

How to use font-based icons in isCOBOL GUI programs

When your GUI application is going to need a large variety of different bitmaps for any kind of GUI control that accepts a bitmap for its icon, you can use font-based bitmaps instead of trying to get different images for each control. Bitmap fonts provide a comprehensive set of glyphs, or icons.

In this article we will use one of the most popular bitmap fonts: **FontAwesome**. You can download it from: www.fontawesome.com.

However, any bitmap font can be used (Material Design Font, dafont.com, etc)

The .otf file that you download can be located in any folder that you choose. You create a named font with W\$CREATEFONT that points to the path (full or relative) of the font.

```
move "Font Awesome 5 Free Solid" to font-name call "w$createfont" using
"files/Font Awesome 5 Free-Solid-900.otf" font-name
```

Then you load a font with W\$FONT based on that named font.

```
initialize wfont-data set wfdevice-console to true move font-name to wfont-
name move 10 to wfont-size call "w$font" using wfont-get-font h-
font wfont-data
```

Now, in order to use some of the icons from that font for your program, you need to create a strip of selected icons.

The FontAwesome font uses a hexadecimal code of 4 characters to refer to their icons.

Here's a link to all of the available icons and their hex codes:

<https://fontawesome.com/v5/cheatsheet>

Each of those hex codes need to be converted to a decimal value and then combined in a national variable as in this example:

```
77 character-1-hex pic x(4). 77 character-1-n pic n(1). 77
character-1-red pic x(2) comp-x
redefines character-1-n. ... 77 icon-
characters pic n any length. ... move "f1c3" to
character-1-hex move "f576" to character-2-hex move "f008" to
character-3-hex move function hex2dec(character-1-hex) to
character-1-red move function hex2dec(character-2-hex) to
character-2-red move function hex2dec(character-3-hex) to
character-3-red initialize icon-characters string
character-1-n delimited by space
character-2-n delimited by space
character-3-n delimited by space into icon-characters.
```

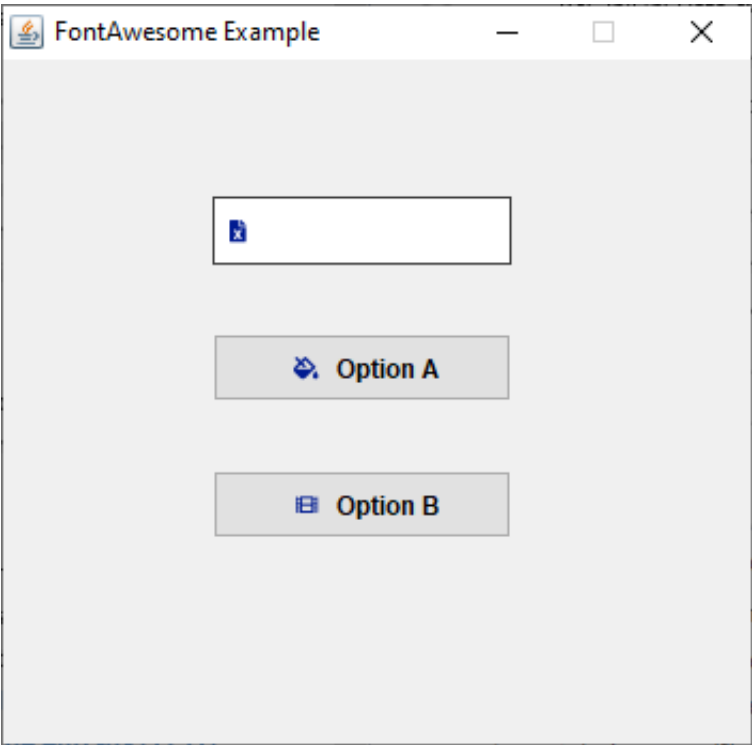
Once you have the list of decimal values in a national string, you can create the bitmap strip in memory, using the W\$BITMAP routine:

```
call "w$bitmap" using wbitmap-load-symbol-font,          h-font          icon-
characters          20          icon-color          giving h-font-icon
```

Now, since the h-font-icon handle of font contains the strip of icons 20 pixels each, you can assign icons from it to a GUI control on the screen section:

```
03 ef-1      entry-field      line          5      col          15      size
          20 cells      lines          2 cells      bitmap-handle          h-font-
icon      bitmap-width          20      bitmap-number          1      .      03
pb-1      push-button      line          9      col          15      lines
          2 cells      size          20 cells      bitmap-handle          h-font-
icon      bitmap-width          20      title-position          2      title
          "Option A"      bitmap-number          2      .
```

This code creates part of a simple example screen that looks like this:



Attached is a zip file with a full sample of using the FontAwesome bitmap font. After downloading it, you can compile:

```
iscc fontawesome.cbl
```

and run:

```
iscrun FONTAWESOME
```

Online URL: <https://support.veryant.com/phpkb/article.php?id=325>