WEEK 2 UNIT 4
SORTING, GROUPING AND FILTERING

Please perform the exercises below in your app project as shown in the video.

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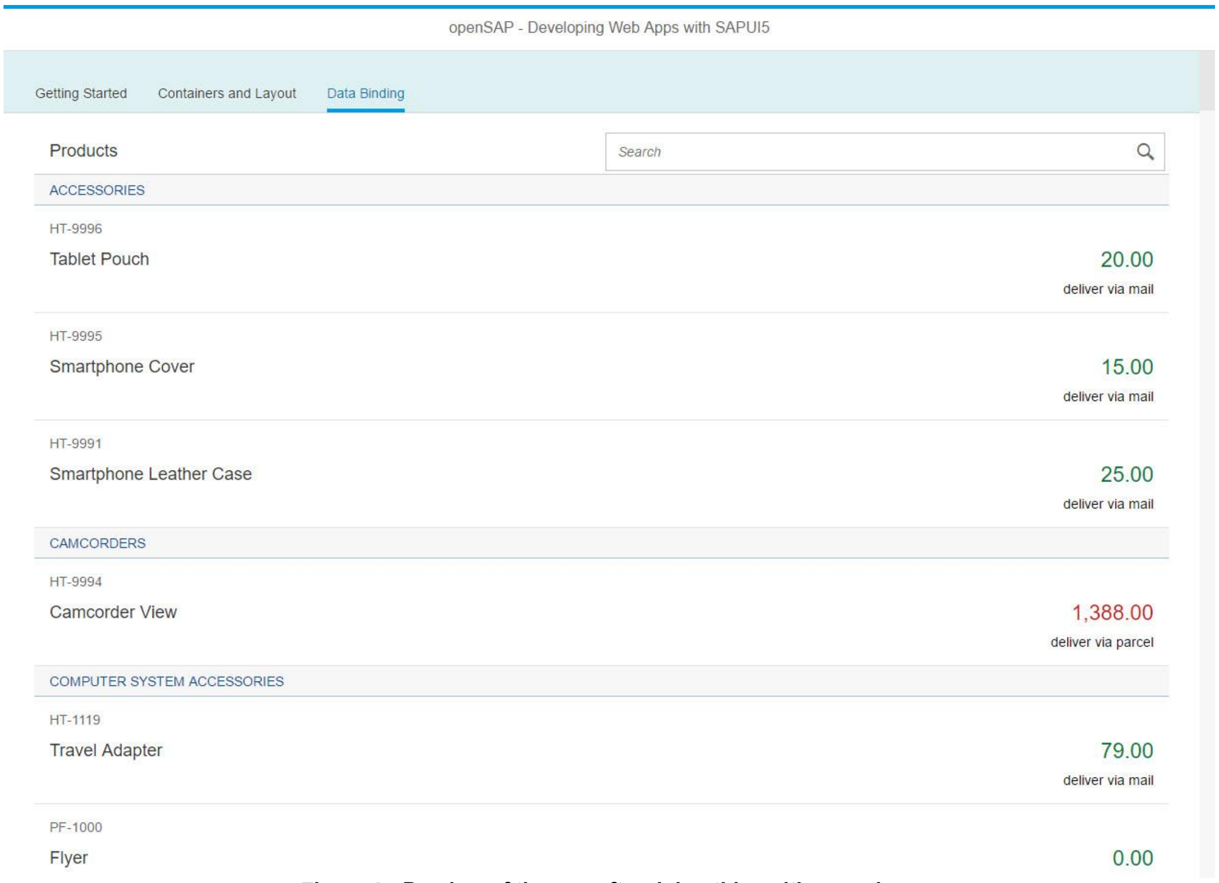
Preview



openSAP - Developing Web Apps with SAPUI5

ACCESSORIES

HT-9996
Tablet Pouch 20.00
deliver via mail

HT-9995
Smartphone Cover 15.00
deliver via mail

HT-9991
Smartphone Leather Case 25.00
deliver via mail

CAMCORDERS

HT-9994
Camcorder View 1,388.00
deliver via parcel

COMPUTER SYSTEM ACCESSORIES

HT-1119
Travel Adapter 79.00
deliver via mail

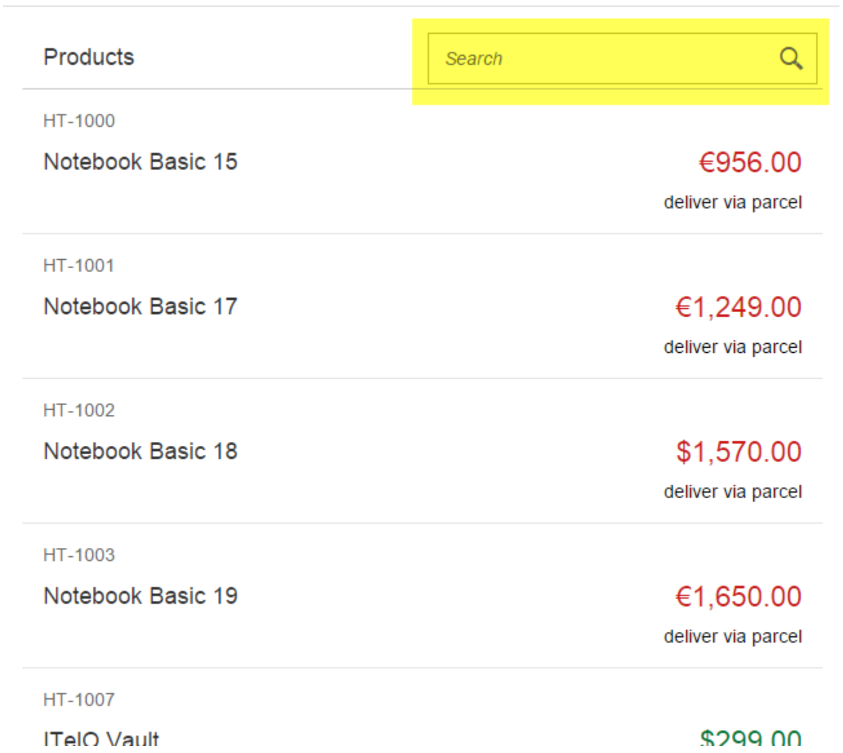
PF-1000
Flyer 0.00

Figure 1 - Preview of the app after doing this unit's exercises

1 FILTERING

Let us first add the `sap.m.SearchField` to the list header.

Preview



Products
Search

HT-1000
Notebook Basic 15 €956.00
deliver via parcel

HT-1001
Notebook Basic 17 €1,249.00
deliver via parcel

HT-1002
Notebook Basic 18 $1,570.00
deliver via parcel

HT-1003
Notebook Basic 19 €1,650.00
deliver via parcel

HT-1007
ITelO Vault $299.00

Figure 2 - List with a SearchField in its header

webapp/view/App.view.xml

```
…
<IconTabFilter
  text="{i18n>dataBindingFilter}" key="db">
  <content>
    <List
      id="productsList"
      items="{/ProductSet}">
      <headerToolbar>
        <Toolbar>
          <Title text="{i18n>productListTitle}"/>
          <ToolbarSpacer/>
          <SearchField width="50%" search="onFilterProducts"/>
        </Toolbar>
      </headerToolbar>
      <items>
    …
      </items>
    </List>
  </content>
</IconTabFilter>
…
```

We will put the SearchField into the list's 'HeaderToolbar' where we can also place the 'headerText'. The 'headerText' can therefore be removed from the list properties. For the 'search' event we provide the handler function 'onFilterProducts' which we need to implement in the controller.

webapp/controller/App.controller.js

```
sap.ui.define([
   "sap/ui/core/mvc/Controller",
   "sap/m/MessageToast",
   "sap/ui/model/Filter",
   "sap/ui/model/FilterOperator",
   "opensap/myapp/model/formatter"
], function (Controller, MessageToast, Filter, FilterOperator, formatter)
{
   "use strict";

   return Controller.extend("opensap.myapp.controller.App", {

      formatter : formatter,

      onShowHello : function () {
         // read msg from i18n model
         var oBundle = this.getView().getModel("i18n").getResourceBundle();
         var sRecipient =
this.getView().getModel("helloPanel").getProperty("/recipient/name");
         var sMsg = oBundle.getText("helloMsg", [sRecipient]);

         // show message
         MessageToast.show(sMsg);
      },

      onFilterProducts : function (oEvent) {

         // build filter array
         var aFilter = [], sQuery = oEvent.getParameter("query"),
            // retrieve list control
            oList = this.getView().byId("productsList"),
            // get binding for aggregation 'items'
            oBinding = oList.getBinding("items");

         if (sQuery) {
            aFilter.push(new Filter("ProductID", FilterOperator.Contains,
sQuery));
         }
         // apply filter. an empty filter array simply removes the filter
         // which will make all entries visible again
         oBinding.filter(aFilter);
      }
   });
});
```

Applying filters (and sorters) can be done using the list's 'items' binding. So we first retrieve the list control using its id suffix 'productList'. The control object gives us access to the list binding object. Now we can create our filter object for field 'ProductId'. We choose a filter operator and fetch the search field value from the handler function's event parameter. Finally, we can call the binding's `filter` method with our new filter.

Please note: With the above code we have implemented a search which is case-sensitive. When you try searching for a product ID, take care to write the same letters in upper or lower case as they are in the actual product ID.

Related Information

API Reference: sap.ui.model.Filter

API Reference: sap.ui.model.FilterOperator

API Overview and Samples: sap.m.SearchField

2 SORTING AND GROUPING

Now, we will add sorting and grouping to our list.

Preview

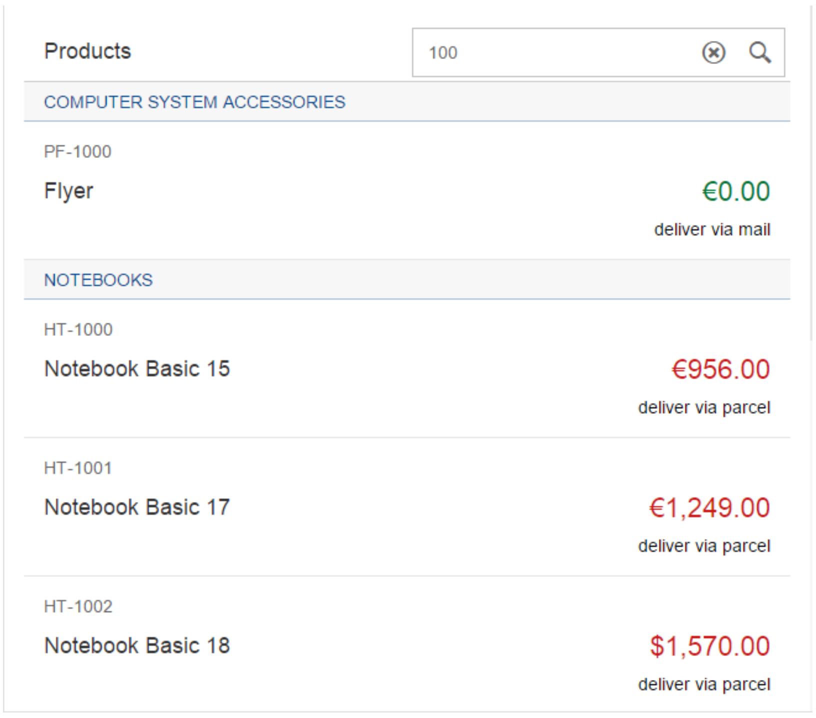

Products
100
COMPUTER SYSTEM ACCESSORIES
PF-1000
Flyer
€0.00
deliver via mail
NOTEBOOKS
HT-1000
Notebook Basic 15
€956.00
deliver via parcel
HT-1001
Notebook Basic 17
€1,249.00
deliver via parcel
HT-1002
Notebook Basic 18
$1,570.00
deliver via parcel

Figure 3 - List sorted and grouped by 'Category'

webapp/view/App.view.xml

```
…
<IconTabFilter
   text="{i18n>dataBindingFilter}" key="db">
   <content>
      <List id="productsList" items="{
         path : '/ProductSet',
         sorter : {
            path : 'Category',
            group : true
         }
      }">
         <headerToolbar>
            <Toolbar>
               <Title text="{i18n>productListTitle}"/>
               <ToolbarSpacer/>
               <SearchField width="50%" search="onFilterProducts"/>
            </Toolbar>
         </headerToolbar>
…
```

All we need to do is to add sorting and grouping to the list's binding information:

Related Information

[API Reference: sap.ui.model.Sorter]()