

# Multi-Theme React Application – Documentation

## Overview

This React + TypeScript application provides a dynamic UI with multiple themes, responsive layouts, and a sidebar-based navigation for one of the themes. It also fetches products from an API and displays them as cards.

### Features:

- Theme switching (Theme1, Theme2, Theme3)
- Layouts: header-based and sidebar-based navigation
- Responsive design for desktop, tablet, and mobile
- Dynamic product cards fetched from the Fake Store API
- Smooth transitions and gradient header backgrounds

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### Folder Structure

```
multi-theme-app
├── src
│   ├── components
│   │   ├── Header.ts      # Header with Theme Dropdown & Sidebar toggle
│   │   ├── Header.css    # Styling for Header & Responsive Sidebar
│   │   └── ThemeDropdown.ts
│   ├── context
│   │   └── ThemeContext.tsx # Provides theme state to the app
│   ├── pages
│   │   ├── Home.ts        # Displays products in a grid layout
│   │   ├── About.ts
│   │   └── Contact.ts
│   ├── pages
│   │   └── Home.module.css # Styles for Home page & cards
│   ├── App.ts             # Main app structure with routes
│   ├── index.tsx          # Entry point
│   └── global.css         # Global CSS + Responsive styles
├── package.json
└── tsconfig.json
```

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## How It Works

### Theme Context (ThemeContext.tsx)

- Stores theme.name (theme1, theme2, theme3) and theme.layout (sidebar, cards).
  - Provides setThemeByName() function to change the theme globally.
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### Header Component (Header.ts)

- Displays app title (🌐 My App)
- Contains navigation links (Home, About, Contact)
- Includes ThemeDropdown for theme switching
- If the layout is sidebar + mobile screen, a toggle button ☰ is displayed to open/close the menu.

#### Key Functions:

```
const [isMobile, setIsMobile] = useState(window.innerWidth < 768);
const [menuOpen, setMenuOpen] = useState(false);
```

#### // Detect screen resize

```
useEffect(() => {
  const handleResize = () => {
    setIsMobile(window.innerWidth < 768);
    if (window.innerWidth >= 768) setMenuOpen(true);
  };
  window.addEventListener("resize", handleResize);
  return () => window.removeEventListener("resize", handleResize);
}, []);
```

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### Home Component (Home.ts)

- Fetches products from FakeStore API
  - Displays cards with image & title
  - Uses responsive grid layout with auto-fit for responsiveness
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### App.ts

- Renders Header at the top.
  - Displays routes (Home, About, Contact).
  - Dynamically adjusts margin-left if the layout is sidebar on desktop.
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## CSS Files

- `Header.css` → Theme-based gradient backgrounds, link colors, sidebar styles.
- `Home.module.css` → Manages grid layout, card styling, and responsive card sizes.
- `global.css` → Provides reset styles and global responsive behavior.

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## Themes

Theme	Header Background	Link Color
Theme1	Blue Gradient	#e6e6ff
Theme2	Red-Pink Gradient	#ff6666
Theme3	Green-Cyan Gradient	#00ffcc

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## Responsive Behavior

Screen Size	Behavior
Desktop ( $\geq 1024\text{px}$ )	Sidebar layout visible on Theme2
Tablet ( $768\text{--}1024\text{px}$ )	Sidebar collapses, cards adjust
Mobile ( $< 768\text{px}$ )	Toggle button $\equiv$ appears for menu, cards shown in smaller grid

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## Key Improvements

- ✓ Cards adjust based on screen resolution using `auto-fit` and `minmax()`.
- ✓ For mobile screens, added `margin-top` to prevent text overlap with header.
- ✓ Gradient-based dynamic header background for each theme.

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## How to Run the Project

- 1 Install dependencies:

```
npm install
```

- 2 Start the development server:

```
npm start
```

- 3 Open in browser:

```
http://localhost:3000
```