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# Color

Convey meaning through color. Out of the box you get access to all colors in the Material Design spec.



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ad by Material-UI

The Material Design [color system](#) can be used to create a color theme that reflects your brand or style.

## Picking colors

### Official color tool

The Material Design team has also built an awesome palette configuration tool: [material.io/resources/color/](https://material.io/resources/color/). This can help you create a color palette for your UI, as well as measure the accessibility level of any color combination.



The output can be fed into `createMuiTheme()` function:

```
import { createMuiTheme } from '@material-ui/core/styles';

const theme = createMuiTheme({
  palette: {
    primary: {
      light: '#757ce8',
      main: '#3f50b5',
      dark: '#002884',
      contrastText: '#fff',
    },
    secondary: {
      light: '#ff7961',
      main: '#f44336',
      dark: '#ba000d',
      contrastText: '#000',
    },
  },
});
```

## Playground

To test a [material.io/design/color](https://material.io/design/color) color scheme with the Material-UI documentation, simply select colors using the palette and sliders below. Alternatively, you can enter hex values in the Primary and Secondary text fields.

## Primary

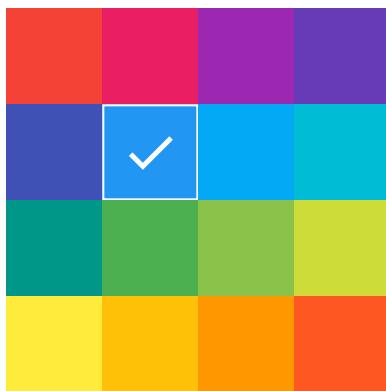
#2196f3

---

Shade:



500



#1769aa #2196f3 #4dabf5

## Secondary

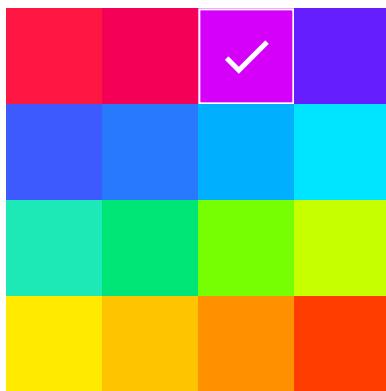
#d500f9

---

Shade:



A400



#9500ae #d500f9 #dd33fa

Color

```
palette: {  
  primary: blue,  
  secondary: purple,  
},  
}
```

[SET DOCS COLORS](#)[RESET DOCS COLORS](#)

The output shown in the color sample can be pasted directly into a `createMuiTheme()` function (to be used with `ThemeProvider`):

```
import { createMuiTheme } from '@material-ui/core/styles';  
import purple from '@material-ui/core/colors/purple';  
  
const theme = createMuiTheme({  
  palette: {  
    primary: {  
      main: purple[500],  
    },  
    secondary: {  
      main: '#f44336',  
    },  
  },  
});
```

Only the `main` shades need be provided (unless you wish to further customize `light`, `dark` or `contrastText`), as the other colors will be calculated by `createMuiTheme()`, as described in the [Theme customization](#) section.

If you are using the default primary and / or secondary shades then by providing the color object, `createMuiTheme()` will use the appropriate shades from the material color for main, light and dark.

## Tools by the community

- **create-mui-theme**: Is an online tool for creating Material-UI themes via Material Design Color Tool.
- **material-ui-theme-editor**: A tool to generate themes for your Material-UI applications by just selecting the colors and having a live preview.
- **Material palette generator**: The Material palette generator can be used to generate a palette for any color you input.

## 2014 Material Design color palettes

These color palettes, originally created by Material Design in 2014, are comprised of colors designed to work together harmoniously, and can be used to develop your brand palette. To generate your own harmonious palettes, use the palette generation tool.

## Important Terms

- **Palette**: A palette is a collection of colors, i.e. hues and their shades. Material-UI provides all colors from the Material Design guidelines. **This color palette** has been designed with colors that work harmoniously with each other.
- **Hue** & **Shade**: A single color within the palette is made up of a hue such as "red", and shade, such as "500". "red 50" is the lightest shade of red (*pink!*), while "red 900" is the darkest. In addition, most hues come with "accent" shades, prefixed with an *A*.

## Color palette

Given a *HUE* (red, pink, etc.) and a *SHADE* (500, 600, etc.) you can import the color like this:

```
import HUE from '@material-ui/core/colors/HUE';
```

```
const color = HUE[SHADE];
```

red

pink

purple

deepPurple

indigo

500 #f44336

500 #e91e63

500 #9c27b0

500 #673ab7

500 #3f51b5

50	#ffebbe	50	#fce4ec	50	#f3e5f5	50	#ede7f6	50	#e8eaf6
100	#ffcdd2	100	#f8bbd0	100	#e1bee7	100	#d1c4e9	100	#c5cae9
200	#ef9a9a	200	#f48fb1	200	#ce93d8	200	#b39ddb	200	#9fa8da
300	#e57373	300	#f06292	300	#ba68c8	300	#9575cd	300	#7986cb
400	#ef5350	400	#ec407a	400	#ab47bc	400	#7e57c2	400	#5c6bc0
500	#f44336	500	#e91e63	500	#9c27b0	500	#673ab7	500	#3f51b5
600	#e53935	600	#d81b60	600	#8e24aa	600	#5e35b1	600	#3949ab
700	#d32f2f	700	#c2185b	700	#7b1fa2	700	#512da8	700	#303f9f
800	#c62828	800	#ad1457	800	#6a1b9a	800	#4527a0	800	#283593
900	#b71c1c	900	#880e4f	900	#4a148c	900	#311b92	900	#1a237e
A100	#ff8a80	A100	#ff80ab	A100	#ea80fc	A100	#b388ff	A100	#8c9eff
A200	#ff5252	A200	#ff4081	A200	#e040fb	A200	#7c4dff	A200	#536dfe
A400	#ff1744	A400	#f50057	A400	#d500f9	A400	#651fff	A400	#3d5afe
A700	#d50000	A700	#c51162	A700	#aa00ff	A700	#6200ea	A700	#304ffe
blue		lightBlue		cyan		teal		green	
500	#2196f3	500	#03a9f4	500	#00bcd4	500	#009688	500	#4caf50
50	#e3f2fd	50	#e1f5fe	50	#e0f7fa	50	#e0f2f1	50	#e8f5e9
100	#bbdefb	100	#b3e5fc	100	#b2ebf2	100	#b2dfdb	100	#c8e6c9

200	#90caf9	200	#81d4fa	200	#80deea	200	#80cbc4	200	#a5d6a7
300	#64b5f6	300	#4fc3f7	300	#4dd0e1	300	#4db6ac	300	#81c784
400	#42a5f5	400	#29b6f6	400	#26c6da	400	#26a69a	400	#66bb6a
500	#2196f3	500	#03a9f4	500	#00bcd4	500	#009688	500	#4caf50
600	#1e88e5	600	#039be5	600	#00acc1	600	#00897b	600	#43a047
700	#1976d2	700	#0288d1	700	#0097a7	700	#00796b	700	#388e3c
800	#1565c0	800	#0277bd	800	#00838f	800	#00695c	800	#2e7d32
900	#0d47a1	900	#01579b	900	#006064	900	#004d40	900	#1b5e20
A100	#82b1ff	A100	#80d8ff	A100	#84ffff	A100	#a7ffeb	A100	#b9f6ca
A200	#448aff	A200	#40c4ff	A200	#18ffff	A200	#64ffda	A200	#69f0ae
A400	#2979ff	A400	#00b0ff	A400	#00e5ff	A400	#1de9b6	A400	#00e676
A700	#2962ff	A700	#0091ea	A700	#00b8d4	A700	#00bfa5	A700	#00c853

lightGreen                    lime                    yellow                    amber                    orange

500	#8bc34a	500	#cddc39	500	#ffeb3b	500	#ffc107	500	#ff9800
50	#f1f8e9	50	#f9fbe7	50	#fffde7	50	#fff8e1	50	#fff3e0
100	#dcdec8	100	#f0f4c3	100	#fff9c4	100	#ffecb3	100	#ffe0b2
200	#c5e1a5	200	#e6ee9c	200	#fff59d	200	#ffe082	200	#ffcc80
300	#aed581	300	#dce775	300	#fff176	300	#ffd54f	300	#ffb74d
400	#9ccc65	400	#d4e157	400	#ffee58	400	#ffca28	400	#ffa726

500	#8bc34a	500	#cddc39	500	#ffeb3b	500	#ffc107	500	#ff9800
600	#7cb342	600	#c0ca33	600	#fdd835	600	#ffb300	600	#fb8c00
700	#689f38	700	#afb42b	700	#fbc02d	700	#ffa000	700	#f57c00
800	#558b2f	800	#9e9d24	800	#f9a825	800	#ff8f00	800	#ef6c00
900	#33691e	900	#827717	900	#f57f17	900	#ff6f00	900	#e65100
A100	#ccff90	A100	#f4ff81	A100	#ffff8d	A100	#ffe57f	A100	#ffd180
A200	#b2ff59	A200	#efff41	A200	#ffff00	A200	#ffd740	A200	#ffab40
A400	#76ff03	A400	#c6ff00	A400	#ffea00	A400	#ffc400	A400	#ff9100
A700	#64dd17	A700	#aeea00	A700	#ffd600	A700	#fffab00	A700	#ff6d00

deepOrange brown grey blueGrey

500	#ff5722	500	#795548	500	#9e9e9e	500	#607d8b
50	#fbe9e7	50	#efebc1	50	#fafafa	50	#ecef1f
100	#ffccbc	100	#d7ccc8	100	#f5f5f5	100	#cf8dc0
200	#ffab91	200	#bcaaa4	200	#eeeeee	200	#b0bec5
300	#ff8a65	300	#a1887f	300	#e0e0e0	300	#90a4ae
400	#ff7043	400	#8d6e63	400	#bdbdbd	400	#78909c
500	#ff5722	500	#795548	500	#9e9e9e	500	#607d8b
600	#f4511e	600	#6d4c41	600	#757575	600	#546e7a

700	#e64a19	700	#5d4037	700	#616161	700	#455a64
800	#d84315	800	#4e342e	800	#424242	800	#37474f
900	#bf360c	900	#3e2723	900	#212121	900	#263238
A100	#ff9e80						
A200	#ff6e40						
A400	#ff3d00						
A700	#dd2c00						

## Examples ↴

For instance, you can refer to complementary primary and accent colors, "red 500" and "purple A200" like so:

```
import purple from '@material-ui/core/colors/purple';
import red from '@material-ui/core/colors/red';

const primary = red[500]; // #f44336
const accent = purple['A200']; // #e040fb
const accent = purple.A200; // #e040fb (alternative method)
```