

Mandatory Exercise 1 - UX

The deadline for this exercise is Friday, March 27, 08:59.

For this **mandatory exercise** you should work on **master branch only**.

Preparation

1. Create a new repository on GitHub called **mandatory-uxdesign1**.
2. Follow the instructions that GitHub gives you; Create a local repository and add a remote or clone the newly created repository.

Submission

When you submit the exercise in PingPong, before the deadline, you will enter a link to your repository, such as:

<https://github.com/mygithubusername/mandatory-uxdesign1>

The teacher will look in the **master branch**. If any commits are done to the branch after the deadline, the teacher will look at the last commit before the deadline.

You will get one of the grades **G** or **IG**.

Instructions

In this exercise you will be creating a simple UI component library, implementing four form elements from Material Design. We will be calling the library “MD Simple”.

You can implement the components in using one of the following libraries

- React
- Vue
- Angular

You are also allowed to implement the component without using any library with pure CSS and JavaScript.

The elements to be implemented are

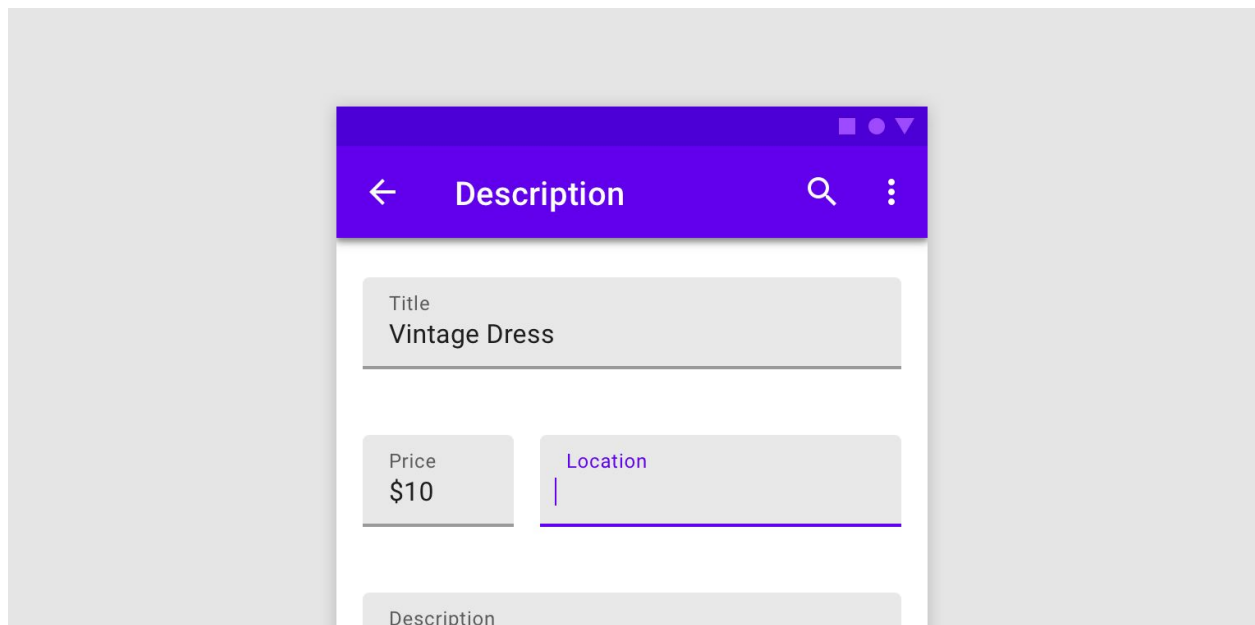
- Text field
<https://material.io/design/components/text-fields.html>
- Switch
<https://material.io/design/components/selection-controls.html#switches>
- Checkboxes
<https://material.io/design/components/selection-controls.html#checkboxes>
- Radio buttons
<https://material.io/design/components/selection-controls.html#radio-buttons>

Demo page

In addition to implementing the components you need to create a simple demo page that shows the components.

Text field

Implement a Material Design textfield. You only need to implement the filled variant.



<https://material.io/design/components/text-fields.html#>

You will probably need an element for the placeholder text since it's not possible to recreate the placeholder using the “placeholder” attribute on the “input” element.

Make sure that the behavior of the placeholder/label text is consistent with the Material Design Specification.

The following is mandatory

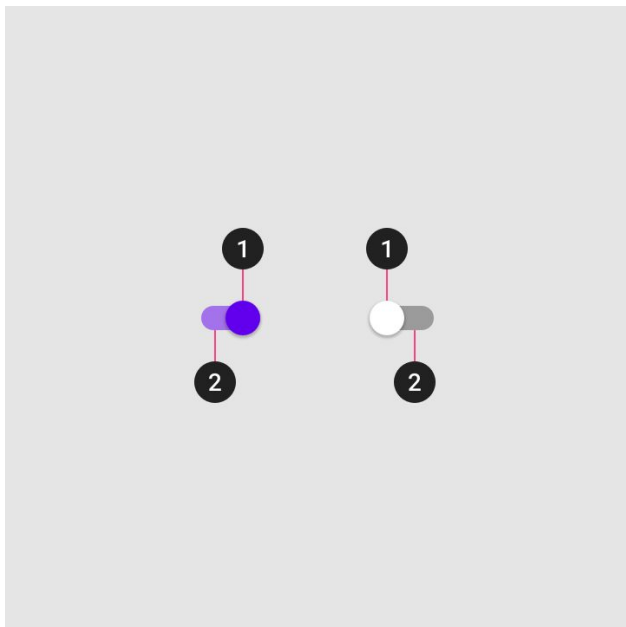
- Implement the text field in accordance with the Spec
- Animated placeholder/label text
- Animated underline
- Focused state
- Disabled state

The following is optional

- Helper text
- Error message
- Icons
- Character counter
- Multi-line text field
- Textarea

Switch

Implement a Material Design switch.



<https://material.io/design/components/selection-controls.html#switches>

The following is mandatory

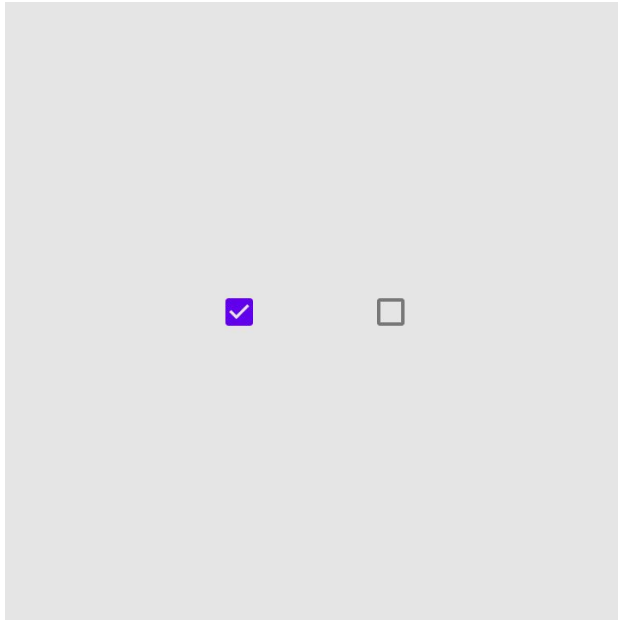
- Implement the switch in accordance with the Spec
- Animated switch toggle
- Disabled state
- Focused state

The following is optional

- Make the switch draggable/swipable

Checkbox

Implement a Material Design checkbox.



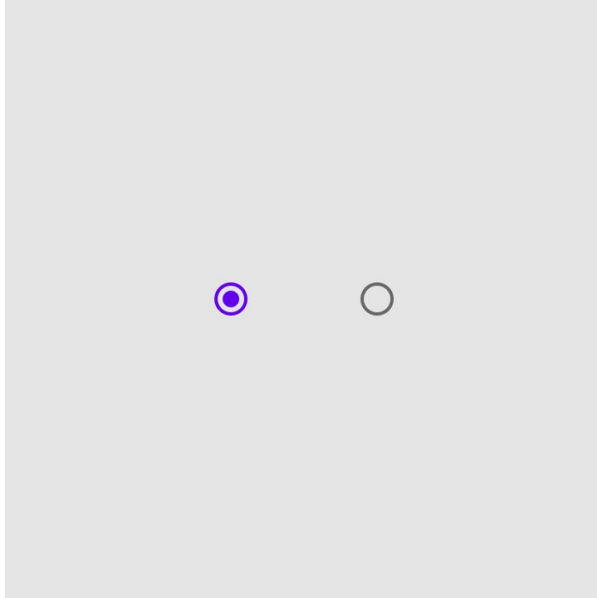
<https://material.io/design/components/selection-controls.html#checkboxes>

The following is mandatory

- Implement a checkbox in accordance with the spec
- Focused state
- Disabled state

Radio button

Implement a Material Design radio button



<https://material.io/design/components/selection-controls.html#radio-buttons>

The following is mandatory

- Implement a radio button in accordance with the Spec
- Focused state
- Disabled state

Tips

- Use native form elements as the basis for your components. E.g. use a native checkbox for the switch and checkbox components
- Make sure the order and structure of your elements makes sense
- Only use JavaScript when it's absolutely necessary
- Ask questions if anything is unclear
- Test your components thoroughly
- Good luck!