



# Material UI.

A 3<sup>rd</sup> party component library to build  
high quality digital UIs

# Material Design.

- Material (Design) **is a design system created by Google to help teams build** high-quality digital experiences **for Android, iOS, and web.**
- **A visual language that synthesizes classic principles of good design with the innovation and possibility of technology and science.**
- **Inspired by:**
  - **the physical world and its textures, including how they reflect light and cast shadows.**
  - **the study of paper and ink.**
- **Material is a metaphor.**
  - **Material surfaces reimagine the mediums of paper and ink.**

# Material Components.

- Material Components **are interactive building blocks for creating a digital user interface.**
- **They cover a range of interface needs, including:**
  1. ***Display:*** Placing and organizing content using components like cards, lists, and grids.
  2. ***Navigation:*** Allowing users to move through an application using components like navigation drawers and tabs.
  3. ***Actions:*** Allowing users to perform tasks using components such as the floating action button.
  4. ***Input:*** Enter information or make selections using components like text fields and selection controls.
  5. ***Communication:*** Alerting users to key information and messages using snackbars, banners and dialogues.

# Theming.

*Material Design does not mean copy Google design.*

- Material Theming - **customize Material Design to match the look and feel of your brand, with built-in support and guidance for customizing colors, typography styles, and corner shape.**
  1. Color - **Material's color system is an organized approach to applying color to a UI.**
    - **Have a Global color styles** with semantic names and defined usage in components – primary, secondary.
  2. Typography – **Material's type system provides 13 typography styles for everything from headlines to body text and captions.**

# Material UI.

- **A React component library based on the Material Design system.**
- **Components include <Card />, <Box />, <Grid />, <Menu />, <Button />, <Icon />, <Snackbar />, <Typography /> .....**
- **Build your own design system, or start with a default.**
- **The CSS-in-JS programming model.**

# CSS-in-JS

- **Plain CSS**

```
.my-header {  
  background-color: lightblue;  
  padding: 10px;  
}
```

- -----  
import 'app.css'

```
<header  
  className="my-header">  
  .....  
</header>
```

Must be  
CamelCase

- **CSS-in-JS**

```
.import { makeStyles } from  
  "@material-ui/core/styles";  
const useStyles = makeStyles(({  
  myHeader: {  
    backgroundColor: "lightblue",  
    padding: "10px"  
  }  
});
```

```
const classes = useStyles();  
<header  
  className={classes.myHeader}>  
  ..... </header>
```

1

2

3

# Many alternatives

- **Libraries:**
  - **Tailwind**
  - **Bulma**
  - **Bootstrap**
  - .....
- **Design systems:**
  - **ANT**
- **CSS models:**
  - **CSS modules**
  - **BEM**

