



HCL Domino Volt v1.0.5 Tutorial

Tutorial assumptions

- Domino Volt v1.0.5 or later
- Domino directory has display names, internet email and manager name populated in person documents
- Users should have some experience with Volt. If you are new to Volt, the [Introductory step by step tutorial](#) is better place to start

What we are going to build

Mobile Phone Order System

Select a Phone

Brand	Model	Storage	Platform
Apple	iPhone 11	64	IOS
Apple	iPhone 11	128	IOS
Apple	iPhone 11 pro	64	IOS
Apple	iPhone 11 pro	256	IOS
Samsung	Galaxy Fold 5G	512	Android


[This phone is \\$900 or greater and requires 2 levels of approval](#)

Apple iPhone 11 pro

Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00




[Order](#)

Mobile Phone Order System

[< back](#)

[This phone is \\$900 or greater and requires 2 levels of approval](#)

Apple iPhone 11 pro



Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00

Business Justification

Requester
Admin

Requester Email
martin.lechleider@hcl.com

Level 1 Approver
Andrew Manby


Level 1 Email
andrew.manby@pnp-hcl.com

Level 2 Approver
Rajesh Iyer

Level 2 Email
rajesh_i@hcl.com

[Submit](#)

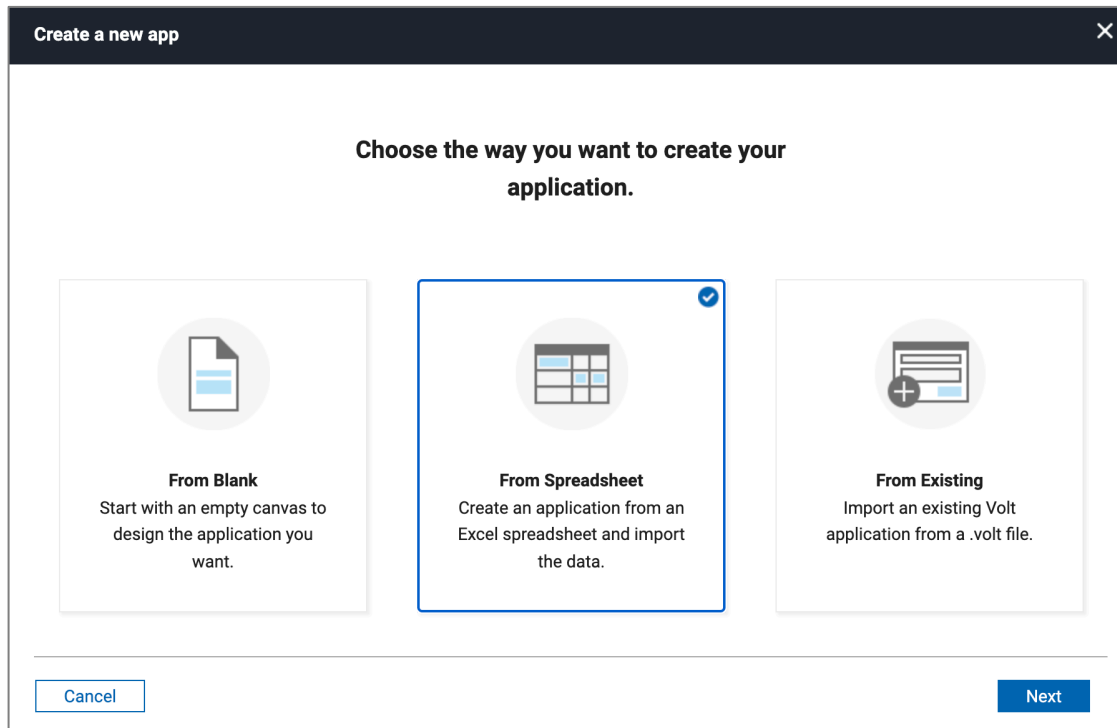
How we are going to build it

Project Steps	Pages	Resource	
1. Creating catalog app from spreadsheet	5	MobilePhoneCatalog.xls	cumulative build of the app 
2. Add order form and data grid for selection	7-11	MobilePhoneOrders1.volt	
3. Getting details for the selected phone and presenting it nicely	12-17	MobilePhoneOrders2.volt	
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7. Rules for a dynamic user experience	45-51	MobilePhoneOrders5.volt	
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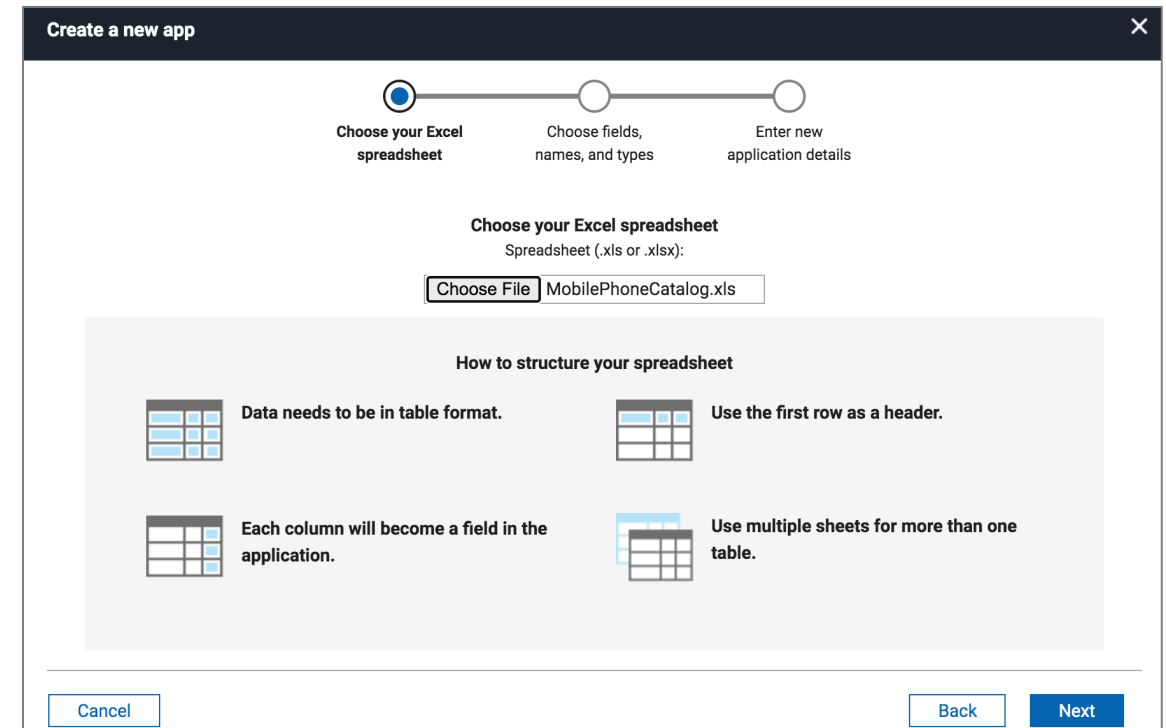
1. Creating catalog app from spreadsheet

[MobilePhoneCatalog.xls](#)

1) Click New Application and select From Spreadsheet



2) Choose the spreadsheet supplied with the tutorial



1. Creating catalog app from spreadsheet

[MobilePhoneCatalog.xls](#)

1) Accept all the default and click Create

Create a new app

Choose your Excel spreadsheet Choose fields, names, and types Enter new application details

*Application Name:
Phone Catalog

Application Description:

Theme:
Flat Blue
Light Gray
Dark Blue
Simple

Cancel Back Create

2) Edit the app and it should appear as indicated below

Phone Catalog > Phone Catalog > Page 1

App Pages +

Forms + v

Phone Catalog

Page 1

Layout v

Section

Tabs

Display v

Brand

Apple
Huawei
Samsung

Model

Galaxy Fold 5G
Galaxy Note10
Galaxy S10
Mate P30
P30
P30 lite

2. Add order form and grid for selection

► Create the order form and selection data grid

2) Add a Data Grid and display brand, model, storage & platform

1) Create new form called Order

The screenshot displays the HCL Software development environment for a 'Mobile Phone Order System'. The main workspace shows a form titled 'Mobile Phone Order System' with a 'Select a Phone' data grid. The grid has four columns: Brand, Model, Platform, and Storage Capacity, with five rows of placeholder data (Value 0 to Value 4). A 'Submit' button is located below the grid. The left sidebar shows the 'Order' form selected under 'Page 1'. The right sidebar shows the properties for the 'Select a Phone' data grid, with 'Allow user to open record' deselected.

Brand	Model	Platform	Storage Capacity
Value 0	Value 0	Value 0	Value 0
Value 1	Value 1	Value 1	Value 1
Value 2	Value 2	Value 2	Value 2
Value 3	Value 3	Value 3	Value 3
Value 4	Value 4	Value 4	Value 4

Properties for 'Select a Phone' (ID: F_DataGrid1):

- Columns: Brand, Model, Platform, Storage Capacity
- Default rows per page: 5
- Dense rows
- Show column header
- Allow user to open record
- Open in new tab

3) Deselect Allow user to open record

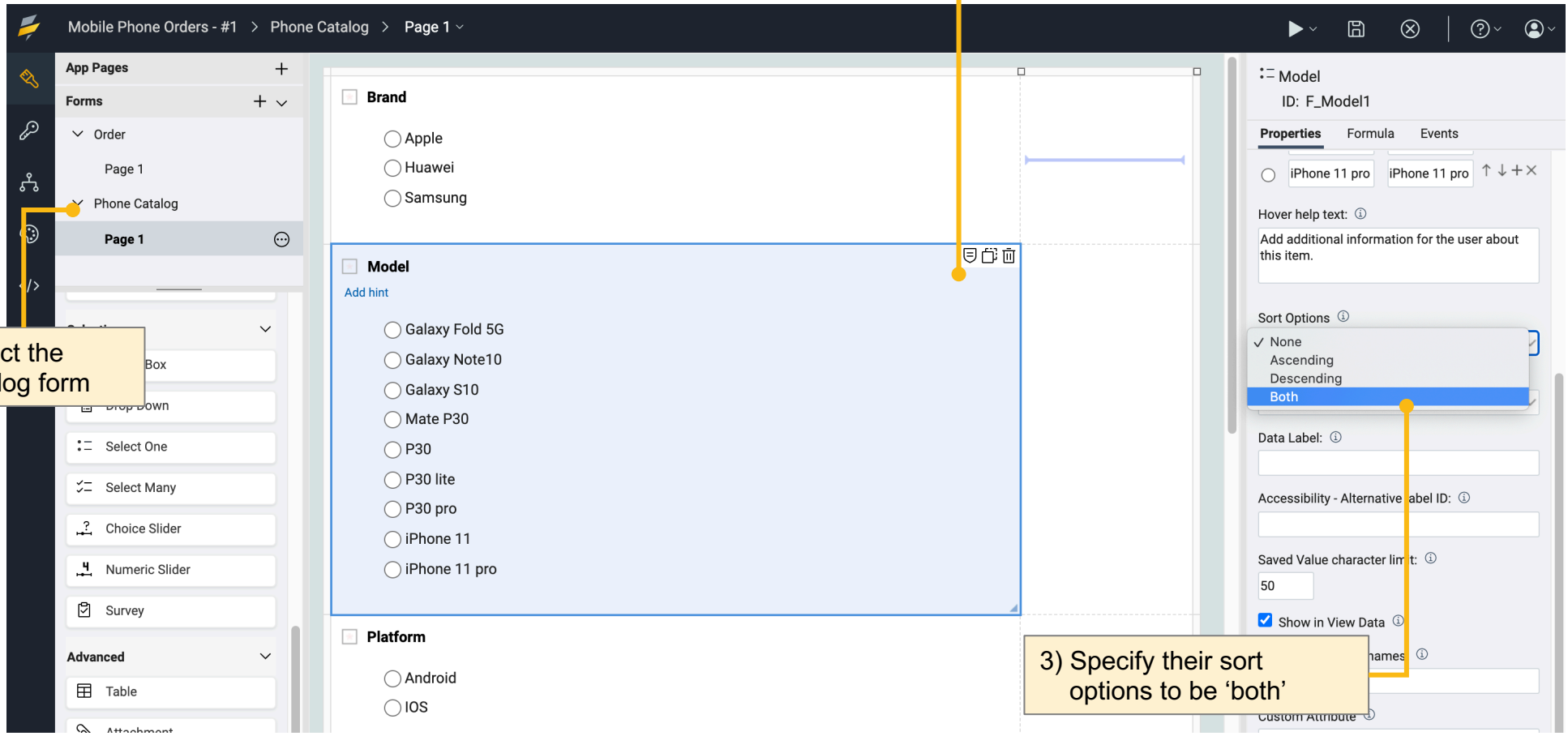
2. Add order form and grid for selection

► Set the display fields to be sortable in the catalog

1) Select the catalog form

2) Select the catalog fields displayed in the data grid

3) Specify their sort options to be 'both'



2. Add order form and grid for selection

- ▶ Set the display fields to be sortable in the data grid

1) Select the data grid on the Order form

The screenshot displays a web application titled "Mobile Phone Order System". It features a data grid titled "Select a Phone" with the following columns: Brand, Model, Platform, and Storage Capacity. The grid contains five rows of placeholder data labeled "Value 0" through "Value 4". To the right of the grid is a properties panel for the data grid component, identified as "F_DataGrid1". The panel has two tabs: "Properties" and "Events". Under the "Properties" tab, there is a "Configure Data Source" button. Below that, the "Columns" section lists the four columns from the grid. A context menu is open over the "Model" column, showing options: "Properties", "Move up", "Move down", and "Remove Column". The "Properties" option is highlighted. At the bottom of the grid, there is a "Show:" dropdown set to "5" and a "1-5" range selector with navigation arrows. The properties panel also includes a "Default rows per page" dropdown set to "5" and two checked options: "Dense rows" and "Show column header".

Brand	Model	Platform	Storage Capacity
Value 0	Value 0	Value 0	Value 0
Value 1	Value 1	Value 1	Value 1
Value 2	Value 2	Value 2	Value 2
Value 3	Value 3	Value 3	Value 3
Value 4	Value 4	Value 4	Value 4

2) Set the properties for each of the display fields to allow the user to sort.

2. Add order form and grid for selection

- ▶ Set the order form to be the home page

The screenshot shows a configuration interface for an application. On the left, a dark sidebar contains icons for code, list, and settings. The settings icon is highlighted with a yellow box and a callout: "1) Select the 'settings' view". The main area is divided into a left pane and a right pane. The left pane shows a tree view with "Phone Catalog" expanded, containing "Formulas", "Order", and "Phone Catalog". The right pane contains configuration options: "Application Regional Options:" with a dropdown set to "United States"; "Application Name:" with a text field containing "Mobile Phone Orders" (highlighted with a yellow box and callout: "2) Change the name to Mobile Phone Orders"); "Application Description:" with an empty text area; "Create full-text index" with an unchecked checkbox; and "Home Page:" with a dropdown set to "Order" (highlighted with a yellow box and callout: "2) Select order form for home page").

2. Add order form and table for selection

▶ How things should look on the orders form

[MobilePhoneOrders1.volt](#)

1) Save, close, deploy and then launch the app

Mobile Phone Order System

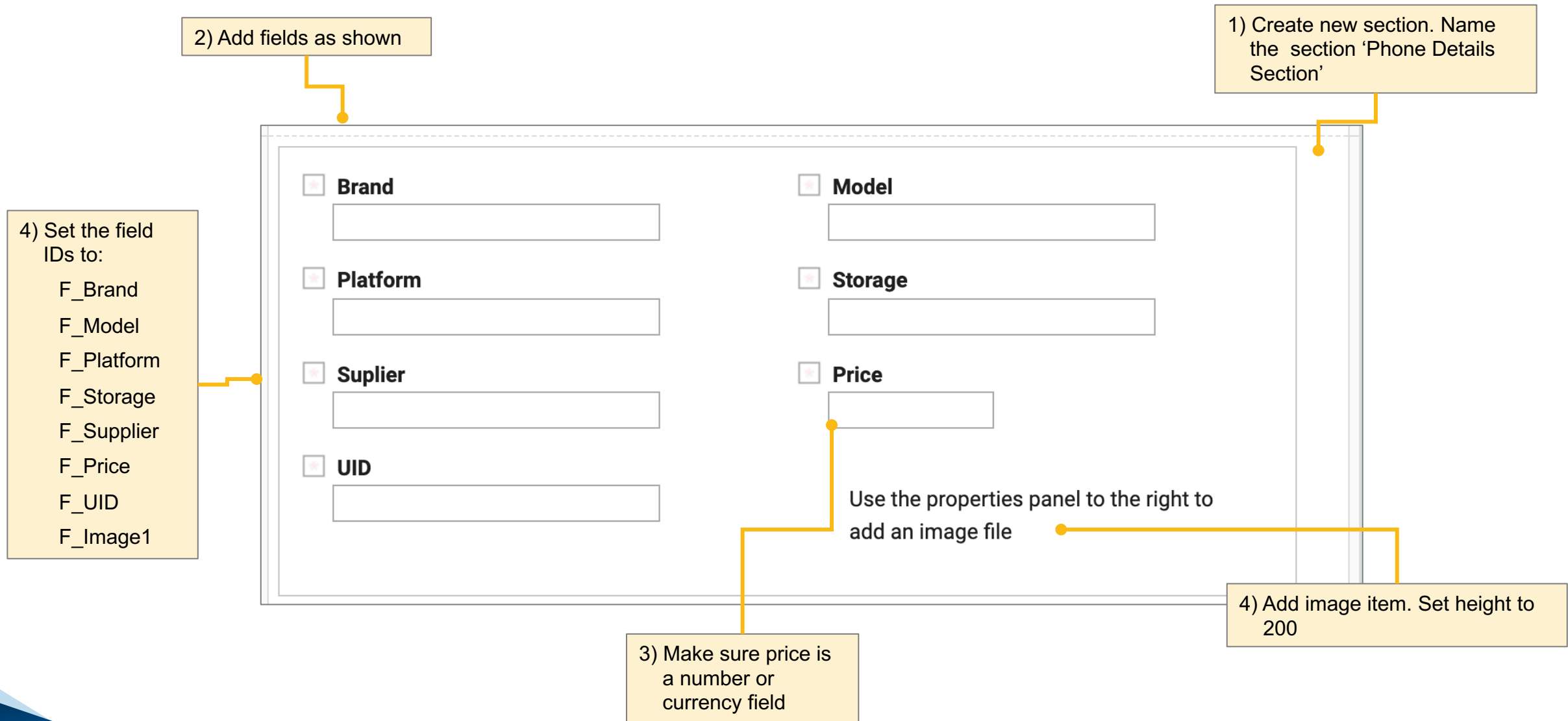
Select a Phone

Brand	Model ↓	Platform	Storage Capacity
Huawei	P30 pro	Android	256
Huawei	P30 lite	Android	256
Huawei	P30	Android	256
Huawei	Mate P30	Android	256
Apple	iPhone 11 pro	IOS	64

Show: 5 ↓ 1-5 < >

3. Getting details for the selected item and presenting it nicely

► Create a section for selected phone details



3. Getting details for the selected item and presenting it nicely

- ▶ Add JavaScript to pass the selected values to fields in the section

1) Select the onRowSelect event for the data grid

The screenshot shows a SAP Fiori development tool interface. On the left, a data grid titled 'Select a Phone' with ID 'F_DataGrid1' is visible. The grid has a column labeled 'city'. On the right, the 'Events' tab is active, showing a list of client-side events: 'onDataChange', 'onHide', 'onRowDeselect', 'onRowSelect', and 'onShow'. The 'onRowSelect' event is highlighted with a green arrow, and a yellow callout box points to it with the text '1) Select the onRowSelect event for the data grid'.

2) Enter the following JavaScript

The screenshot shows the configuration screen for the 'onRowSelect' event. It includes a description: 'This event is invoked when a row is selected in the Data Grid'. Under 'Predefined Actions', there are two options: 'Run a Formula' and 'Call a Service', both of which are unchecked. Under 'Custom Actions', there is a note: 'This environment allows a reduced set of JavaScript and HTML. [Learn More](#)'. Below this, a code editor contains the following JavaScript code:

```
1 BO.F_Brand.setValue(rowData.F_Brand1.displayValue);
2 BO.F_Model.setValue(rowData.F_Model1.displayValue);
3 BO.F_Platform.setValue(rowData.F_Platform1.displayValue);
4 BO.F_Storage.setValue(rowData.F_StorageCapacity);
5 BO.F_Supplier.setValue(rowData.F_Supplier1.displayValue);
6 BO.F_Currency1.setValue(rowData.F_Price1);
7 BO.F_UID.setValue(rowData.uid);
8 page.F_Image1.setURL(rowData.F_Picture1);
```

A yellow callout box points to the code editor with the text '2) Enter the following JavaScript'.

Code to copy and paste and details on next page

3. Getting details for the selected item and presenting it nicely

- ▶ Add JavaScript to pass the selected values to fields in the section

Set the value of the field in the section

Set it to the value of the field in the catalog for the selected row.

Use `displayValue` (or `savedValue`) when field is represented by a dropdown or radio button

```
BO.F_Brand.setValue(rowData.F_Brand1.displayValue);  
BO.F_Model.setValue(rowData.F_Model1.displayValue);  
BO.F_Platform.setValue(rowData.F_Platform1.displayValue);  
BO.F_Storage.setValue(rowData.F_StorageCapacity);  
BO.F_Supplier.setValue(rowData.F_Supplier1.displayValue);  
BO.F_Currency1.setValue(rowData.F_Price1);  
BO.F_UID.setValue(rowData.uid);  
page.F_Image1.setURL(rowData.F_Picture1);
```

Use `page` (instead of `BO`) because an image is not a data object

`uid` returns the unique identifier for each record

3. Getting details for the selected item and presenting it nicely

- ▶ Improve presentation of phone details with text widget

Use Insert drop down to add values from the form. This is referred to as "echo text".

1) Add new Section. Name the Section 'Details Presentation Section'

2) Move the image item into the section

20px and bold

16px bold

3) Add text item with "echo text"

Use the properties panel to the right to add an image file

Normal | Font | 16 | **B** | *I* | U | **S**

{Brand} {Model}

Storage Capacity: {Storage}

Supplier: {Storage}

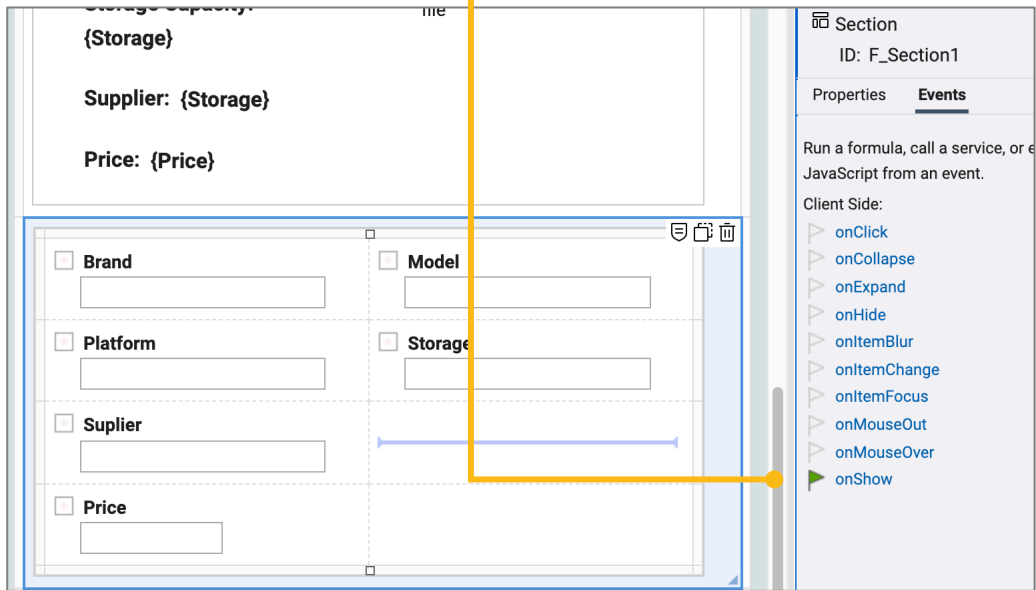
Price: {Price}

3. Getting details for the selected item and presenting it nicely

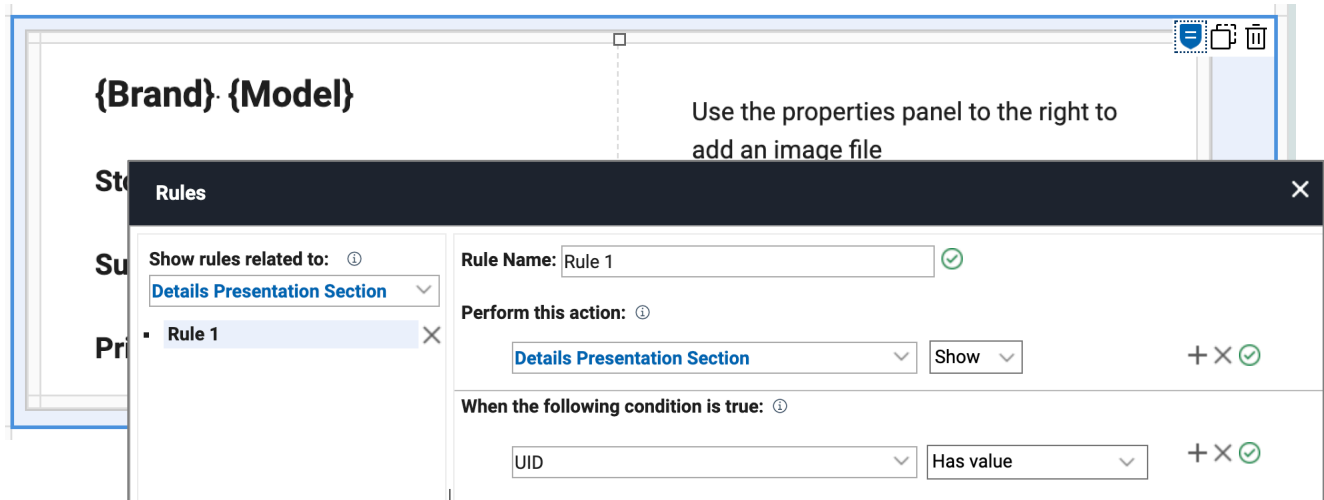
- ▶ Hide the phone detail data section and show presentation section

1) On the phone details section onShow event add the following line of JavaScript to hide it

```
item.setVisible(false);
```



2) Click on the rule icon to set a rule on the display section so it shows when UID has a Value



3. Getting details for the selected item and presenting it nicely

▶ How things should look - detail presentation of selected phone

[MobilePhoneOrders2.volt](#)

1) Save, close, deploy and then launch the app

Mobile Phone Order System

Select a phone

Brand	Model	Platform	Storage Capacity
Apple	iPhone 11	IOS	64
Apple	iPhone 11	IOS	128
Apple	iPhone 11 pro	IOS	64
Apple	iPhone 11 pro	IOS	256
Samsung	Galaxy Fold 5G	Android	512


1 row selected Show: 5 ▾ 1-5 < >

Apple iPhone 11 pro

Storage Capacity: 64

Supplier: 64

Price: \$999.00



4. Getting information on the requester and workflow approvers

- ▶ Create section for requester and workflow approver information

1) Create a new Section and add all these fields. Name the Section 'Workflow Approver Section'.

Use email items, not single line since we will use these for notifications

2) Set the field IDs to:

F_Requester
 F_RequesterEmail
 F_Level1
 F_Level1Email
 F_Level2
 F_Level2Email

The screenshot shows a form editor interface with a section titled 'Workflow Approver Section'. The section contains three rows of input fields. Each row has a label on the left and an email field on the right. The labels are 'Requester', 'Level 1', and 'Level 2'. The email fields are 'Requester Email', 'Level 1 Email', and 'Level 2 Email'. The form is enclosed in a blue border with a dashed line indicating the section boundary. There are icons for settings, copy, and delete in the top right corner of the form editor.

3) Add the following JavaScript to the section onShow event to make the values in the section read only.

```

onItemFocus
onMouseOut
onMouseOver
onShow
    
```

```
item.setActive(false);
```

4. Getting information on the requester and workflow approvers

► Populating the requester, level 1 and level 2 fields

Assumptions:

- Manager, Display Name and Internet Email are stored in the Domino Directory for each person record

Alternative Approaches:

- Lookup Level 1 and Level 2 information in a different source
- Let the requester manually select Level 1 and Level 2 information in the form using the Name Picker widget

4. Getting information on the requester and workflow approvers

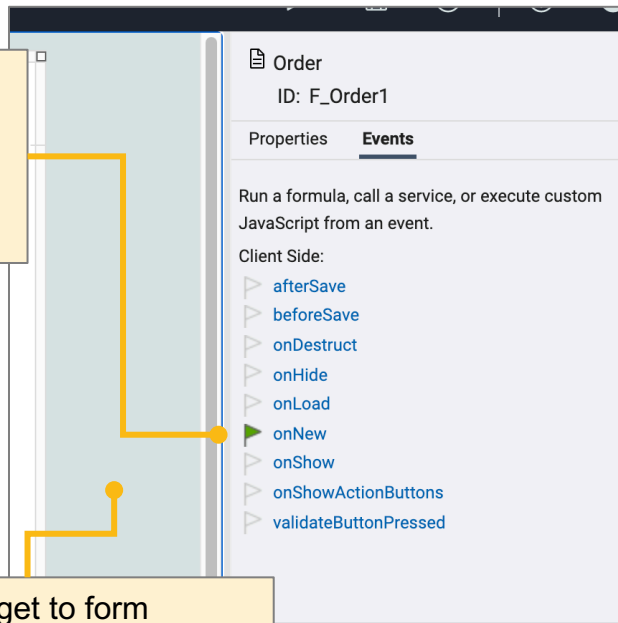
▶ When and where the service calls are made

	Timing	Where Specified	What's Returned
1	When the request is filled out	Form onNew	Requester Name, Email and Level 1 Name
2	When the request is being submitted to Level 1 for Approval	Level 1 Workflow Action	Level 1 Email, Level 2 Name
3	When (and if) the request is being submitted to Level 2 for Approval	Level 2 Workflow Action	Level 2 Email

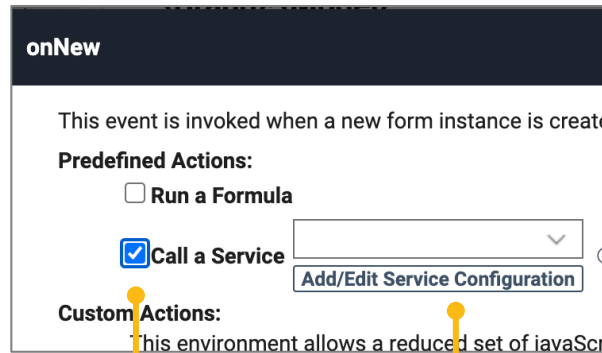
4. Getting information on the requester and workflow approvers

- ▶ Add service call 1 to the order form onNew event

1) Select the onNew event for the Order form.

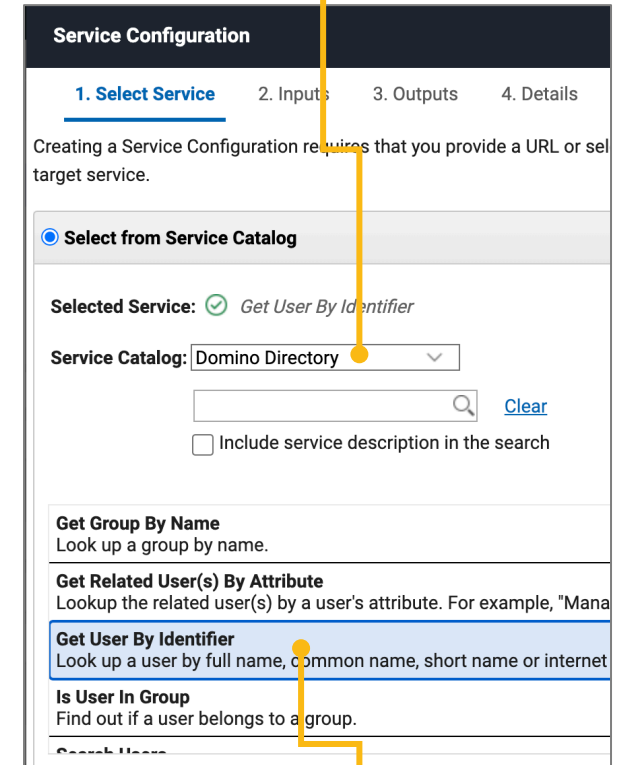


Hint: you can get to form properties by clicking in the gray background of the canvas



2) Select 'Call a Service'. and then 'Add/Edit Service Configuration'

3) Select 'Domino Directory'



4) Select 'Get User By Identifier'

4. Getting information on the requester and workflow approvers

► Create service call 1

1) Map Current User to Inputs

Service Configuration

1. Select Service **2. Inputs** 3. Outputs 4. Details

Create Input Assignments

Order ► Get User By Identifier

Select source:

- Current User ✓
- Page 1 ⓘ

Select target:

- User Name or Email * ✓ ⓘ

View: Basic

Assigned Inputs

Source	Target
Context: Current User	User Name or Email *

2) Outputs: map Display Name to Requester, Internet Email to Requester Email and Manager to Level 1 Name

Service Configuration

1. Select Service 2. Inputs **3. Outputs** 4. Details

Create Output Assignments

Get User By Identifier ► Order

Select source:

- Department ⓘ
- Job Title ⓘ
- Location ⓘ
- Office Phone ⓘ
- Manager ✓ ⓘ
- Assistant ⓘ

View: Basic

Select target:

- Section ⓘ
- Requester ✓ ⓘ
- Requester Email ✓ ⓘ
- Level 1 ✓ ⓘ
- Level 1 Email ⓘ
- Level 2 ⓘ

View: Basic

Assigned Outputs

Source	Target
Display Name	Page 1 > Section > Requester > Value
Internet Email	Page 1 > Section > Requester Email > Value
Manager	Page 1 > Section > Level 1 > Value

4. Getting information on the requester and workflow approvers

- ▶ Give service call 1 a descriptive name

1) Select the 'Settings' view

2) Change the name of the service to 'Get Requester Info and Approver 1 Name'

The screenshot displays the 'Settings' view of the HCL Software interface. The left sidebar contains a navigation menu with icons for General, Files, Services, Formulas, and a gear icon for Settings. The main content area shows 'Order Service Configurations' with a list of services. The service 'Get Requester Info and Approver 1 Name' is highlighted, and a yellow box points to its name, indicating the step to change it to a more descriptive name.

4. Getting information on the requester and workflow approver(s)

▶ How things should look - workflow approver section

[MobilePhoneOrders3.volt](#)

Mobile Phone Order System

Select a phone

Brand	Model	Platform	Storage Capacity
Apple	iPhone 11	IOS	64
Apple	iPhone 11	IOS	128
Apple	iPhone 11 pro	IOS	64
Apple	iPhone 11 pro	IOS	256
Samsung	Galaxy Fold 5G	Android	512


1 row selected Show: 5 ▾ 1-5 < >

Apple iPhone 11

Storage Capacity: 128

Supplier: 128

Price: \$749.00



Requester

Requester Email

Level 1

Level 1 Email

Level 2

Level 2 Email

5. Creating the workflow

- ▶ Rename submitted to level 1 and delete the update action

The screenshot displays the HCL workflow editor interface. The top navigation bar shows the breadcrumb path: Mobile Phone Orders - #4 > Workflow > Order. The main workspace contains a workflow diagram with the following elements:

- Start** (Initiator)
- Submit** (Activity)
- Update** (Activity)
- Level 1** (Level 1, Administrator)

Annotations in yellow boxes provide instructions:

- 1) Click into and rename Submitted to Level 1**: Points to the 'Submit' activity.
- 2) Delete the Update Action**: Points to the 'Update' activity.

The right-hand panel shows the properties for 'Level 1' (ID: ST_Submitted). The 'Actions' section lists the 'Update' action, which is highlighted with a yellow circle and a 'Delete' icon. Below it are options to '+ Add Action' and '+ Add Cancel Action'.

5. Creating the workflow

► Zoom out and add level 2 stage and action

1) Zoom out with the – icon (or two fingers on track pad)

2) Move diagram up by clicking near it and dragging it

3) Hover below the Level 1 Stage box and click the + icon that appears. This will add a new Stage an Action.

Order
ID: F_Order1

Properties

Single submission per authenticated user

Upon submission
Show the success message page

Stages

Start

Level 1

+ Add Stage

5. Creating the workflow

- ▶ Rename submitted to level 1 and delete the update action

The screenshot displays the HCL workflow editor interface. The main workspace shows a vertical flowchart with the following stages and actions:

- Start** (Initiator)
- Submit** (Add Activity)
- Level 1** (Administrator)
- Approve** (Add Activity)
- Approved** (Administrator)

Yellow callout boxes highlight the 'Approve' action and the 'Approved' stage, with the text: "1) Name the Action 'Approve' and the Stage 'Approved'".

The right-hand panel shows the properties for the workflow:

- Order** (ID: F_Order1)
- Properties**
 - Single submission per authenticated user
 - Upon submission: Show the success message page
- Stages**
 - Start
 - Level 1
 - Approved
 - + Add Stage

5. Creating the workflow

▶ Add the level 2 stage and action

The screenshot displays the HCL workflow editor interface for a workflow named "Mobile Phone Orders - #4". The interface is divided into a main workspace and a right-hand sidebar. The main workspace shows a flowchart with the following stages and actions:

- Start** (Initiator)
- Submit** (Add Activity)
- Level 1** (Administrator)
- Approve** (Add Activity)
- Approved** (Administrator)
- Approve** (Add Activity)
- Level 2** (Administrator)

Two yellow callout boxes provide instructions:

- 1) Hover below the Level 1 Stage box and click the + icon that appears. This will add another new Stage and Action.
- 2) Drag the new Stage to the right and name the Action 'Approve' and Stage 'Level 2'

The right-hand sidebar shows the "Order" properties and stages. The "Properties" section includes a checkbox for "Single submission per authenticated user" and a dropdown menu for "Show the success message page". The "Stages" section lists the stages: Start, Level 1, Approved, and Level 2, with an "Add Stage" button at the bottom.

5. Creating the workflow

- ▶ Add the level 2 stage and action

The screenshot displays a workflow editor for 'Mobile Phone Orders - #4'. The workflow consists of the following stages and actions:

- Start** (Initiator)
- Submit** (Add Activity)
- Level 1** (Administrator)
- Approve** (Add Activity) - This action branches into two paths.
- Approved** (Administrator) - End of the first path.
- Level 2** (Administrator) - End of the second path, highlighted with a blue border.

Annotations on the canvas:

- 1) Select the Level 2 Stage**: A yellow box with a line pointing to the 'Level 2' stage.
- 2) Click Add Action**: A yellow box with a line pointing to the '+ Add Action' button in the right-hand panel.

The right-hand panel shows the configuration for the selected 'Level 2' stage (ID: ST_Stage4). It includes sections for 'Properties' (with a 'Description' field) and 'Actions' (with '+ Add Action' and '+ Add Cancel Action' buttons).

5. Creating the workflow

- ▶ Point the level 2 approve action to approved stage

Mobile Phone Orders - #4 > Workflow > Order

Workflow Visibility

Start
Initiator

Submit
Add Activity

Level 1
Administrator

Approve
Add Activity

Approve
Add Activity

Approved
Administrator

Level 2
Administrator

2) Change the name to Approved

1) Select the new Action and set it so it points to Approved

Approve
ID: S_Submit3

Properties Activities

Next Stage
Approved

On action completion, redirect to
None

Action Completion Message [Edit](#)
Your data has been successfully submitted.

Hover help text

Custom CSS class names

5. Creating the workflow

▶ Define rule for when level 2 approval is required

1) Add number field to the hidden section in the Form and set default value to 900

Level 2 Threshold 🛡️ 📄 🗑️

900

[Add hint](#)

2) Switch to the Visibility tab in the Workflow view

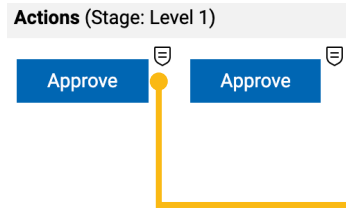
3) Select the Level 1 Stage

4) Click on the Rule icon on the 1st Approve Action

5. Creating the workflow

▶ Define condition for level 2 approval

1) Set the Rule for the 1st Action to Show when Price is less than the Level 2 Threshold



Rules

Show rules related to: Level 1 - Approve - S_Submit1

Rule Name: Rule 2

Perform this action: Level 1 - Approve - S_Submit1 Show

When the following condition is true: Price Less than Another item Level 2 Threshold

1) Add a rule on the 2nd Action to Show when Price is greater than or equals than the Level 2 Threshold



Rules

Show rules related to: Level 1 - Approve - S_Submit2

Rule Name: Rule 3

Perform this action: Level 1 - Approve - S_Submit2 Show

When the following condition is true: Price Greater than or equal: Another item Level 2 Threshold

5. Creating the workflow

▶ Define level 1 approver role

1) Select the Level 1 Stage

2) Select Permissions

3) Click Create Role

4) Name the Role 'Level 1 Approver'

5) Set the Role Permissions to include write

The screenshot shows a workflow editor with a 'Workflow' tab. The workflow diagram includes a 'Start' activity (Initiator), a 'Submit' activity, and a 'Level 1' activity (Level 1 Approver, +1). The 'Role Settings' dialog is open, showing the role name 'Level 1 Approver' and a list of predefined groups: All Authenticated Users, Anonymous Users, and Instance Creator. The 'Permissions' panel is also open, showing a list of roles including 'Level 1 Approver', which is selected. The 'Level 1 Approver' role is highlighted with a blue border, and the 'Create Role' button is visible below it.

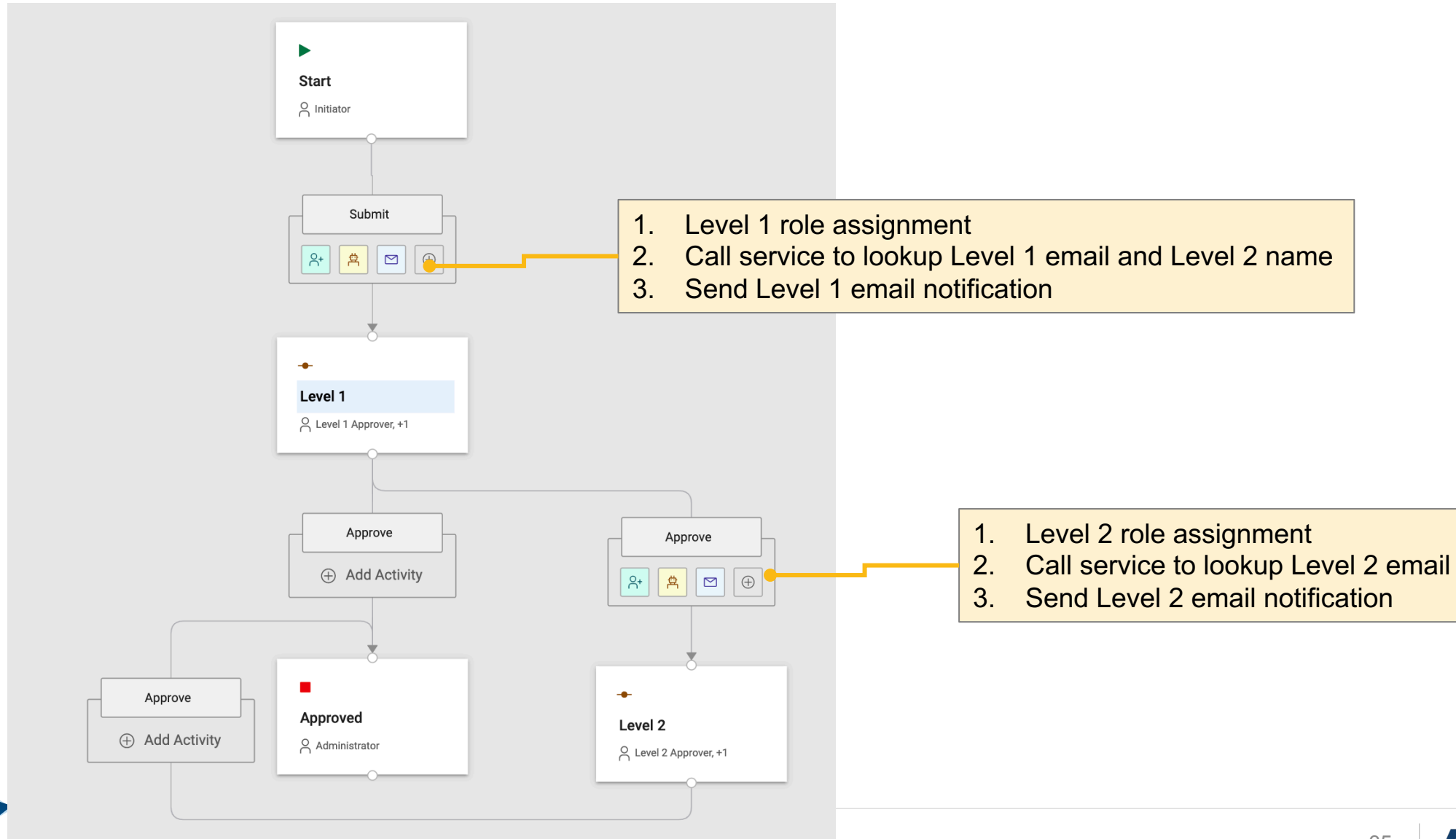
5. Creating the workflow

▶ Define level 2 approver role

The screenshot displays the HCL workflow configuration interface. On the left, a workflow diagram shows an 'Approve' activity with an 'Add Activity' button. A callout box labeled '1) Select the Level 2 Stage' points to a 'Level 2' stage in the diagram, which lists 'Level 2 Approver, +1'. In the center, the 'Role Settings' dialog is open, showing the role name 'Level 2 Approver' and a 'Members' section. A callout box labeled '4) Name the Role 'Level 2 Approver'' points to the role name field. Below the members section, there is a search bar and a list of 'Add Predefined Groups' including 'All Authenticated Users', 'Anonymous Users', and 'Instance Creator'. On the right, the 'Permissions' tab is active for the 'Level 2' role (ID: ST_Stage4). A list of roles is shown, with 'Level 2 Approver' selected. A callout box labeled '2) Select Permissions' points to the 'Permissions' tab. Another callout box labeled '3) Click Create Role' points to the '+ Create Role' button. A final callout box labeled '5) Set the Role Permissions to include write (in addition to read) in the Level 2 Stage' points to the edit icon for the 'Level 2 Approver' role.

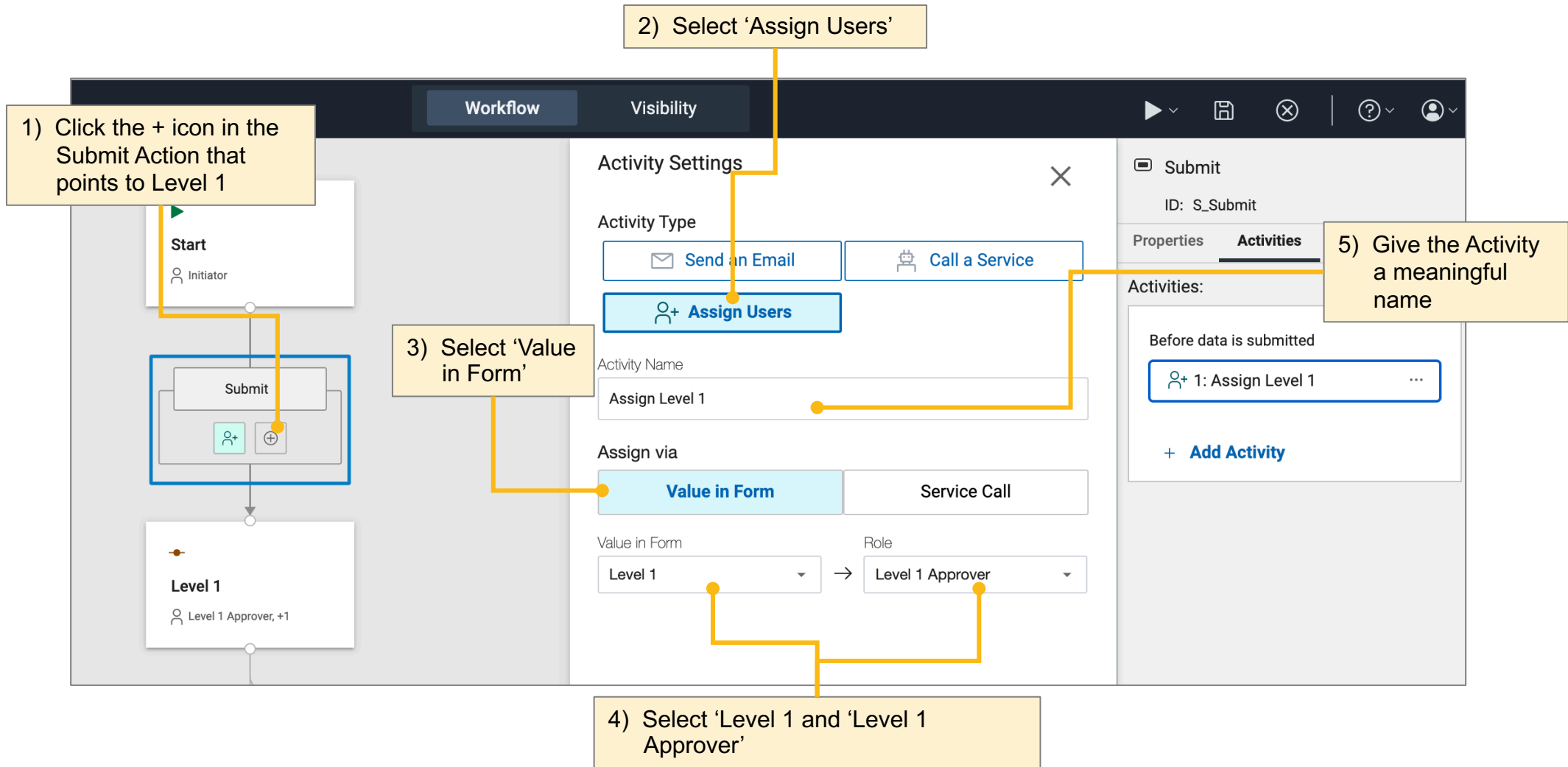
5. Creating the workflow

► Overview of workflow activities to be setup



5. Creating the workflow

▶ Level 1 role assignment



5. Creating the workflow

- ▶ Call service to lookup level 1 email and level 2 name

The screenshot displays a workflow editor with a central canvas and several panels. The canvas shows a workflow starting with a 'Start' node, followed by a 'Submit' action, and then a 'Level 1' node. The 'Submit' action is highlighted with a blue box, and a yellow callout box points to its '+' icon with the text '1) Click the + icon in the Submit Action that points to Level 1'. The 'Activity Settings' panel is open, showing the 'Activity Type' section with three options: 'Send an Email', 'Call a Service', and 'Assign Users'. The 'Call a Service' option is selected, and a yellow callout box points to it with the text '2) Select 'Call a Service''. Below this, the 'When' section has 'Before Submission' selected. The 'Activity Name' field contains 'Get Level 1 Email and Level 2 Name', and a yellow callout box points to it with the text '3) Give the Activity a meaningful name'. The 'Service Title' field also contains 'Get Level 1 Email and Level 2 Name', and a yellow callout box points to the 'Configure Service' button below it with the text '4) Click 'Configure Service''. The right-hand panel shows the 'Submit' action details, including its ID 'S_Submit' and a list of activities under the 'Activities' tab. The list includes '1: Assign Level 1' and '2: Get Level 1 Email and...', with a yellow callout box pointing to the second activity with the text '3) Give the Activity a meaningful name'.

1) Click the + icon in the Submit Action that points to Level 1

2) Select 'Call a Service'

3) Give the Activity a meaningful name

4) Click 'Configure Service'

5. Creating the workflow

► Call service to lookup level 1 email and level 2 name

1) Select 'Domino Directory'

Call a Service

1. Select Service 2. Inputs 3. Outputs

Creating a Service Configuration requires that you provide a target service.

Select from Service Catalog

Selected Service: Get User By Identifier

Service Catalog: Domino Directory

2) Select 'Get User By Identifier'

Get Group By Name
Look up a group by name.

Get Related User(s) By Attribute
Lookup the related user(s) by a user's attribute. For example, by a user's department.

Get User By Identifier
Look up a user by full name, common name, short name, or email address.

Is User In Group

3) Input: map Level 1

Call a Service

1. Select Service 2. Inputs 3. Outputs 4. Details

Create Input Assignments

Order: Get User By Identifier

Select source: Requester, Requester Email, **Level 1** ✓, Level 2, Level 1 Email, Level 2 Email

Select target: User Name or Email

Assigned Inputs

Source	Target
Page 1 > Section > Level 1	User Name or Email *

3) Output: map Internet Email to Level 1 Email and Manager to Level 2

Call a Service

1. Select Service 2. Inputs 3. Outputs 4. Details

Create Output Assignments

Order: Get User By Identifier

Select source: Department, Job Title, Location, Office Phone, **Manager** ✓, Assistant

Select target: Requester, Requester Email, Level 1, **Level 1 Email** ✓, Level 2 ✓, Level 2 Email

Assigned Outputs

Source	Target
Internet Email	Page 1 > Section > Level 1 Email > Value
Manager	Page 1 > Section > Level 2 > Value

4) Give the service a descriptive name on the Details tab

6. Dynamic role assignments and email notifications

▶ Level 1 email notification

The screenshot displays the HCL workflow editor interface. On the left, a workflow diagram shows a 'Start' activity leading to a 'Submit' activity, which then leads to a 'Level 1' activity. The 'Submit' activity is highlighted with a blue box, and a callout points to its configuration options. The 'Level 1' activity is also highlighted with a blue box, and a callout points to its configuration options. The main part of the screenshot is the 'Activity Settings' dialog for the 'Send and Email' activity. The dialog has several sections: 'Activity Type' with 'Send an Email' selected; 'Activity Name' set to 'Level 1 Email'; 'To:' field with '{Level 1 Email}'; 'Subject:' field with 'Phone Request'; 'Attachments:' set to 'None'; and 'Body:' field with a rich text editor containing a link. Five numbered callouts provide instructions: 1) Click the + icon in the Submit Action that points to Level 1; 2) Select 'Send and Email'; 3) Give Activity a meaningful name; 4) Select Level 1 Email; 5) Use Insert to add link to form.

1) Click the + icon in the Submit Action that points to Level 1

2) Select 'Send and Email'

3) Give Activity a meaningful name

4) Select Level 1 Email

5) Use Insert to add link to form

5. Creating the workflow

▶ Level 2 role assignment

The screenshot displays the HCL workflow configuration interface. On the left, a workflow diagram shows an 'Approve' activity box with a '+' icon, which is highlighted by a blue box and a callout. Below it is a 'Level 2' activity box with a person icon and the text 'Level 2 Approver, +1'. The main area shows the 'Activity Settings' dialog for the 'Assign Users' activity. The 'Activity Type' section has three buttons: 'Send an Email', 'Call a Service', and 'Assign Users', with the latter selected. The 'Activity Name' field contains 'Assign Level 2'. The 'Assign via' section has two buttons: 'Value in Form' (selected) and 'Service Call'. The 'Value in Form' section has a dropdown menu with 'Level 2' selected. The 'Role' section has a dropdown menu with 'Level 2 Approver' selected. On the right, a preview of the 'Approve' activity shows the text '1: Assign Level 2' with a person icon and a three-dot menu. Five yellow callout boxes with numbered instructions are overlaid on the interface:

- 1) Click the + icon in the Submit Action that points to Level 2
- 2) Select 'Assign Users'
- 3) Select 'Value in Form'
- 4) Select 'Level 1 and 'Level 1 Approver''
- 5) Give the Activity a meaningful name

5. Creating the workflow

- ▶ Call service to lookup level 2 email

The screenshot displays the workflow editor interface with four numbered callouts:

- 1) Click the + icon in the Submit Action that points to Level 2**: Points to a plus icon in the 'Approve' action box.
- 2) Select 'Call a Service'**: Points to the 'Call a Service' button in the 'Activity Settings' panel.
- 3) Give the Activity a meaningful name**: Points to the 'Activity Name' text field containing 'Get Level 2 Email'.
- 4) Click 'Configure Service'**: Points to the 'Configure Service' button in the 'Service Title' section.

The interface includes a 'Workflow' tab, 'Activity Settings' panel, and an 'Activities' list on the right. The 'Activities' list shows '1: Assign Level 2' and '2: Get Level 2 Email'.

5. Creating the workflow

► Call service to lookup level 2 email

1) Select 'Domino Directory'

Call a Service

1. Select Service 2. Inputs 3. Outputs

Creating a Service Configuration requires that you provide a target service.

Select from Service Catalog

Selected Service: Get User By Identifier

Service Catalog: Domino Directory

2) Select 'Get User By Identifier'

3) Input: map Level 2

Call a Service

1. Select Service 2. Inputs 3. Outputs 4. Details

Create Input Assignments

Order: Get User By Identifier

Select source:

- Requester
- Requester Email
- Level 1
- Level 2
- Level 1 Email
- Level 2 Email

Select target:

- Requester
- ab User Name or Email * ✓

View: Basic

Assigned Inputs

Source	Target
Page 1 > Section > Level 2 > Value	User Name or Email *

3) Output: map Internet Email to Level 2 Email

Call a Service

1. Select Service 2. Inputs 3. Outputs 4. Details

Create Output Assignments

Order: Get User By Identifier

Select source:

- Found Matches
- ab User ID
- ab Internet Email ✓
- ab Mobile
- ab User Name
- ab Display Name

Select target:

- Requester
- Requester Email
- Level 1
- Level 1 Email
- Level 2
- Level 2 Email ✓

View: Basic

Assigned Outputs

Source	Target
Internet Email	Page 1 > Section > Level 2 Email > Value

4) Give the service a descriptive name on the Details tab

6. Dynamic role assignments and email notifications

▶ Level 2 email notification

The screenshot displays a workflow editor with a canvas on the left and an 'Activity Settings' panel on the right. The workflow includes a 'Submit' action, a 'Level 1' approval step, and a 'Level 2' approval step. The 'Level 2' step is highlighted with a blue box, and a callout points to its '+ Add Activity' icon.

The 'Activity Settings' panel for the 'Approve' activity (ID: S_Submit2) is open, showing the following configuration:

- Activity Type:** Send an Email (selected), Call a Service, Assign Users.
- Activity Name:** Send an Email to Level 2
- To:** {Level 2 Email} (with an 'Insert' dropdown arrow)
- Subject:** Phone Request (with an 'Insert' dropdown arrow)
- Attachments:** None
- Body:** {Link to this form} (with an 'Insert' dropdown arrow)

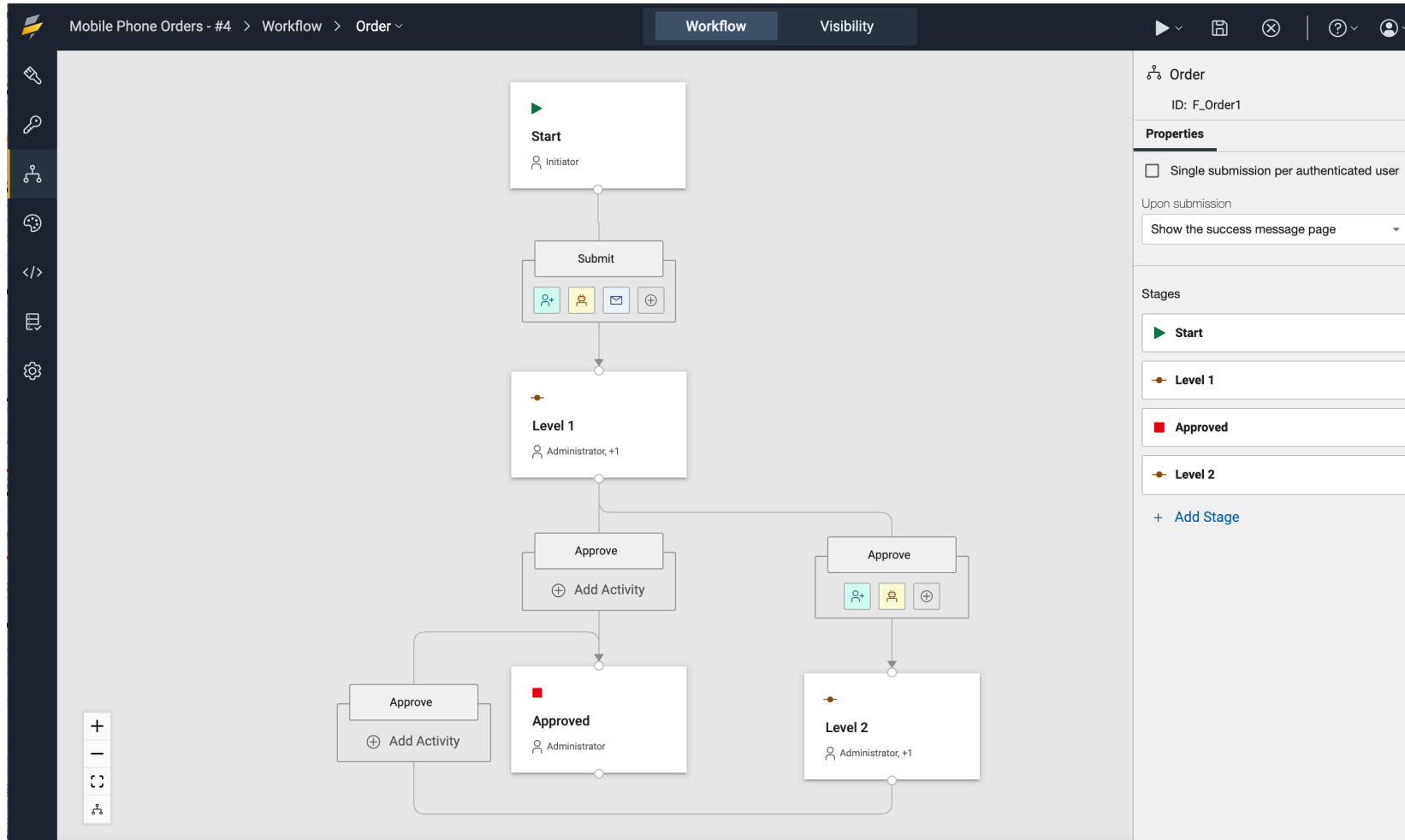
Five numbered callouts provide instructions:

- 1) Click the + icon in the Submit Action that points to Level 2
- 2) Select 'Send and Email'
- 3) Give Activity a meaningful name
- 4) Select Level 2 Email
- 5) Use Insert to add link to form

6. Dynamic role assignments and email notifications

- ▶ How things should look when the workflow is complete

[MobilePhoneOrders4.volt](#)



7. Rules for a dynamic user experience

► Conditionally show the '2 levels required' indicator

1) Add text item to top of section to inform when 2 levels are required

This phone is {Level 2 Threshold} or greater and requires 2 levels of approval

{Brand} {Model}

Storage Capacity: {Storage}

Supplier: {Storage}

Price: {Price}

Use the properties panel to the right to add an image file

2) Set a rule on the text item so it shows when price is equal to or greater than the level 2 threshold

Rules

Show rules related to: F_Text2

- Rule 3

Rule Name: Rule 3

Perform this action: F_Text2 Show

When the following condition is true: Price Greater than or equal: Another item Level 2 Threshold

7. Rules for a dynamic user experience

► Add additional fields and navigation

The screenshot shows a mobile application form with the following elements and annotations:

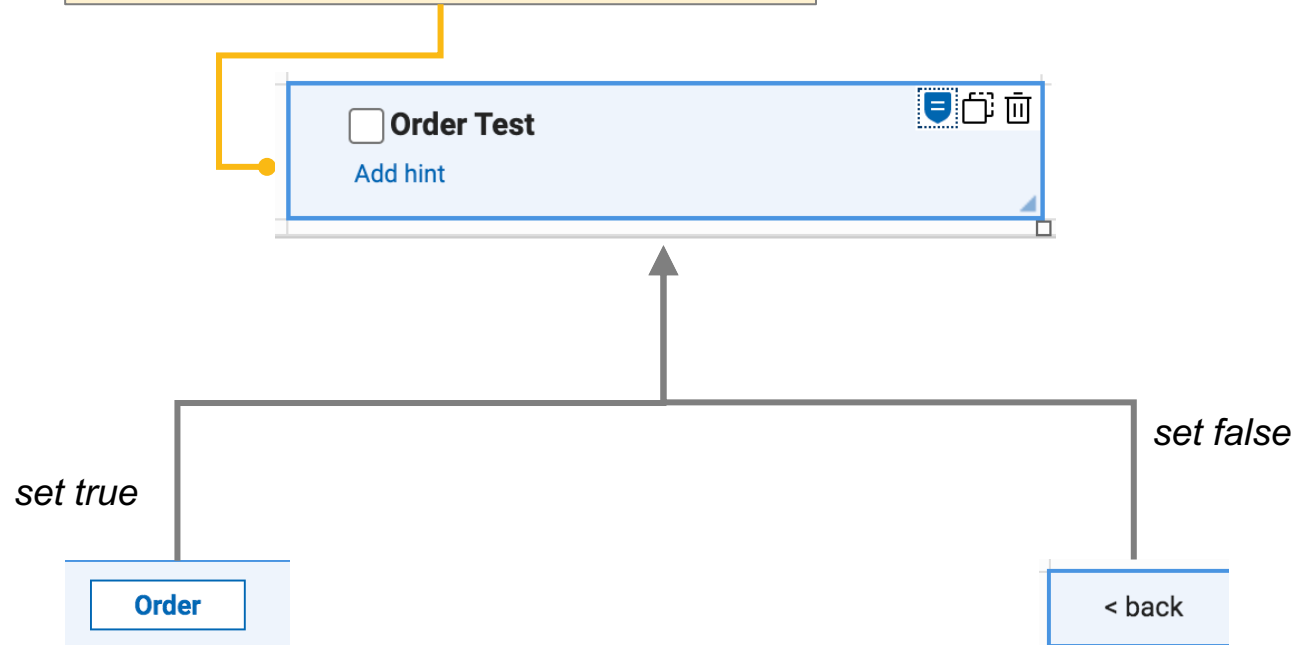
- Annotation 5:** A yellow box on the left says "5) Add Text item. Set the ID to 'F_BackText'". A line points to the "< back" button at the top left of the form.
- Annotation 6:** A yellow box on the left says "6) Add order button.". A line points to the blue "Order" button at the bottom of the form.
- Annotation 1:** A yellow box on the right says "1) Add a Multi-Line field 'Business Justification'". A line points to the text input field under the "Business Justification" checkbox.
- Annotation 2:** A yellow box on the right says "2) Add Multi-Line 'Level 1 Manager Comments'". A line points to the text input field under the "Level 1 Manager Comments" checkbox.
- Annotation 3:** A yellow box on the right says "3) Add Multi-Line 'Level 2 Manager Comments'". A line points to the text input field under the "Level 2 Manager Comments" checkbox.

The form content includes a back button, a status message "This phone is \${Level 2 Threshold} or greater and requires 2 levels of approval", a header "{Brand} {Model}", a "Click 'Edit Properties' to add an image file" instruction, and fields for "Storage Capacity: {Storage}", "Supplier: {Supplier}", and "Price: {Price}".

7. Rules for a dynamic user experience

► Determine if order button or back text has been clicked

1) Add Checkbox in the hidden section to record if order button has been clicked. Set the the ID to F_OrderTest



```
BO.F_OrderTest.setValue(true);
```

2) Add JavaScript to the button onClick to set checkbox 'true'

```
BO.F_OrderTest.setValue(false);
```

3) Add JavaScript to the '< back' text item onClick to set checkbox 'false'

7. Rules for a dynamic user experience

▶ Making the form dynamic based on the checkbox value

The screenshot shows a 'Rules' configuration window. On the left, a sidebar lists 'Show rules related to: F_BackText' and 'Rule 6'. The main area contains a table of rules with columns for the rule name, action, and status. Below the table is a condition section: 'When the following condition is true: Order Test (hidden) Equals A fixed value Checked'. Callout boxes on the right point to specific elements: 'Show submit action button' (points to the 'Show' action for 'Start - Submit'), 'Show workflow approver section' (points to the 'Show' action for 'Workflow Approver Section'), 'Show detail presentation section' (points to the 'Show' action for 'Details Presentation Section'), 'Show '<back>' text item' (points to the 'Show' action for 'F_BackText'), 'Hide phone selection table' (points to the 'Hide' action for 'Select a Phone'), 'Hide order button' (points to the 'Hide' action for 'Order'), 'Show business justification' (points to the 'Show' action for 'Business Justification'), and 'When Order Test is checked (true)' (points to the 'Checked' checkbox in the condition).

Rule Name	Action	Status
Start - Submit	Show	Active
Workflow Approver Section	Show	Active
Details Presentation Section	Show	Active
F_BackText	Show	Active
Select a Phone	Hide	Active
Order	Hide	Active
Business Justification	Show	Active

When the following condition is true: Order Test (hidden) Equals A fixed value Checked

7. Rules for a dynamic user experience

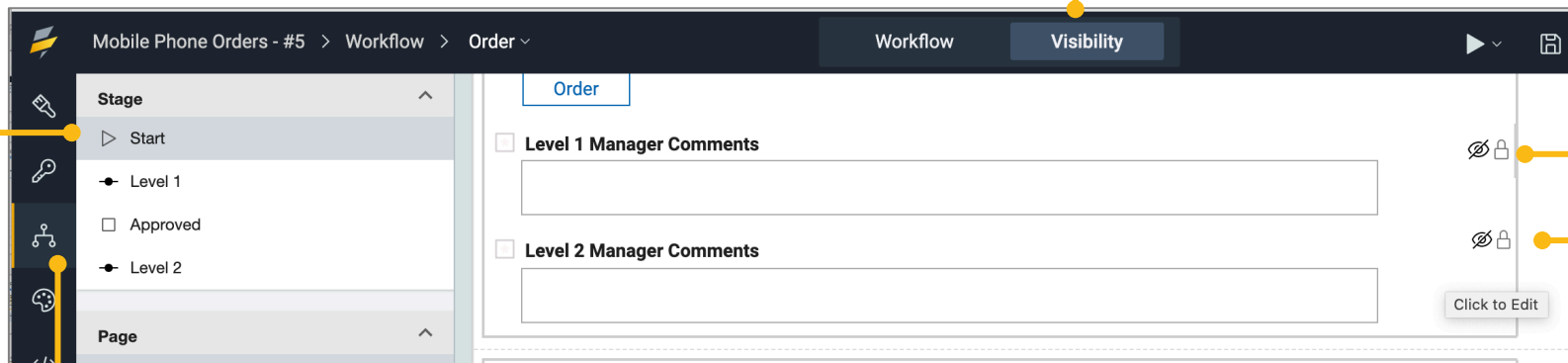
- ▶ Hide the approver comments in start

1) Go to the Visibility tab in the Workflow view and hide Level 1 Comments and Level 2 Comments in the Start Stage

2) Select the Start Stage

2) Hover and click the eye icon to hide

Workflow view



7. Rules for a dynamic user experience

► Set visibility and read only rule in level 1 and level 2

1) Select the Level 1 Stage

2) Hover and click the lock icon to make read only

3) Hover and click the eye icon to show (so there is no line through icon)

4) Hover and click the eye icon to hide

5) Select Level 2 Stage and set Business Justification to read only, Level 1 Comments to read only, and Level 2 Comments to show

7. Rules for a dynamic user experience

▶ How things should look with rules and navigation complete

[MobilePhoneOrders5.volt](#)

Mobile Phone Order System

Select a phone

Brand	Model	Platform	Storage Capacity
Apple	iPhone 11	IOS	64
Apple	iPhone 11	IOS	128
Apple	iPhone 11 pro	IOS	64
Apple	iPhone 11 pro	IOS	256
Samsung	Galaxy Fold 5G	Android	512

1 row selected Show: 5 ▾ 1-5 < >


This phone is \$900.00 or greater and requires 2 levels of approval

Apple. iPhone 11 pro

Storage Capacity: 64

Supplier: 64

Price: \$999.00



Mobile Phone Order System

< Back


This phone is \$900.00 or greater and requires 2 levels of approval

Apple. iPhone 11 pro

Storage Capacity: 64

Supplier: 64

Price: \$999.00



Business Justification

Requester

Requester Email

Level 1

Level 1 Email

Level 2

Level 2 Email

8. Add a workflow approval log

► Adding fields and text to show approval status

1) Add the following fields to hidden section

<input type="checkbox"/> Order Created	Date	Time
	<input type="text" value="Date"/>	<input type="text" value="Time"/>
<input checked="" type="checkbox"/> When Level 1 Approved	Date	Time
	<input type="text" value="Date"/>	<input type="text" value="Time"/>
<input type="checkbox"/> When Level 2 Approved	Date	Time
	<input type="text" value="Date"/>	<input type="text" value="Time"/>

3) Add text items to the right of the approvers section and enter the text indicated below. Use echo text to get the requester, approvers and times

<input checked="" type="checkbox"/> Requester	<input type="text"/>	<input checked="" type="checkbox"/> Requester Email	<input type="text"/>	Order submitted by {Requester} on {Order Created}	
<input type="checkbox"/> Level 1	<input type="text"/>	<input type="checkbox"/> Level 1 Email	<input type="text"/>		Level 1 was approved by {Level 1} on {When Level 1 Approved}
<input checked="" type="checkbox"/> Level 2	<input type="text"/>	<input type="checkbox"/> Level 2 Email	<input type="text"/>		Level 2 was approved by {Level 2} on {When Level 2 Approved}

1) Set the IDs to the following:

F_OrderCreated
 F_L1ApproverTime
 F_L2ApproverTime

Set the first text item so that it does not show in Start stage

The values of these will be set via JavaScript on the Form onValidButtonPressed event

8. Add a workflow approval log

▶ Adding function to record approval changes

Add the following JavaScript to Form validButtonPressed event. Check the IDs on your workflow actions to be sure they match

(be mindful when copying and pasting the code: often Microsoft will adjust the quotes to be invalid in JavaScript)

```
//record order creation time
if(pActionId === 'S_Submit')
{
BO.F_OrderCreated.setValue(new Date());
}

//record L1 approval time
if(pActionId === 'S_Submit1' || pActionId ===
'S_Submit2')
{
BO.F_L1ApproverTime.setValue(new Date())
}

//record L2 approval time
if(pActionId === 'S_Submit3')
{
BO.F_L2ApproverTime.setValue(new Date());
}
```

Records date & time
when order submitted

Records date & time
when Level 1 approved

Records date & time
when Level 2 approved

8. Add a workflow approval log

▶ Adding rules to display approval status

Order submitted by
{Requester} on
{Order Created}

Level 1 was approved by
{Level 1} on
{When Level 1 Approved}

Level 2 was approved by   
{Level 2} on
{When Level 2 Approved}

Set rules on the Level 1 and Level 2 text item so that are shown when the timestamp fields have a value

Rules

Show rules related to: ⓘ

F_Text4

- Rule 11

Rule Name: Rule 11 ✔

Perform this action: ⓘ

F_Text4 Show

When the following condition is true: ⓘ

When L1 Approved Has value

Mobile Phone Order System

Select a Phone

Brand	Model	Storage	Platform
Apple	iPhone 11	64	IOS
Apple	iPhone 11	128	IOS
Apple	iPhone 11 pro	64	IOS
Apple	iPhone 11 pro	256	IOS
Samsung	Galaxy Fold 5G	512	Android


This phone is \$900 or greater and requires 2 levels of approval

Apple iPhone 11 pro

Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00




[Order](#)

Mobile Phone Order System

< back

This phone is \$900 or greater and requires 2 levels of approval

Apple iPhone 11 pro



Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00

Business Justification

Requester
Admin

Requester Email
martin.lechleider@hcl.com

Level 1 Approver
Andrew Manby

Level 1 Email
andrew.manby@pnp-hcl.com

Level 2 Approver
Rajesh Iyer

Level 2 Email
rajesh_i@hcl.com

[Submit](#)

Finished app – approval steps

Level 1 approval

Mobile Phone Order System

This phone is \$900 or greater and requires 2 levels of approval

Apple iPhone 11 pro

Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00

Business Justification

Level 1 Manager Comments

Requester	Requester Email	✔ Order submitted by Admin on 10/16/2020, 2:26 PM
Admin	martin.lechleider@hcl.com	
Level 1 Approver	Level 1 Email	
Andrew Manby	andrew.manby@pnp-hcl.com	✔ Level 1 was approved by Andrew Manby on 10/16/2020, 2:28 PM
Level 2 Approver	Level 2 Email	✔ Level 2 was approved by Rajesh Iyer on 10/16/2020, 2:29 PM
Rajesh Iyer	rajesh_i@hcl.com	

Level 2 approval

Mobile Phone Order System

This phone is \$900 or greater and requires 2 levels of approval

Apple iPhone 11 pro

Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00

Business Justification

Level 1 Manager Comments

Level 2 Manager Comments

Requester	Requester Email	✔ Order submitted by Admin on 10/16/2020, 2:26 PM
Admin	martin.lechleider@hcl.com	
Level 1 Approver	Level 1 Email	
Andrew Manby	andrew.manby@pnp-hcl.com	✔ Level 1 was approved by Andrew Manby on 10/16/2020, 2:28 PM
Level 2 Approver	Level 2 Email	
Rajesh Iyer	rajesh_i@hcl.com	

Approval Complete

Mobile Phone Order System

This phone is \$900 or greater and requires 2 levels of approval

Apple iPhone 11 pro

Storage Capacity: 64

Supplier: Apple Store

Price: \$999.00

Business Justification

Level 1 Manager Comments

Level 2 Manager Comments

Requester	Requester Email	✔ Order submitted by Admin on 10/16/2020, 2:26 PM
Admin	martin.lechleider@hcl.com	
Level 1 Approver	Level 1 Email	
Andrew Manby	andrew.manby@pnp-hcl.com	✔ Level 1 was approved by Andrew Manby on 10/16/2020, 2:28 PM
Level 2 Approver	Level 2 Email	✔ Level 2 was approved by Rajesh Iyer on 10/16/2020, 2:29 PM
Rajesh Iyer	rajesh_i@hcl.com	