

# Replacing Prompt constant (F4) with a *clickable* icon

Prompting for possible values of fields (also known as *drilling down* on a user interface) is very common.

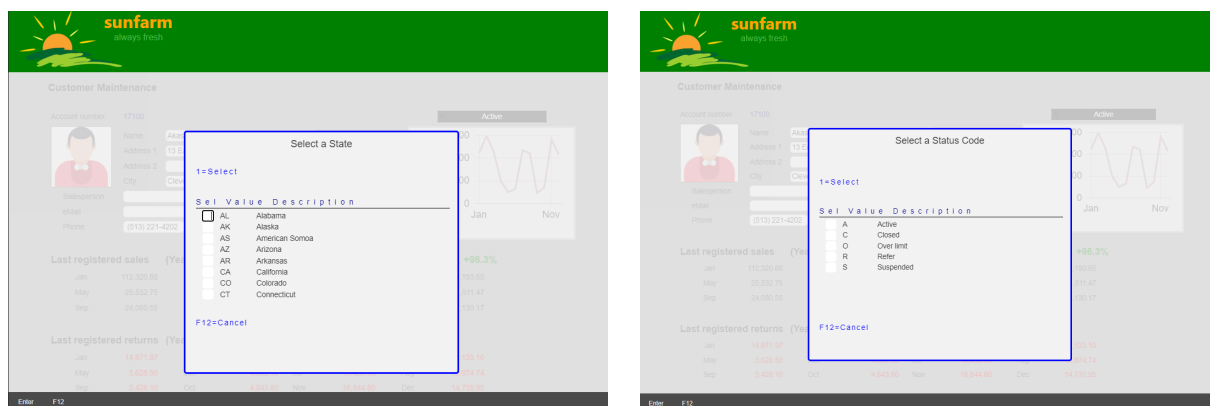
There are several ways to enhance a Page with this functionality, such as using drop-down lists. In this Guide we will assume we want to keep the Window record feature of the legacy DDS and pop-up records on the screen to present valid field values.

The legacy application used to present a constant label — to the right of the given field — with the content “**(F4)**” to hint to the user that pressing Function 4 on the keyboard at specific fields would present the list of valid values.

In particular, the SunFarm Application menu option “Update” on the main Page would show the “Customer Maintenance” screen — which we have been enhancing in during the narrative of this Guide —. The Customer Maintenance Page contains two Prompts:

1. Prompting for States (to update Address Information) and
2. Prompting for Status (to update Customer Status)

The Window records presented when F4 key is pressed at the proper fields are shown below:



## Adding a Button with a magnifying glass icon to the right of the State field.

The following is the tagHelper added (in blue) to the CUSTREC record in file:

\$\SunFarm\CustomerAppSite\Areas\CustomerAppViews\Pages\CUSTDSPF.cshtml

```
<div Row="7">
  <DdsConstant Col="20" Text="City" />
  <DdsCharField Col="27" ColSpan="10" For="CUSTREC.SFCITY" Lower="true" VirtualRowCol="10,27"
  PositionCursor="42" tabIndex=5 />
  <DdsCharField Col="37" For="CUSTREC.SFSTATE" VirtualRowCol="11,27" PositionCursor="43"
  tabIndex=6 />
  <DdsButton Col="40" IconId="search" ButtonStyle="Icon" AidKey="F4"
  FocusField="CUSTREC.SFSTATE"/>
  <DdsCharField Col="42" For="CUSTREC.SFPOSTCODE" VirtualRowCol="11,37" tabIndex=7 />
</div>
```


That simple markup line would do the trick nicely, WITHOUT having to change a single line in the Model's code or Application logic.

Let's see how it looks (all the details will be explained later at the end of this document):

**sunfarm**  
always fresh

### Customer Maintenance

Account number 46000



Name 38 Inc. Co Operations

Address 1 350 O North 439 1609 B

Address 2

City Shreveport LA 71101

Salesperson

eMail

Phone (318) 559-6777 Fax (318) 675-5327 Send Confirmation: ☐ Yes ☒ No

**Last registered sales (Year 1997) 984,883.27**

	Jan	Feb	Mar	Apr
Sales	41,593.55	44,211.32	50,069.10	

When the mouse pointer is moved close to the magnifying glass icon — also known as *hovering over it* — the shape of the pointer changes to a Hand with finger pointing to it. This is a hint to the user that the icon may be clicked.

<sup>1</sup> Commit “Adding icon to simulate F4 prompt”

When the icon is clicked:

1. The keyboard focus is changed to the field CUSTREC.SFSTATE
2. The AidKey with the value F4 is programmatically set in the keyboard buffer right before the Page is submitted, just as if the User had navigated to the field in question and the key F4 in the keyboard had been pressed.

## DdsButton tagHelper

Let's look deeper into how the markup that produced the clickable icon for prompting is defined.

```
<DdsButton Col="40" ButtonStyle="Icon" IconId="search" AidKey="F4"
           FocusField="CUSTREC.SFSTATE"/>
```

The attribute **Col** should already be familiar. It specifies the horizontal position within the row (seven in this case) where the button should be rendered.

**ButtonStyle** is an attribute that defines the different styles supported for clickable buttons:

1. "Button" - A push button with a text label centered (Default)
2. "Image" - An image that is identified by a user file as a web resource.
3. "Link" - A hyperlink (text label that executes an action)
4. "Icon" - A named *stock image* (more on this below)

If the **ButtonStyle** attribute is set to "**Icon**" (which is what we use in this Guide), the attribute **IconId** must be provided to the name of an existing Icon shape.

Icon shapes are rendered with square dimensions (width equals height) and are scaled to fit in a "cell" of the height of the font and the fore-color of the CSS text, (think of a character with a graphic shape).

**AidKey** is an attribute that takes the name of an IBMi Aid key ("F1" ... "F24", "Clear", "Help", "PageUp", "PageDown", "Print", "Home", "Enter", "Attn" and "Reset").

**FocusField** is an attribute that is set to the field-name of the record written to the page where we want to simulate user navigation right before the Page is auto-submitted.

## Icon Payload efficiency

ASNA Monarch Expo rendering engine is optimized to include in the Page payload ONE copy of a particular shape. If you plan to add **DdsButton** elements in records of a subfile, you can














be assured that the Page's payload will not grow. When more than one instance of a particular shape is rendered on a Page, there is a single copy in memory of the shape and several references to it.

## Icon Stock Image IDs

ASNA Monarch Expo contains a collection of shapes that describe SVG<sup>2</sup> with commonly used shapes that are inspired by the **Font Awesome** free library<sup>3</sup>

The shapes are simple and clean, monochrome (color can be selected) , scaled without loss and respect the background (use transparent background).

ASNA Monarch Expo Icon library contains 250 named shapes, which should be sufficient for most of the DdsButtons you application may need.<sup>4</sup>






















Name	Icon shape
"adjust"	
"align-center"	
"align-justify"	
"align-left"	
"align-right"	
"ambulance"	
"angle-down"	
"angle-left"	
"angle-right"	
"angle-up"	
"arrow-down"	
"arrow-left"	
"arrow-right"	

---























<sup>2</sup> Scalable Vector Graphic file format.























<sup>3</sup> See: <https://fontawesome.com/plans>

<sup>4</sup> If none of the shapes fits your needs, use Image ButtonStyle and provide your own.






















Name	Icon shape
"arrow-up"	
"asterisk"	
"backward"	
"ban-circle"	
"bar-chart"	
"barcode"	
"beaker"	
"beer"	
"bell-alt"	
"bell"	
"bold"	
"bolt"	
"book"	
"bookmark-empty"	
"bookmark"	
"briefcase"	
"building"	
"bullhorn"	
"calendar"	
"camera-retro"	
"camera"	






















Name	Icon shape
"caret-down"	▼
"caret-left"	◀
"caret-right"	▶
"caret-up"	▲
"certificate"	⚙
"check-empty"	□
"check"	☑
"chevron-down"	▼
"chevron-left"	◀
"chevron-right"	▶
"chevron-up"	▲
"circle-arrow-down"	⬇
"circle-arrow-left"	⬅
"circle-arrow-right"	➡
"circle-arrow-up"	⬆
"circle-blank"	◯
"circle"	●
"cloud-download"	☁⬇
"cloud-upload"	☁⬆
"cloud"	☁
"coffee"	☕
"cog"	⚙






















Name	Icon shape
"cogs"	
"columns"	
"comment-alt"	
"comment"	
"comments-alt"	
"comments"	
"copy"	
"credit-card"	
"cut"	
"dashboard"	
"desktop"	
"double-angle-down"	
"double-angle-left"	
"double-angle-right"	
"double-angle-up"	
"download-alt"	
"download"	
"edit"	
"eject"	
"envelope-alt"	
"envelope"	
"equals"	






















Name	Icon shape
"exchange"	
"exclamation-sign"	
"external-link"	
"eye-close"	
"eye-open"	
"facebook-sign"	
"facebook"	
"facetime-video"	
"fast-backward"	
"fast-forward"	
"fighter-jet"	
"file-alt"	
"file"	
"film"	
"filter"	
"fire"	
"flag"	
"folder-close-alt"	
"folder-close"	
"folder-open-alt"	
"folder-open"	
"font"	














































Name	Icon shape
"food"	
"forward"	
"fullscreen"	
"gift"	
"github-alt"	
"github-sign"	
"github"	
"glass"	
"globe"	
"google-plus-sign"	
"google-plus"	
"group"	
"h-sign"	
"hand-down"	
"hand-left"	
"hand-right"	
"hand-up"	
"hdd"	
"headphones"	
"heart-empty"	
"heart"	






















Name	Icon shape
"home"	
"hospital"	
"inbox"	
"indent-left"	
"indent-right"	
"info-sign"	
"italic"	
"key"	
"laptop"	
"leaf"	
"legal"	
"lemon"	
"lightbulb"	
"link"	
"linkedin-sign"	
"linkedin"	
"list-alt"	
"list-ol"	
"list-ul"	
"list"	
"lock"	



Name	Icon shape
"magic"	
"magnet"	
"map-marker"	
"medkit"	
"minus-sign"	
"minus"	
"mobile-phone"	
"money"	
"move"	
"music"	
"off"	
"ok-circle"	
"ok-sign"	
"ok"	
"paper-clip"	
"paste"	
"pause"	
"pencil"	
"phone-sign"	
"phone"	
"picture"	

Name	Icon shape
"pinterest-sign"	
"pinterest"	
"plane"	
"play-circle"	
"play"	
"plus-sign-alt"	
"plus-sign"	
"plus"	
"print"	
"pushpin"	
"qrcode"	
"question-sign"	
"quote-left"	
"quote-right"	
"random"	
"refresh"	
"remove-circle"	
"remove-sign"	
"remove"	
"reorder"	
"repeat"	

Name	Icon shape
"reply"	
"resize-full"	
"resize-horizontal"	
"resize-small"	
"resize-vertical"	
"retweet"	
"road"	
"rss"	
"save"	
"screenshot"	
"search"	
"share-alt"	
"share"	
"shopping-cart"	
"sign-blank"	
"signal"	
"signin"	
"signout"	
"sitemap"	
"sort-down"	
"sort-up"	
"sort"	

Name	Icon shape
"spinner"	
"star-empty"	
"star-half"	
"star"	
"step-backward"	
"step-forward"	
"stethoscope"	
"stop"	
"strikethrough"	
"suitcase"	
"table"	
"tablet"	
"tag"	
"tags"	
"tasks"	
"text-height"	
"text-width"	
"th-large"	
"th-list"	
"th"	
"thumbs-down"	

Name	Icon shape
"thumbs-up"	
"time"	
"tint"	
"trash"	
"trophy"	
"truck"	
"twitter-sign"	
"twitter"	
"umbrella"	
"underline"	
"undo"	
"unlock"	
"upload-alt"	
"upload"	
"user-md"	
"user"	
"volume-down"	
"volume-off"	
"volume-up"	
"warning-sign"	
"wrench"	

Name	Icon shape
"zoom-in"	
"zoom-out"	

## Button Icon for Status prompt

Adding a clickable icon for the second prompt can be accomplished the same way. We want to show the icon at the right of the Chart's title where we are displaying the Customer Status (Active for the customer we have been using as a sample).

The last field was positioned at column 72 with a span of 18, that is: the last position is 72+18 = 90. Let's add the icon at column position 91. The field we want to emulate pressing is SFSTATUS on the record CUSTREC.

The following is the markup we need:

```
<div Row="2">
  <DdsConstant Col="8" Text="Account number" />
  <DdsDecField class="left-aligned-field" Col="20" For="CUSTREC.SFCUSTNO"
    VirtualRowCol="5,27" Color="DarkBlue" EditCode="Z" Comment="CUSTOMER NUMBER" />
  <span class="box-highlight-center-field"
    ExpoGridCol="72/90">@Model.CUSTREC.SF_STATUS_NAME</span>
  <DdsCharField class="present-no-visible-field" Col="72" ColSpan="18"
    For="CUSTREC.SFSTATUS" VirtualRowCol="15,27" PositionCursor="44" />
  <DdsButton Col="91" IconId="search" ButtonStyle="Icon" AidKey="F4"
    FocusField="CUSTREC.SFSTATUS"/>
</div>
```

## Button Title as a Visual Hint for the User

Not all icon shapes are universal and when the same shape appears in more than one place on the Page, it may not be immediately apparent as to its purpose.

We can add a small text hint that shows on Desktop Browsers when the mouse pointer hovers on top of the Icon.

Let's add the following two text hints to our prompts:

1. "Prompt for State Codes"
  2. "Prompt for Status Codes"
- 5

Simple addition of these attributes to our tagHelpers:

```
IconTitle="Prompt for State Codes"
```


```
IconTitle="Prompt for Status Codes"
```

---

<sup>5</sup> Commit "Adding Titles to the Icon Prompts."




The prompts with their corresponding titles should now look like this:



### Customer Maintenance

Account number 46000



Salesperson  
eMail  
Phone (318) 559-6777

Name 38 Inc. Co Operations

Address 1 350 O North 439 1609 B

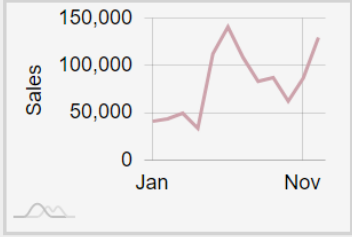
Address 2

City Shreveport LA 71101

Prompt for Status Codes

Fax 318)675-5327 Send Confirmation: ☐ Yes ☒ No

Active



Last registered sales (Year 1007) 084 883 27 +100.00%

*This concludes the Guide.*