

**PowerApps Coding and Standards**

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**Introduction:**

Microsoft PowerApps is a high-productivity application development platform from Microsoft. Enterprise customers can also use the same platform to build their own custom line-of-business applications. Individual users and teams within your organization can also build personal or team productivity applications without having to write very much code (or any)

**Purpose of this Document:**

This document is targeted to developer who is responsible for designing, building, testing, deploying, and maintaining PowerApps apps in a corporate or government environment. This document was developed as a collaboration between the Microsoft PowerApps team, Microsoft IT, and industry professionals. Of course, enterprise customers are free to develop their own standards and practices. However, we feel that adherence to these guidelines will help developers in these areas:

• Simplicity

• Readability

• Supportability

• Ease of deployment and administration

• Performance

• Accessibility

**Scope of this Document:**

In this document we are going to provide the technical standards and design guidance of our organization. By following the standards and best practices from our company, it will make all the applications has unique structure and all the users can feel simple and friendly to use the application. Also, if we hand over the application to other developers also then can feel easy to identify the coding and any functionality what we have in it.

All the developers need to follow the same standards and technical design what we have listed in this document.

**Colour and Theme Standards:**

Before designing of the application decide the theme of the app weather it should be an dark mode and light mode. Based on that choose the our organization colour codes to build either the dark theme or lighter theme.

Please find the below standards colour codes for each and every element below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Element Name** | **Colour Name** | **RGBA** | **Hex** | **Colour** |
| Background | Off White | RGBA (245, 245, 245,1) | #F5F5F5 |  |
| Primary Background | Dark Gray | RGBA (34, 34, 34, 1) | #222222 |  |
| Font (Text) | Charcoal Gray | RGBA (34, 34, 34, 1) | #222222 |  |
| Buttons/Links | Company Blue | RGBA (0, 120, 215, 1) | #0078D7 |  |
| Hover/ Background (Containers/Cards) | White | RGBA (255, 255, 255,1) | #FFFFFF |  |
| Secondary Background | Light Gray | RGBA (240, 240, 240, 1) | #F0F0F0 |  |
| Success Colour | Soft Green | RGBA (76, 175, 80, 1) | #4CAF50 |  |
| Warning Colour | Warm Amber | RGBA (255, 193, 7, 1) | #FFC107 |  |
| Error Colour | Rich Red | RGBA (244, 67, 54, 1) | #F44336 |  |
| Secondary Accent | Sky Blue | RGBA (3, 169, 244,1) | #03A9F4 |  |
| Neutral Accent | Cool Silver | RGBA (189, 189, 189, 1) | #BDBDBD |  |

**Fonts and Sizes for Elements:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Element Name** | **Font** | **Size** | **Colour** | **Hex** | **Font Weight** |
| App Title/Headers | Segoe UI | 24pt | RGBA (245, 245, 245,1) | #F5F5F5 | Bold |
| Screen Titles | Segoe UI | 20pt | RGBA (245,245,245,1) | #F5F5F5 | Bold |
| Labels/Field Headers | Segoe UI | 14pt | RGBA (245,245,245,1) | #F5F5F5 | Semi Bold |
| Body Text/Help Text | Segoe UI | 12pt | RGBA (245,245,245,1) | #F5F5F5 | Regular |

**Button and Control Design:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Element Name** | **Background Colour** | **Font Colour** | **Border Radius** | **Font Size** | **Padding** |
| Primary Button | #0078D7 | #F5F5F5 | 5px | 14pt | 10PX |
| Secondary Button | #000000 | #0078D7 | 5px | 14pt | 10PX |
| Success Button | #4CAF50 | #F5F5F5 | 5px | 14pt | 10PX |
| Warning Button | #FFC107 | #222222 | 5px | 14pt | 10PX |

Please find the below elements with their properties

**Header Label:**

Text: *#Your App title#*

Font: Font. ‘Segoe UI’

Colour: RGBA (34,34,34,1)

Fill: RGBA (255,255,255,1)

Height:60

Align: Align.Center

**Primary Button:**

Text: *#Button Name#*

Fill: RGBA (0, 120, 215, 1)

Colour: RGBA (255,255,255,1)

Font: Font. ‘Segoe UI’

Border Radius: 8

**Footer (optional):**

Text: *# ©Your Company Name#*

Colour: RGBA (34, 34, 34,1)

Fill: RGBA(255,255,255,1)

Align: Align.Center

**Naming Conventions for Elements:**

Control names must be unique across an application. If a control is reused on multiple screens, the short screen name should be suffixed at the end. This approach makes it easier to reference the control in formulas across screens.

|  |  |  |
| --- | --- | --- |
| **Control Name** | **Abbreviation** | **Example** |
| Button | btn | btn\_Home\_Submit |
| Screen | scr | scr\_HomeScreen |
| Camera Control | cam | cam\_Home\_attach |
| Canvas | can | Can\_NFS\_Form |
| Card | crd | crd\_NFS\_Title |
| Collection | col | colAllItems |
| Combo Box | cmb | cmb\_NFS\_Requestor |
| Date | dte | dte\_NFS\_StartDate |
| Dropdown | drp | drp\_NFS\_Status |
| Form | frm | frm\_NFS\_RequestForm |
| Gallery | gal | gal\_DBS\_MyRequests |
| Group | grp | grp\_NFS\_Success |
| Html text | htm | htm\_NFS\_Requestor |
| Icon | icn | icn\_NFS\_Add |
| Image | img | img\_NFS\_Loader |
| Label | lbl | lbl\_NFS\_Requestor |
| Text Input | txt | txt\_NFS\_Title |

**Accessibility and Usability:**

* Ensure High Contrast between Background and Font
* Buttons should be Clearly labelled and atleasr 44\*44px
* Use tooltips and descriptive labels for inputs
* Add comments in the code for quick and ease readability
* Use Concurrent function for parallel execution. It will avoid the performance issue and loading time of the application
* Before navigating to the screen reset all the controls which is used in the screen
* To avoid delegation issues, try to save the data source data in to the collection.
* Filter out the data from the data source and place it in to the temporary collections where we want the limited set of data.
* Avoid “ForAll” function if it is not necessary
* Remove the unused data sources, media, flows, variables and collections
* Avoid using of high MB images in the app.
* Make format text option for all coding
* Avoid nested functions if it is not necessary in the application.

**Limiting and Packing Size:**

Limiting the package size Although PowerApps does a lot to optimize app loading, you can take steps to reduce the footprint of your apps. A reduced footprint will be especially important for users of older devices, or users in locales where there’s higher latency or reduced bandwidth.

* Evaluate the media that are embedded in your app. If something isn’t used, delete it.
* Embedded images might be too big. Instead of PNG files, see whether you can use SVG images. However, be careful about using text in SVG images, because the font that’s used will have to be installed on the client. A great workaround when you need to show text is to superimpose a text label over an image.
* Evaluate whether the resolution is appropriate for the form factor. The resolution for a mobile app doesn’t need to be as high as the resolution for a desktop app. Experiment to get the right balance of image quality and size.
* If you have unused screens, delete them. Be careful not to delete any hidden screens that only app makers or administrators use.
* Evaluate whether you’re trying to fit too many workflows into one app. For example, do you have both admin screens and client screens in the same app? If so, consider breaking them into individual apps. This approach will also make it easier for multiple people to work on the apps at the same time, and it will limit the “blast radius” (amount of testing) when app changes require a full test pass.

**Developer Tips:**

* Set the theme variables and the variables which will not be edited again in the app in the App.Formula property to reuse those in the app.
* Eg: VarPrimaryColor=RGBA(0,120,215,1)
* Use these variables consistently in the PowerApps

**Summary Checklist:**

Before Publishing your app

* Use Company Approved Colours and Fonts
* Buttons and Forms styled consistently
* Screens follow naming convention
* Accessibility checked (Contrast, Alt Text, Labels)
* App.Formula assign the standard theme variables
* App looks clean and branded.