DEVELOPING A CUSTOM SUBFILE WIDGET

The HATS Subfile component can be used to recognize subfiles on the host screen. A scenario may be encountered in which there are multiple actions for a subfile on the host screen. We can render such a subfile by using HATS' subfile widgets.

USING THE HATS SUBFILE WIDGET

By using the already provided HATS subfile widgets, we can use pop-up boxes for displaying multiple actions associated with a subfile on the webpage transformation, but it will always display a pop-up box regardless of whether there's a single action or multiple actions associated with a subfile. This can be a problem especially if subfiles for the whole application are rendered using the same widget.

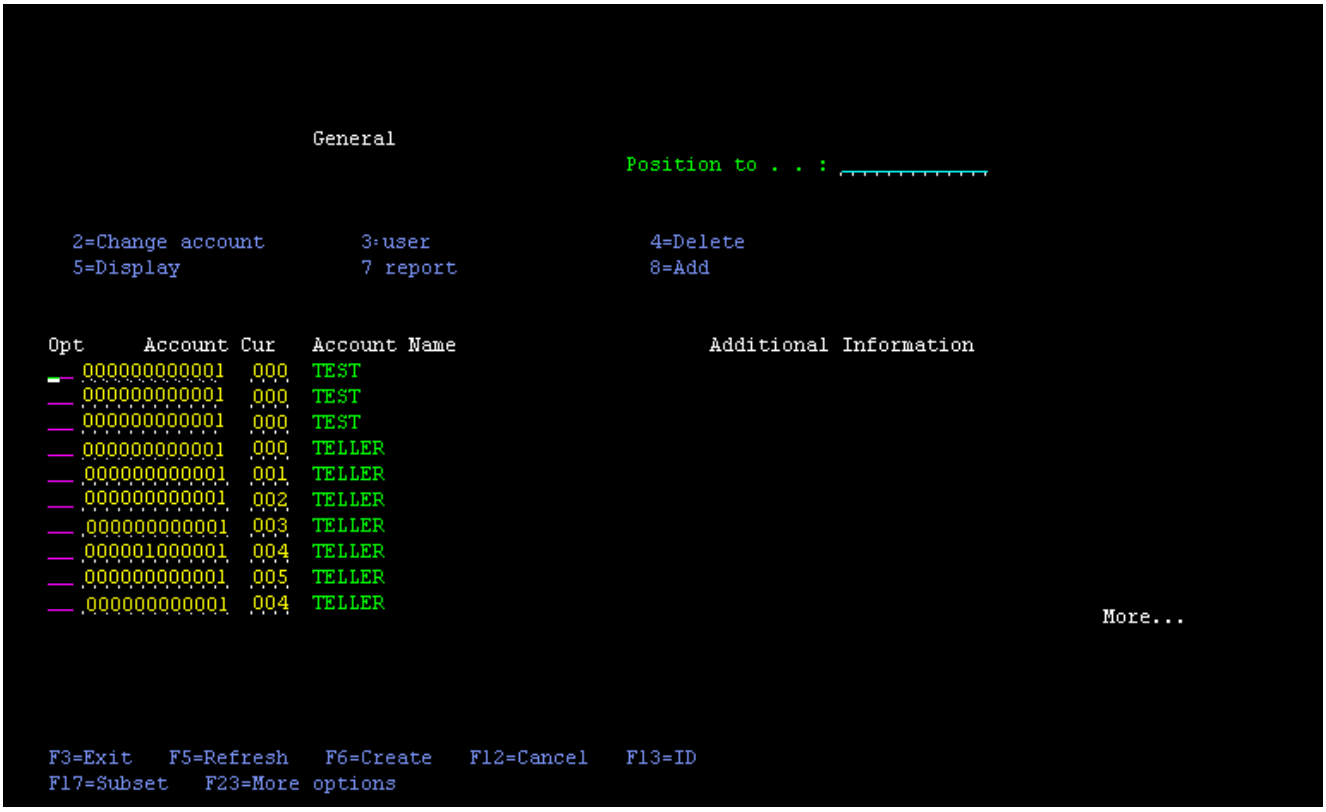
THE NEED FOR A CUSTOM SUBFILE WIDGET

We need a widget that can recognize the number of actions on any subfile and act accordingly to the number of actions found. It should be able to distinguish between a single action and a multiple action subfile.

DEVELOPING A CUSTOM WIDGET

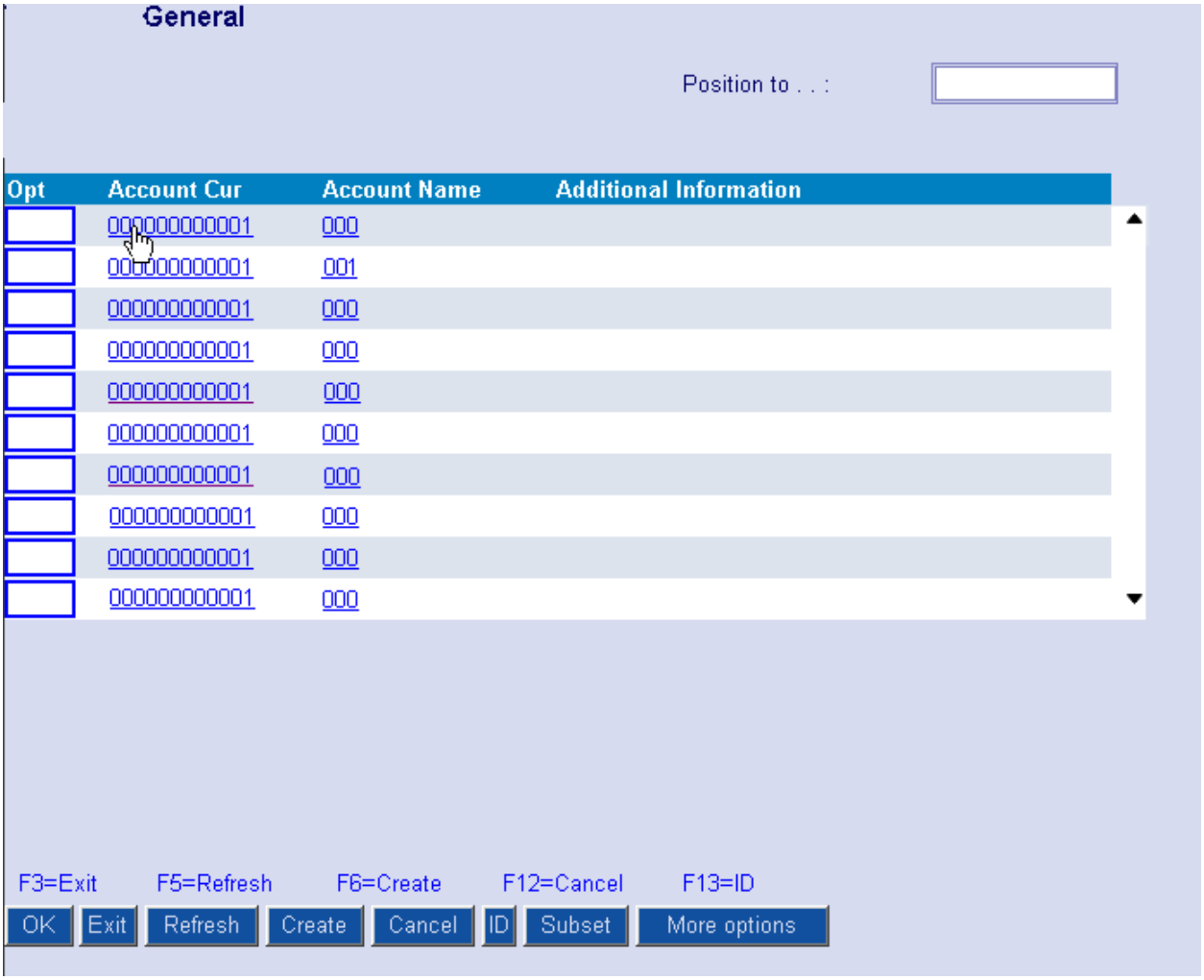
To overcome this roadblock in the default subfile widget, we can develop a custom subfile widget, that renders the subfile such that in the web transformation, a user may click any item in a subfile to view the actions associated with it in a pop-up box, only that the pop-up box gets displayed in the case of multiple actions. If there's a single action, the action is directly performed upon clicking an item on the webpage. We have also included scrollbars for our custom subfile widget. The addition of scrollbars helps in the navigation of different screens on the host. In the remainder of this article, we highlight the development of such a widget.

Our subfile on the host screen appears as below:

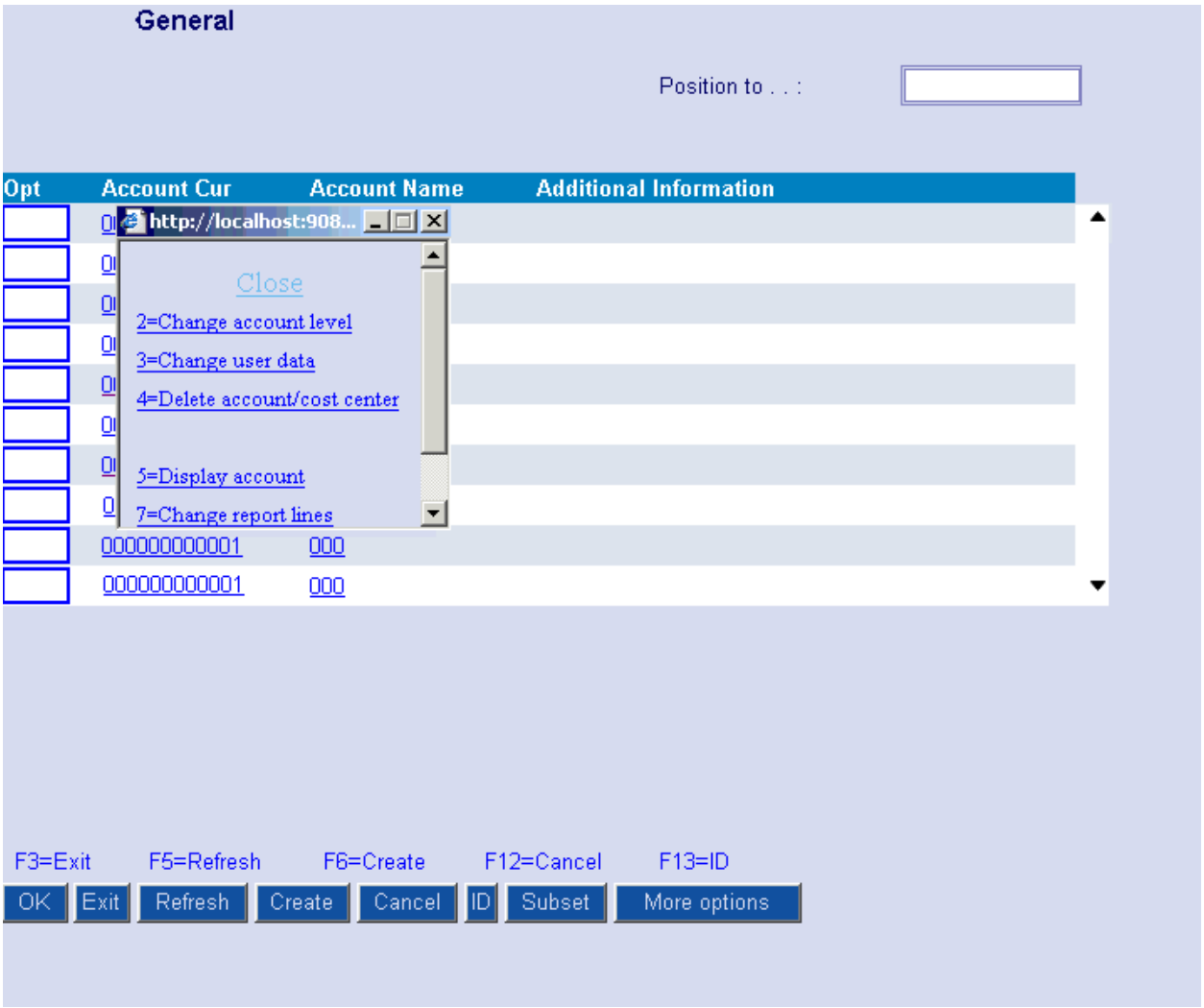


As we can observe, we have multiple actions for our subfile in the above host screen. Our objective is to render the above subfile as such, that it displays the results as hyperlinks and upon clicking any hyperlink, a list of available actions is displayed to the user in a pop-up window.

Our webpage rendering appears as shown below:

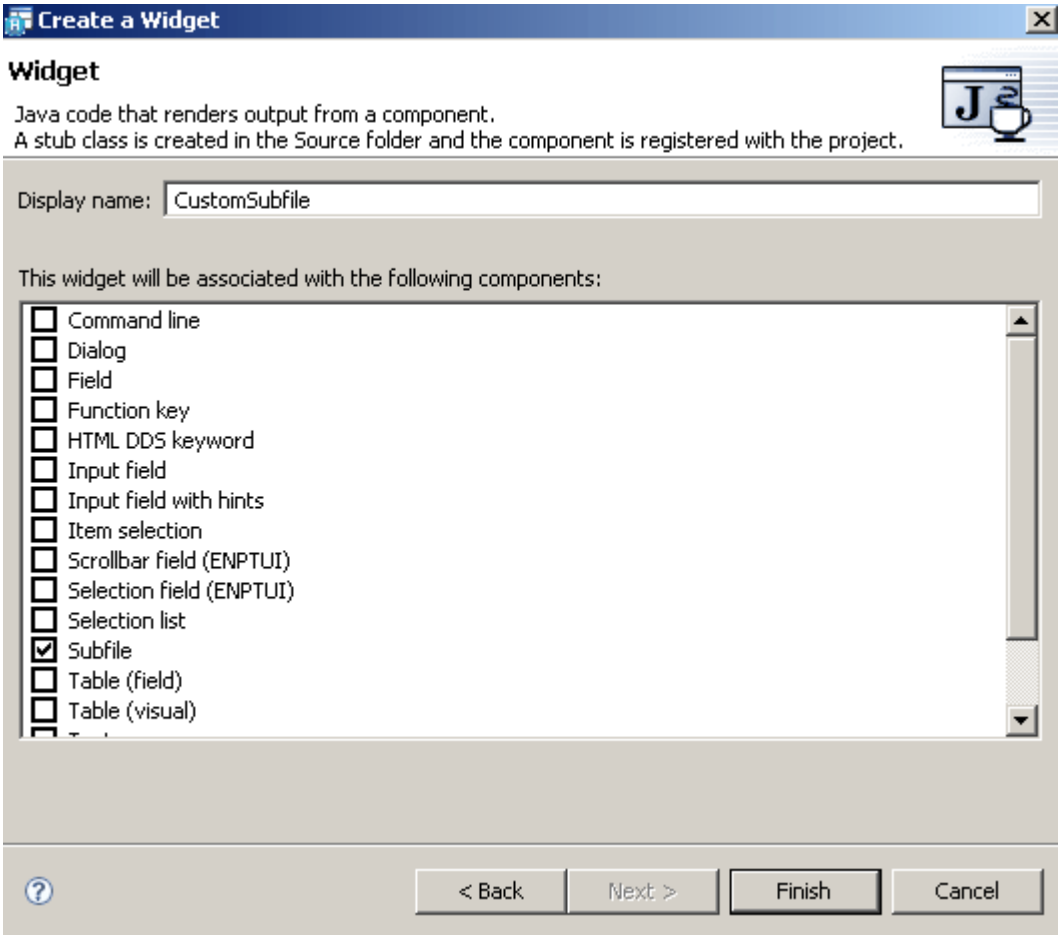


Upon clicking the first link in the above screen, we are presented with a pop-up box that displays all the available actions on the host screen, as shown below:



Upon clicking any of the actions in the above screenshot, the proper action code gets populated into the respective input field and an **Enter** command is sent to the host, thus completing the action. Notice the scrollbars in the shot above, clicking the down arrow, sends a **[PAGEDOWN]** to the host and thus displays the new items on the webpage from the host screen. Similarly, clicking the up arrow sends the **[PAGEUP]** key to the host.

We have associated our widget on the Subfile Component, as shown below:



We fetch the elements into **FieldComponents** as demonstrated by the following code segment:

```
ComponentElement[] elements = this.getComponentElements();
ComponentElementList cel = (ComponentElementList) elements[0];
FieldComponentElement fce= new FieldComponentElement();
```

As we know that a subfile is mainly composed of **Actions**, **Header**, and **Data**. We now utilize the three components separately in our widget.

We start with the **Actions** associated with the Subfile. Let's examine the code segment below:

```
if(cel.getElement(0).getClass().toString().indexOf("SubfileActionComponentElementV6")>0)
{
    Object objj =cel.getElement(j);
    if(objj instanceof  SubfileActionComponentElementV6){
        SubfileActionComponentElementV6 obj =(SubfileActionComponentElementV6)objj;
        numActions++;
        actions[j]=obj.getFullCaption().trim();
```

We get the elements of our **cel** object in an Object **objj**. Next, we parse **objj** into a **SubfileActionComponentElementV6** object named **obj**. This object will contain our subfile **Actions**. The **numActions** variable will contain the number of **Actions** available in our subfile.

Next we place a check for a single or multiple actions on the host. In the code segment below

```
if(numActions > 1){
    buffer = getMultipleActionSubFile(buffer,cel,fce);
}else if(numActions == 1){
    buffer=  getSingleActionSubFile(buffer,cel,fce);
}
```

We check the value of **numActions**, if its value is greater than 1, this means there are multiple actions in our subfile. Therefore we call our custom method named **getMultipleActionSubfile** that contains the functionality to render the data on the webpage as displayed earlier in the document. It populates a pop-up window and implements the functionality of sending the appropriate action through the pop-up window. Similarly, if **numActions** is equal to 1, only a single action is found, and we call our custom method **getSingleActionSubfile** that doesn't call a pop-up window and directly sends the action to the host.

Next, we can print out the **Header** element of our subfile, utilizing the **SubfileHeaderComponentElementV6** class in the code segment below:

```
buffer.append("<TR class='HATSTABLEHEADER'>");
SubfileHeaderComponentElementV6 shce = (SubfileHeaderComponentElementV6) cel.getElement(i);
```

Now we print our subfile **Data** on our webpage utilizing the **SubfileDataComponentElementV6** class to parse our **cel** object as depicted by the code segment below:

```
if(cel.getElement(i).getClass().toString().indexOf("SubfileDataComponentElementV6") > 0)
{

    counter++;
    SubfileDataComponentElementV6 sace = (SubfileDataComponentElementV6) cel.getElement(i);
    if(flag==true)
    {
        buffer.append("<TR class='HATSTABLEODDROW'>");
    flag=false;
    }
    else
    {
        buffer.append("<TR class='HATSTABLEEVENROW' align='left'>");
        flag=true;
    }
```

Notice that we have used different classes to highlight our odd and even rows (namely HATSTABLEODDROW and HATSTABLEEVENROW).

The following code segment calls the JavaScript function that is responsible for calling the pop-up window upon clicking of an item in the subfile **Data** section on the webpage:

```
if(!fce.isAllBlank() && fce.isAlphaNumeric() && !fce.getText().equals(""))
{
  buffer.append("<td><a href=\"javascript:checkMyValue('"+str+"');\">"+fce.getText()+ "</a>");
  buffer.append("</td>");
}
```

In this way we can design a subfile widget that can render subfiles in an application depending on the number of actions and having scrollbars for navigating to different screens on the host.

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