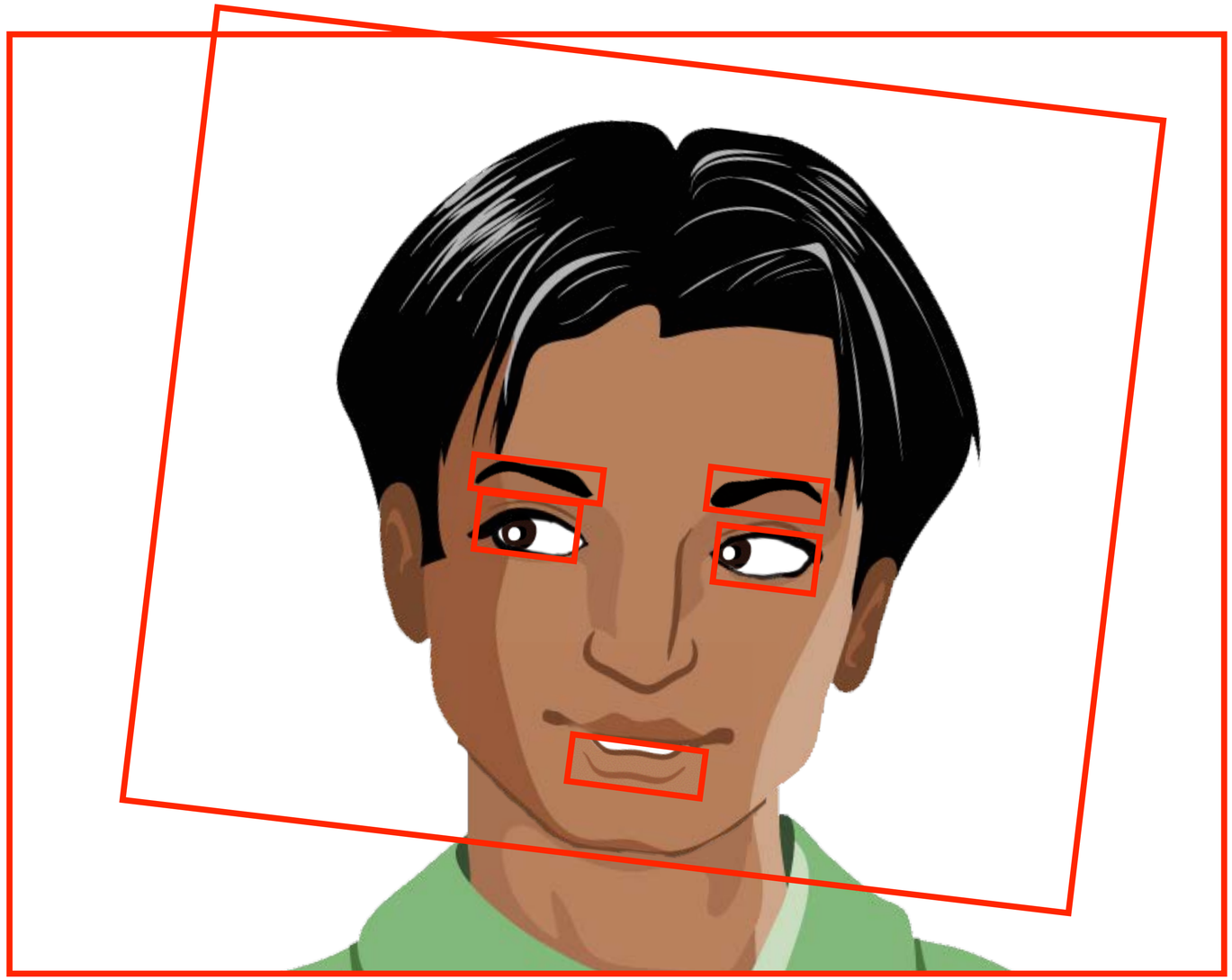
When the elements are the correct size you can display the backgrounds.



When the elements are the correct size you can display the backgrounds.

When the elements are the correct size you can display the backgrounds.

If you rotate an element you will automatically rotate its contents too.



These can then be animated using keyframe animations.

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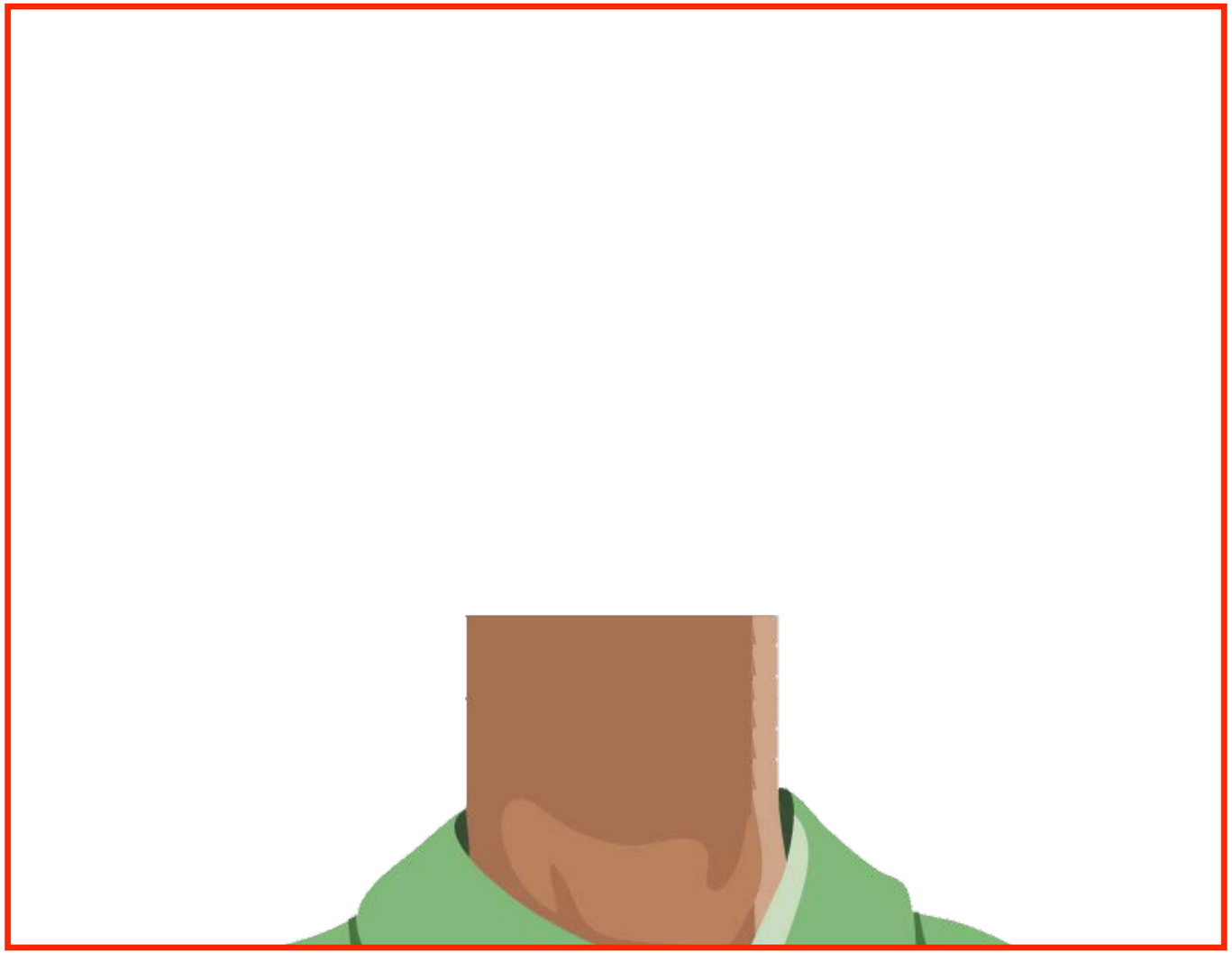
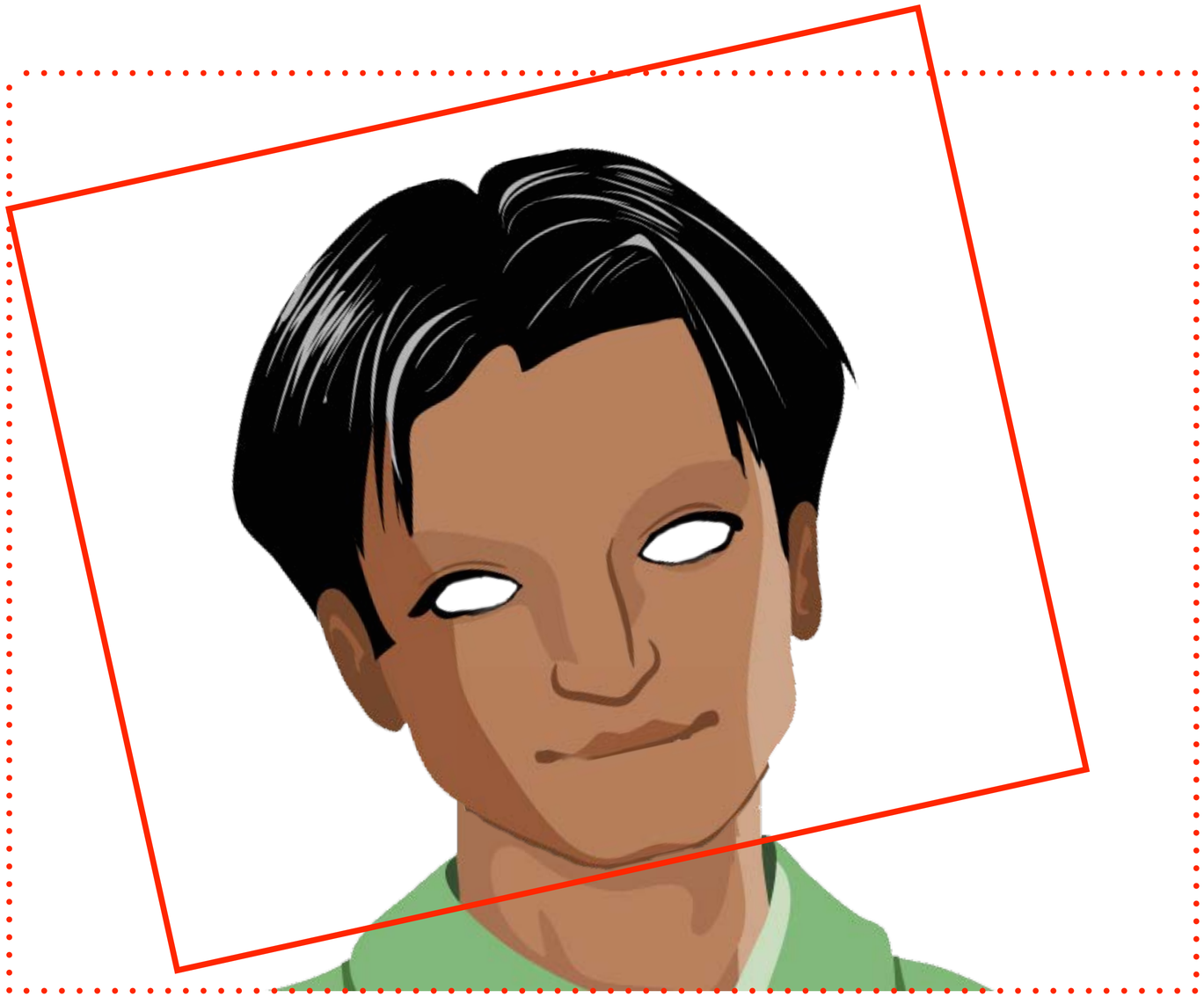
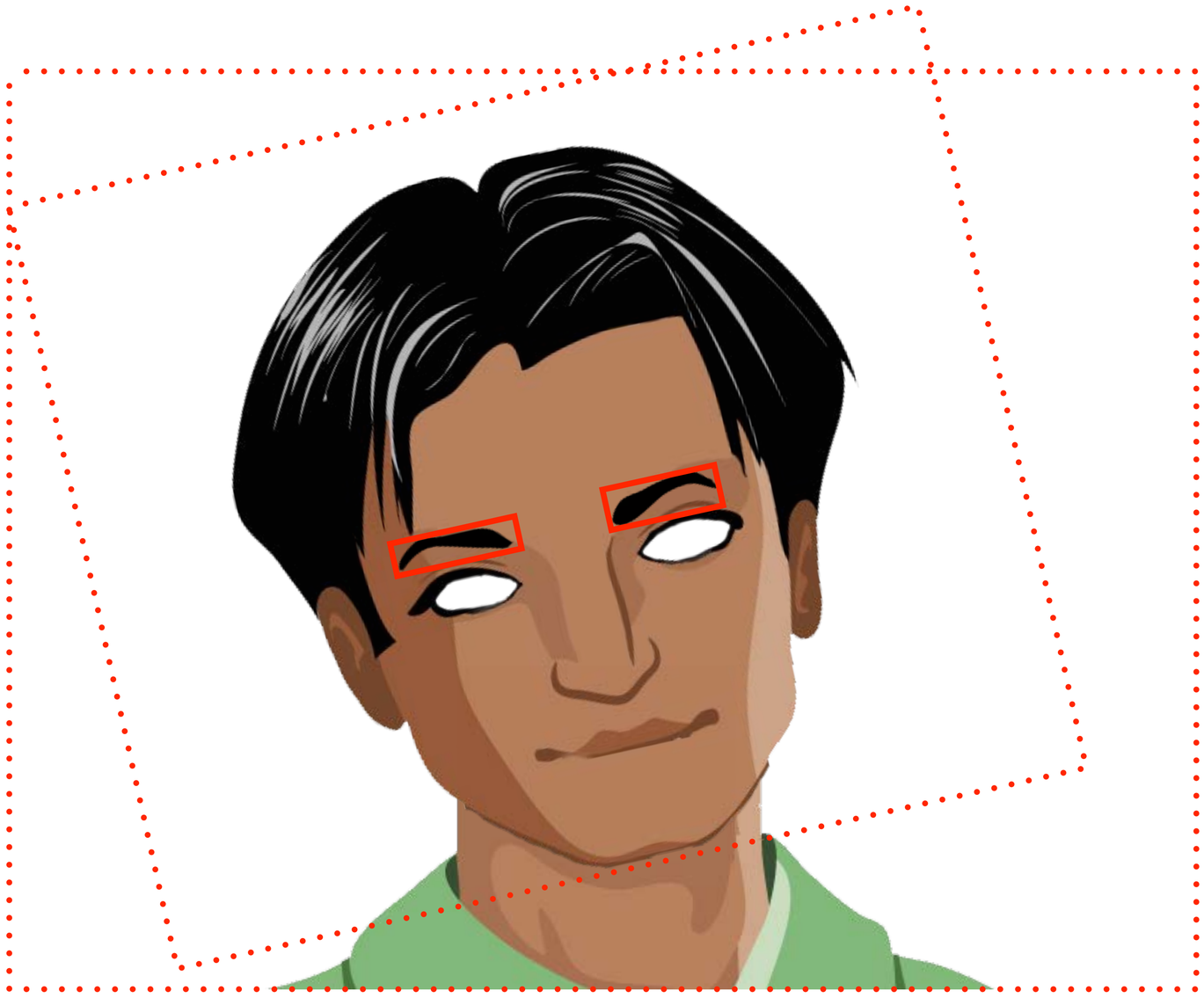


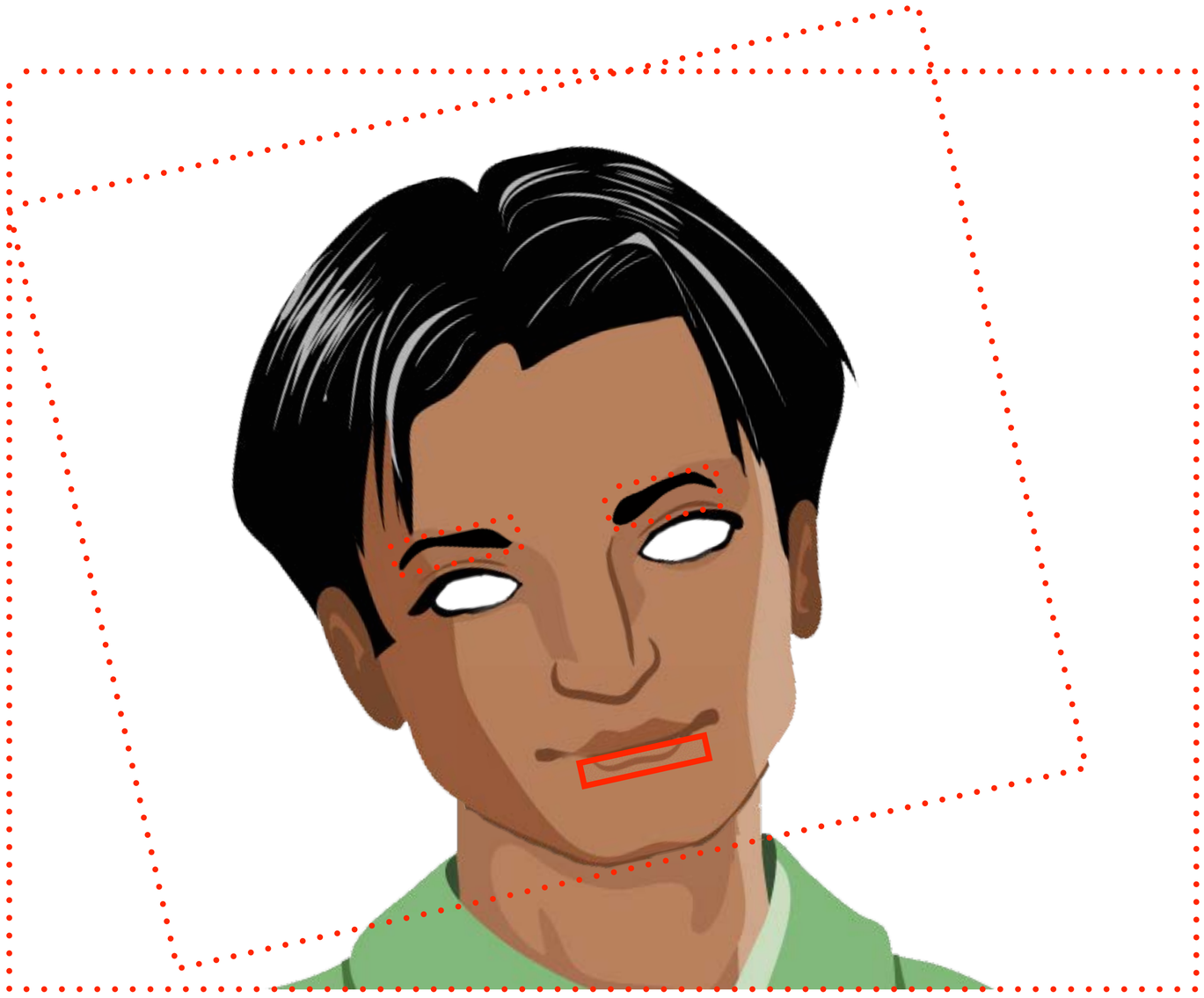
For the purposes of this assignment we will use a separate element for each background.



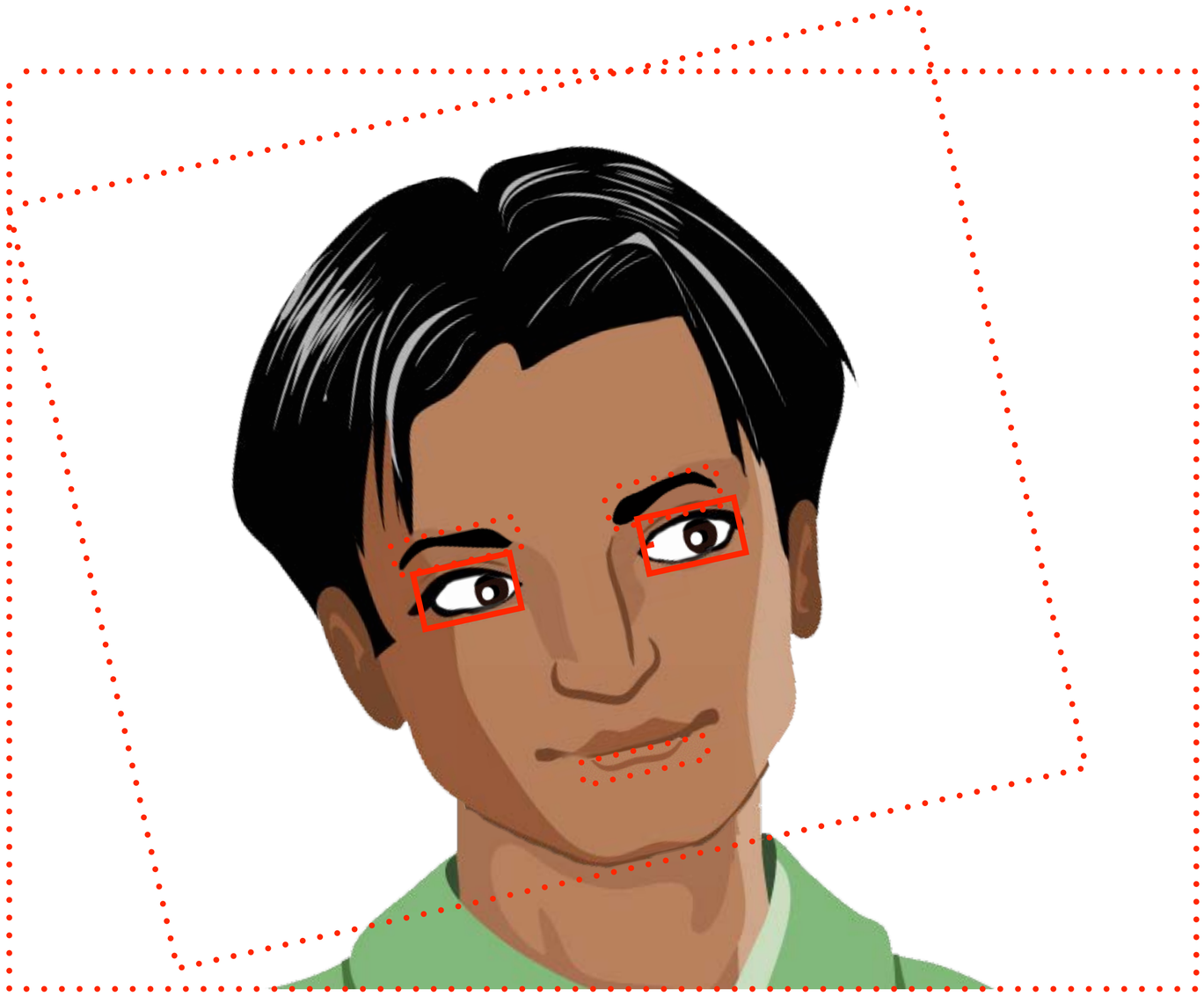
For the purposes of this assignment we will use a separate element for each background.



For the purposes of this assignment we will use a separate element for each background.

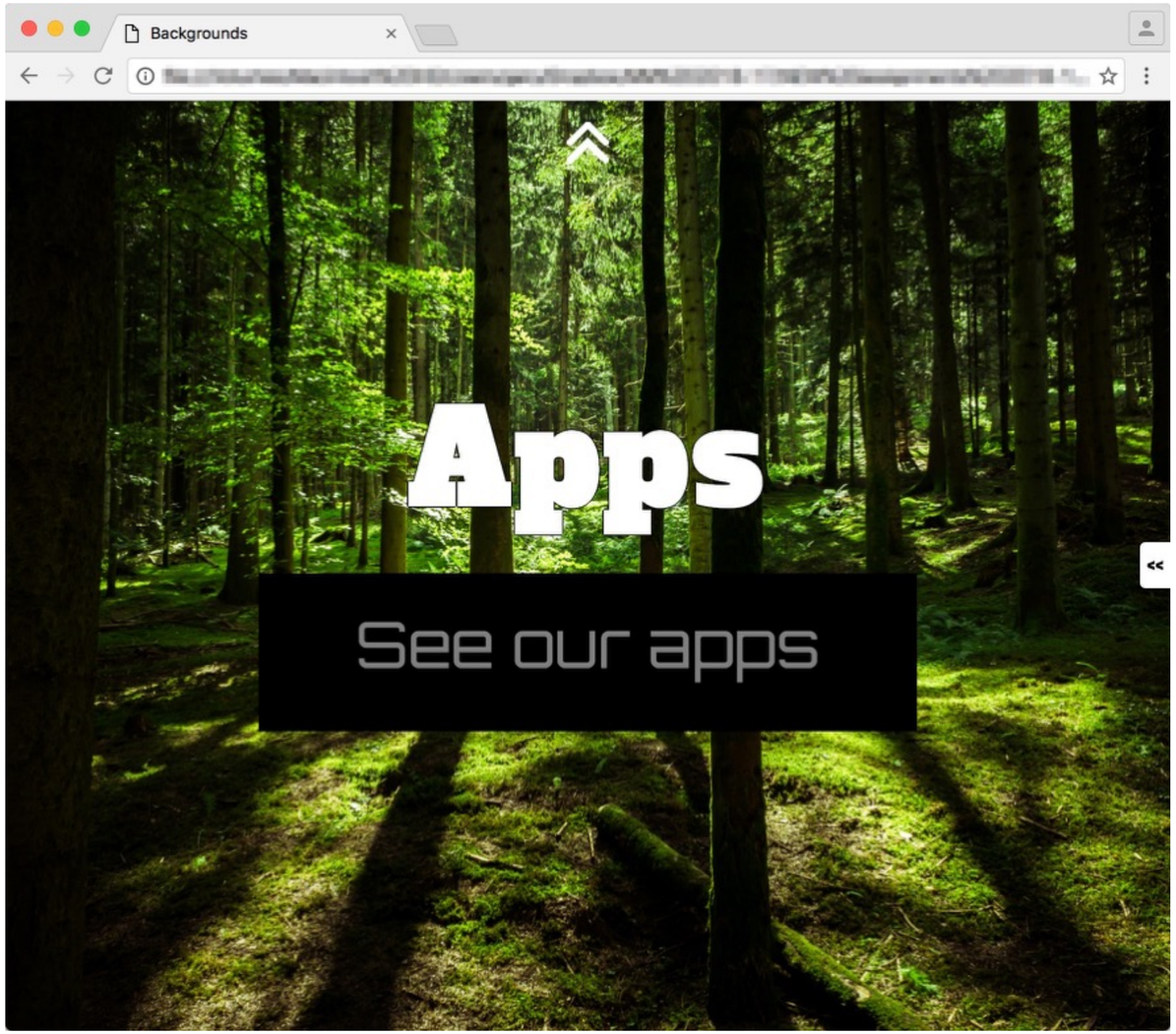


For the purposes of this assignment we will use a separate element for each background.

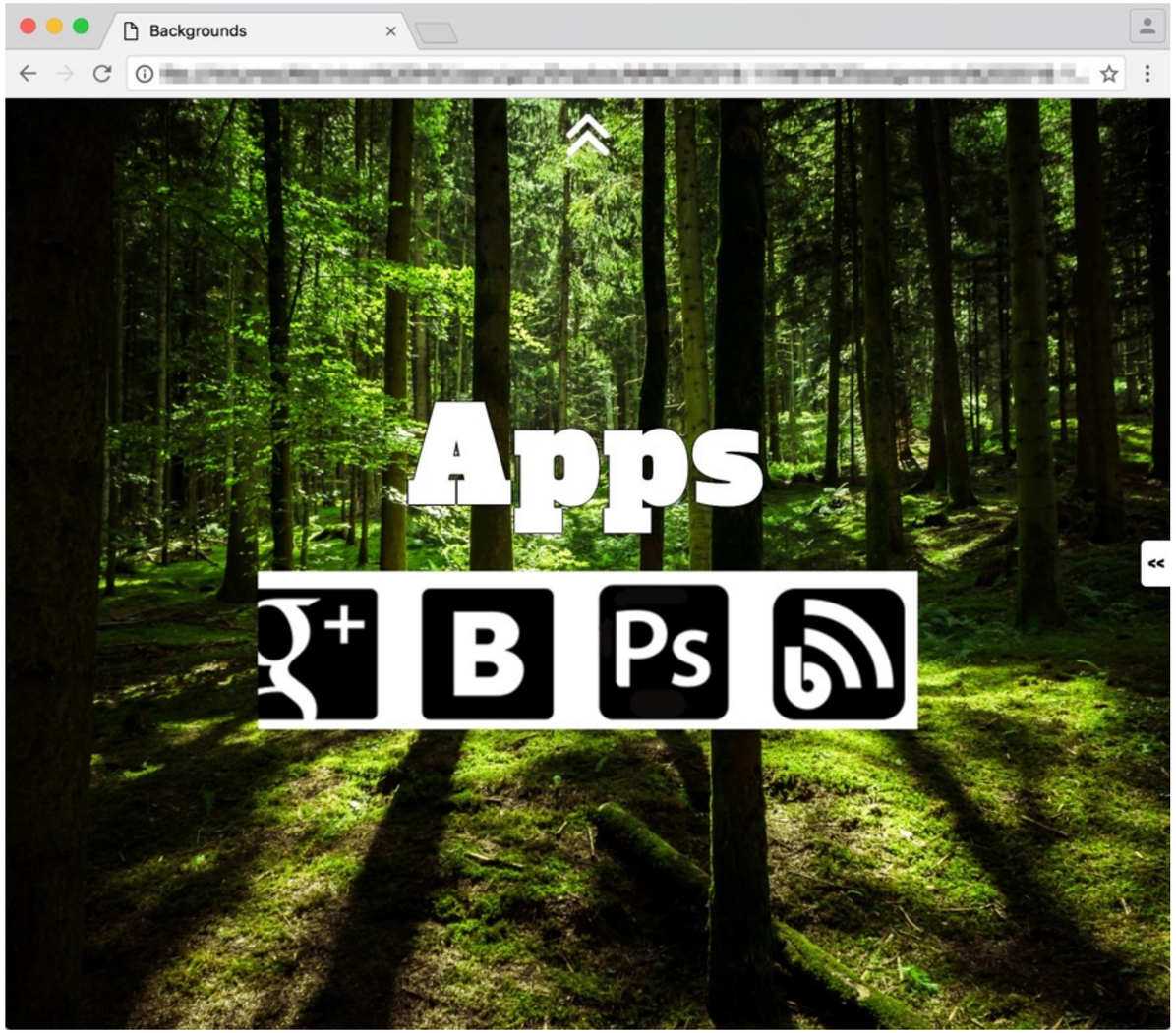


For the purposes of this assignment we will use a separate element for each background.

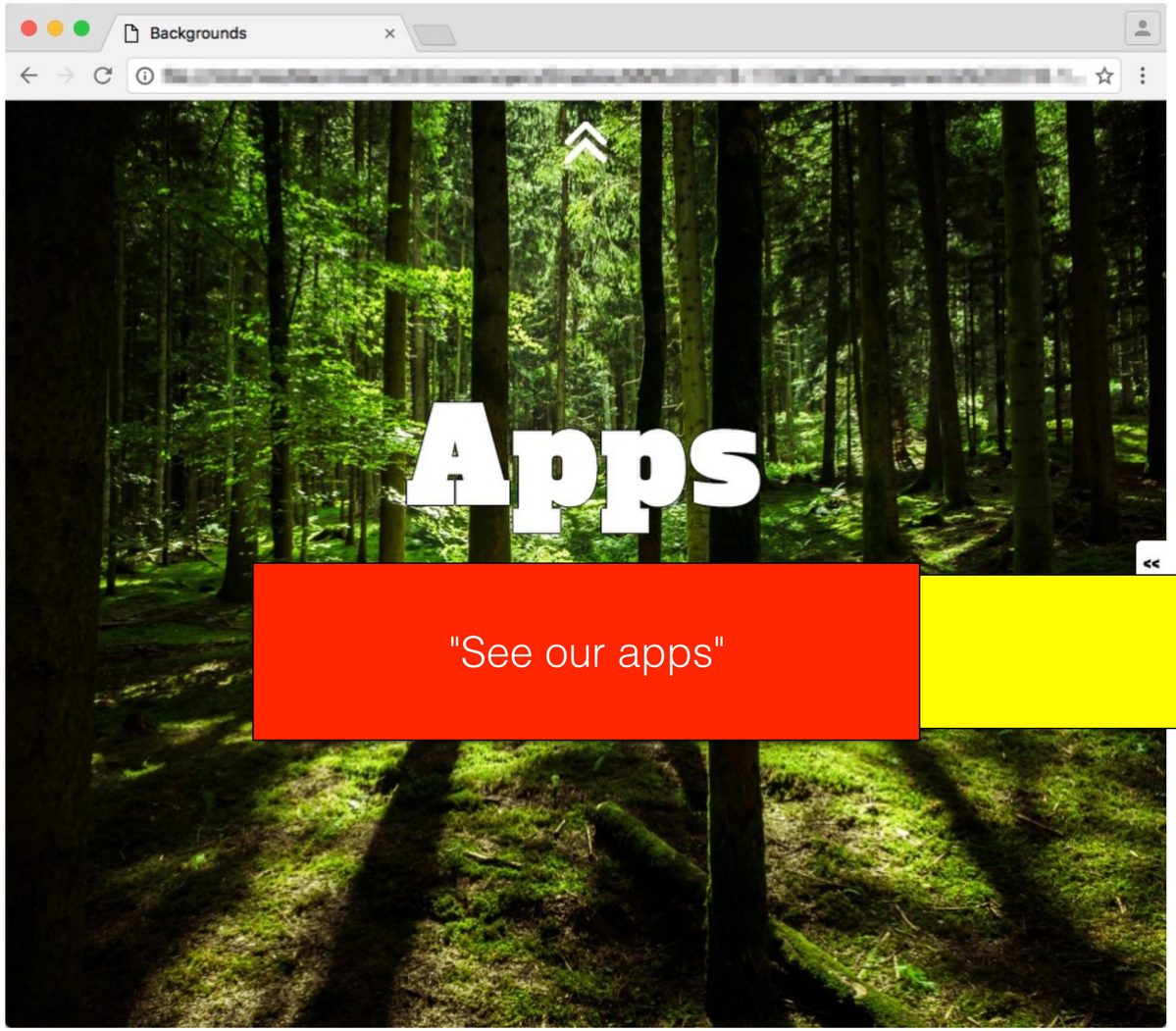
Apps Viewer



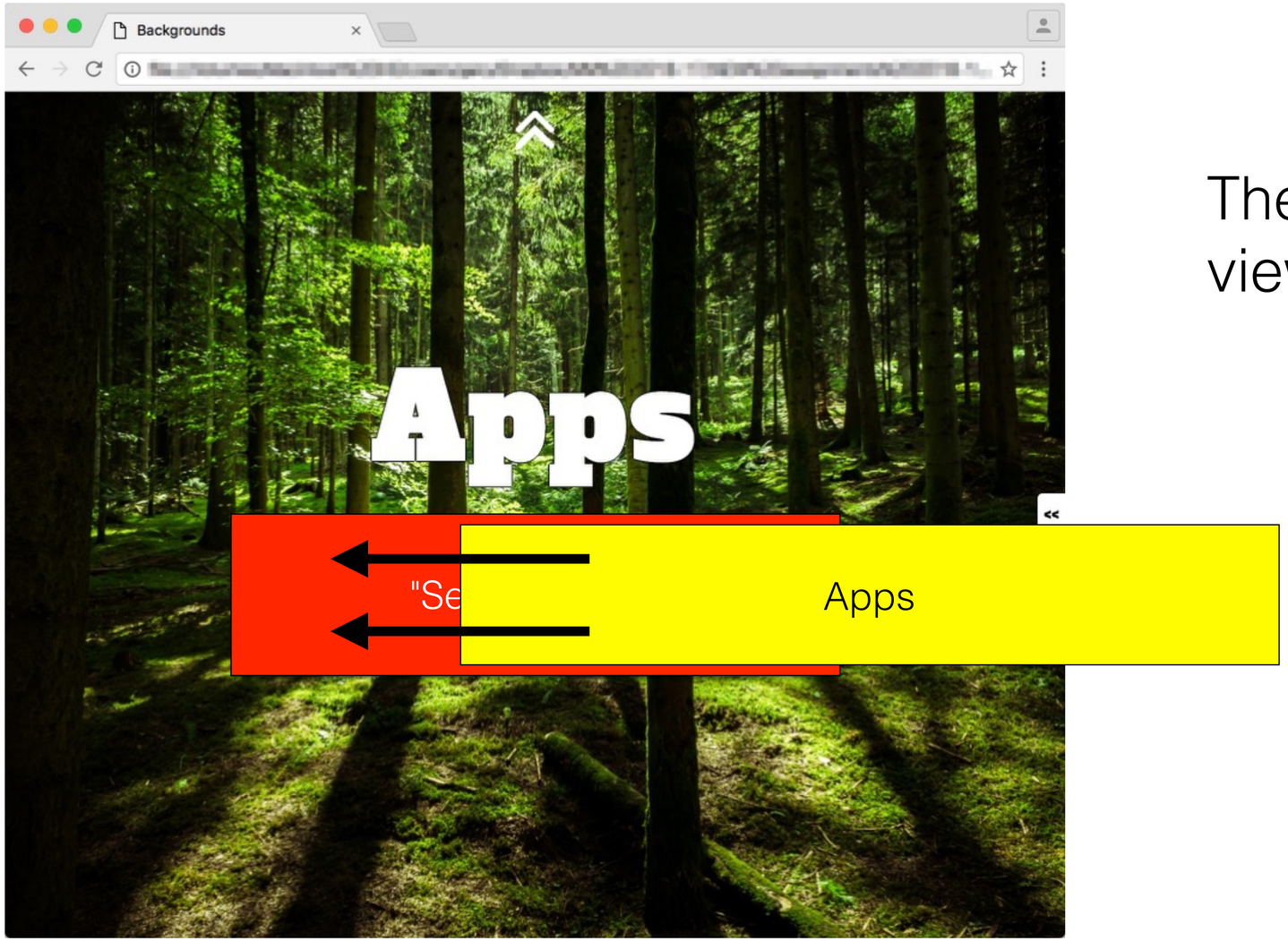
You should create a section that views a selection of icons.



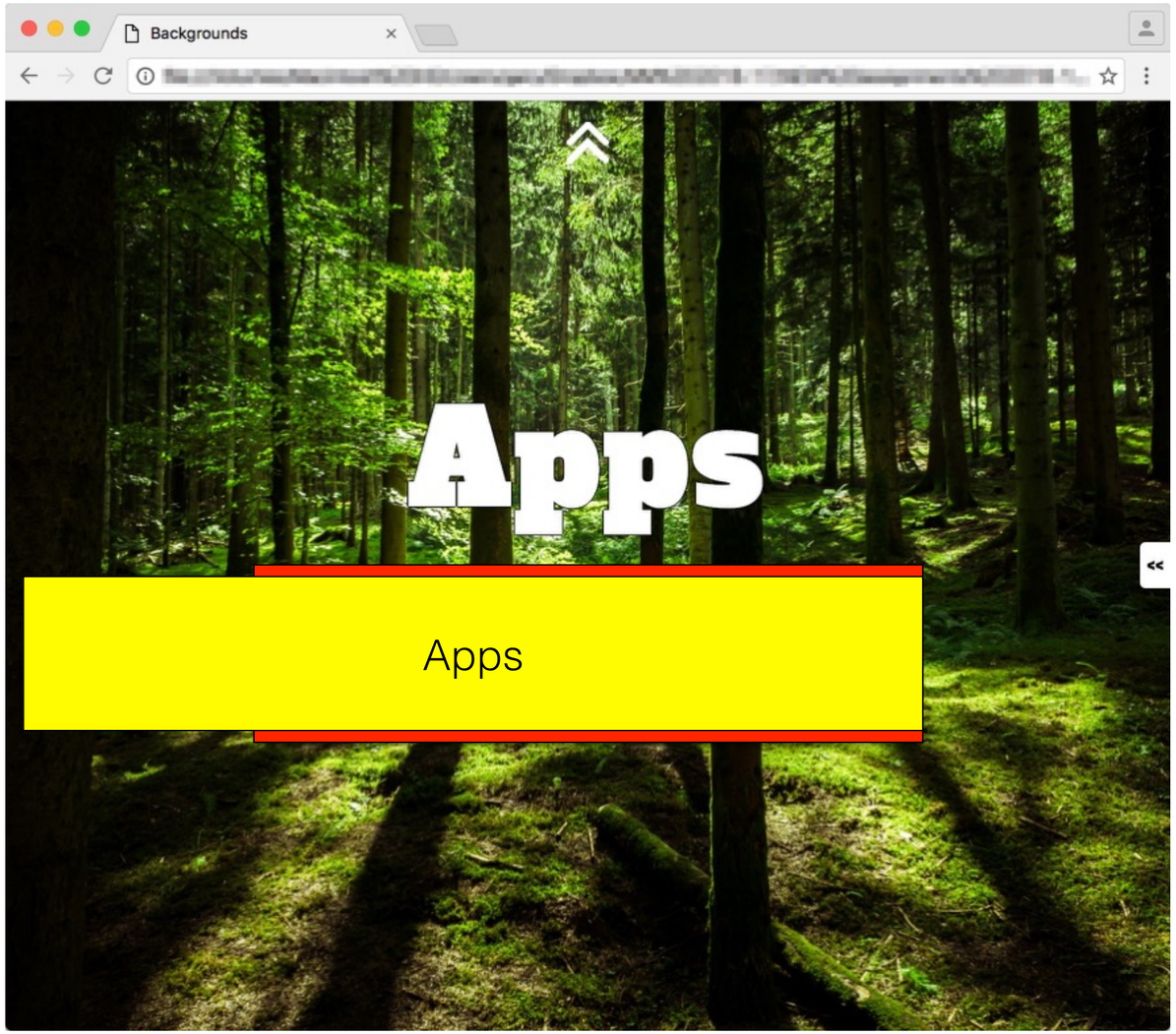
If you move the mouse over the **"See our apps"** box the app icons come into view inside it.



The apps should scroll into view from right to left.

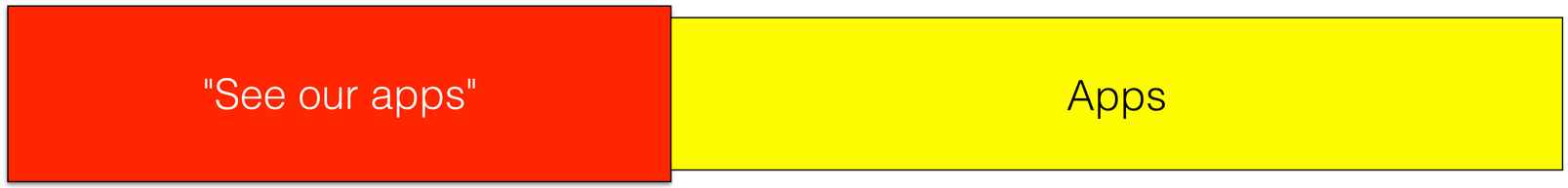


The apps should scroll into view from right to left.



It should stop scrolling once all the apps have been seen (as indicated here).

You need to position the two elements as shown. The **Apps** element should be contained by the **"See our apps"** element.



This way we can ensure that any of the **Apps** element not visually inside the bounds of the **"See our apps"** element will not be seen.

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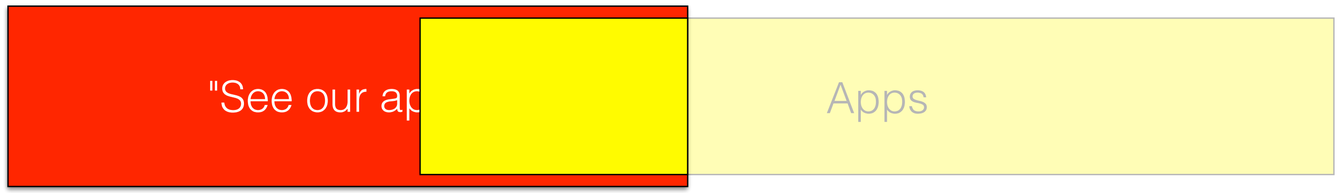
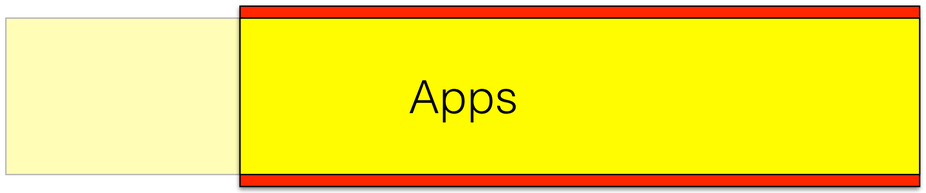
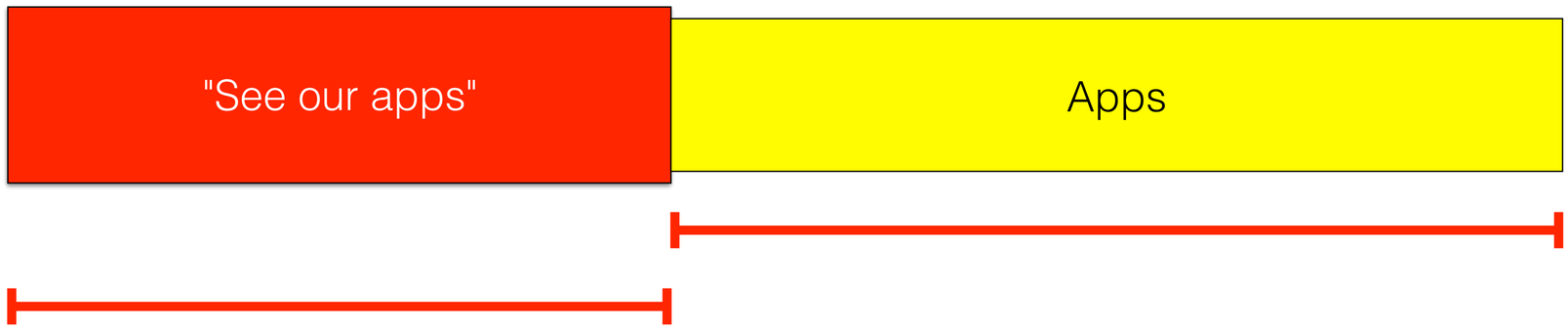


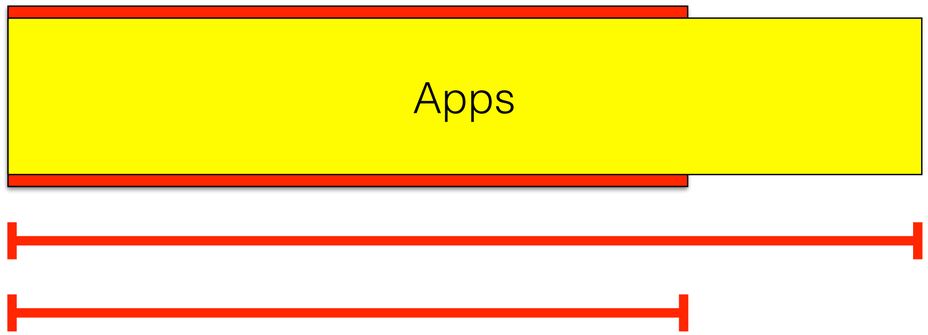
This way we can ensure that any of the **Apps** element not visually inside the bounds of the **"See our apps"** element will not be seen.



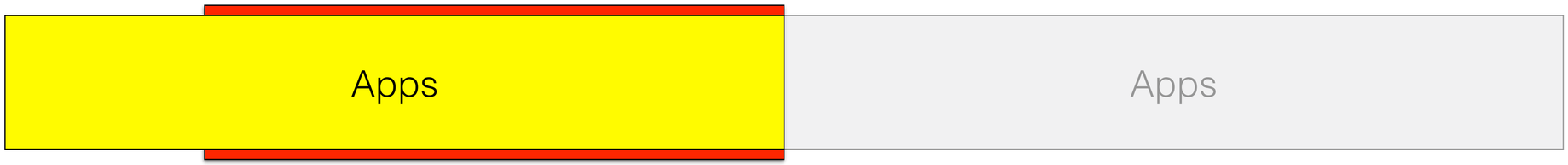
The width of the "Apps" element should be the **minimum** required to hold the apps icons. For the purpose of the assignment the "Apps" element should be **wider** than the "See our apps" element.



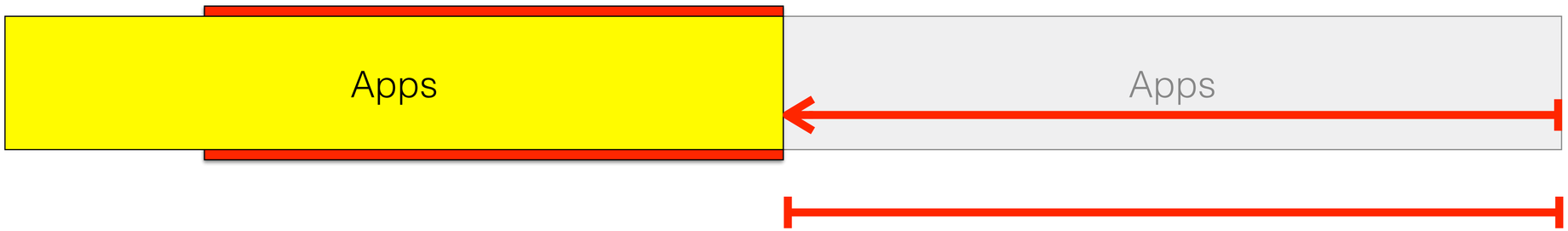
The width of the "Apps" element should be the **minimum** required to hold the apps icons. For the purpose of the assignment the "Apps" element should be **wider** than the "See our apps" element.

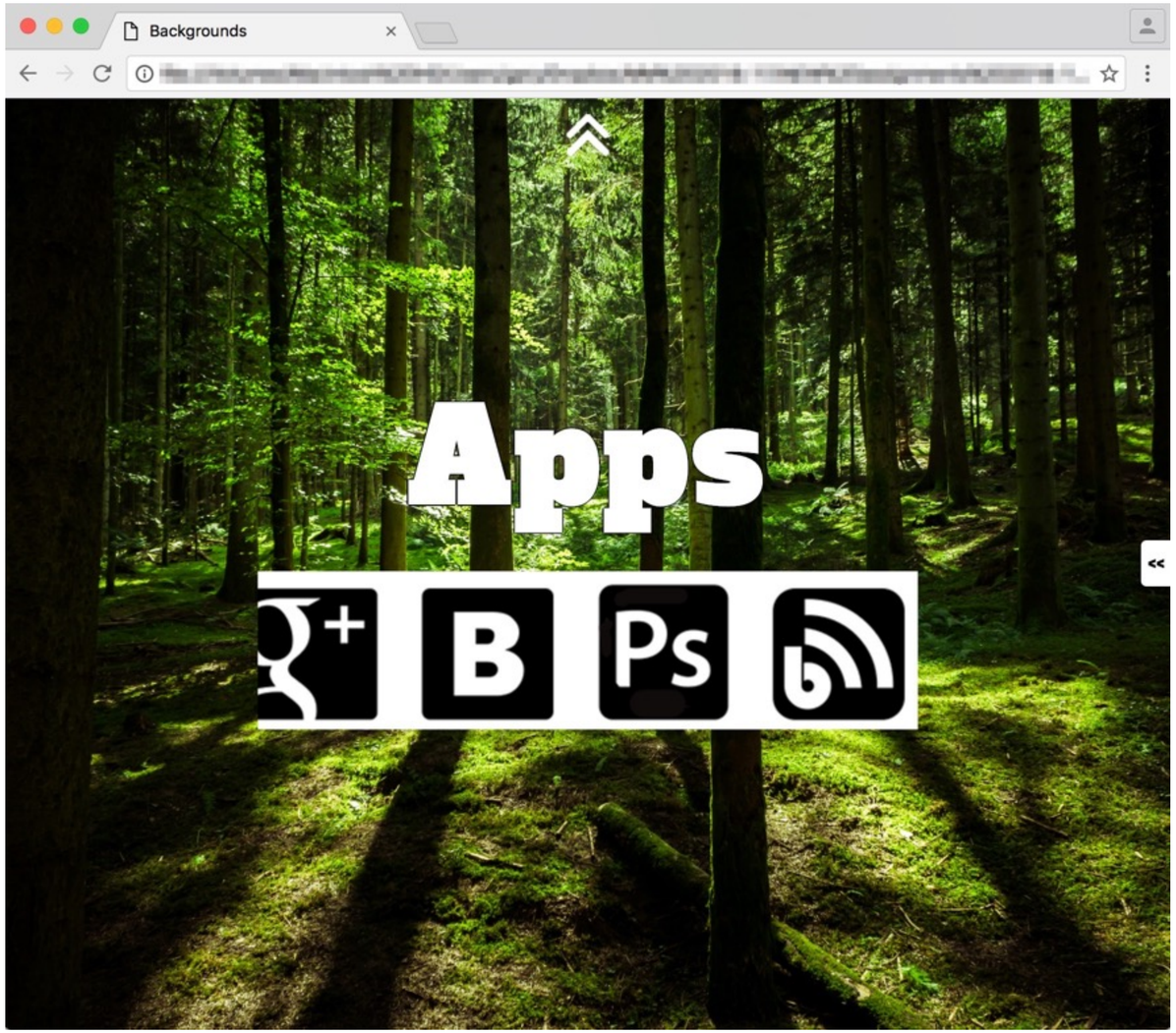


When moving the inner element you need to know when to stop.



I.e. the distance you move it to the left is the same as its width. You can use a **translate transform** for this (Proportional values in **translate** refer to the size of the actual element not its parent).





You can then animate this change of position as a **transition**.

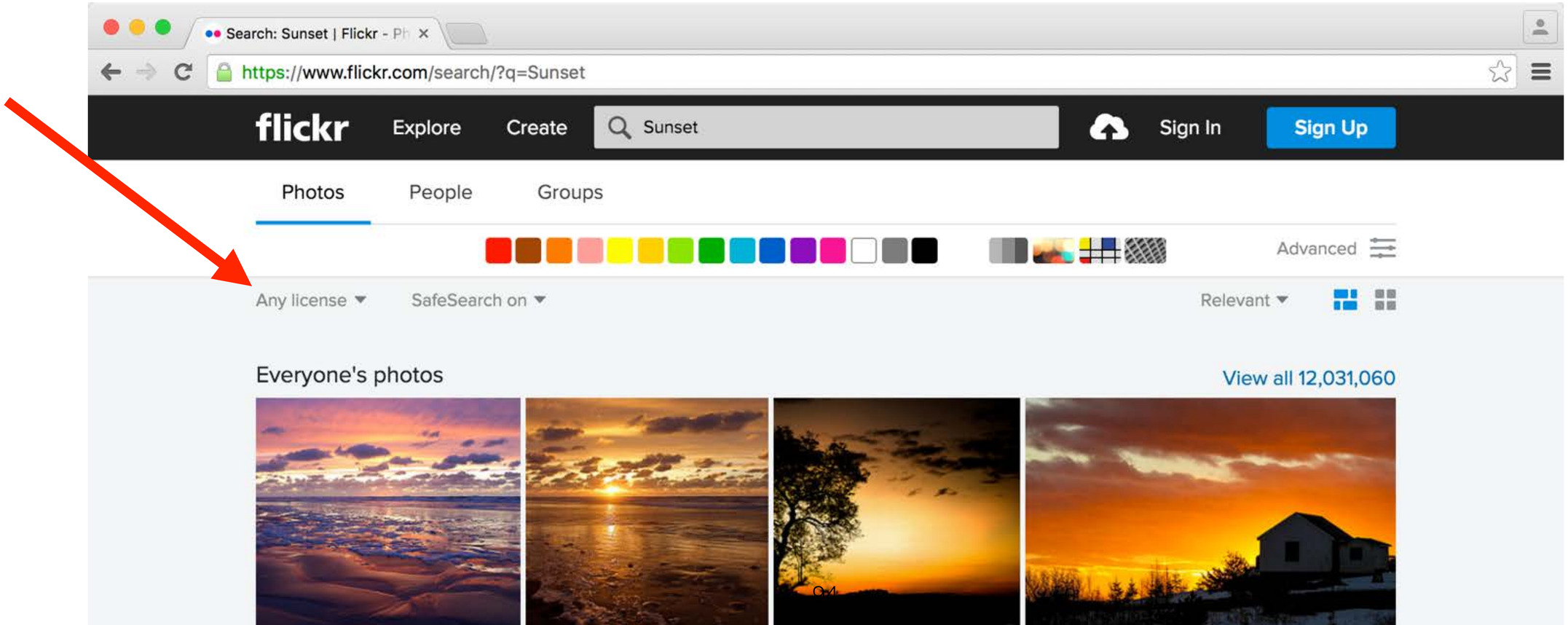
Requirements

All code must be your own.

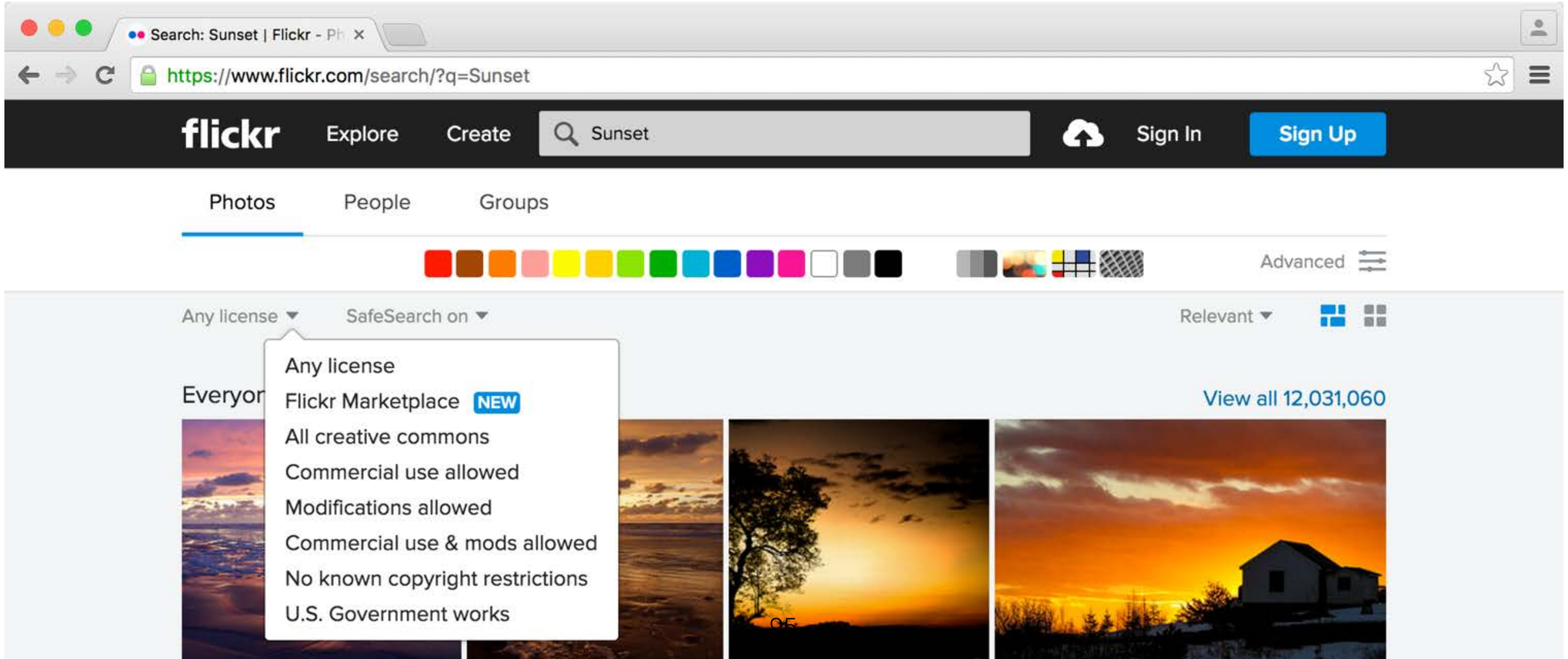
Images (for backgrounds) can be sourced online but must have an appropriate licence that allows you to use them (see next slide).

The images you use are up to you. As are the fonts.

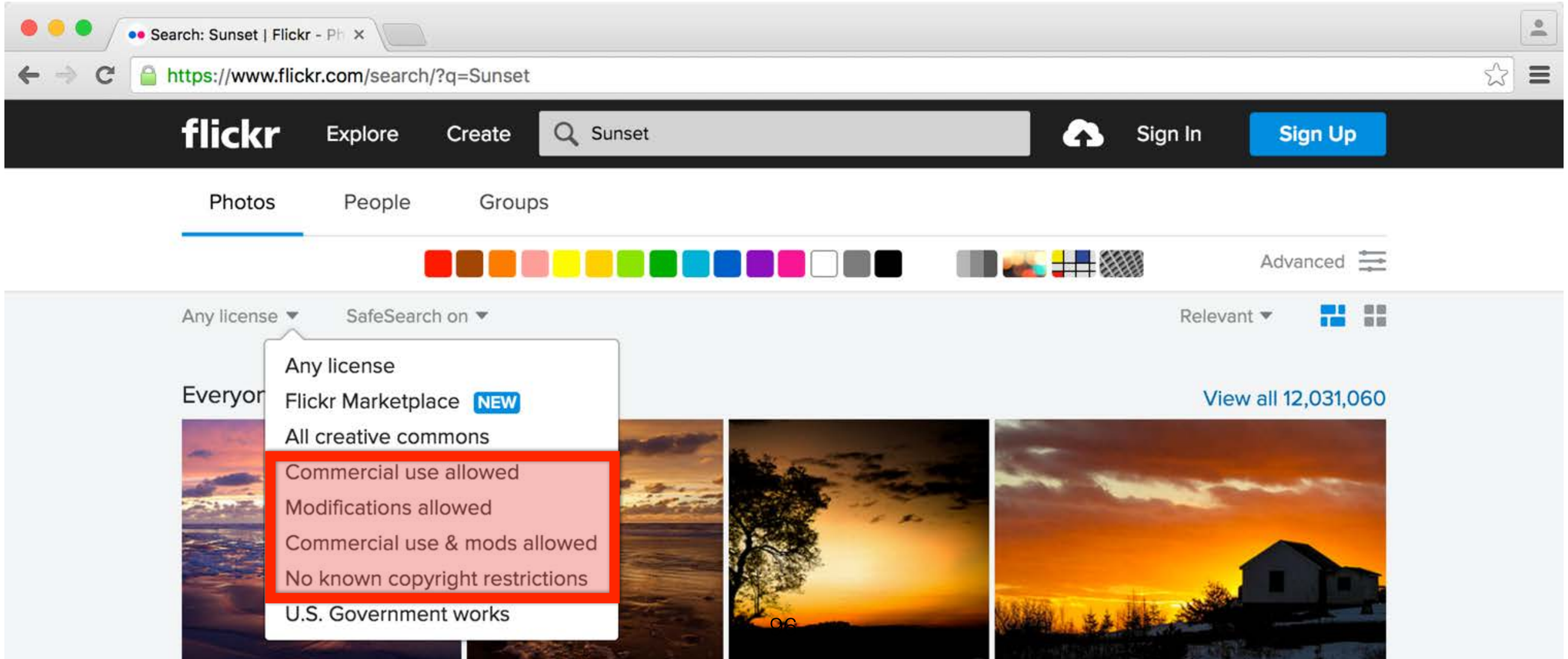
When searching a site like Flickr you can choose to search images with specific licences.



This menu will filter your results to only show you images with the licence you selected.



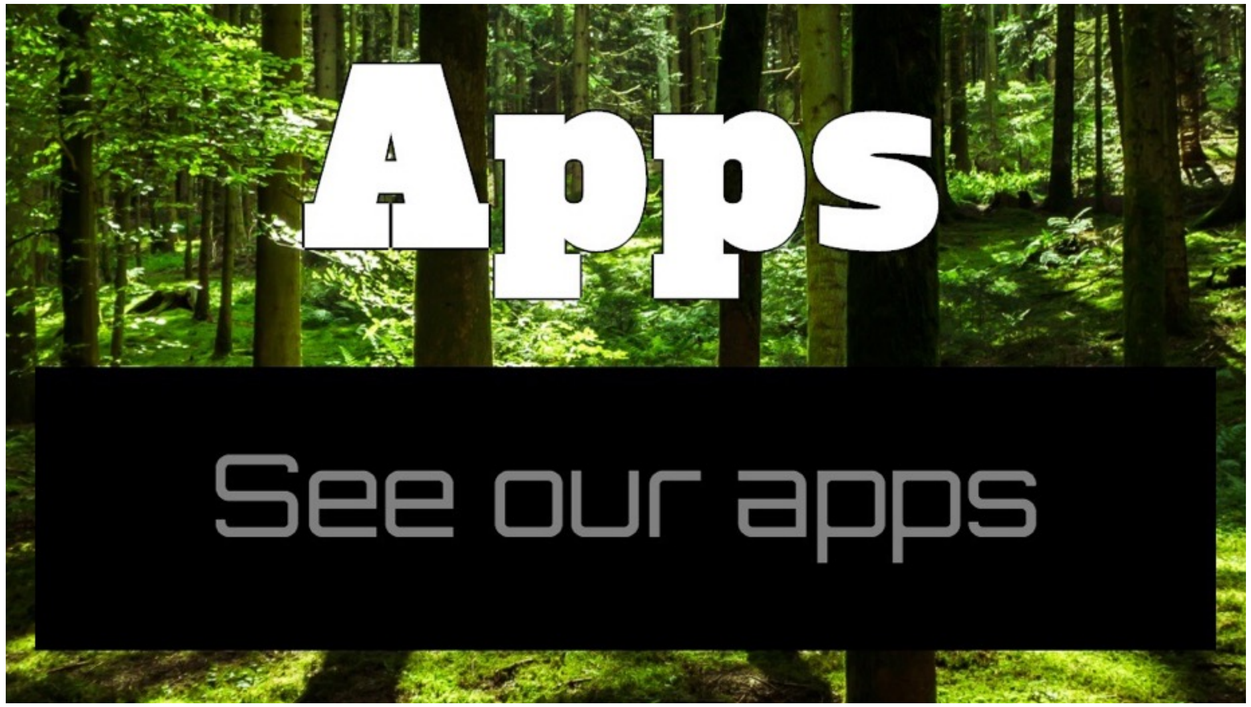
The licences you can choose from for this assignment are highlighted below.



For the purposes of this assignment we will assume that your page must work for a **minimum** size of 700px high and 700px wide.

This simply means you don't need to cater for smaller screens (we will deal with this later with Responsive Web Design).

You must use at least two web fonts of your choosing (that you must download instead of using a web hosting service).



Screencasts are provided that show the page working.

If you have any questions about the functionality required or any other issues involving the assignment, it is your responsibility to contact me about it.

You must also include a text file with links to the source of the images you used and the licence that applies to them.

Your name and class should appear in a comment on each file of code you submit. I.e. as a comment.

In HTML that would look like this:

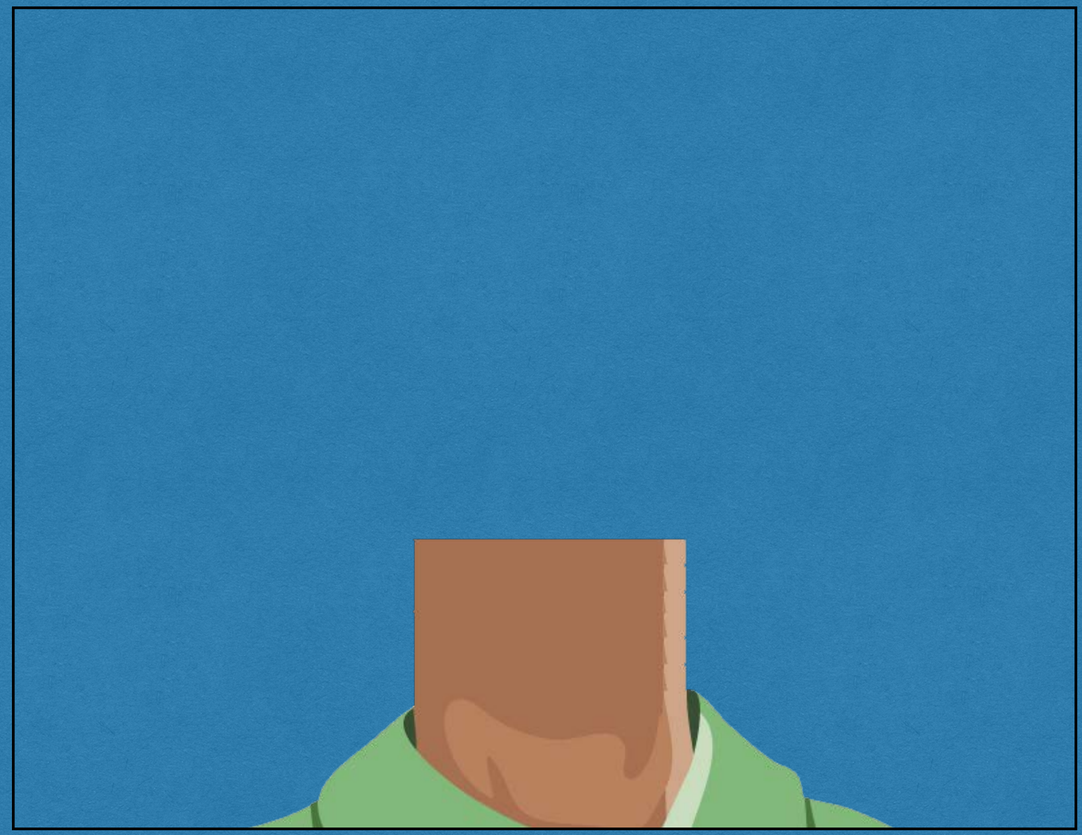
```
<!-- Name: Jane Doe —>
```

In CSS it would look like:

```
/* Name: John Smith */
```

You are provided with:

This Brief
Component images of the face graphic
App icons
Screencasts
Up and down link images



Provided Images

Provided screencasts

All features in one movie	all.m4v
Scrolling apps	apps.m4v
Arrow links animation	arrow.m4v
Scrolling the document	scrolling.m4v
Closeup of sidemenu	sidemenu-closeup.m4v
sidemenu	sidemenu.m4v
Arrow links	up-and-down-links.m4v

Place all your code in a folder with your name, compress that folder and submit the compressed file.

Do not include brief or screencasts in your final submission.