

Course: COMSM0104 Web Technologies

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Topic of our web: Item Exchange Platform

A for Html

We use the EJS template to generate html pages. Using EJS makes our code visually easier to read and maintain. We first write a draft version of the html page, then split the page into different modules based on its content, and then use the include library to combine each module to form the final html page. It reduces a lot of code duplication.

A for CSS

We use mentoring themes to ensure that our site's style is unified and neat. We define the corresponding interface framework and transparent effects on each page to display data more clearly. Especially in the information page, we unified the frame of the picture so that different sizes of photos can be displayed more beautifully on the same page. In addition, the boot program also provides adaptive features to avoid image distortion.

A for JS

We use JavaScript to write an animation that is displayed on all pages of our site. Knockout is used as the client framework. It provides a convenience feature to use what is known as text binding. Due to knockout group all the required data hierarchically, we can change everything that needs to be changed at once.

A for PNG

Logo design:

We have designed a graphic for the site's iconic icons:

1. Design and get a rough picture by drawing straight lines and simple geometric

shapes :



2. Remove the background layer and add a rounded rectangle background layer. Use the gun and brush tools to decorate on this layer. Give this layer a certain amount of transparency.



3. Copy the main graphics layer to the new layer and add artistic effects through the filter tools.



4. Taking into account that this icon is to be added to the dark bar, the graphics

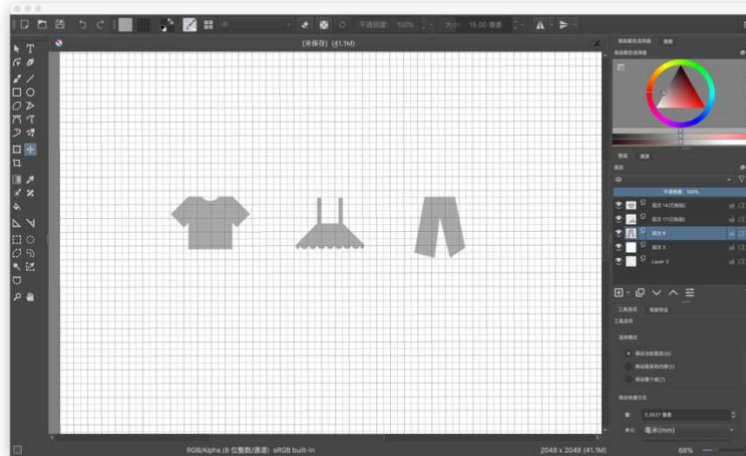
have been further modified. First add a dark layer to the background to simulate the color of the bar. Then add layer styles of outer glow and inner glow to the filtered layer. After that, add layer styles of outer glow and drop shadow to emphasis on the subject.



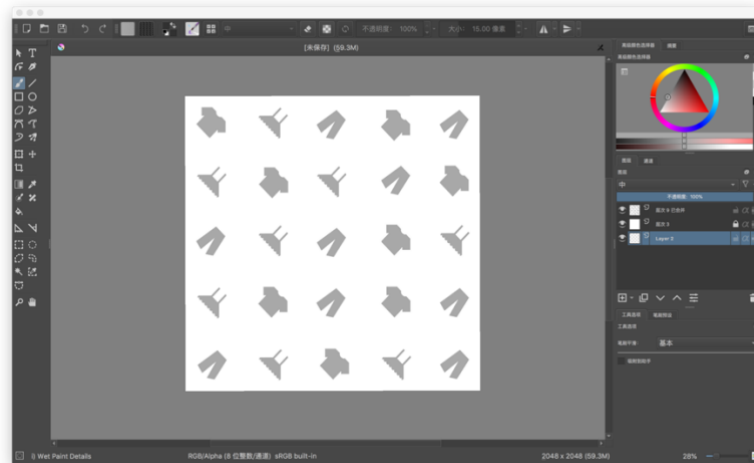
Background design:

We also have designed a graphic for the background and background elements.

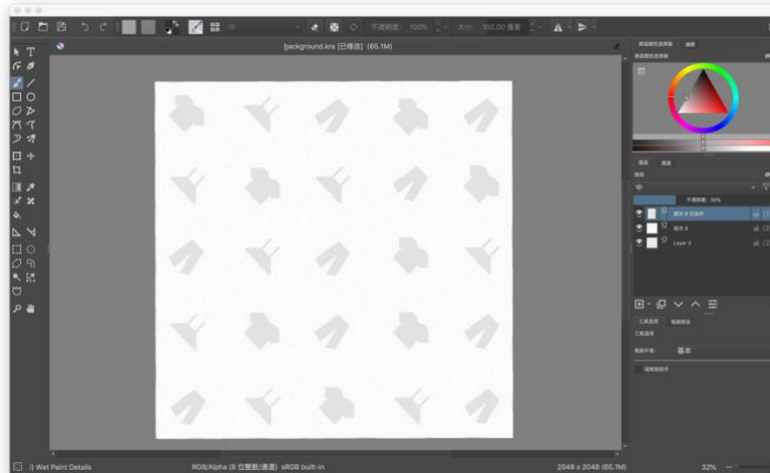
1. Set the grid binding function to get three similar background graphic elements through the drawing of the geometry. These elements are saved separately for other place using.



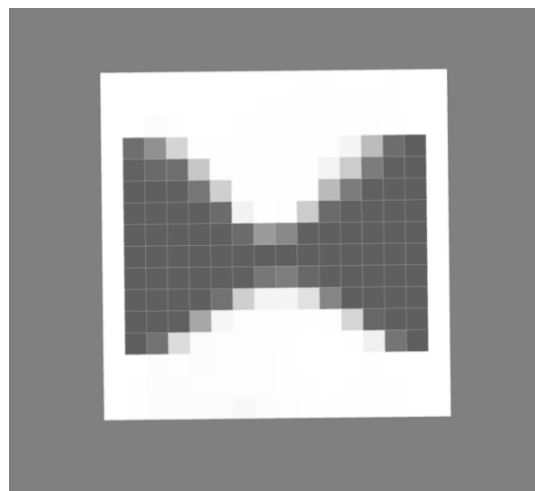
2. Copy and arrange these elements to form a large background.



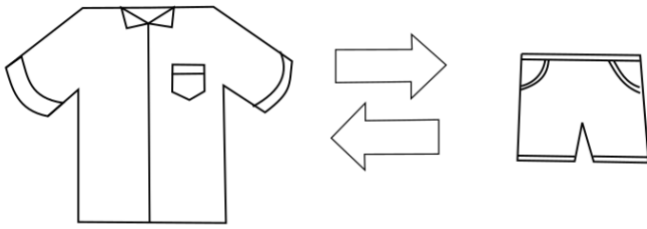
3. Add noise on background layer and adjust transparency for all layers.



Other icon:



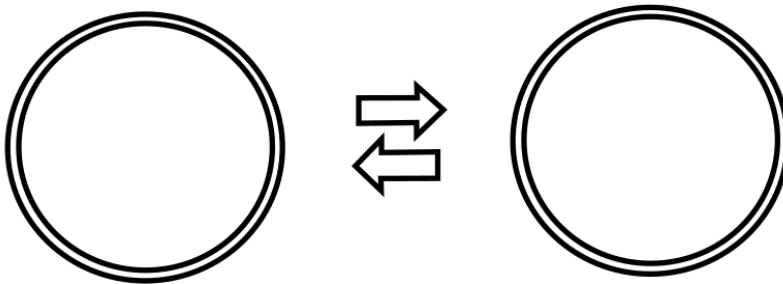
A for SVG



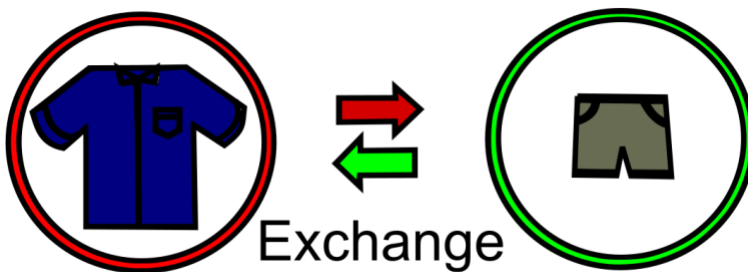
Firstly, we draw a Bezier curve and edited the path and position.



Then emphasize the line by enlarge the thickness of line.



Then we created circles and rectangle by shape tool



We adjust the layer and merge all components and characters. Finally, we

colored it with paint buckets.

A for Sever

In this section, we first processed the port number: set it to `http://localhost:8081 /`. And set the character set "UTF-8", which makes our website support characters including Chinese characters.

After that, we tested our site on popular browsers: Firefox, Chrome, Safari, and IE. All the features and images on our site worked well. Therefore, we will not consider doing anything with the content negotiation of the old browser.

Last but not least, our web pages have an authentication mechanism, which means that browsing as a visitor runs with lower privileges. However, once you log in, you can use more features, such as submitting an event or submitting a comment.

A for Database

Our database is SQLite. We can update or insert data into the database and extract it. Here are some examples of typical features of our database:

Insert: New user registration

Extract: update comments

A for Dynamic pages

We use the Express framework to create dynamic pages. On the "Upload" page, when the user wants to submit information about a new event, the page can interact with the database. Then, our "information" page needs to access the database to add new pictures and details. In addition, we provide comment function at the bottom of the "detail" page so that users can comment on specific content which could interact with the database dynamically.

A for depth

There are relatively few websites for item exchange. Our website will provide a platform to help users exchange items.

We have a mature registration mechanism that includes validating email addresses, duplication, and password length. Also, when we register, we will show any specific error, instead of simply returning the failed message. Each router has an authentication mechanism. Therefore, all dynamic interactions are safe.

When the user logs in, a window pops up on the current page, and the shift is registered on the same page. This makes our website very efficient. Pictures can be uploaded by dragging.

In the design of the background, a background animation based on javascript functions was taken. The main idea of this animation is to create multiple div elements and call them automatically. When it is called, randomly generates coordinates according to the window and replaces the picture. Of course, these containers are set to the lowest level. With other graphics transparency settings can produce a very good display.