Fluent UI 9 in SPFX

About me

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Working in the Edu sector since 2008

11+ years working on M365

@techienickb

Agenda

What is Fluent UI
What is different with Fluent UI 9
Demo
Code

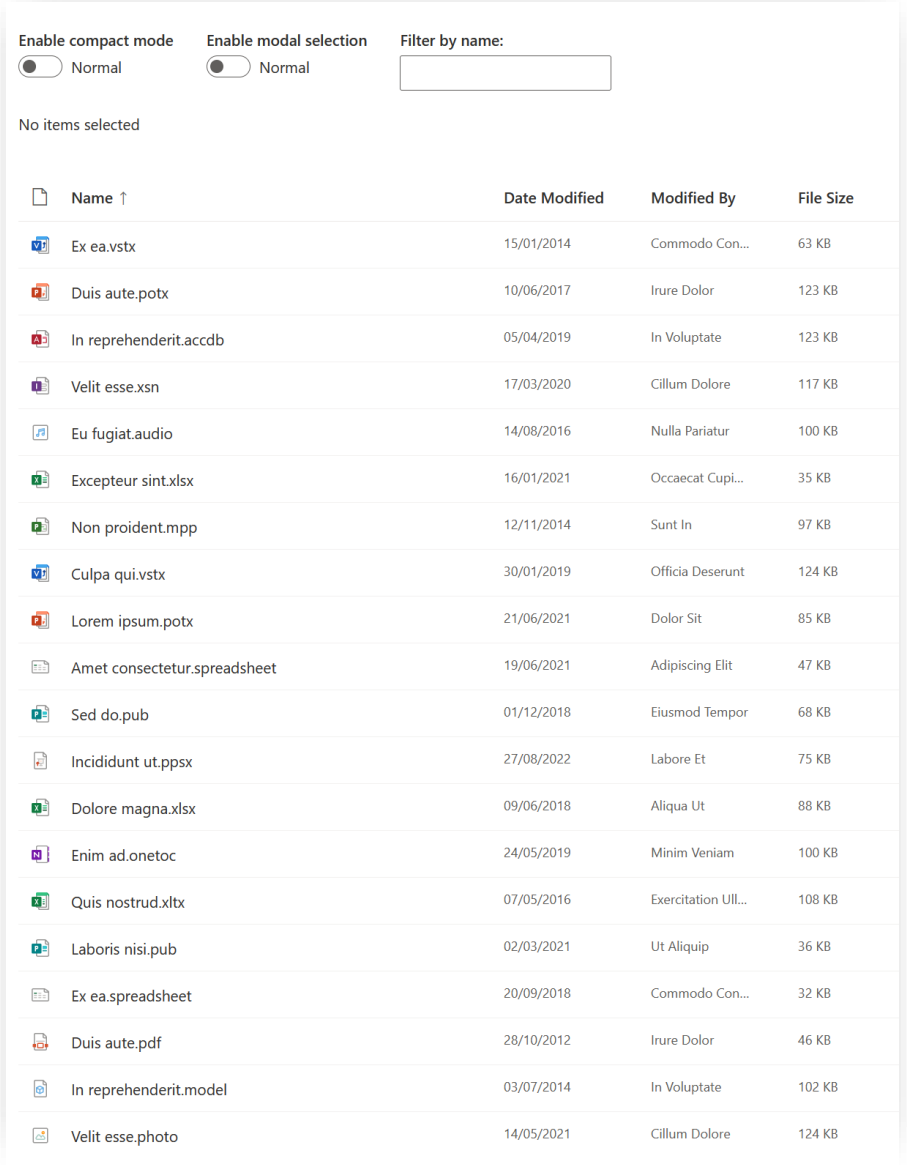
What is Fluent UI?

A collection of UX frameworks for creating beautiful, cross-platform apps that share code, design, and interaction behaviour.

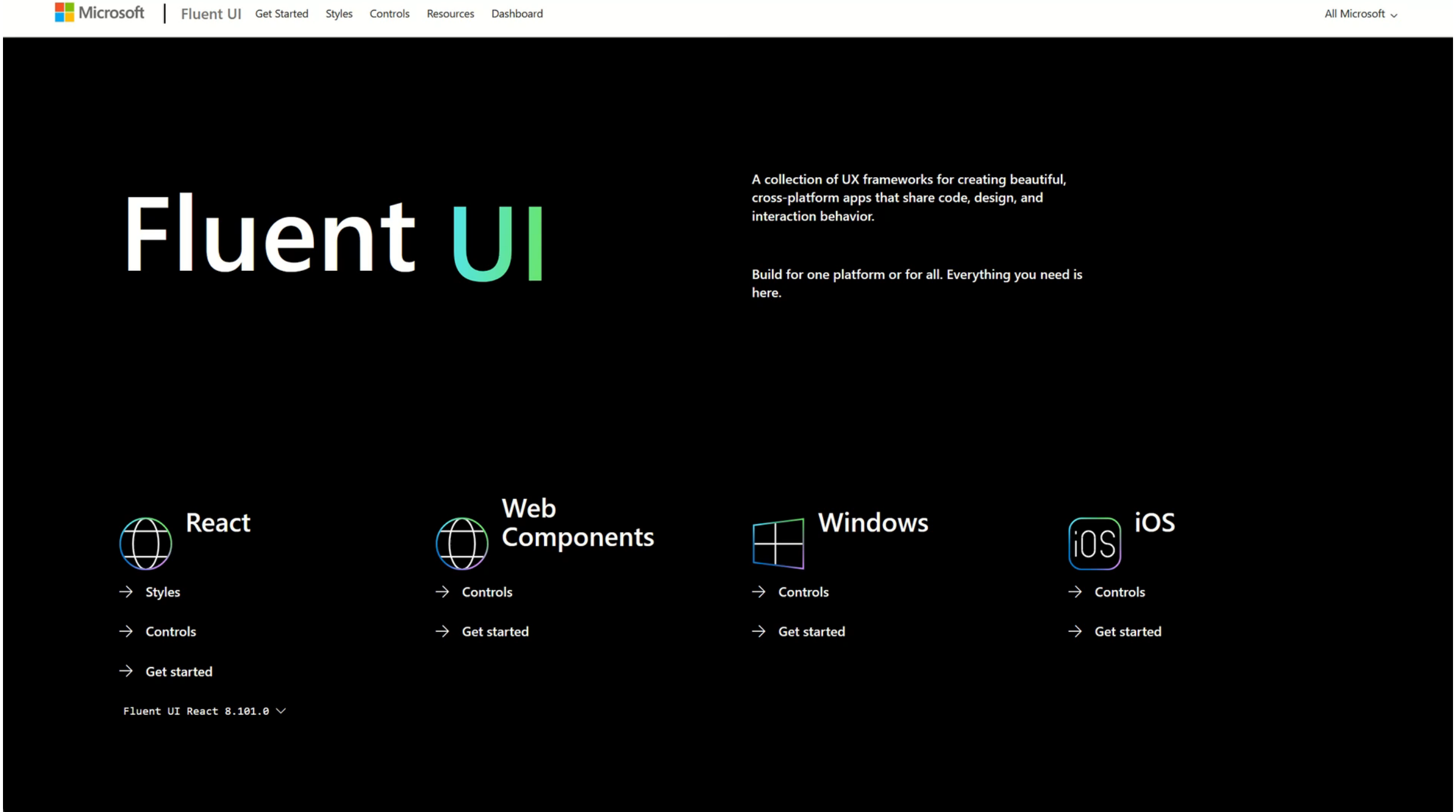
Build for one platform or for all.

Fluent UI 7 currently ships with SPFx

Fluent UI 8 has 128+ components



[Fluent UI: https://developer.microsoft.com/en-us/fluentui](https://developer.microsoft.com/en-us/fluentui)


Microsoft
Fluent UI
Get Started
Styles
Controls
Resources
Dashboard
All Microsoft
Fluent UI
A collection of UX frameworks for creating beautiful, cross-platform apps that share code, design, and interaction behavior.
Build for one platform or for all. Everything you need is here.
React
Styles
Controls
Get started
Fluent UI React 8.101.0
Web Components
Controls
Get started
Windows
Controls
Get started
iOS
Controls
Get started

Fluent UI 9

Windows 11 UI styled

React based

Merges 8 and Northstar (Teams) into one library

Ongoing project

60+ components

[Fluent UI 9 React: https://react.fluentui.dev](https://react.fluentui.dev)

Fluent UI React v9

Find components /

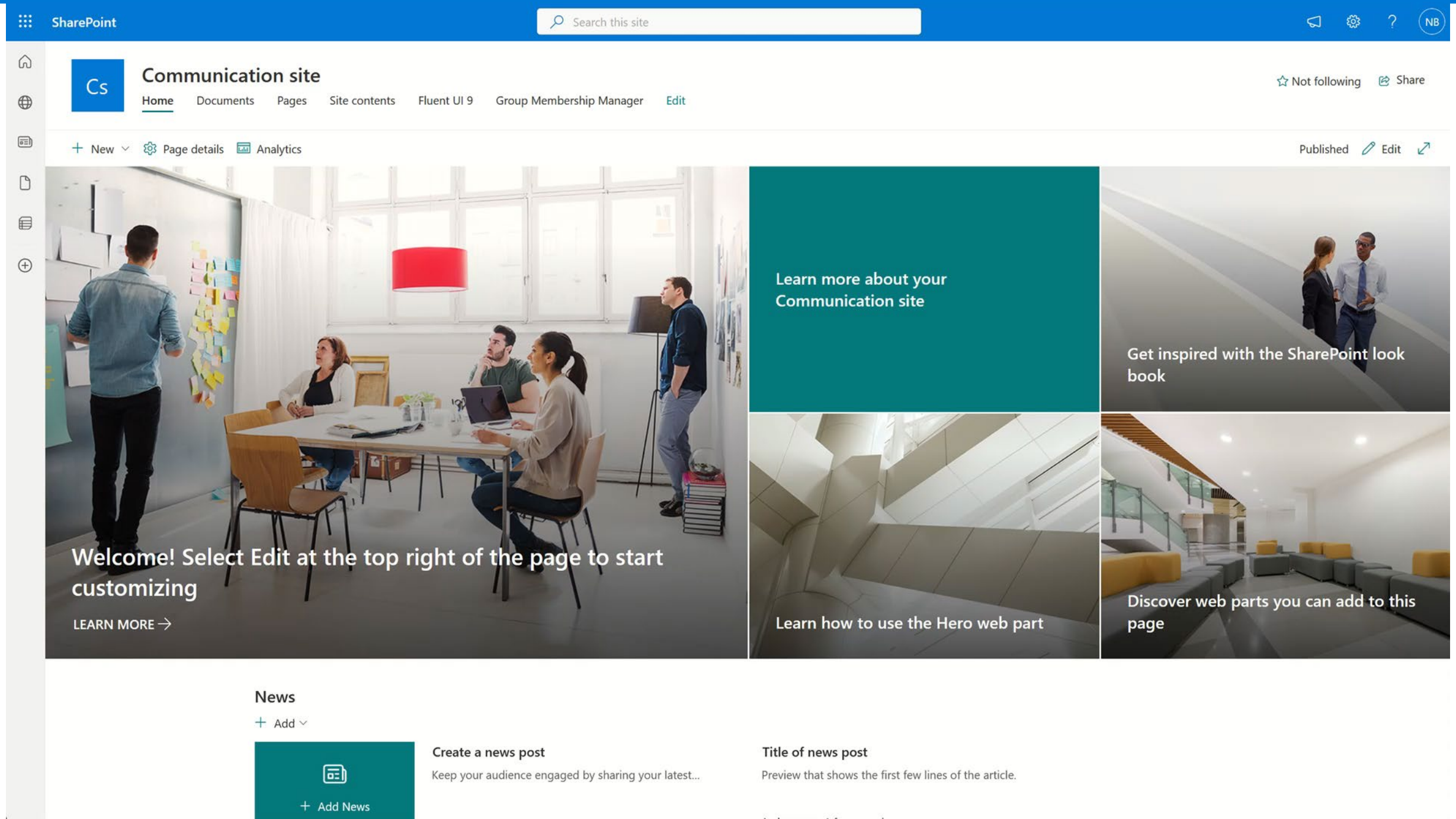
- Concepts
  - Introduction
  - Developer
  - Migration
- Theme
  - Color
  - Motion and Size
  - Typography
- Components
  - Accordion
  - Avatar
  - AvatarGroup
  - Badge
  - Button
  - Checkbox
  - Dialog
  - Divider
  - FluentProvider
  - Image
  - Input
  - Label
  - Link
  - Menu
  - Popover
  - Portal
  - Radio
  - RadioGroup
  - Slider
  - SpinButton
  - Spinner
  - Switch
  - TabList
  - Text
  - Textarea
  - Tooltip
- Migration Shims
  - Button
  - StackShim

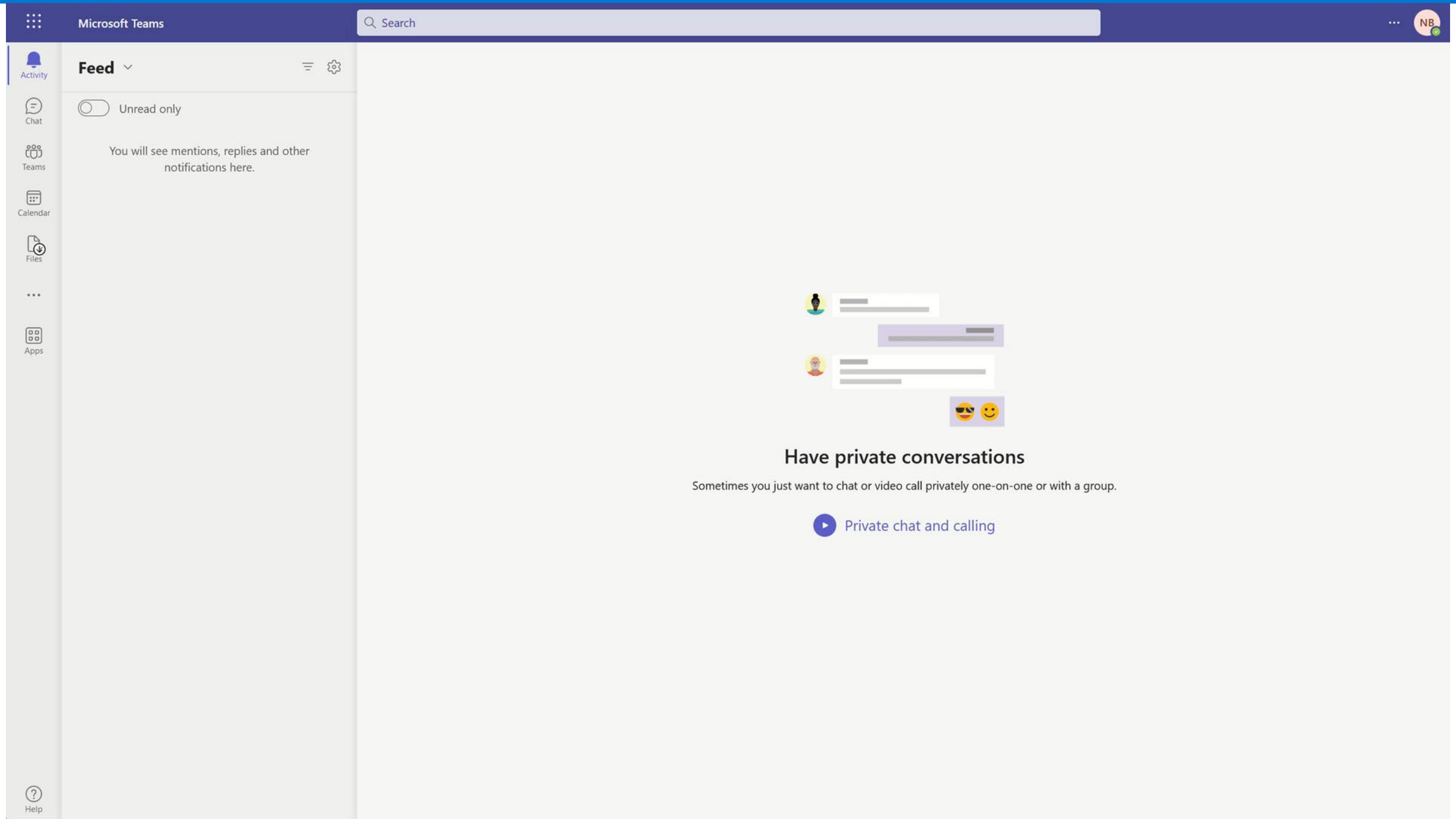
Fluent UI React Components

v9.7.0

What's new

Demo Time


SharePoint
Search this site
NB
Cs
Communication site
Home
Documents
Pages
Site contents
Fluent UI 9
Group Membership Manager
Edit
Not following
Share
New
Page details
Analytics
Published
Edit
Welcome! Select Edit at the top right of the page to start customizing
LEARN MORE
Learn more about your Communication site
Get inspired with the SharePoint look book
Learn how to use the Hero web part
Discover web parts you can add to this page
News
Add
Add News
Create a news post
Keep your audience engaged by sharing your latest...
Title of news post
Preview that shows the first few lines of the article.


Microsoft Teams
Search
NB
Activity
Chat
Teams
Calendar
Files
Apps
Help
Feed
Unread only
You will see mentions, replies and other notifications here.
Have private conversations
Sometimes you just want to chat or video call privately one-on-one or with a group.
Private chat and calling

Installing the fluent ui components

```
npm i @fluentui/react-components
```

Optionally: npm un office-ui-fabric-react

Fluent Provider onInit

WebPart.ts

```
import { FluentProvider, FluentProviderProps, teamsDarkTheme, teamsLightTheme,
  webLightTheme, webDarkTheme, Theme
} from '@fluentui/react-components';
import { createv9Theme } from './shims/v9ThemeShim';

export enum AppMode {
 SharePoint, SharePointLocal, Teams, TeamsLocal, Office, OfficeLocal, Outlook, OutlookLocal
}

export default class FluentUi9DemoWebPart extends BaseClientSideWebPart<{}> {

 private _isDarkTheme: boolean = false;
 private _appMode: AppMode = AppMode.SharePoint;
 private _theme: Theme = webLightTheme;

 protected async onInit(): Promise<void> {
  const _l = this.context.isServedFromLocalhost;
  if (!!this.context.sdks.microsoftTeams) {
   const teamsContext = await this.context.sdks.microsoftTeams.teamsJs.app.getContext();
   switch (teamsContext.app.host.name.toLowerCase()) {
    case 'teams': this._appMode = _l ? AppMode.TeamsLocal : AppMode.Teams; break;
    case 'office': this._appMode = _l ? AppMode.OfficeLocal : AppMode.Office; break;
    case 'outlook': this._appMode = _l ? AppMode.OutlookLocal : AppMode.Outlook; break;
    default: throw new Error('Unknown host');
   }
  } else this._appMode = _l ? AppMode.SharePointLocal : AppMode.SharePoint;
  return super.onInit();
 }
```

https://github.com/pnp/sp-dev-fx-webparts/blob/main/samples/react-fluentui-9/src/webparts/fluentUi9Demo/FluentUi9DemoWebPart.ts

Fluent Provider render

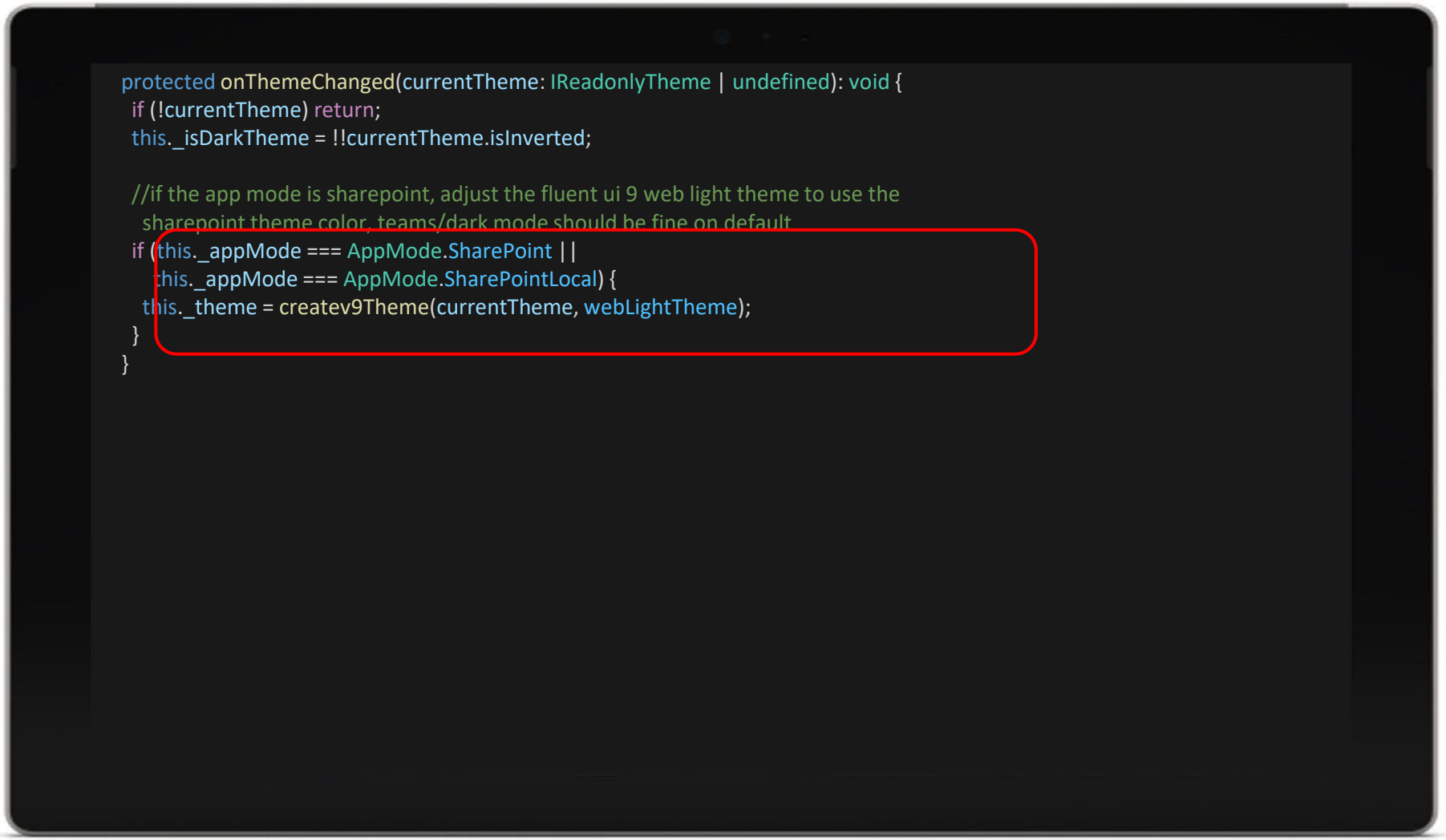
WebPart.ts

```
public render(): void {
  const element: React.ReactElement<IFluentUi9DemoProps> = React.createElement(
    FluentUi9Demo,
    {
      isDarkTheme: this._isDarkTheme,
      hasTeamsContext: !!this.context.sdks.microsoftTeams,
      userDisplayName: this.context.pageContext.user.displayName,
      context: this.context
    }
  );

  //wrap the component with the Fluent UI 9 Provider.
  const fluentElement: React.ReactElement<FluentProviderProps> = React.createElement(
    FluentProvider,
    {
      theme : this._appMode === AppMode.Teams ||
              this._appMode === AppMode.TeamsLocal ?
                this._isDarkTheme ? teamsDarkTheme : teamsLightTheme :
                  this._isDarkTheme ? webDarkTheme : this._theme
    },
    element
  );

  ReactDom.render(fluentElement, this.domElement);
}
```

https://github.com/pnp/sp-dev-fx-webparts/blob/main/samples/react-fluentui-9/src/webparts/fluentUi9Demo/FluentUi9DemoWebPart.ts

Fluent Provider Theme Change

WebPart.ts



```
protected onThemeChanged(currentTheme: IReadonlyTheme | undefined): void {
  if (!currentTheme) return;
  this._isDarkTheme = !!currentTheme.isInverted;

  //if the app mode is sharepoint, adjust the fluent ui 9 web light theme to use the
    sharepoint theme color, teams/dark mode should be fine on default
  if (this._appMode === AppMode.SharePoint ||
      this._appMode === AppMode.SharePointLocal) {
    this._theme = createv9Theme(currentTheme, webLightTheme);
  }
}
```

https://github.com/pnp/sp-dev-fx-webparts/blob/main/samples/react-fluentui-9/src/webparts/fluentUi9Demo/FluentUi9DemoWebPart.ts

Fluent Provider Createv9Theme

v9ThemeShim.ts

```ts
import { IPalette, ITheme as ThemeV8 } from '@microsoft/sp-component-base';

import { ColorTokens, Theme as ThemeV9, webLightTheme } from '@fluentui/react-components';
import { blackAlpha, whiteAlpha, grey } from './themeDuplicates';

/**
 * Creates v9 color tokens from a v8 palette.
 * https://github.com/microsoft/fluentui/blob/master/apps/public-docsite-
   v9/src/shims/ThemeShim/v9ThemeShim.ts
 */
const mapAliasColors = (palette: Partial<IPalette>, inverted: boolean): ColorTokens => {
  ...
};

/**
 * Creates a v9 theme from a v8 theme.
 * You can optional pass a base v9 theme; otherwise webLightTheme is used.
 */
export const createv9Theme = (themeV8: ThemeV8, baseThemeV9?: ThemeV9): ThemeV9 => {
 const baseTheme = baseThemeV9 ?? webLightTheme;

 return {
   ...baseTheme,
   ...mapAliasColors(themeV8.palette, themeV8.isInverted)
 };
};
```

https://github.com/pnp/sp-dev-fx-webparts/blob/main/samples/react-fluentui-9/src/webparts/fluentUi9Demo/shims/v9ThemeShim.ts

Components

FluentUi9Demo.tsx

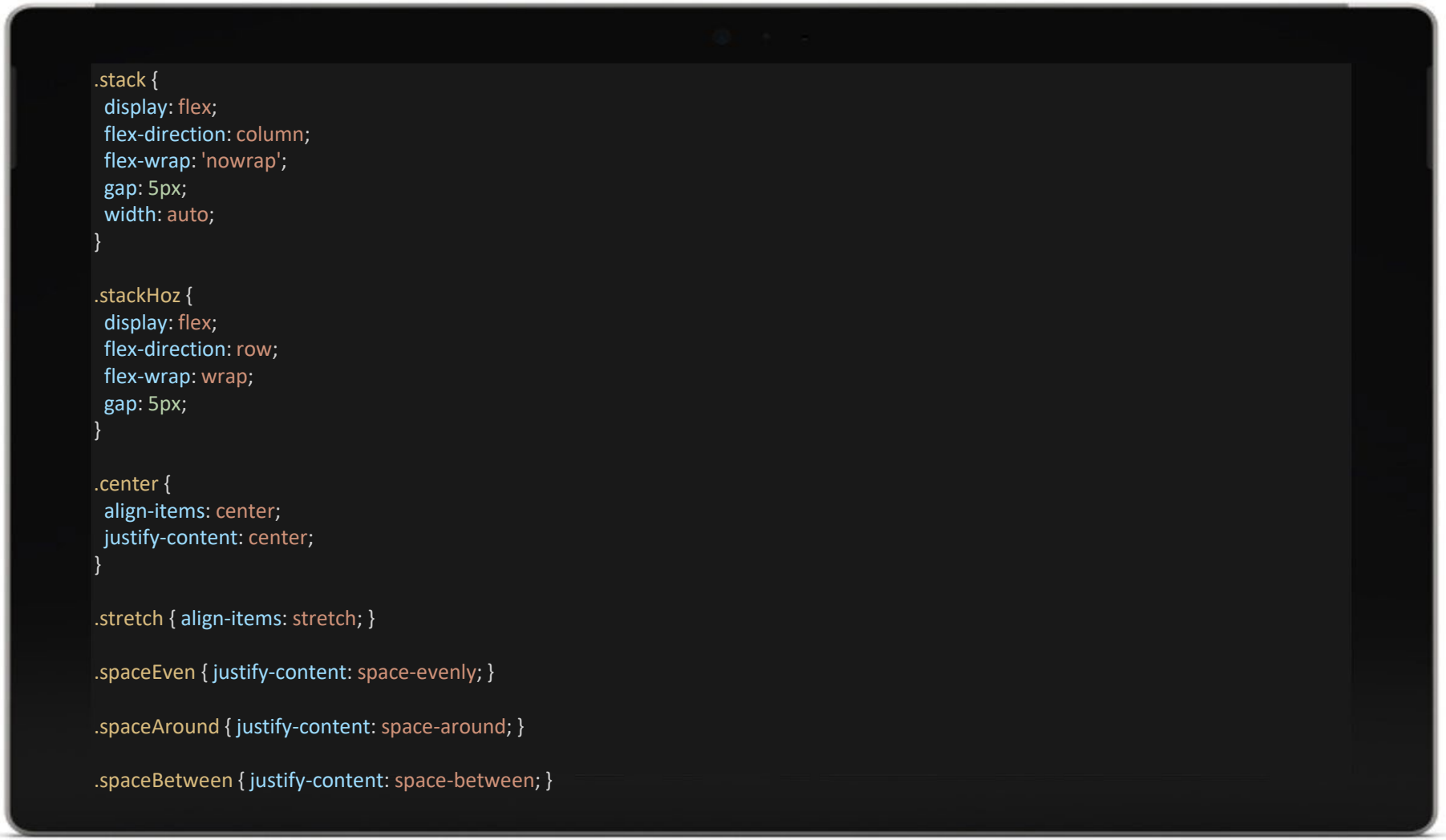
```
import { Button, Link, Text, Tab, TabList, Avatar, useId, ToggleButton, Slider, Menu,
      MenuTrigger, MenuButtonProps, MenuPopover, MenuList, MenuItem, SplitButton, Divider,
      Label, Input, Checkbox, RadioGroup, Radio, Switch, Body1, Caption1
} from '@fluentui/react-components';
import { Card, CardHeader, CardPreview, CardFooter }
      from '@fluentui/react-components/unstable';
import { ... } from '@fluentui/react-icons';


<TabList onTabSelect={(e, data) => setTab(data.value)} defaultSelectedValue="buttons">
  <Tab value="buttons">Buttons</Tab>
  <Tab value="cards">Cards</Tab>
  <Tab value="inputs">Inputs</Tab>
</TabList>


<Divider appearance='brand'>Button</Divider>
<div className={`${styles.stackHoz} ${styles.spaceBetween}`}>
 <Button>Default</Button>
 <Button appearance="primary">Primary</Button>
 <Button appearance="outline">Outline</Button>
 <Button appearance="subtle">Subtle</Button>
 <Button appearance="transparent">Transparent</Button>
</div>
```

https://github.com/pnp/sp-dev-fx-webparts/blob/main/samples/react-fluentui-9/src/webparts/fluentUi9Demo/components/FluentUi9Demo.module.scss

Stacks

Stacks currently do not exist in Fluent UI 9

You can use CSS to achieve the same results



```css
.stack {
  display: flex;
  flex-direction: column;
  flex-wrap: 'nowrap';
  gap: 5px;
  width: auto;
}

.stackHoz {
  display: flex;
  flex-direction: row;
  flex-wrap: wrap;
  gap: 5px;
}

.center {
  align-items: center;
  justify-content: center;
}

.stretch { align-items: stretch; }

.spaceEven { justify-content: space-evenly; }

.spaceAround { justify-content: space-around; }

.spaceBetween { justify-content: space-between; }
```

https://github.com/pnp/sp-dev-fx-webparts/blob/main/samples/react-fluentui-9/src/webparts/fluentUi9Demo/shims/v9ThemeShim.ts

Thank You

https://github.com/pnp/sp-dev-fx-webparts/tree/main/samples/react-fluentui-9

https://react.fluentui.dev/