



Oracle Application Express: Developing Database Web Applications

Hands-On-Labs Guide

Unit 6: Managing and Customizing Interactive Reports

This exercise includes two hands-on-labs.

HOL 6-1: Using an Interactive Report: In this lab, you customize and use an interactive report as an end user.

HOL 6-2: Customizing an Interactive Report as a Developer: In this lab, as a developer, you customize an interactive report for your end users.

Both these hands-on-labs utilize the Hardware application that you created in HOL 5-2.

HOL 6-1: Using an Interactive Report

1. First, you run the Hardware application. To do this, navigate to **Application Builder**. In the report, click the **Run** button for **Hardware**.

The screenshot shows the Oracle Application Express interface. At the top, there are navigation tabs: ORACLE Application Express, App Builder (selected), SQL Workshop, Team Development, and Packaged Apps. Below the tabs are four main action buttons: Create, Import, Dashboard, and Workspace Utilities. Below these is a search bar with a 'Go' button and a 'Create >' button. The main content area displays a table of applications.

Application ↑	Name	Pages	Type	Updated By	Updated	Run
100	Sample Database Application	66	Packaged Application	chaitanya	7 days ago	
101	Sample Reporting	39	Packaged Application	chaitanya	2 days ago	
102	Sample Projects	52	Packaged Application	chaitanya	2 days ago	
103	Demo Projects	10	Database Application	chaitanya	3 hours ago	
106	BUDGET APP	4	Database Application	chaitanya	96 minutes ago	
107	Team Status	3	Websheet Application	chaitanya	18 hours ago	
110	Hardware	3	Database Application	chaitanya	117 seconds ago	

2. In the navigation menu, click **Hardware Interactive Report**.
3. You do not want to display the Id and Form Factor columns in the report. Also, you want the Purchase Date column to display just before the Purchase Price column. Perform the following steps:

- a) Click **Actions** and select **Columns**.

Id	Serial	Cpu Type	Cpu Speed	Brand	Model	Form Factor	Purchase Price	Department Id
1	0C8765T	Pentium I	200	Dell	Optiplex	D	2343	2
2	1U09CM2423	Pentium II	667	Dell	Optiplex	D	3256	2
3	0KBU4	Pentium III	1000	Dell	Optiplex	L	4532	6
4	51214246AB	Pentium III	450	Dell	Optiplex	L	5401	3
5	HQMHC12	Pentium IV	1700	Dell	Optiplex	D	6588	5
6	W112FGHZ456	Pentium III	800	Dell	Optiplex	D	5330	1
7	2DLP1	Celeron	366	Dell	Optiplex	D	1399	3
8	6ZQ11	Pentium I	200	Dell	Optiplex	D	2378	2
9	59785246GH	Pentium III	650	Dell	Optiplex	L	5122	1
10	12375936YT	Pentium I	166	Dell	Optiplex	L	2266	3

- b) The Select Columns dialog appears. The columns on the right are displayed, and the columns on the left are hidden. Select **Id** and **Form Factor** in Display in Report group, and click the **Remove** icon.

Select Columns

Do Not Display

←

⇧

→

⇧

⇧

⇧

Display in Report

Id

Serial

Cpu Type

Cpu Speed

Purchase Date

Brand

Model

Form Factor

Purchase Price

Department Id

↑

↑

↓

↓

Cancel
Apply

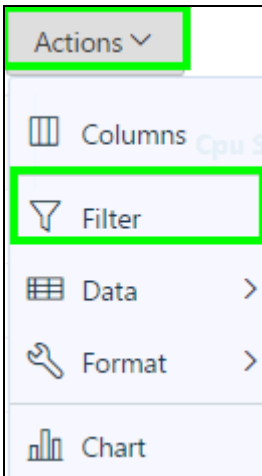
- c) You can reorder the displayed columns using the arrows on the far right. Select **Purchase Date** in the Display in Report group, and click the **Down** arrow twice. Then, click **Apply**.

- d) The changes you made to the interactive report display are reflected now.

Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id
0C8765T	Pentium I	200	Dell	Optiplex	09-OCT-98	2343	2
1U09CM2423	Pentium II	667	Dell	Optiplex	01-JUN-99	3256	2
0KBU4	Pentium III	1000	Dell	Optiplex	12-MAY-01	4532	6
51214246AB	Pentium III	450	Dell	Optiplex	14-JUN-01	5401	3
HQMHC12	Pentium IV	1700	Dell	Optiplex	15-JUN-02	6588	5
W112FGHZ456	Pentium III	800	Dell	Optiplex	12-JAN-01	5330	1
2DLP1	Celeron	366	Dell	Optiplex	01-APR-99	1399	3

4. You want to create filters on the report. First, you want to filter the report to display rows which meet the criteria Purchase Price \geq 5330. Within these filtered results, you then create another filter to display rows with Cpu Type is Pentium III. Perform the following steps:

- a) Click **Actions** and select **Filter**.

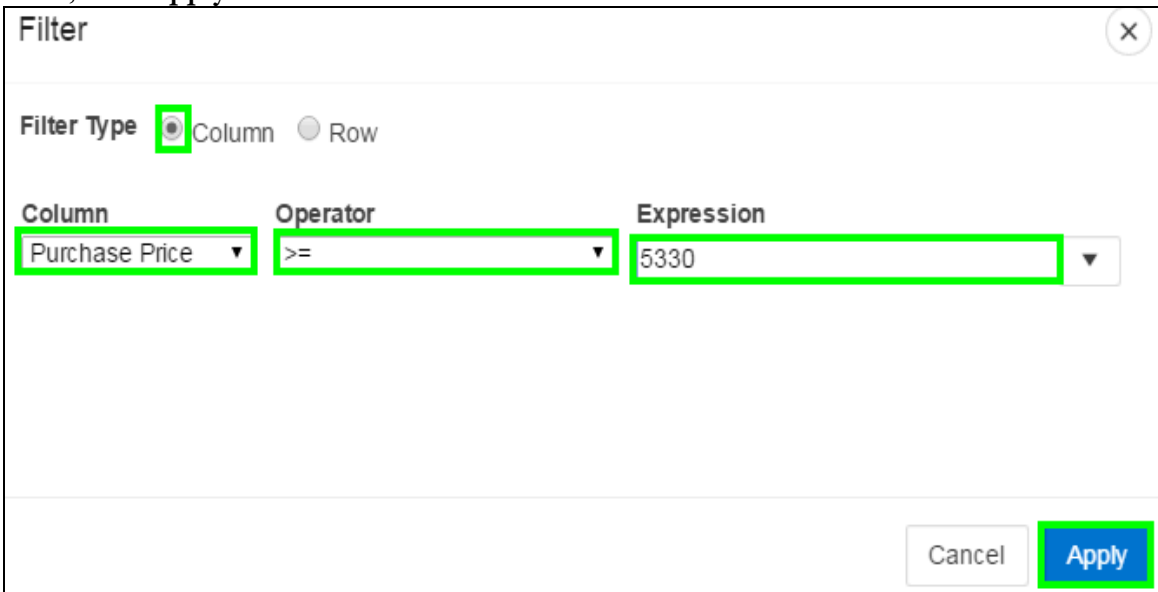


- b) For Filter Type, select **Column**.

For Column, select **Purchase Price**, for Operator, select **>=** and select **5330** from the Expression list.

Notice that this list of values for Expression is determined automatically, based on all the values in the Purchase Price column.

Then, click **Apply**.

A screenshot of the 'Filter' dialog box. The dialog has a title bar with a close button (X). Below the title bar, there are two radio buttons for 'Filter Type': 'Column' (selected) and 'Row'. Below this, there are three dropdown menus: 'Column' (set to 'Purchase Price'), 'Operator' (set to '>='), and 'Expression' (set to '5330'). At the bottom right, there are two buttons: 'Cancel' and 'Apply' (highlighted with a green border).

- c) The filter is applied now. You can have more than one filter on a report. If you decide that you want to disable a particular filter, you can click the check box to disable the filter. In this lab, you want to add another filter on the Cpu Type column.

Click the **Actions** menu, and select **Filter**.

Serial	Cpu Type	Cpu Speed	Purchase Date	Purchase Price	Department Id
51214246AB	Pentium III	450	14-JUN-01	5401	3
HQMHC12	Pentium IV	1700	15-JUN-02	6588	5
W112FGHZ456	Pentium III	800	12-JAN-01	5330	1
9875H879	Pentium III	850	05-OCT-01	5446	1
H098OIUP296	Pentium IV	1700	27-APR-02	6477	5
FL4Q321	Pentium III	2400	10-DEC-02	6267	2
54HFLDSEG77	Pentium III	466	14-JUN-03	5401	4
90DSLFR7	Pentium III	366	15-JUN-02	6588	3
88LDKSUE	PowerPC G4	450	Dell Optiplex 08-APR-01	5330	4

- d) Select **Cpu Type** for Column, select **=** for Operator and select **Pentium III** from the Expression list.
Click **Apply**.

Filter [X]

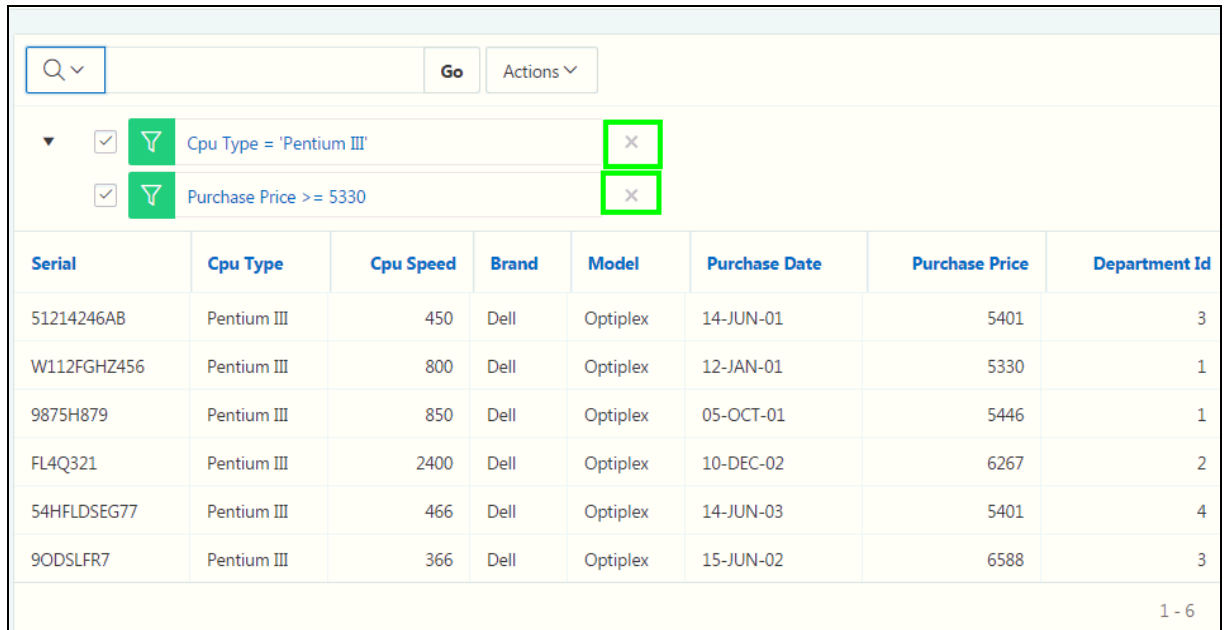
Filter Type Column Row

Column: Cpu Type | Operator: = | Expression: Pentium III

Cancel Apply

- e) Notice that two filters are applied now. The rows displayed are fewer now because they are only the rows that meet both the filter criteria. You can remove each filter by clicking the Remove Filter icon, next to the filter you want to remove.

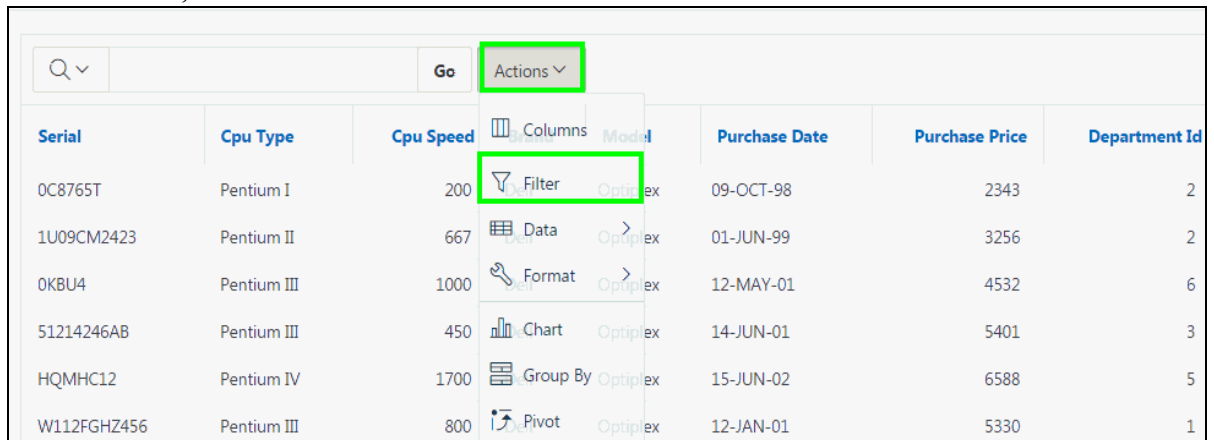
Click the **Remove Filter** icon next to both the filters.



Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id
51214246AB	Pentium III	450	Dell	Optiplex	14-JUN-01	5401	3
W112FGHZ456	Pentium III	800	Dell	Optiplex	12-JAN-01	5330	1
9875H879	Pentium III	850	Dell	Optiplex	05-OCT-01	5446	1
FL4Q321	Pentium III	2400	Dell	Optiplex	10-DEC-02	6267	2
54HFLDSEG77	Pentium III	466	Dell	Optiplex	14-JUN-03	5401	4
9ODSLFR7	Pentium III	366	Dell	Optiplex	15-JUN-02	6588	3

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5. Both the filters are now removed, and you see that all the rows are displayed. You can also create a row filter.
- a) Click **Actions**, and select **Filter**.



Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id
0C8765T	Pentium I	200	Dell	Optiplex	09-OCT-98	2343	2
1U09CM2423	Pentium II	667	Dell	Optiplex	01-JUN-99	3256	2
0KBU4	Pentium III	1000	Dell	Optiplex	12-MAY-01	4532	6
51214246AB	Pentium III	450	Dell	Optiplex	14-JUN-01	5401	3
HQMHC12	Pentium IV	1700	Dell	Optiplex	15-JUN-02	6588	5
W112FGHZ456	Pentium III	800	Dell	Optiplex	12-JAN-01	5330	1

- b) You want to create a filter which selects a row when both the following conditions are true:

Cpu Type = 'Pentium III'

Purchase Price >= 5330

Select **Row** for Filter Type.

Click **Cpu Type** under Columns and then click = from Functions / Operators. Enter **'Pentium III'**.

Click **AND** under Functions / Operators. Click **Purchase Price** under Columns and then click >= under Functions / Operators. Enter **5330**.

Click **Apply**.

Filter

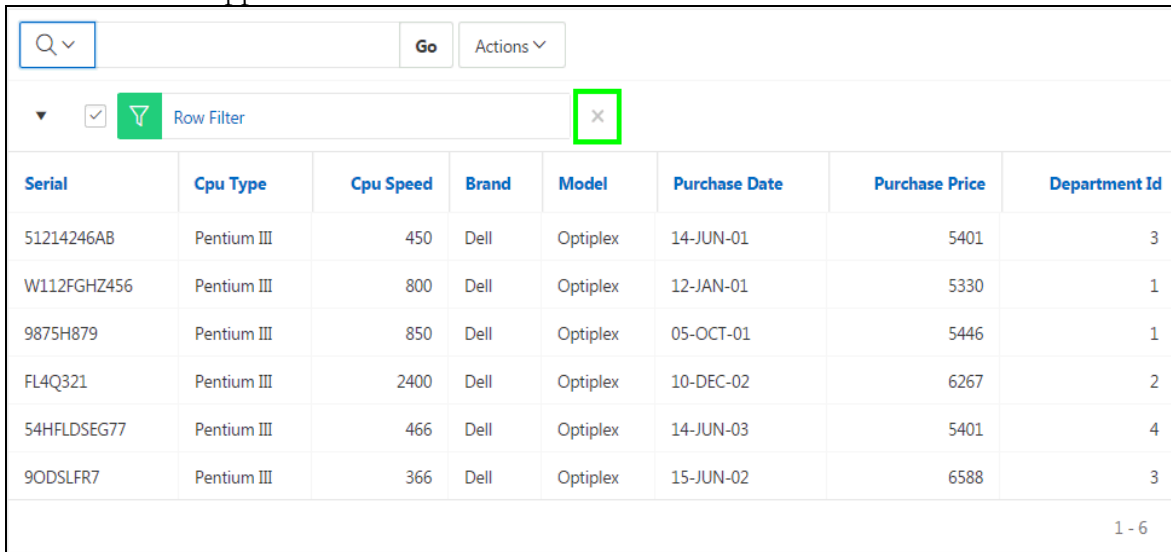
Filter Type Column Row

Name

Filter Expression

Columns	Functions / Operators
B. Serial	!=
C. Cpu Type	<
D. Cpu Speed	<=
E. Purchase Date	=
F. Brand	>
G. Model	>=
H. Form Factor	ABS
I. Purchase Price	ADD_MONTHS
J. Department Id	AND
	BETWEEN

- c) The row filter is applied now. Click the Remove Filter icon to remove the filter.

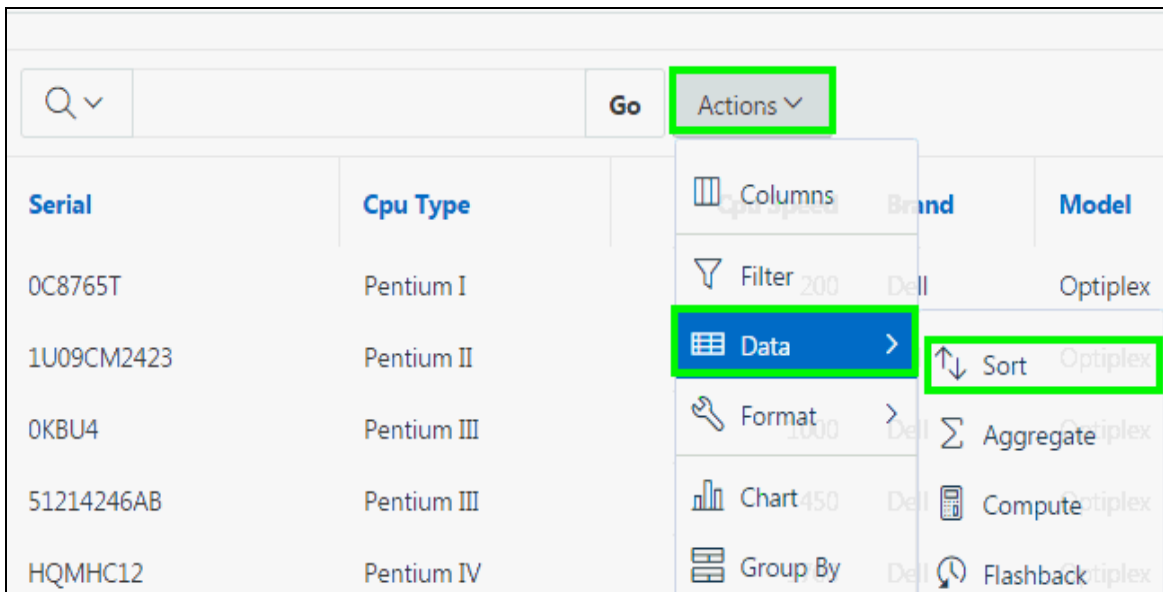


Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id
51214246AB	Pentium III	450	Dell	Optiplex	14-JUN-01	5401	3
W112FGHZ456	Pentium III	800	Dell	Optiplex	12-JAN-01	5330	1
9875H879	Pentium III	850	Dell	Optiplex	05-OCT-01	5446	1
FL4Q321	Pentium III	2400	Dell	Optiplex	10-DEC-02	6267	2
54HFLDSEG77	Pentium III	466	Dell	Optiplex	14-JUN-03	5401	4
90DSLFR7	Pentium III	366	Dell	Optiplex	15-JUN-02	6588	3

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6. You want to sort the report on the Purchase Price column.

- a) Select **Actions > Data > Sort**.



Serial	Cpu Type	Cpu Speed	Brand	Model
0C8765T	Pentium I	200	Dell	Optiplex
1U09CM2423	Pentium II	1000	Dell	Optiplex
0KBU4	Pentium III	1000	Dell	Optiplex
51214246AB	Pentium III	450	Dell	Optiplex
HQMHC12	Pentium IV	1000	Dell	Optiplex

- b) Select **Purchase Price** for Column and click **Apply**.

Sort ✕

	Column	Direction	Null Sorting
1	Purchase Price ▼	Ascending ▼	Default ▼
2	- Select Column - ▼	Ascending ▼	Default ▼
3	- Select Column - ▼	Ascending ▼	Default ▼
4	- Select Column - ▼	Ascending ▼	Default ▼
5	- Select Column - ▼	Ascending ▼	Default ▼
6	- Select Column - ▼	Ascending ▼	Default ▼

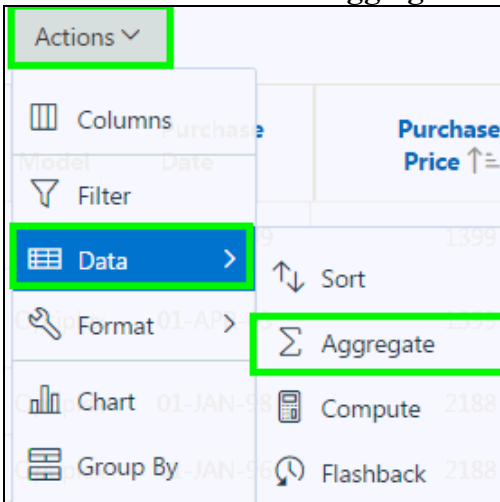
Cancel
Apply

- c) The report is now sorted in the ascending order of Purchase Price.
Note: The sort indicator is located next to the columns that are sorted. The arrow indicates whether it is in ascending or descending order. To change the sort to descending order, you can click on the sort ascending icon in the header for Purchase Price and it will change to sort descending.

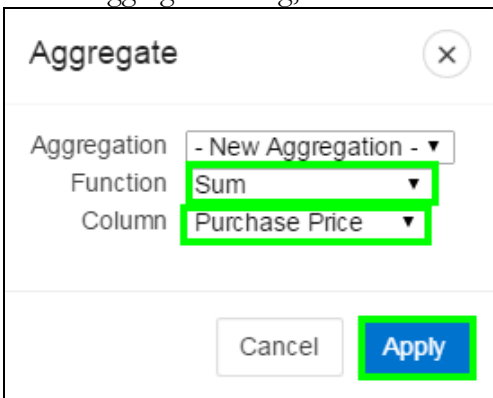
Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price ↑	Department Id
2DLP1	Celeron	366	Dell	Optiplex	01-APR-99	1399	3
HKLDU810	PowerPC G4	600	Dell	Optiplex	01-APR-03	1399	6
OKMND876	Pentium I	1200	Dell	Optiplex	01-JAN-98	2188	6
LTS5133	Pentium I	100	Dell	Optiplex	01-JAN-96	2188	6
12375936YT	Pentium I	166	Dell	Optiplex	01-MAR-97	2266	3
JKEW77U	Pentium I	1700	Dell	Optiplex	01-MAR-03	2266	6
WE5483	PowerPC G4	200	Dell	Optiplex	09-OCT-00	2343	2
0C8765T	Pentium I	200	Dell	Optiplex	09-OCT-98	2343	2
54FFVDWS	PowerPC G3	800	Dell	Optiplex	24-OCT-96	2378	4

7. Create an aggregation against the Purchase Price column. You want to display the sum of the purchase price.

- a) Select **Actions > Data > Aggregate**.



- b) In the Aggregate dialog, select **Sum** for Function, **Purchase Price** for Column. Click **Apply**.



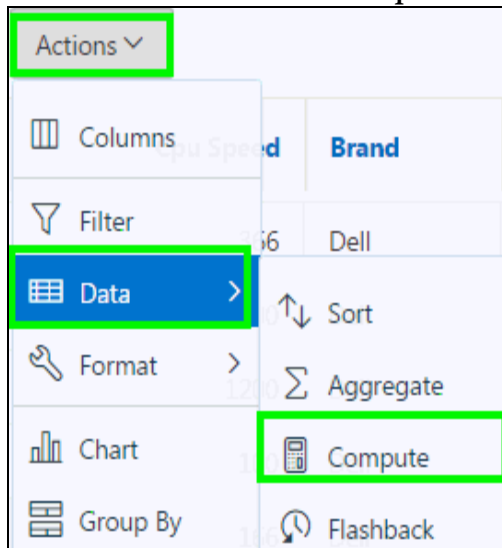
- c) The aggregate function is applied on the column. Notice that the sum of purchase price is displayed at the end of the report under the column.

Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price ↑	Department Id
GFDU654540IU	Pentium III	450	Dell	Optiplex	24-OCT-01	5120	4
59785246GH	Pentium III	650	Dell	Optiplex	20-MAR-00	5122	1
8UJJDLSKN	Pentium III	850	Dell	Optiplex	20-MAR-00	5122	5
KLJH98798YUTU	Pentium III	1200	Dell	Optiplex	12-JUN-02	5170	1
BHDYO87	Pentium III	600	Dell	Optiplex	27-OCT-01	5276	3
W112FGHZ456	Pentium III	800	Dell	Optiplex	12-JAN-01	5330	1
88LDSUE	PowerPC G4	450	Dell	Optiplex	08-APR-01	5330	4
54HFLDSEG77	Pentium III	466	Dell	Optiplex	14-JUN-03	5401	4
51214246AB	Pentium III	450	Dell	Optiplex	14-JUN-01	5401	3
9875H879	Pentium III	850	Dell	Optiplex	05-OCT-01	5446	1
FL4Q321	Pentium III	2400	Dell	Optiplex	10-DEC-02	6267	2
H098OIUP296	Pentium IV	1700	Dell	Optiplex	27-APR-02	6477	5
HQMHC12	Pentium IV	1700	Dell	Optiplex	15-JUN-02	6588	5
9ODSLFR7	Pentium III	366	Dell	Optiplex	15-JUN-02	6588	3
						148061	

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8. In the report, you want to include purchase price calculated with tax. The computation you want to make is $\text{Purchase Price} * 1.05$. You create a computed column in the interactive report.

- a) Select **Actions > Data > Compute**.



- b) The Compute dialog appears.
 For Column Heading, enter **Price with Tax** and select **\$5,234.10** for Format Mask.
 For Computation Expression, click **Purchase Price** under Columns. Click ***1.05** under Keypad.

Click **Apply**.

Compute ✕

Computation - New Computation - ▾

Column Heading Price with Tax Format Mask FML999G9999G9999G9999G9990D ▾

Computation Expression

I *1.05

Columns	Keypad	Functions / Operators
A. Id	() '	!=
B. Serial	7 8 9 -	<
C. Cpu Type	4 5 6 +	<=
D. Cpu Speed	1 2 3 *	=
E. Purchase Date	0 . /	>
F. Brand	space ,	>=
G. Model		ABS
H. Form Factor		ADD_MONTHS
I. Purchase Price		AND
J. Department Id		BETWEEN
		CASE

Create a computation using column aliases.

Examples:

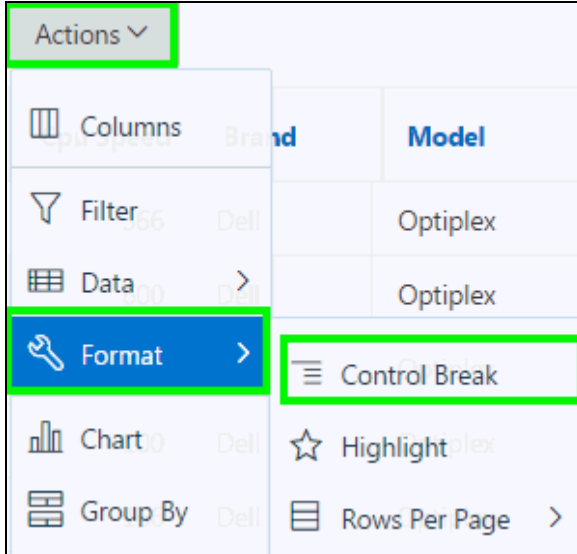
1. (B+C)*100
2. INITCAP(B)||', '||INITCAP(C)
3. CASE WHEN A = 10 THEN B + C ELSE B END

Cancel
Apply

- c) The new computed column Price with Tax now appears in the report.

Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase Date	Purchase Price ↑⇅	Department Id	Price with Tax
2DLP1	Celeron	366	Dell	Optiplex	01-APR-99	1399	3	\$1,468.95
HKLDU810	PowerPC G4	600	Dell	Optiplex	01-APR-03	1399	6	\$1,468.95
OKMND876	Pentium I	1200	Dell	Optiplex	01-JAN-98	2188	6	\$2,297.40
LTS5133	Pentium I	100	Dell	Optiplex	01-JAN-96	2188	6	\$2,297.40
12375936YT	Pentium I	166	Dell	Optiplex	01-MAR-97	2266	3	\$2,379.30
JKEW77U	Pentium I	1700	Dell	Optiplex	01-MAR-03	2266	6	\$2,379.30
WE5483	PowerPC G4	200	Dell	Optiplex	09-OCT-00	2343	2	\$2,460.15

9. Create a Control Break on the Cpu Type column.
a) Select **Actions > Format > Control Break**.



- b) In the Control Break dialog, select **Cpu Type** for Column, and click **Apply**.

The screenshot shows a 'Control Break' dialog box with a table of settings. The first row has 'Cpu Type' selected in the 'Column' dropdown and 'Enabled' in the 'Status' dropdown. The other rows have '- Select Column -' in the 'Column' dropdown and 'Enabled' in the 'Status' dropdown. At the bottom, there are 'Cancel' and 'Apply' buttons. The 'Apply' button is highlighted with a blue border.

Column	Status
1 Cpu Type	Enabled
2 - Select Column -	Enabled
3 - Select Column -	Enabled
4 - Select Column -	Enabled
5 - Select Column -	Enabled
6 - Select Column -	Enabled

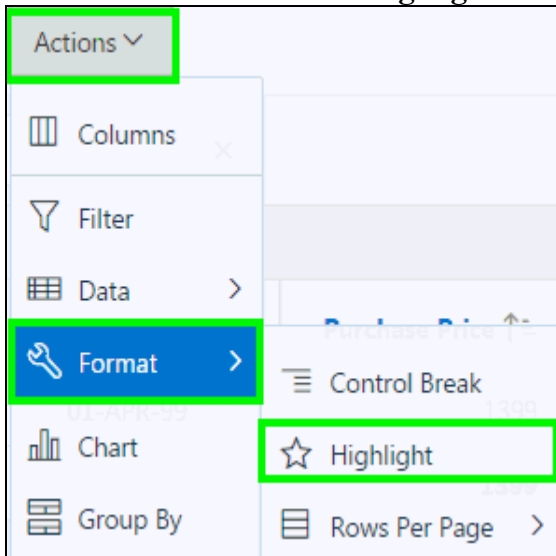
- c) The control break is applied now. Notice that the aggregation that you created in a previous step appears at the end of each control break.

The screenshot shows a report with a search bar and a filter for 'Cpu Type'. The report is divided into two sections based on the control break: 'Cpu Type : Celeron' and 'Cpu Type : Pentium I'. Each section contains a table with the following columns: Serial, Cpu Speed, Brand, Model, Purchase Date, Purchase Price, Department Id, and Price with Tax. The 'Purchase Price' column is sorted in descending order. The 'Cpu Type : Celeron' section shows one row with a total of 1399 for Purchase Price. The 'Cpu Type : Pentium I' section shows seven rows.

Serial	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id	Price with Tax
2DLP1	366	Dell	Optiplex	01-APR-99	1399	3	\$1,468.95
					1399		
Serial	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id	Price with Tax
OKMND876	1200	Dell	Optiplex	01-JAN-98	2188	6	\$2,297.40
LTS5133	100	Dell	Optiplex	01-JAN-96	2188	6	\$2,297.40
JKEW77U	1700	Dell	Optiplex	01-MAR-03	2266	6	\$2,379.30
12375936YT	166	Dell	Optiplex	01-MAR-97	2266	3	\$2,379.30
0C8765T	200	Dell	Optiplex	09-OCT-98	2343	2	\$2,460.15
6ZQ11	200	Dell	Optiplex	24-OCT-96	2378	2	\$2,496.90

10. You want to highlight those rows with Price with Tax values less than \$2300. You add the highlighting to rows while continuing with the control break that you created in the previous step.

- a) Select **Actions > Format > Highlight**.



- b) In the Highlight dialog, enter **Price with Tax less than \$2400** for Name. Select **yellow** for Background Color and **red** for Text Color. For Highlight Condition: Select ****Price with Tax** column, and **<** Operator. Enter **2400** for Expression. Click Apply.

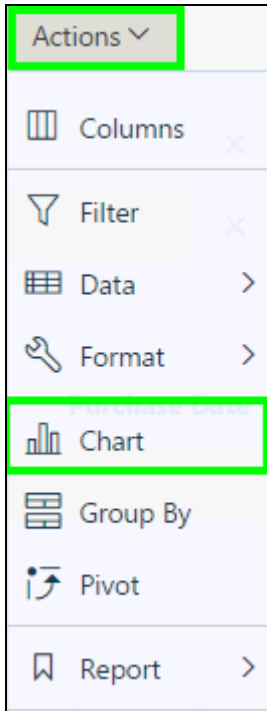
A screenshot of the Oracle APEX Highlight dialog box. The dialog has a title bar 'Highlight' with a close button. The fields are: Name: 'Price with Tax less than \$2400'; Sequence: '10'; Enabled: 'Yes'; Highlight Type: 'Row'; Background Color: '#FFFF99' with a color picker showing 'yellow' selected; Text Color: '#FF7755' with a color picker showing 'red' selected; Highlight Condition: Column: '**Price with Tax', Operator: '<', Expression: '2400'. At the bottom are 'Cancel', 'Delete', and 'Apply' buttons.

c) Notice that the rows that meet the condition are highlighted now.

Serial	Cpu Speed	Brand	Model	Purchase Date	Purchase Price ↑	Department Id	Price with Tax
Cpu Type : Celeron							
2DLP1	366	Dell	Optiplex	01-APR-99	1399	3	\$1,468.95
					1399		
Cpu Type : Pentium I							
Serial	Cpu Speed	Brand	Model	Purchase Date	Purchase Price	Department Id	Price with Tax
OKMND876	1200	Dell	Optiplex	01-JAN-98	2188	6	\$2,297.40
LTS5133	100	Dell	Optiplex	01-JAN-96	2188	6	\$2,297.40
JKEW77U	1700	Dell	Optiplex	01-MAR-03	2266	6	\$2,379.30
12375936YT	166	Dell	Optiplex	01-MAR-97	2266	3	\$2,379.30
0C8765T	200	Dell	Optiplex	09-OCT-98	2343	2	\$2,460.15
6ZQ11	200	Dell	Optiplex	24-OCT-96	2378	2	\$2,496.90

11. In your interactive report, you want to include a Chart to display the total Price with Tax for each Cpu Type. Your interactive report should include both the Report and Chart views to toggle.

a) Select **Actions > Chart**.



b) In the Chart dialog, select / enter the following:

- Chart Type: **Horizontal Column**
- Label: **Cpu Type**
- Value: ****Price with Tax**
- Function: **Sum**
- Axis Title for Label: **Cpu Type**
- Axis Title for Value: **Price with Tax**

Click **Apply**.

Chart

Chart Type: Horizontal Column Vertical Column Pie Line

Label: Axis Title for Label:

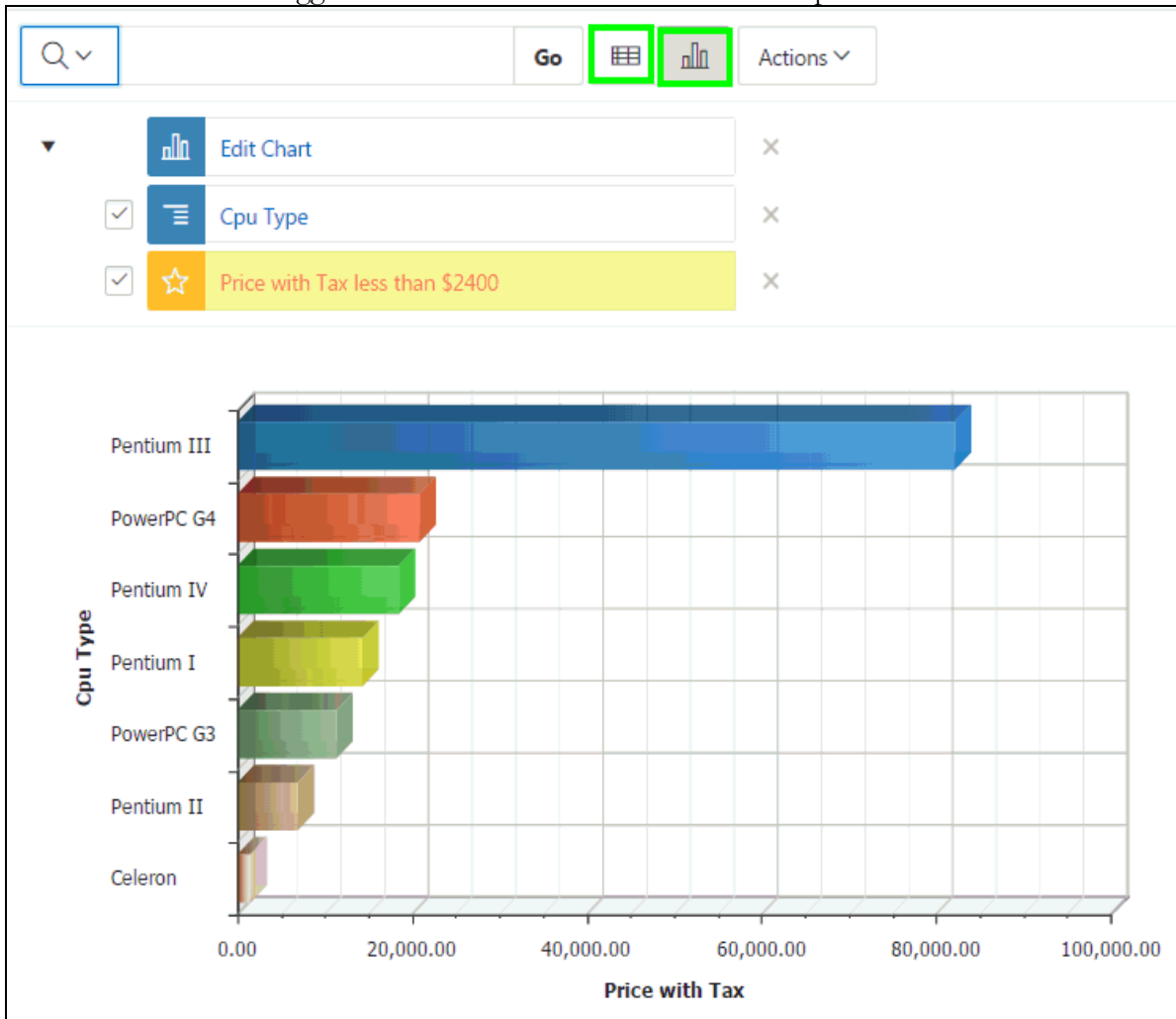
Value: Axis Title for Value:

Function:

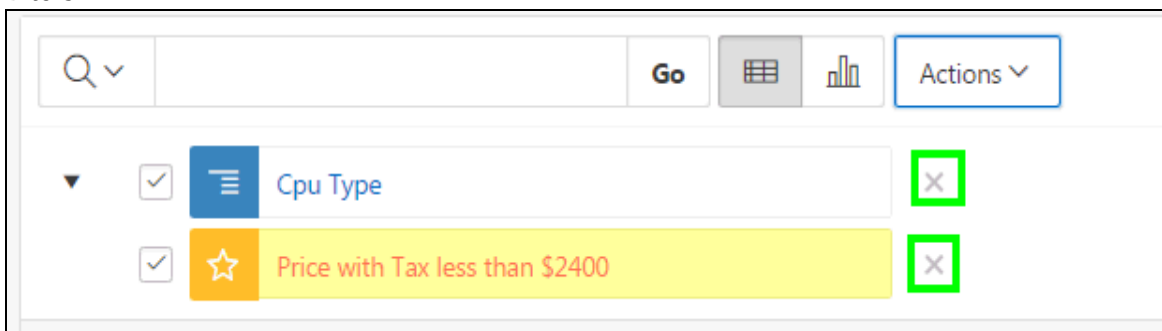
Sort:

Buttons: Cancel, Delete, **Apply**

c) The chart is created. Toggle between the View Chart and View Report.

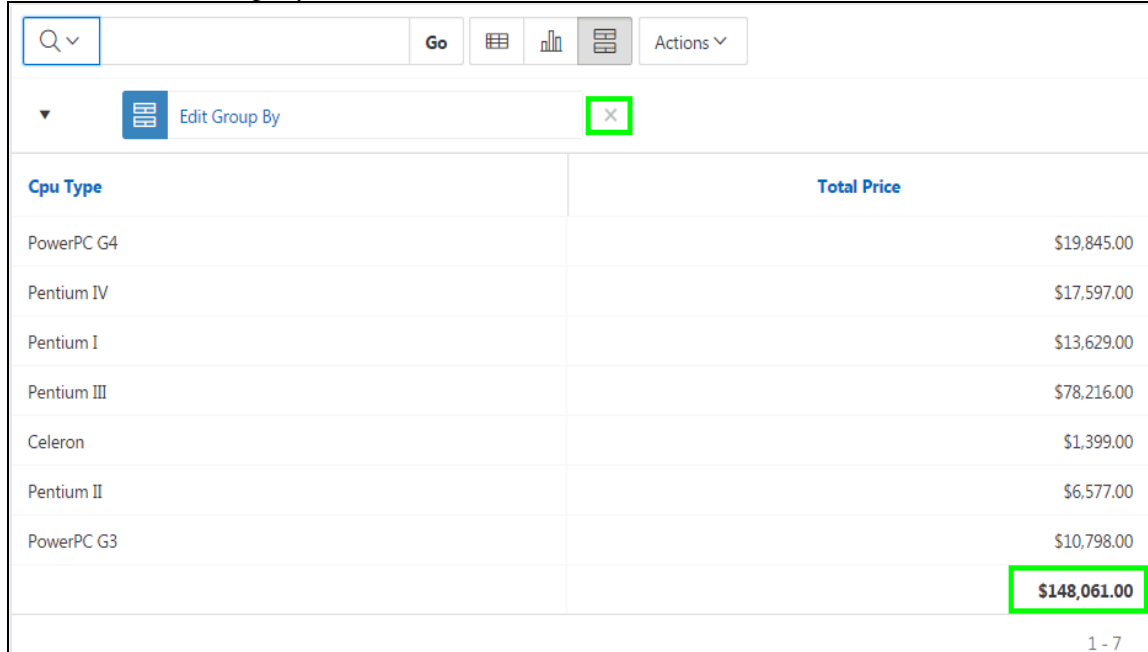


d) You want to remove the control break and the highlighting. Click the X icon for both the filters.



12. Create a Group By report to display each Cpu Type with the total purchase price.

- c) The Group By report is created. You also see the sum of the purchase price. Notice that the icon for View Group By is also added.

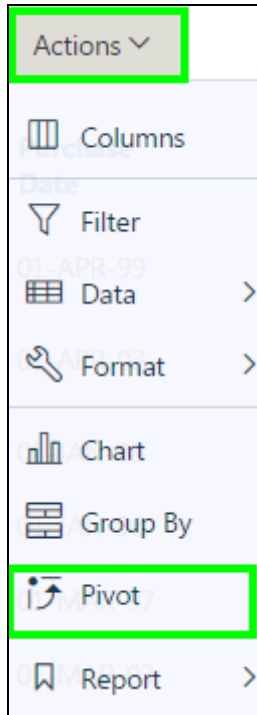


Cpu Type	Total Price
PowerPC G4	\$19,845.00
Pentium IV	\$17,597.00
Pentium I	\$13,629.00
Pentium III	\$78,216.00
Celeron	\$1,399.00
Pentium II	\$6,577.00
PowerPC G3	\$10,798.00
	\$148,061.00

- d) Click the **X** to the right of Edit Group By to remove the filter.

13. You want to display the count of each Cpu Type that are available with each department. The results should be in a crosstab format. Create a Pivot Report.

- a) Click **Actions > Pivot**.



- b) In the Pivot dialog enter / select:
- Pivot Column: **Cpu Type**

- Row Column: **Department Id**
- Functions: **Count**
- Column: **Cpu Type**

Click **Apply**.

Pivot ✕

Pivot Columns

1 Cpu Type ▼

2 - Select Pivot Column - ▼

[Add Pivot Column](#)

Row Columns

1 Department Id ▼

2 - Select Row Column - ▼

[Add Row Column](#)

Functions	Column	Label	Format Mask	Sum
1 Count ▼	Cpu Type ▼		999G999G999G999G990	<input checked="" type="checkbox"/>
2 - Select Function - ▼	- Select Column - ▼			<input type="checkbox"/>

[Add Function](#)

c) The Pivot report is displayed and a View Pivot icon is created.

Q ▼ Actions ▼

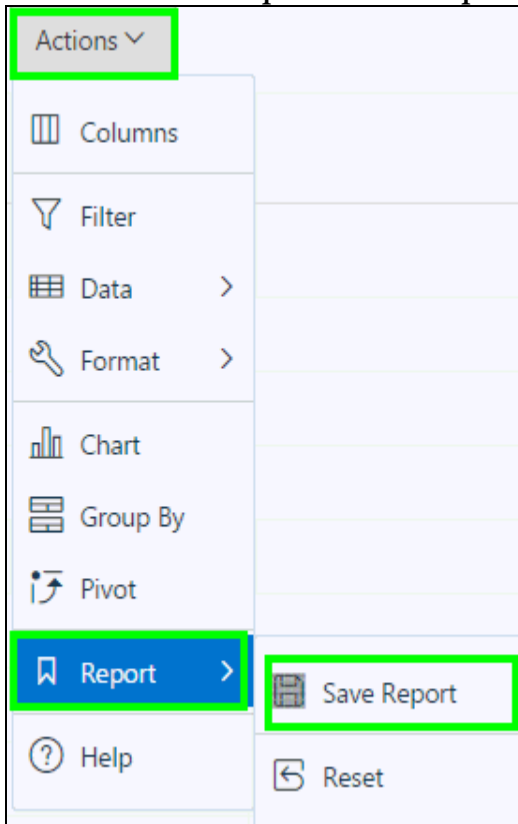
▼ Edit Pivot ✕

	Celeron	Pentium I	Pentium II	Pentium III	Pentium IV	PowerPC G3	PowerPC G4
Department Id	Count Cpu Type	Count Cpu Type	Count Cpu Type	Count Cpu Type	Count Cpu Type	Count Cpu Type	Count Cpu Type
1	0	0	0	4	0	0	0
2	0	2	2	2	0	0	1
3	1	1	0	3	0	1	1
4	0	0	0	4	1	2	1
5	0	0	0	1	2	1	1
6	0	3	0	1	0	0	2
	1	6	2	15	3	4	6

1 - 6

14. You want to save the report with all the customization.

- a) Select **Actions > Report > Save Report**.



- b) Enter **My Report** for Name and click **Apply**.

15. A drop down list automatically appears with the report you just created being selected. You can view the default primary report.

You want to reset the Primary Report back to the default settings and remove any customizations that you have made so far.

- a) Select **Primary Report** from the Reports drop down list. The primary report is now displayed. You can make any changes to this report and it will not be reflected in the 'My Report' private report you just created.

b) Select **Actions > Reset**.

The screenshot shows an Oracle APEX report with a pivot table. The table has columns for Department Id and counts for various CPU types: Celeron, Pentium I, Pentium II, Pentium III, Pentium IV, PowerPC G3, and PowerPC G4. The 'Actions' menu is open, and the 'Reset' option is highlighted with a green box.

Department Id	Celeron	Pentium I	Pentium II	Pentium III	Pentium IV	PowerPC G3	PowerPC G4
1	0	0	0	4	0	0	0
2	0	2	2	2	0	1	1
3	1	1	0	3	0	1	1
4	0	0	0	4	2	2	1
5	0	0	0	1	2	1	1
6	0	3	0	1	0	0	2
	1	6	2	15	3	4	6

c) In the Reset dialog, click **Apply**.

The screenshot shows a 'Reset' dialog box with the text 'Restore report to the default settings.' and two buttons: 'Cancel' and 'Apply'. The 'Apply' button is highlighted with a green box.

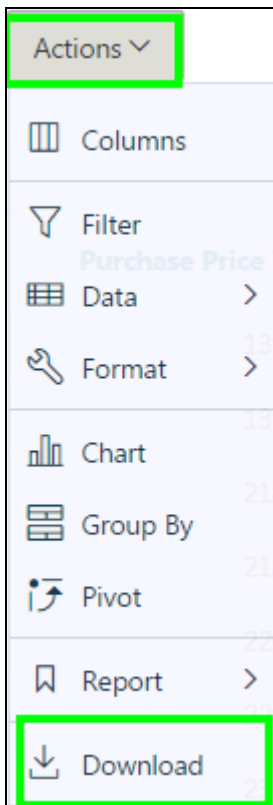
d) From the Reports drop down list, select **My Report**.

The screenshot shows an Oracle APEX report with a table. The table has columns for Id, Serial, Cpu Type, Cpu Speed, Brand, Model, and Form Factor. The '1. Primary Report' dropdown menu is open, and '1. My Report' is highlighted with a green box.

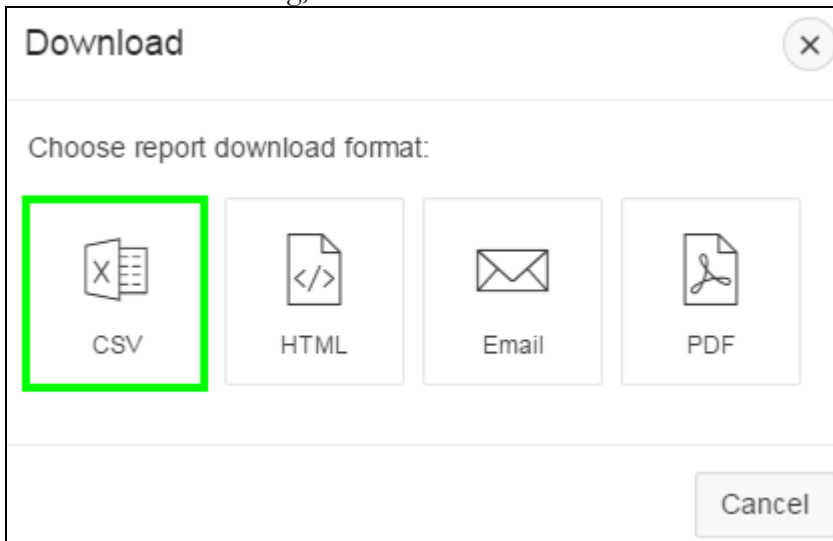
Id	Serial	Cpu Type	Cpu Speed	Brand	Model	Form Factor
1	0C8765T	Pentium I	2000	Dell	Optiplex	D
2	1U09CM2423	Pentium II	667	Dell	Optiplex	D
3	0KBU4	Pentium III	1000	Dell	Optiplex	L

16. You want to download the customized report as a CSV.

- a) Select **Actions > Download**.



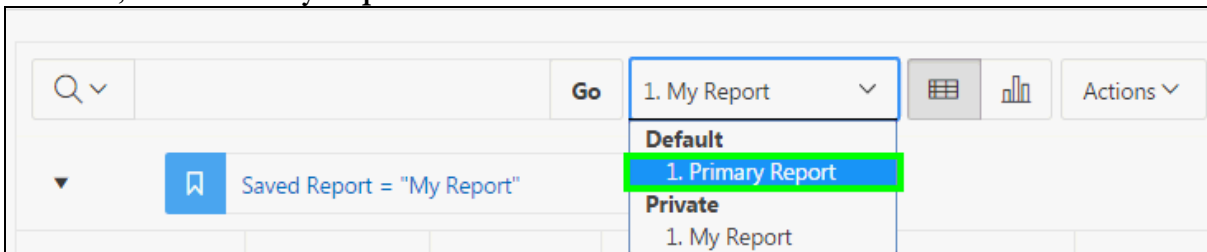
- b) In the Download dialog, select **CSV**.



c) The report is now downloaded as a CSV.

	A	B	C	D	E	F	G	H
1	Serial	Cpu Type	Cpu Speed	Brand	Model	Purchase [Purchase F	Depart
2	2DLP1	Celeron	366	Dell	Optiplex	1-Apr-99	1399	
3	HKLDU810	PowerPC C	600	Dell	Optiplex	1-Apr-03	1399	
4	OKMND87	Pentium I	1200	Dell	Optiplex	1-Jan-98	2188	
5	LTS5133	Pentium I	100	Dell	Optiplex	1-Jan-96	2188	
6	12375936\	Pentium I	166	Dell	Optiplex	1-Mar-97	2266	
7	JKEW77U	Pentium I	1700	Dell	Optiplex	1-Mar-03	2266	
8	WE5483	PowerPC C	200	Dell	Optiplex	9-Oct-00	2343	
9	0C8765T	Pentium I	200	Dell	Optiplex	9-Oct-98	2343	
10	54FFFVDW	PowerPC C	800	Dell	Optiplex	#####	2378	
11	6ZQ11	Pentium I	200	Dell	Optiplex	#####	2378	
12	XA9042NU	PowerPC C	333	Dell	Optiplex	13-Apr-01	2650	

17. You want to make some more customization to your interactive report. From the Reports drop down list, select **Primary Report**.



18. To customize the report, you now use the column heading menu instead of using the Actions menu. The report is currently sorted in ascending order of Purchase Price. You want to the report to be sorted in the descending order of Department Id.

a) Click the **Department Id** header and select **Sort Descending**.

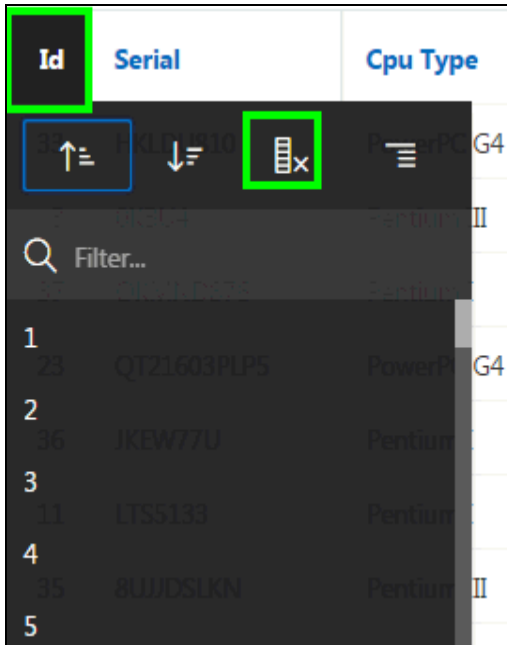
	Q	Go	1. Primary Report	Actions					
Id	Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Form Factor	Purchase Price	Department Id
1	0C8765T	Pentium I	200	09-OCT-98	Dell	Optiplex	D		
2	1U09CM2423	Pentium II	667	01-JUN-99	Dell	Optiplex	D		
3	0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	L		
4	51214246AB	Pentium III	450	14-JUN-01	Dell	Optiplex	L		
5	HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	D		
6	W112FGHZ456	Pentium III	800	12-JAN-01	Dell	Optiplex	D		
7	2DLP1	Celeron	366	01-APR-99	Dell	Optiplex	D		
8	6ZQ11	Pentium I	200	24-OCT-96	Dell	Optiplex	D		

b) The report is now sorted in the descending order of Department Id.

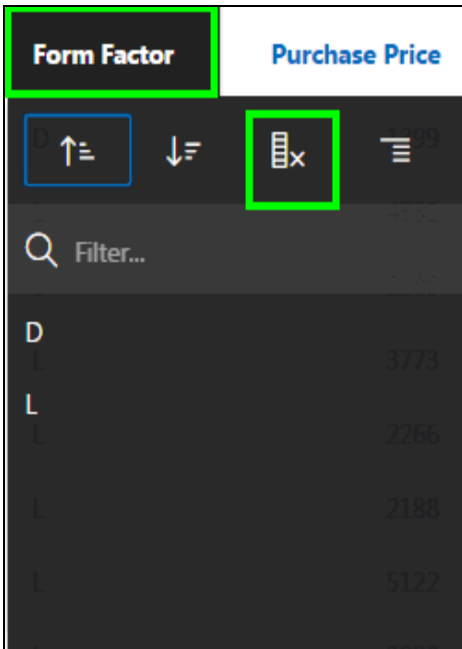
Q									
Go 1. Primary Report Actions									
Id	Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Form Factor	Purchase Price	Department Id
33	HKLDU810	PowerPC G4	600	01-APR-03	Dell	Optiplex	D	1399	6
3	OKBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	L	4532	6
37	OKMND876	Pentium I	1200	01-JAN-98	Dell	Optiplex	L	2188	6
23	QT21603PLP5	PowerPC G4	800	12-JUL-02	Dell	Optiplex	L	3773	6
36	JKEW77U	Pentium I	1700	01-MAR-03	Dell	Optiplex	L	2266	6
11	LTSS133	Pentium I	100	01-JAN-96	Dell	Optiplex	L	2188	6
35	8UJDSLKN	Pentium III	850	20-MAR-00	Dell	Optiplex	L	5122	5
24	QT1030FH	PowerPC G4	667	10-JAN-02	Dell	Optiplex	L	3800	5
20	H0980IUP296	Pentium IV	1700	27-APR-02	Dell	Optiplex	D	6477	5
16	OK765KLJL543	PowerPC G3	450	08-SEP-00	Dell	Optiplex	L	2870	5
5	HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	D	6588	5
12	A492CSLZE265	Pentium III	750	23-JUN-99	Dell	Optiplex	D	5066	4

19. You do not want the Id and Form Factor columns in the report.

a) Click the **Id** header and select **Hide Column**.



- b) Click the **Form Factor** header and select **Hide Column**.

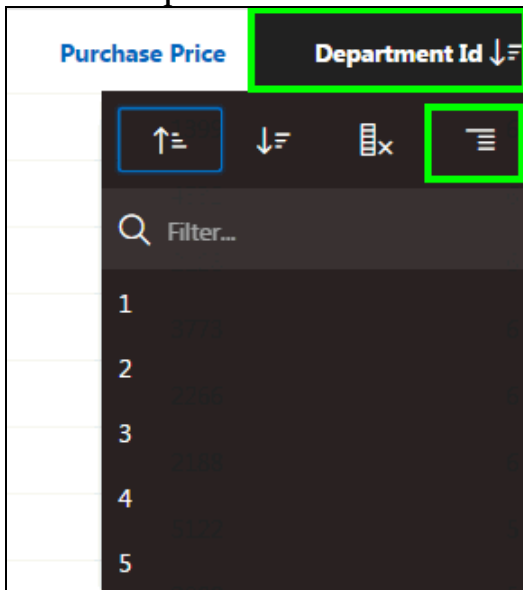


- c) Your report now looks like:

Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price	Department Id ↓
HKLDU810	PowerPC G4	600	01-APR-03	Dell	Optiplex	1399	6
0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	4532	6
OKMND876	Pentium I	1200	01-JAN-98	Dell	Optiplex	2188	6
QT21603PLP5	PowerPC G4	800	12-JUL-02	Dell	Optiplex	3773	6
JKEW77U	Pentium I	1700	01-MAR-03	Dell	Optiplex	2266	6
LTSS133	Pentium I	100	01-JAN-96	Dell	Optiplex	2188	6
8UJDSLKN	Pentium III	850	20-MAR-00	Dell	Optiplex	5122	5

20. Create a control break on the Department Id.

- a) Click the **Department Id** header and select **Control Break**.



- b) The control break is now applied.

Department Id : 6						
Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price
HKLDU810	PowerPC G4	600	01-APR-03	Dell	Optiplex	1399
0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	4532
OKMND876	Pentium I	1200	01-JAN-98	Dell	Optiplex	2188
QT21603PLP5	PowerPC G4	800	12-JUL-02	Dell	Optiplex	3773
JKEW77U	Pentium I	1700	01-MAR-03	Dell	Optiplex	2266
LTS5133	Pentium I	100	01-JAN-96	Dell	Optiplex	2188
Department Id : 5						
Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price
8UJDSLKN	Pentium III	850	20-MAR-00	Dell	Optiplex	5122
QT1030FH	PowerPC G4	667	10-JAN-02	Dell	Optiplex	3800
H098OIUP296	Pentium IV	1700	27-APR-02	Dell	Optiplex	6477

21. You want to save the customizations made from step 18 through 20. You save the report as a Named Report.

- a) Select **Actions > Report > Save Report**.

- b) The Save Report dialog appears. For Save, select **As Named Report** and enter **Departments Hardware Report** for Name. Click **Apply**.

Save Report

Save: As Named Report (Only displayed for developers)

Name: **Departments Hardware Report**

Description:

Cancel Apply

- c) The report is saved and is now available in the Reports drop down list.

1. Departments Hardware Report

Default

1. Primary Report

Private

1. Departments Hardware Report

2. My Report

Department Id : 6

Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price
HKLDU810	PowerPC G4	600	01-APR-03	Dell	Optiplex	1399
OKBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	4532
OKMND876	Pentium I	1200	01-JAN-98	Dell	Optiplex	2188
QT21603PLP5	PowerPC G4	800	12-JUL-02	Dell	Optiplex	3773
JKEW77U	Pentium I	1700	01-MAR-03	Dell	Optiplex	2266
LTSS5133	Pentium I	100	01-JAN-96	Dell	Optiplex	2188

22. You want to reset the primary report to default settings now.

- From the Reports down list, select **Primary Report**.
- Select **Actions > Report > Reset**.
- In the Reset dialog, click **Apply**.
- The primary report is now restored to default settings. The customizations you made to your private reports are available.

<input type="text"/> <input type="button" value="Go"/>				1. Primary Report			Actions		
Id	Serial	Cpu Type	Cpu Speed	Default			Form Factor	Purchase Price	Department Id
				Private					
1	0C8765T	Pentium I	200	1. Departments Hardware Report			D	2343	2
2	1U09CM2423	Pentium II	667	01-JUN-99	Dell	Optiplex	D	3256	2
3	0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	L	4532	6
4	51214246AB	Pentium III	450	14-JUN-01	Dell	Optiplex	L	5401	3
5	HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	D	6588	5
6	W112FGHZ456	Pentium III	800	12-JAN-01	Dell	Optiplex	D	5330	1

HOL 6-2: Customizing an Interactive Report as a Developer

In this lab, you edit an interactive report in page designer and customize it for end users.

1. First, view the interactive report in page designer. In the Developer Toolbar, click **Edit Page 2**.

Id	Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Form Factor	Purchase Price	Department Id
1	0C8765T	Pentium I	200	09-OCT-98	Dell	Optiplex	D	2343	2
2	1U09CM2423	Pentium II	667	01-JUN-99	Dell	Optiplex	D	3256	2
3	0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	L	4532	6
4	51214246AB	Pentium III	450	14-JUN-01	Dell	Optiplex	L	5401	3
5	HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	D	6588	5
6	W112FGHZ456	Pentium III	800	12-JAN-01	Dell	Optiplex	D	5330	1
7	2DLP1	Celeron	366	01-APR-99	Dell	Optiplex	D	1399	3
8	6ZQ11	Pentium I	200	24-OCT-96	Dell	Optiplex	D	2378	2
9	59785246GH	Pentium III	650	20-MAR-00	Dell	Optiplex	L	5122	1
10	12375936YT	Pentium I	166	01-MAR-97	Dell	Optiplex	L	2266	3
11	LT55133	Pentium I	100	01-JAN-96	Dell	Optiplex	L	2188	6
12	A492CSLZE265	Pentium III	750	23-JUN-99	Dell	Optiplex	D	5066	4
13	3J17JZL1345	Pentium III	850	17-AUG-01	Dell	Optiplex	L	5119	4
14	1M103GA1Q105	PowerPC G3	466	02-NOV-01	Dell	Optiplex	L	2900	3

2. You do not want the Id and Form Factor columns to be displayed in the interactive report for end users. Modify the report source query.

- a) In the page designer, under **Rendering > Regions**, select **Hardware Interactive Report**. In the property editor, locate **Source > SQL Query**.

```

select ID,
SERIAL,
CPU_TYPE,
CPU_SPEED,
PURCHASE_DATE,
BRAND,
MODEL,
FORM_FACTOR,
PURCHASE_PRICE,
DEPARTMENT_ID
from HARDWARE

```

- b) Copy and paste the following SQL in to SQL Query.

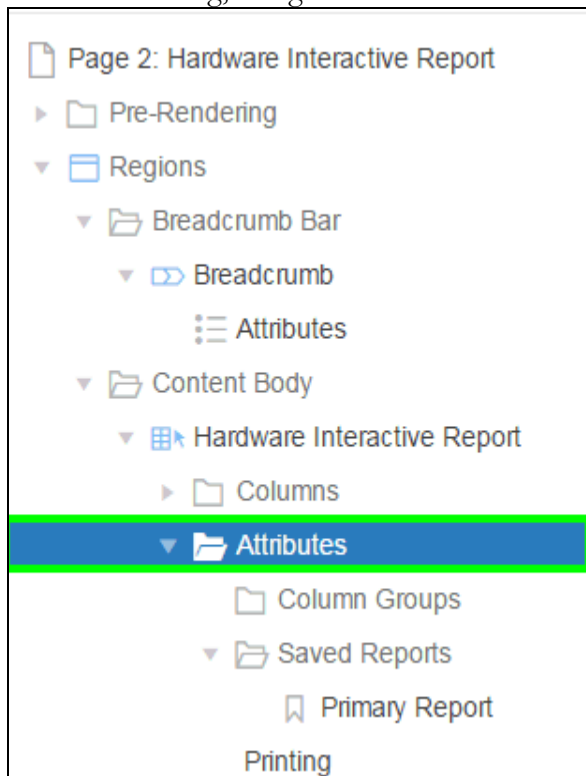
```
select SERIAL,
       CPU_TYPE,
       CPU_SPEED,
       PURCHASE_DATE,
       BRAND,
       MODEL,
       PURCHASE_PRICE,
       DEPARTMENT_ID
from HARDWARE
```

- c) Click **Save**. Then, click **Save and Run Page**.
 d) Your interactive report now looks like:

Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price	Department Id
0C8765T	Pentium I	200	09-OCT-98	Dell	Optiplex	2343	2
1U09CM2423	Pentium II	667	01-JUN-99	Dell	Optiplex	3256	2
0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	4532	6
51214246AB	Pentium III	450	14-JUN-01	Dell	Optiplex	5401	3
HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	6588	5

3. When the end users click an edit icon for a specified row, they should be directed to a page which shows the column values for that row. The interactive report currently does not have a link column. Modify your interactive report to have a link to single row view.






- a) Under Rendering, navigate to **Hardware Interactive Report** and select **Attributes**.



- b) The attributes are now listed in the property editor. Under Link, for Link Column, select **Link to Single Row View**. Click **Save**. Then, click **Save and Run Page**.

The screenshot shows the Oracle APEX property editor for a link column. The 'Link Column' dropdown is set to 'Link to Single Row View'. The 'Uniquely Identify Rows by' dropdown is set to 'ROWID'. The 'Link Icon' field contains the HTML code: ``. The 'Save' and 'Save and Run Page' buttons are highlighted with green boxes.

- c) In the report, click the edit icon (pencil) for any row.

	Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price	Department Id
	0C8765T	Pentium I	200	09-OCT-98	Dell	Optiplex	2343	2
	1U09CM2423	Pentium II	667	01-JUN-99	Dell	Optiplex	3256	2
	0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	4532	6
	51214246AB	Pentium III	450	14-JUN-01	Dell	Optiplex	5401	3
	HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	6588	5

- d) The single row view is displayed. Click **Report View** button to return to the report.



< Report View Row 1 of 37 >	
Serial	0C8765T
Cpu Type	Pentium I
Cpu Speed	200
Purchase Date	09-OCT-98
Brand	Dell
Model	Optiplex
Purchase Price	2343
Department Id	2

4. The current pagination type of the interactive report is Row Ranges X to Y. You want this to be changed for the end users' display of the report.

Under Rendering, navigate to **Hardware Interactive Report** and select **Attributes**.

In the property editor, locate **Pagination**. For Type, select **Row Ranges X to Y of Z**.



▼ Pagination

Type Row Ranges X to Y of Z ▼

Display Position Bottom - Right ▼

5. You want to customize the display of Search Bar. End users should be able to select the display of desired number of rows per page.

In the property editor, locate Search Bar. For Rows Per Page Selector, select **Yes**. Enter **10** for Maximum Rows Per Page.

Search Bar	
Include Search Bar	<input checked="" type="radio"/> Yes <input type="radio"/> No
Search Field	<input checked="" type="radio"/> Yes <input type="radio"/> No
Finder Drop Down	<input checked="" type="radio"/> Yes <input type="radio"/> No
Reports Select List	<input checked="" type="radio"/> Yes <input type="radio"/> No
Rows Per Page Selector	<input checked="" type="radio"/> Yes <input type="radio"/> No
Search Button Label	<input type="text"/>
Maximum Rows Per Page	<input type="text" value="10"/>

6. Currently your interactive report allows end users to save the report as private. However, you also want to make sure that they can save a report as public. Enable this option in the Actions menu.

In the property editor, locate **Actions Menu**. For Save Public Report, select **Yes**.

Actions Menu		
Include Actions Menu	<input checked="" type="checkbox"/> Yes	No
Filter	<input checked="" type="checkbox"/> Yes	No
Select Columns	<input checked="" type="checkbox"/> Yes	No
Rows Per Page	<input checked="" type="checkbox"/> Yes	No
Sort	<input checked="" type="checkbox"/> Yes	No
Control Break	<input checked="" type="checkbox"/> Yes	No
Highlight	<input checked="" type="checkbox"/> Yes	No
Compute	<input checked="" type="checkbox"/> Yes	No
Aggregate	<input checked="" type="checkbox"/> Yes	No
Chart	<input checked="" type="checkbox"/> Yes	No
Group By	<input checked="" type="checkbox"/> Yes	No
Pivot	<input checked="" type="checkbox"/> Yes	No
Flashback	<input checked="" type="checkbox"/> Yes	No
Save Report	<input checked="" type="checkbox"/> Yes	No
Save Public Report	<input checked="" type="checkbox"/> Yes	No
Save Public Report Authorization	- Select -	

7. You want to disable the Email and RTF formats in the Download option of the Actions menu. In the property editor, navigate to **Download**. Deselect **Email** and **RTF** download formats.

Download	
Download Formats	<input checked="" type="checkbox"/> CSV
	<input checked="" type="checkbox"/> HTML
	<input type="checkbox"/> Email
	<input checked="" type="checkbox"/> XLS
	<input checked="" type="checkbox"/> PDF
	<input type="checkbox"/> RTF

8. Now that you finished the customization for end users, click **Save**. Then, click **Save and Run Page**.
9. Notice that the row selector and the new pagination type are available on the report.

Serial	Cpu Type	Cpu Speed	Purchase Date	Brand	Model	Purchase Price	Department Id
0C8765T	Pentium I	200	09-OCT-98	Dell	Optiplex	2343	2
1U09CM2423	Pentium II	667	01-JUN-99	Dell	Optiplex	3256	2
0KBU4	Pentium III	1000	12-MAY-01	Dell	Optiplex	4532	6
51214246AB	Pentium III	450	14-JUN-01	Dell	Optiplex	5401	3
HQMHC12	Pentium IV	1700	15-JUN-02	Dell	Optiplex	6588	5
W112FGHZ456	Pentium III	800	12-JAN-01	Dell	Optiplex	5330	1
2DLP1	Celeron	366	01-APR-99	Dell	Optiplex	1399	3
6ZQ11	Pentium I	200	24-OCT-96	Dell	Optiplex	2378	2
59785246GH	Pentium III	650	20-MAR-00	Dell	Optiplex	5122	1
12375936YT	Pentium I	166	01-MAR-97	Dell	Optiplex	2266	3

1 - 10 of 37

10. Select **Actions > Report > Save Report**.

11. The Save Report dialog displays. Notice that the Public check box is now available. For Save, select **As Named Report**, enter **Departments Public Report** for Name. Select the **Public** check box and click **Apply**.

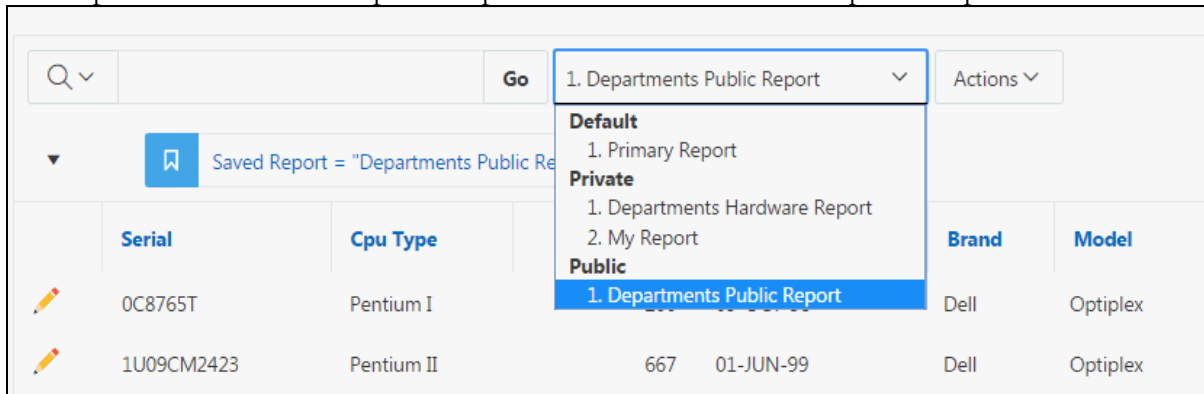
Save Report ✕

Save As Named Report (Only displayed for developers)

Name Departments Public Report Public

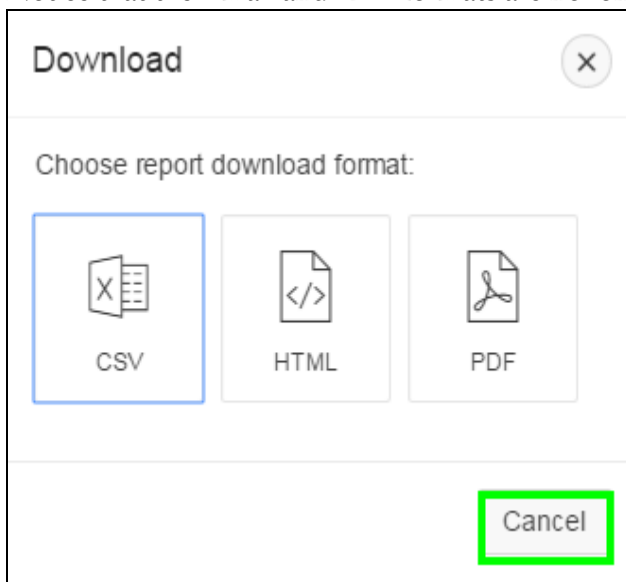
Description

12. This report is now saved as a public report and is available in the Reports drop down list.



13. Click **Actions > Download**.

14. Notice that the Email and RTF formats are no longer available. Click **Cancel**.



15. From the Reports drop down list, select **Primary Report**.



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