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APEX Experts

Hooked on Classic (Reports)

Learn tips & techniques to make them sing

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  "Expert Oracle Application Express, 2nd Edition"
  with "Themes & Templates" chapter

- Oracle Database since 1995
- APEX since it was HTMLDB in 2004
- Kscope16 APEX Track Content Lead
- jrimblas in OTN Forums

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ODTUG

OAUG oracle applications users group

Agenda

- Why?
- Template Types
- Generic Column Templates
- **Named Column Templates**
  - Analytic Functions
  - Limitations
  - Resources

The "Manual" Approach

```
htp.p('<ul>');
for t in (
  select id
       , todo
       , decode(completed_by
              , null, ''
              , 'check' || '-') checked
  from app_todos
)
loop
  htp.p('<li>'
      || t.todo
      ||  ' <i class="fa fa-'
      ||     t.checked || 'square-o">'
      ||   '</i>'
      || '</li>');
end loop;
htp.p('</ul>');
```

Why?

Standard Functionality

Ease of use

Flexibility

No PL/SQL loops

Classic Report examples

Mens:

ASICS

Running

Out of stock 2390	**Gel Nimbus** After 18 years of innovation, the Nimbus® series continues as one of ASICS' most recognized high performing footwear. Get the substitute →	$150.00	ADD TO CART
New Arrival! 9001	**Fuzex** ASICS newest GEL cushioning technology made from the fusion of GEL property and foam creates lightweight adaptable comfort -	$110.96	ADD TO CART

Training

9075	**Gel-Fortius 2 TR** Strategically positioned in critical areas of the outsole, this exceptionally durable compound is 50% more durable than standard ASICS High Abrasion Rubber. -	$95.00	ADD TO CART

NEW BALANCE

Lifestyle

LF574	**574 Sweatshirt** Inspired by your favorite hoodie -	$69.99	ADD TO CART
New Arrival! MVL530	**530 Vazee** Fresh for 2016, our 530 Vazee for men combines a classic upper with a sleek performance base, creating a modern look and feel that's perfect for everyday wear. -	$99.99	ADD TO CART

Running

102374	**Vazee Prism** Find the extra push you need to stay focused on your goals in the Vazee Prism men's running shoe. -	$99.99	ADD TO CART

Template Types

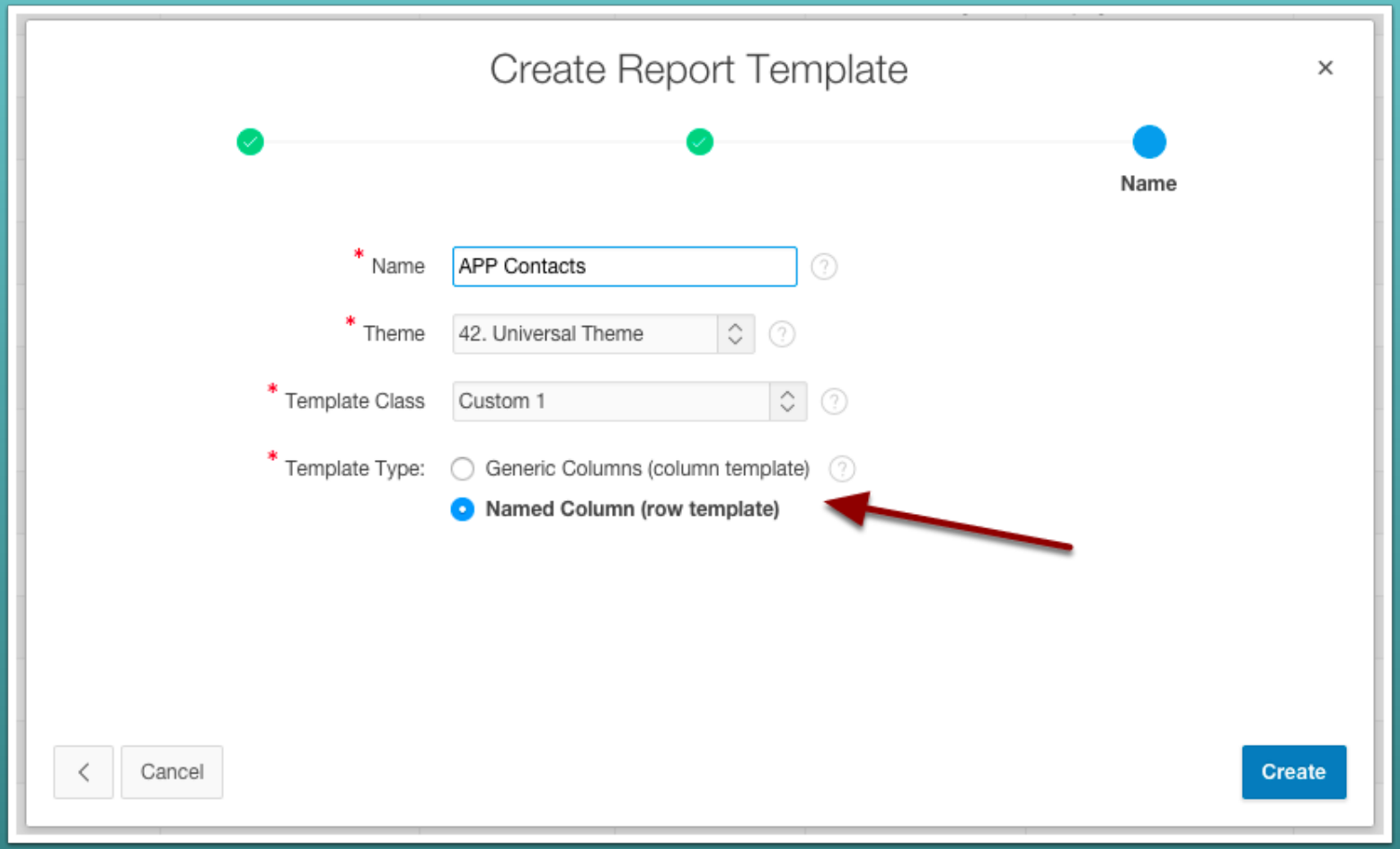
Generic Columns
&
Named Columns

Generic Columns

→ Column Template

Named Columns

→ Row Template


Create Report Template
Name
* Name
APP Contacts
* Theme
42. Universal Theme
* Template Class
Custom 1
* Template Type:
Generic Columns (column template)
Named Column (row template)
Cancel
Create

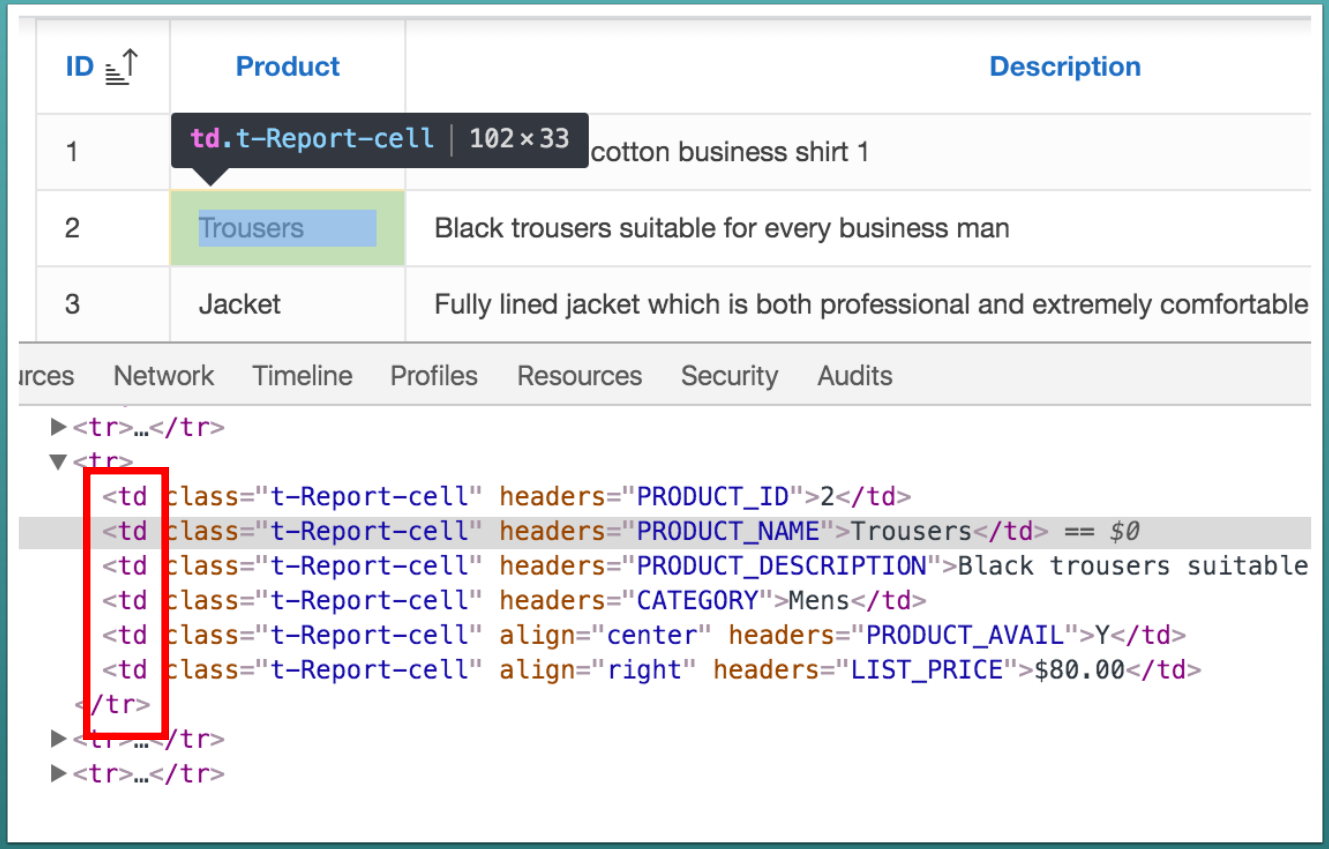
Generic Columns

Every column looks the same

```
<td>
  #COLUMN_VALUE#
</td>
```

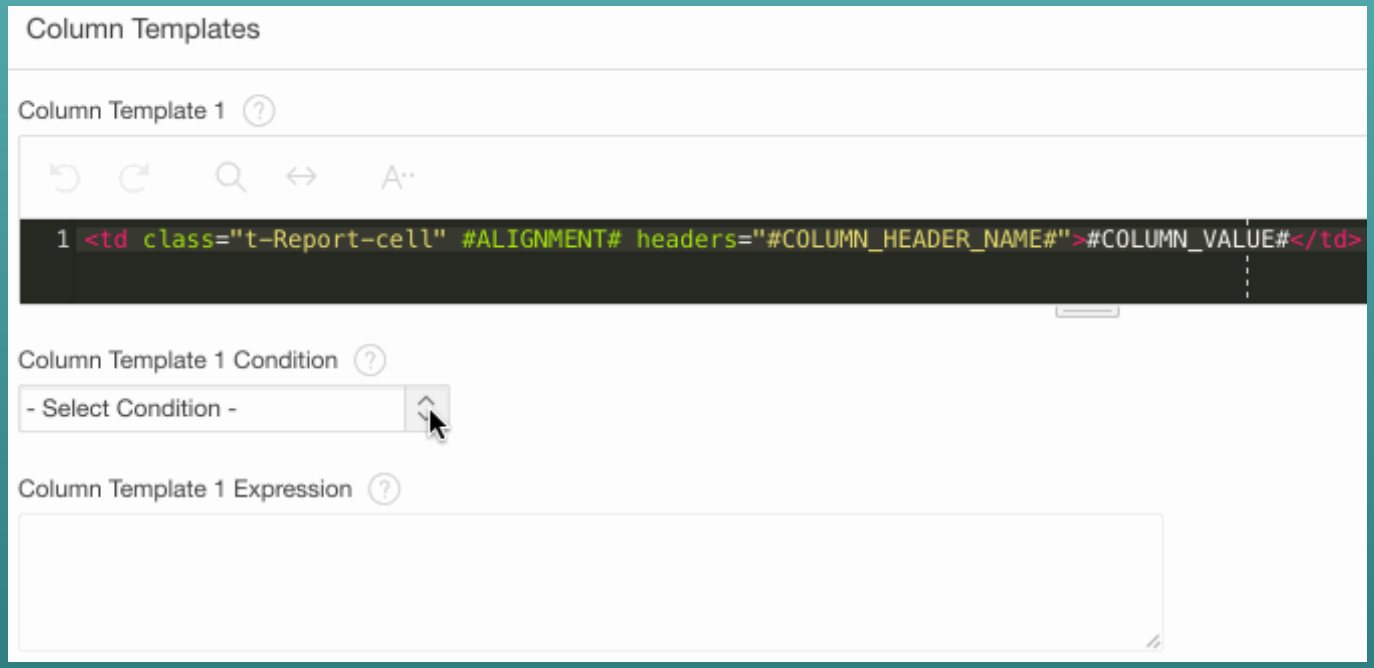
Every column looks the same

```
<td class="t-Report-cell" #ALIGNMENT# headers="#COLUMN_HEADER_NAME#">
  #COLUMN_VALUE#
</td>
```



Column Template Conditions

- **Four** Column Templates
- Condition for each template
- Condition types: PL/SQL Expression, even or odd rows

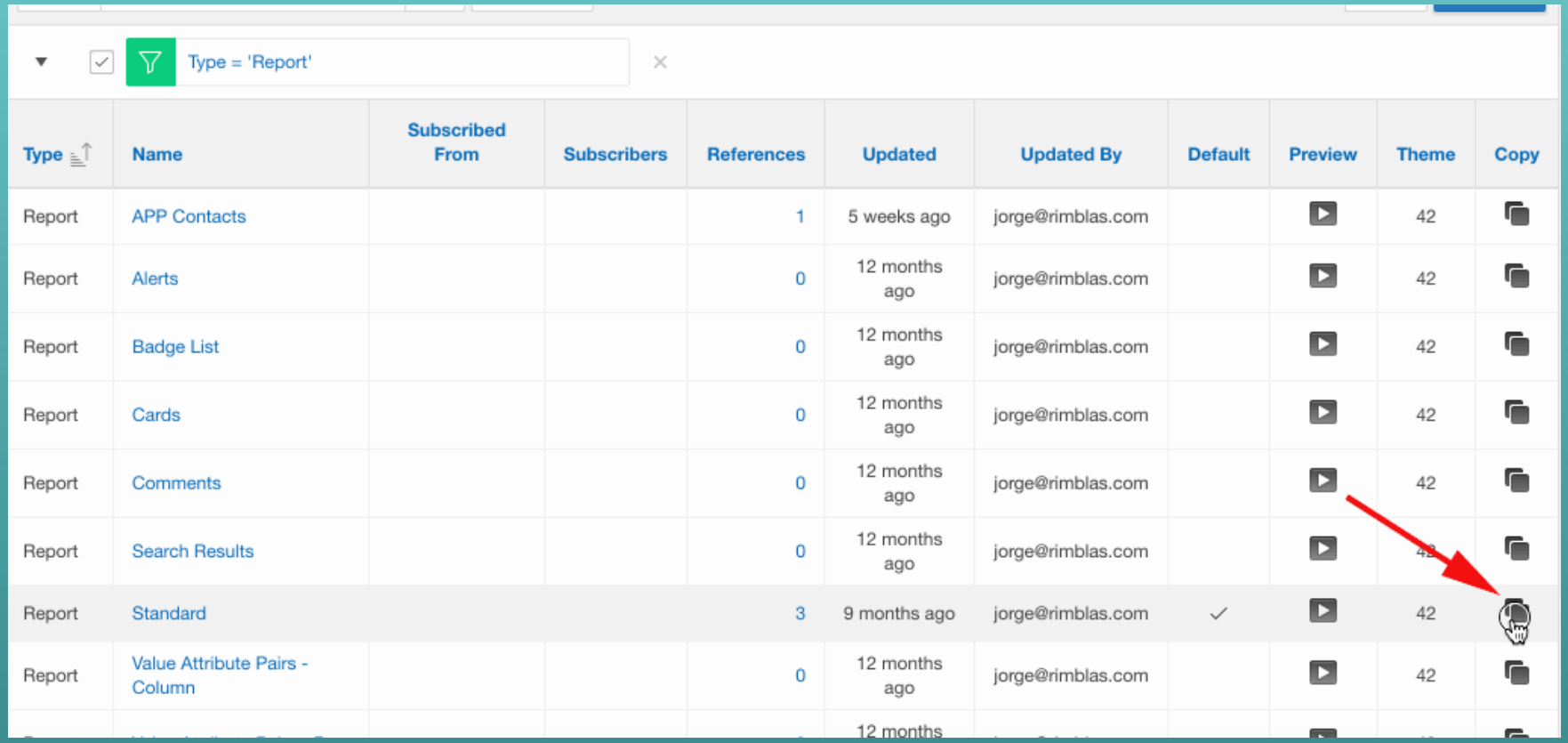


Using conditions

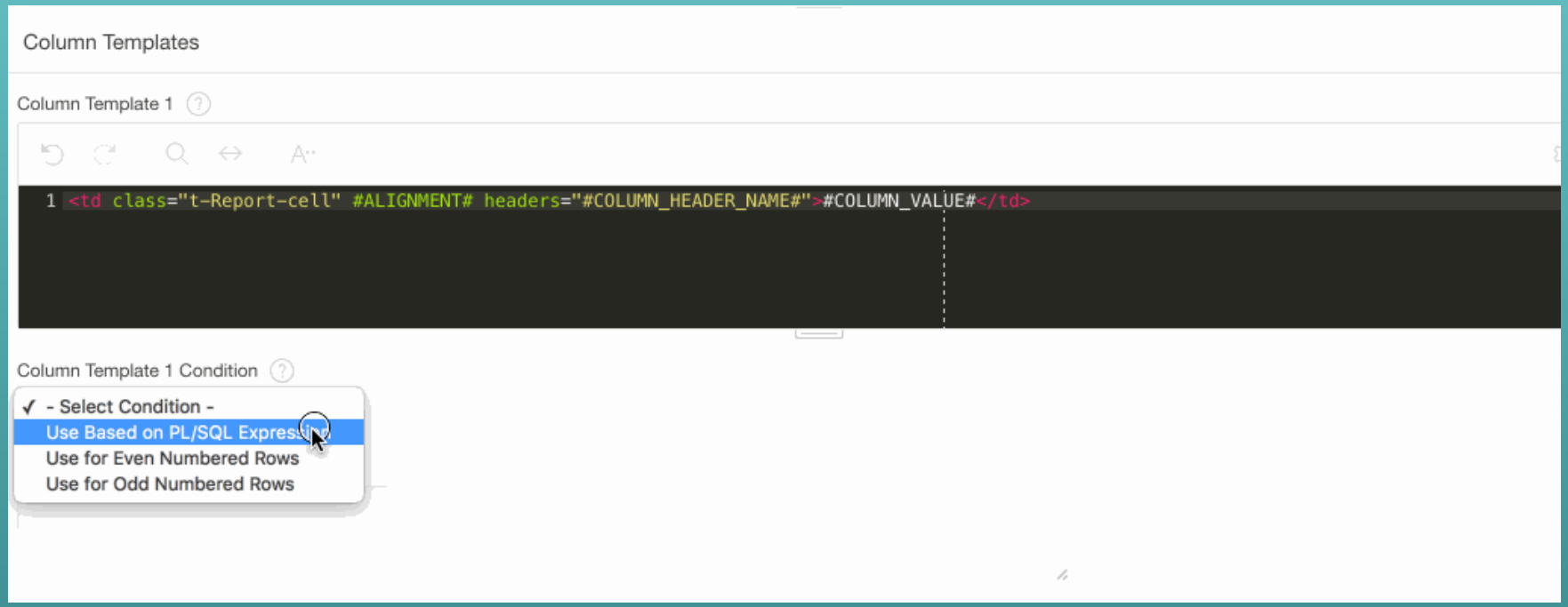
ID	Product	Description	Category	Avail?	Price
1	Business Shirt	Wrinkle-free cotton business shirt 1	Mens	Y	$50.00
2	Trousers	Black trousers suitable for every business man	Mens	Y	$80.00
3	Jacket	Fully lined jacket which is both professional and extremely comfortable to wear	Mens	Y	$150.00
4	Blouse	Silk blouse ideal for all business women	Womens	Y	$60.00
5	Skirt	Wrinkle free skirt	Womens	N	$80.00
6	Ladies Shoes	Low heel and cushioned interior for comfort and style in simple yet elegant shoes	Womens	Y	$120.00
7	Belt	Leather belt 1	Accessories	Y	$30.00
8	Bag	Unisex bag suitable for carrying laptops with room for many additional items	Accessories	Y	$125.00
9	Mens Shoes	Leather upper and lower lace up shoes	Mens	N	$110.00
10	Wallet	Travel wallet suitable for men and women. Several compartments for credit cards, passports and cash	Accessories	Y	$50.00

Download

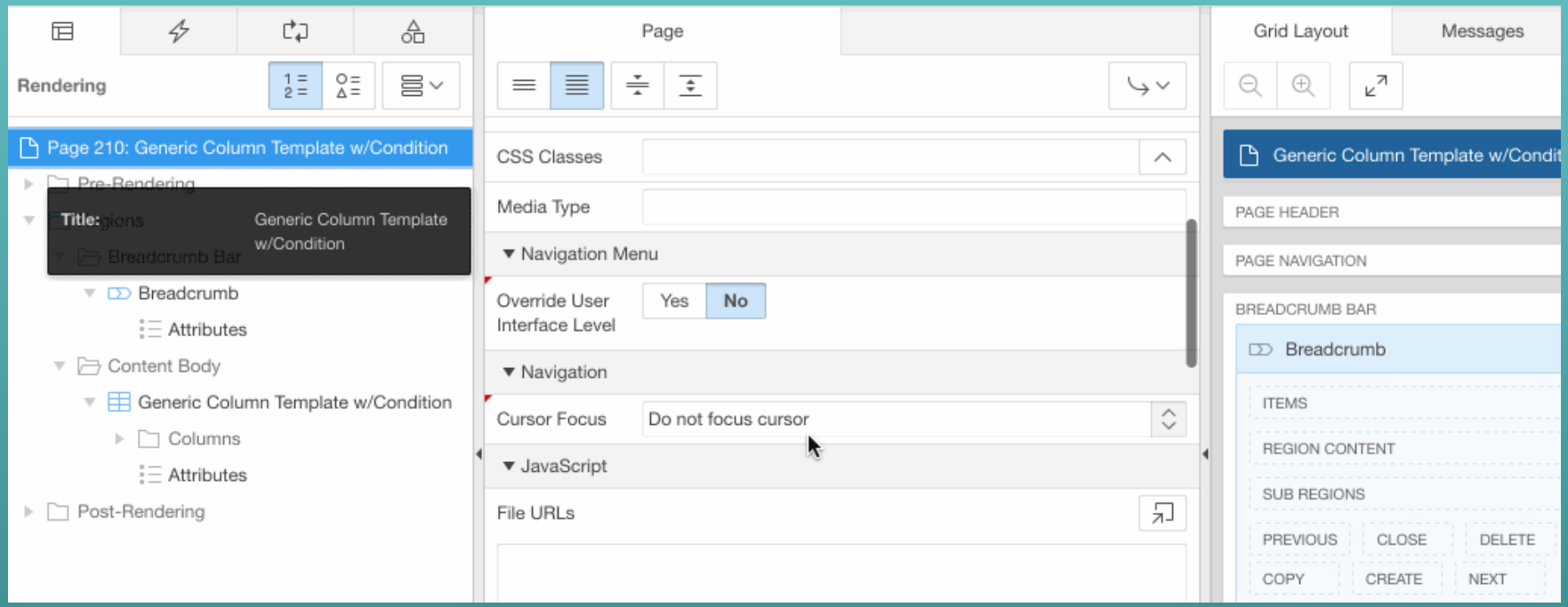
1 - 10



Duplicate the template



Modify the template



Assign the template

ID	Product	Description	Category	Avail?	Price
1	Business Shirt	Wrinkle-free cotton business shirt 1	Mens	Y	$50.00
2	Trousers	Black trousers suitable for every business man	Mens	Y	$80.00
3	Jacket	Fully lined jacket which is both professional and extremely comfortable to wear	Mens	Y	$150.00
4	Blouse	Silk blouse ideal for all business women	Womens	Y	$60.00
5	Skirt	Wrinkle free skirt	Womens	N	$80.00
6	Ladies Shoes	Low heel and cushioned interior for comfort and style in simple yet elegant shoes	Womens	Y	$120.00
7	Belt	Leather belt 1	Accessories	Y	$30.00
8	Bag	Unisex bag suitable for carrying laptops with room for many additional items	Accessories	Y	$125.00
9	Mens Shoes	Leather upper and lower lace up shoes	Mens	N	$110.00
10	Wallet	Travel wallet suitable for men and women. Several compartments for credit cards, passports and cash	Accessories	Y	$50.00

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Step by step details

rimblas.com/blog/2014/05/using-conditions-with-column-templates/

Named Columns

SQL

```
select PRODUCT_ID
     , PRODUCT_NAME
     , PRODUCT_DESCRIPTION
     , CATEGORY
     , PRODUCT_AVAIL
     , LIST_PRICE
 from PRODUCTS
```

Named Columns

```
#PRODUCT_ID#
#PRODUCT_NAME#
#PRODUCT_DESCRIPTION#
#CATEGORY#
#PRODUCT_AVAIL#
#LIST_PRICE#
```

Generic Columns

```
#COLUMN_VALUE#
```

Positional Columns

SQL

```
select PRODUCT_ID
     , PRODUCT_NAME
     , PRODUCT_DESCRIPTION
     , CATEGORY
     , PRODUCT_AVAIL
     , LIST_PRICE
 from PRODUCTS
```

Named Columns

```
#1#
#2#
#3#
#4#
#5#
#6#
```

Simple List

Simple List

```
<ul>
  <li>Orange Juice <i class="fa fa-check-square-o"></i></li>
  <li>Milk <i class="fa fa-check-square-o"></i></li>
  <li>Eggs <i class="fa fa-square-o"></i></li>
  <li>Bread <i class="fa fa-square-o"></i></li>
  <li>Cornflakes <i class="fa fa-square-o"></i></li>
</ul>
```

```
<ul>
```

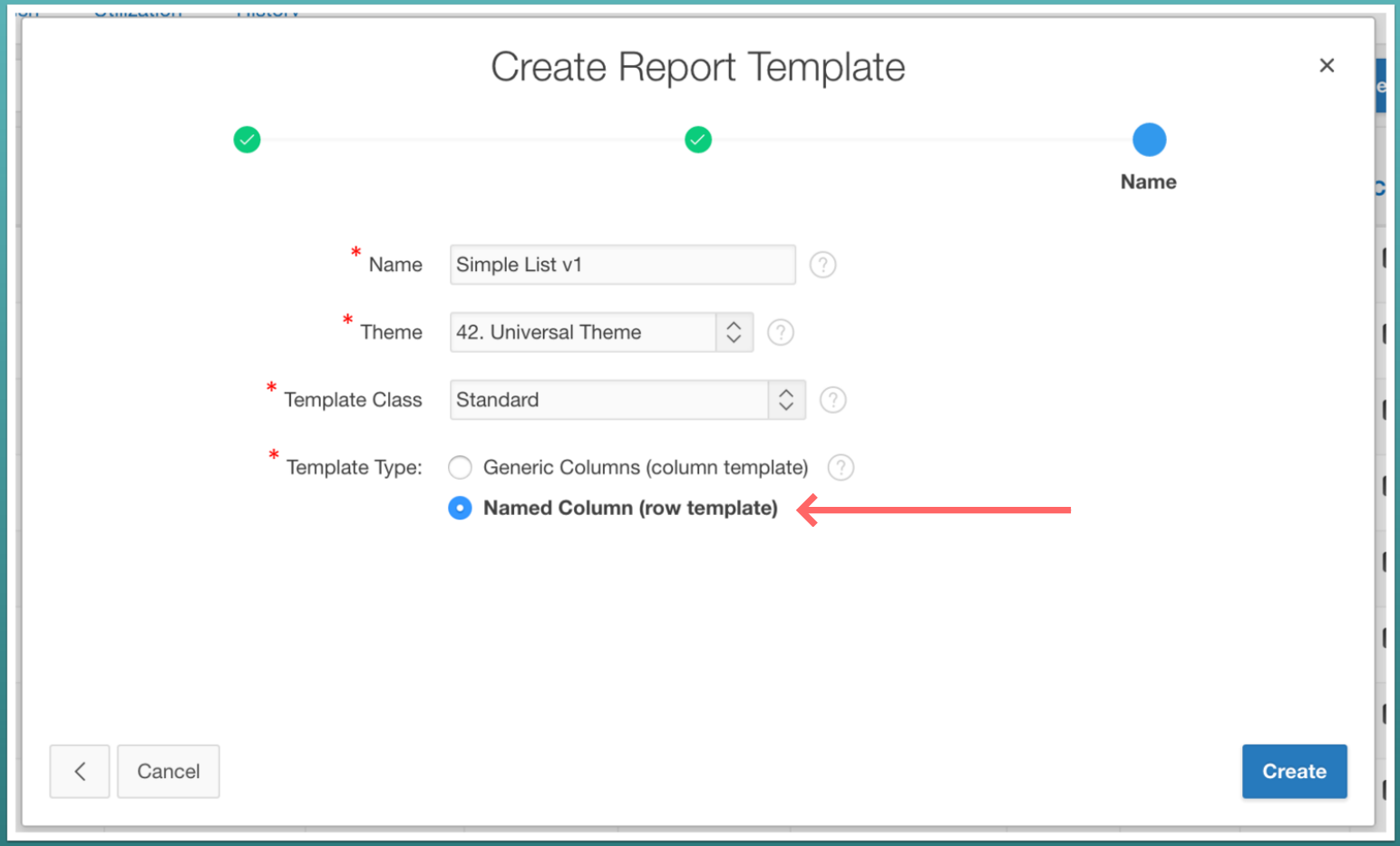
Before Rows

```
  <li>#TODO# <i class="fa fa-#CHECKED#square-o"></i></li>
```

```
</ul>
```

After Rows

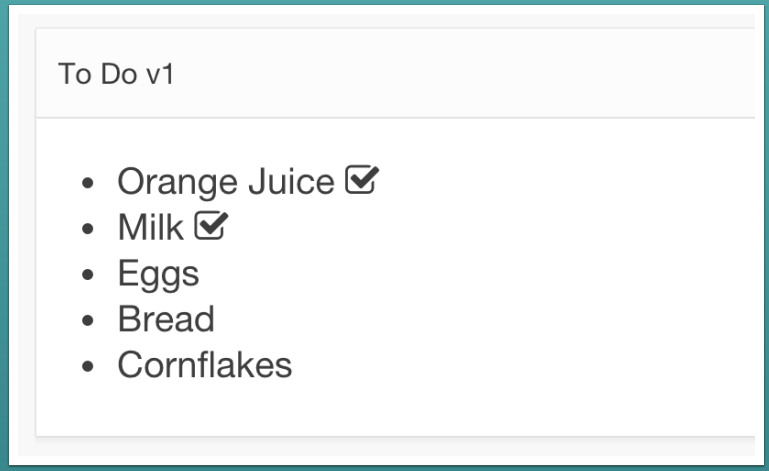
Simple List Template



Simple List

```
<li>#TODO# <i class="fa fa-#CHECKED#square-o"></i></li>
```

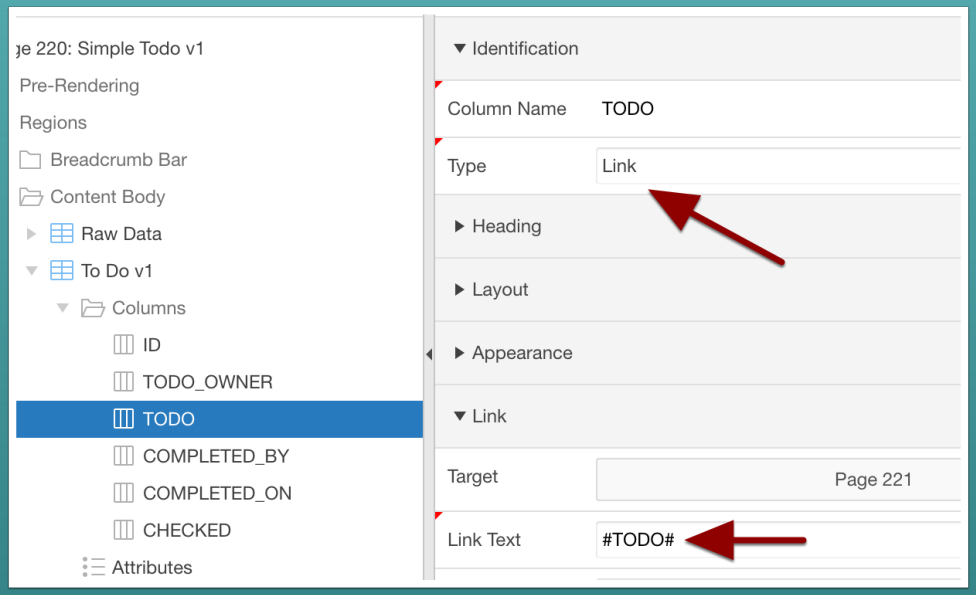
```
select id
     , todo
     , decode(completed_by
           , null, ''
           , 'check' || '-') checked
     , completed_by
     , completed_on
from app_todos
```

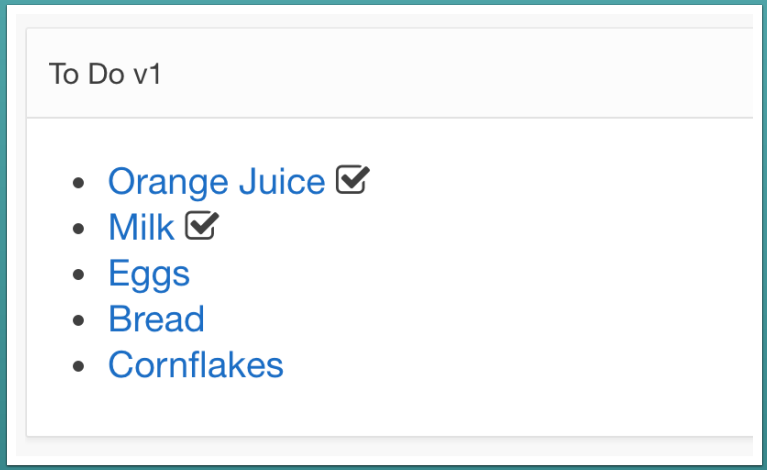


Demo p220

Demo

Adding a link to edit



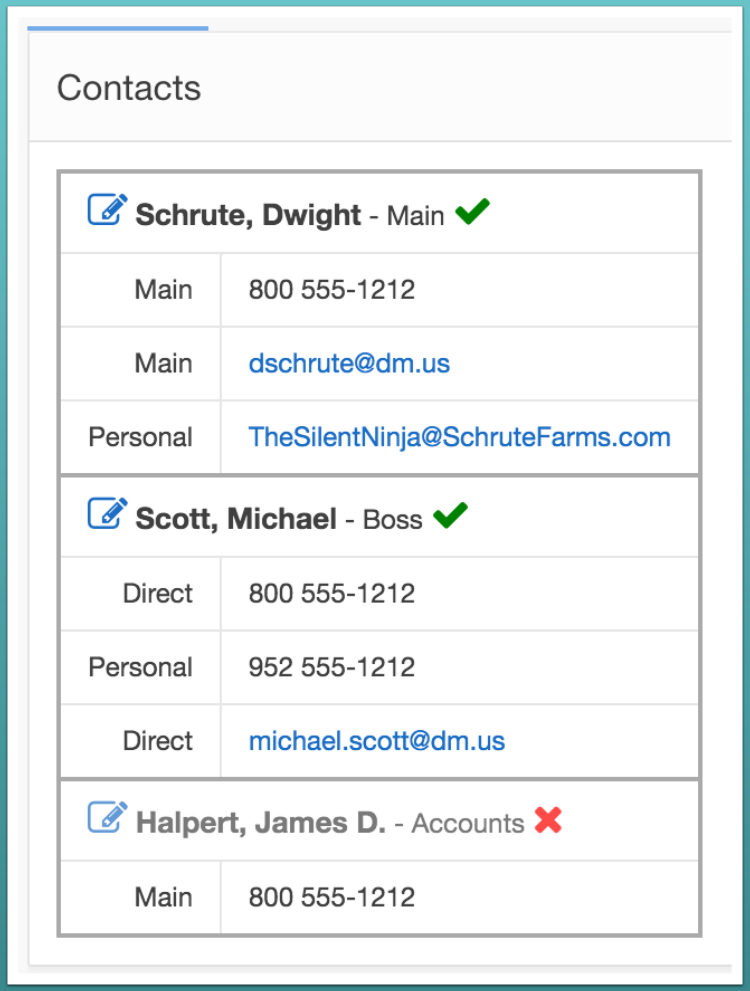


Benefits

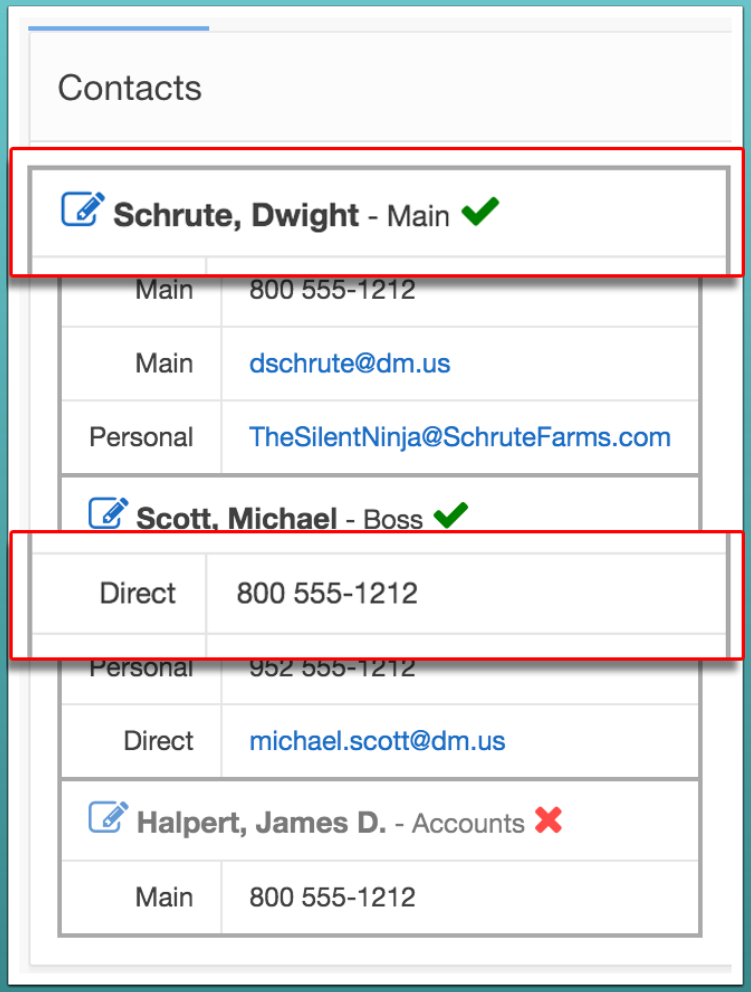
- Standard Classic Report Functionality
  - Edit Links
  - Dynamic Actions
    - Dialog Close
    - Refresh

Named Columns

Mixing Layouts



Contact List




```
<tr>
  <td colspan="2">
    <a href="#LINK#">&EDIT_BUTTON.</a>
    #PARTY_NAME# - #ROLE# <i class="fa"></i>
  </td>
</tr>
```

```
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

Two types of rows

```
select party_id
     , party_name
     , role
     , type_name
     , entry
     , active_ind
  from parties
```

```
<tr>
  <td colspan="2">
    <a href="#LINK#">&EDIT_BUTTON.</a>
    #PARTY_NAME# - #ROLE# <i class="fa"></i>
  </td>
</tr>
```

```
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

PARTY_ID	PARTY_NAME	ROLE	TYPE_NAME	ENTRY	ACTIVE_IND
21	Schrute, Dwight	Main	Main	800 555-1212	Y
21	Schrute, Dwight	Main	Personal	TheSilentNinja@SchruteFarms.com	Y
21	Schrute, Dwight	Main	Main	dschrute@dm.us	Y
1	Scott, Michael	Boss	Personal	952 555-1212	Y
1	Scott, Michael	Boss	Direct	michael.scott@dm.us	Y
1	Scott, Michael	Boss	Direct	800 555-1212	Y
41	Halpert, James D.	Accounts	Main	800 555-1212	N

7 rows selected.

Special Case

```
select party_id
     , party_name
     , role
     , type_name
     , entry
     , active_ind
  from parties
 where party_id = 41
```

```
<tr>
  <td colspan="2">
    <a href="#LINK#">&EDIT_BUTTON.</a>
    #PARTY_NAME# - #ROLE# <i class="fa"></i>
  </td>
</tr>
```

```
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

PARTY_ID	PARTY_NAME	ROLE	TYPE_NAME	ENTRY	ACTIVE_IND
41	Halpert, James D.	Accounts	Main	800 555-1212	N

For a single row

→ Or the 1st Party Row

Use **both** types of rows

PARTY_ID	PARTY_NAME	ROLE	TYPE_NAME	ENTRY	ACTIVE_IND
21	Schrute, Dwight	Main	Main	800 555-1212	Y
21	Schrute, Dwight	Main	Personal	TheSilentNinja@SchruteFarms.com	Y
21	Schrute, Dwight	Main	Main	dschrute@dm.us	Y
1	Scott, Michael	Boss	Personal	952 555-1212	Y
1	Scott, Michael	Boss	Direct	michael.scott@dm.us	Y
1	Scott, Michael	Boss	Direct	800 555-1212	Y
41	Halpert, James D.	Accounts	Main	800 555-1212	N

7 rows selected.

Analytic Functions

Analytics Syntax

```
<function> (<arg1>, <arg2>, )
  OVER (
     < partition clause >
     < sorting clause >
     < windowing clause >
   )
```

```
row_number()
   over (
     partition by party_id
     order by party_name, entry
   )
```

Analytics

```
select party_id
     , party_name
     , entry
     , row_number() over (
         partition by party_id
         order by party_name, entry) rn
  from parties
```

```
PARTY_ID  PARTY_NAME         ENTRY                            RN
--------- ------------------ -------------------------------- -------
1         Scott, Michael     800 555-1212                     1
1         Scott, Michael     952 555-1212                     2
1         Scott, Michael     michael.scott@dm.us              3
21        Schrute, Dwight    800 555-1212                     1
21        Schrute, Dwight    TheSilentNinja@SchruteFarms.com  2
21        Schrute, Dwight    dschrute@dm.us                   3
21        Schrute, Dwight    ceo@SchruteFarms.com             4
41        Halpert, James D.  800 555-1212                     1

 8 rows selected.
```

count(*) as analytic

```
select party_id
     , party_name
     , row_number() over (
         partition by party_id
         order by party_name, entry) rn
     , count(*) over (
        partition by party_id
       ) total_rows
  from parties
```

```
PARTY_ID  PARTY_NAME          RN  TOTAL_ROWS
--------- ------------------- --- -----------
1         Scott, Michael      1   3
1         Scott, Michael      2   3
1         Scott, Michael      3   3
21        Schrute, Dwight     1   4
21        Schrute, Dwight     2   4
21        Schrute, Dwight     3   4
21        Schrute, Dwight     4   4
41        Halpert, James D.   1   1

 8 rows selected.
```

KISS series on Analytics

by Connor McDonald

youtu.be/nk4I4ta4ZuU

```
select party_id
     , party_name
     , role
     , type_name
     , entry
     , row_number() over (partition by party_id
                              order by party_name, entry) rn
  from parties
```

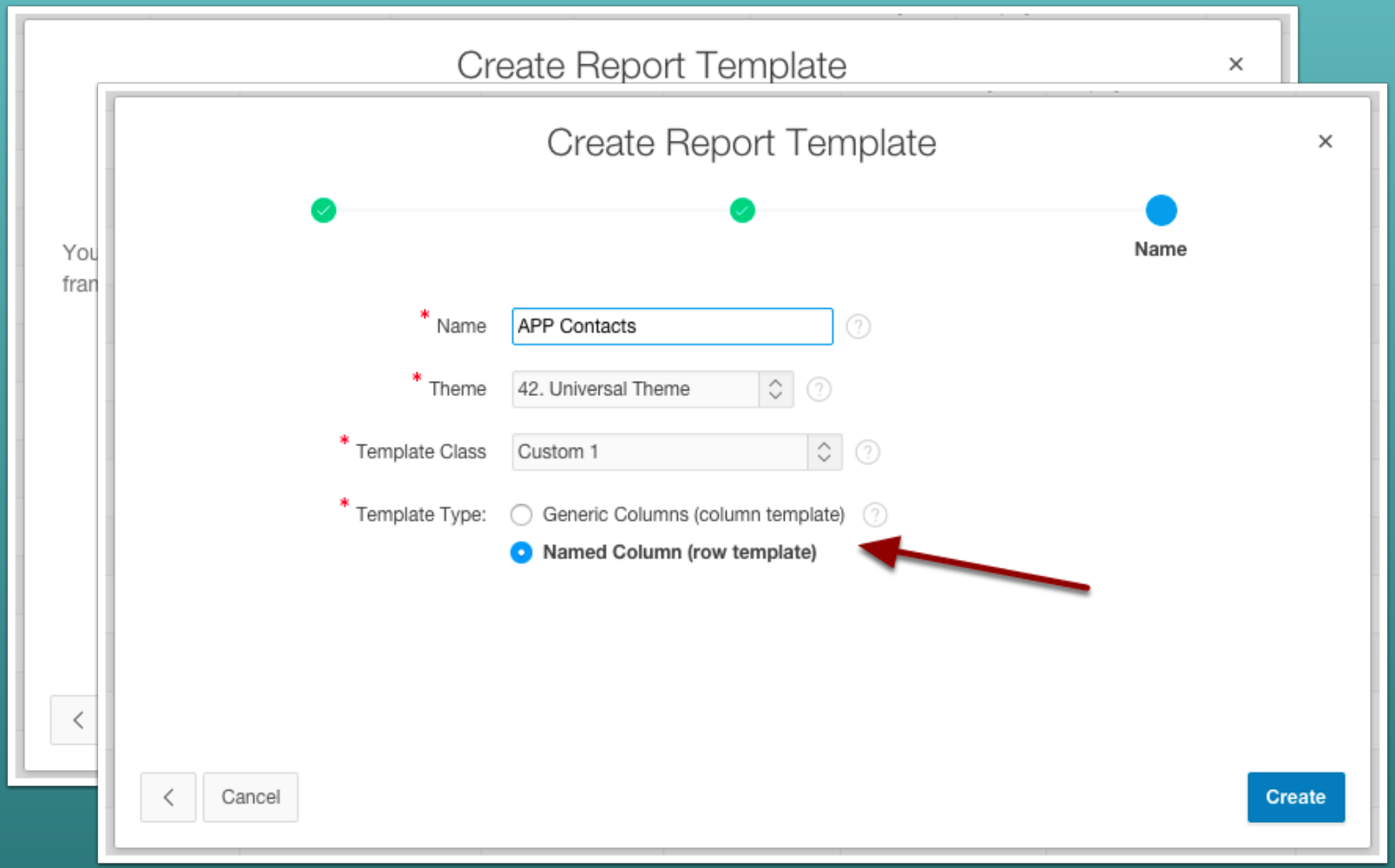
PARTY_ID	PARTY_NAME	ROLE	TYPE_NAME	ENTRY	RN
21	Schrute, Dwight	Main	Main	800 555-1212	1
21	Schrute, Dwight	Main	Personal	TheSilentNinja@SchruteFarms.com	2
21	Schrute, Dwight	Main	Main	dschrute@dm.us	3
1	Scott, Michael	Boss	Direct	800 555-1212	1
1	Scott, Michael	Boss	Personal	952 555-1212	2
1	Scott, Michael	Boss	Direct	michael.scott@dm.us	3
41	Halpert, James D.	Accounts	Main	800 555-1212	1

7 rows selected.

```
:RN = 1
```

Putting it all together

Create a new template



Before Rows

Before Rows

```
1  <table class="app-contacts t-Report-report">
```

Column Template 1

```
<tr>
  <td colspan="2">
    <a href="#LINK#">&EDIT_BUTTON.</a>
    #PARTY_NAME# - #ROLE# <i class="fa"></i>
  </td>
</tr>
```

```
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

Column Template 2

```
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

After Rows

After Rows

```
1  </table>
```

Column Template 1

```
<tr>
  <td colsp
    <a href
    #PARTY_
  </td>
</tr>
<tr>
  <td align
  <td>#ENTR
</tr>
```

1

Adding some markup

Column Template 1

```
<tr>
  <td colspan="2">
    <a href="#LINK#">&EDIT_BUTTON.</a>
    #PARTY_NAME# - #ROLE# <i class="fa"></i>
  </td>
</tr>
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

```
:RN = 1
```

Column Template 1

```
1  <tr class="newContact rowStatus_#ACTIVE_IND#">
2    <td colspan="2" class="t-Report-cell heading">
3      <a href="#LINK#" class="contactEdit" data-id="#PARTY_ID#">&EDIT_BUTTON.</a>
4      <span class="name">#PARTY_NAME#</span> - <span class="roleName">#ROLE#</span> <i class="fa cfa-check_#ACTIVE_IND# cfa-1_5x"
       title="#ACTIVE_IND#"></i>
5    </td>
6  </tr>
7  <tr>
8    <td align="right" class="t-Report-cell contactType">#TYPE_NAME#</td><td class="t-Report-cell contactEntry">#ENTRY#</td>
9  </tr>
10
```

Column Template 1 Condition

Use Based on PL/SQL Expression

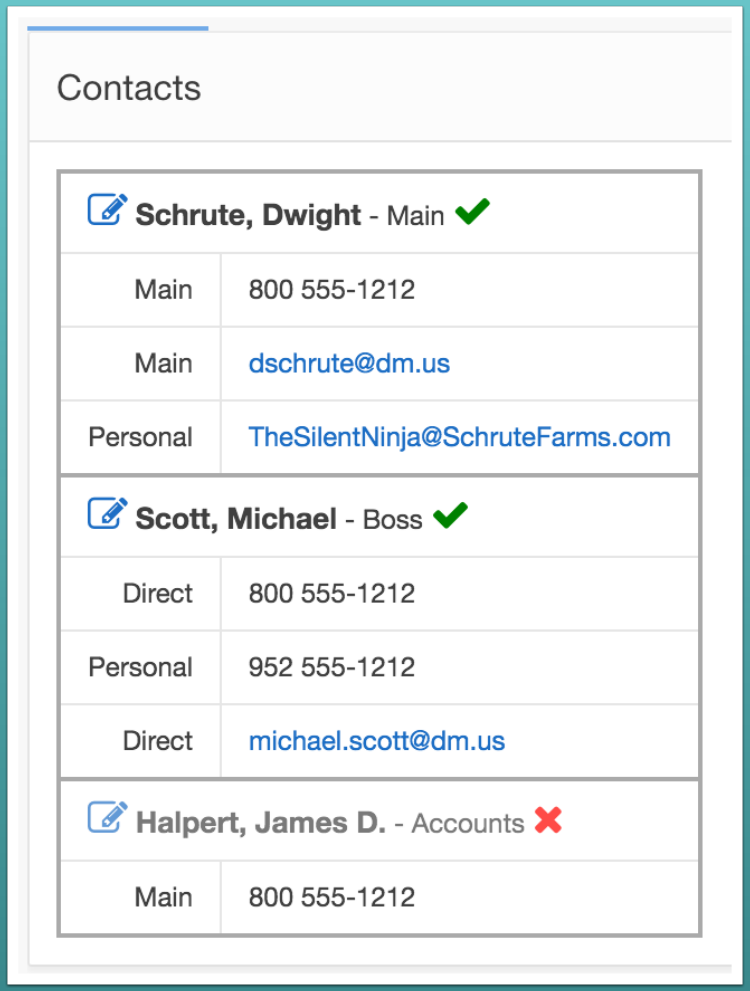
Column Template 1 Expression

```
:RN = 1
```

Column Template 2

```
<tr>
  <td align="right">#TYPE_NAME#</td>
  <td>#ENTRY#</td>
</tr>
```

else



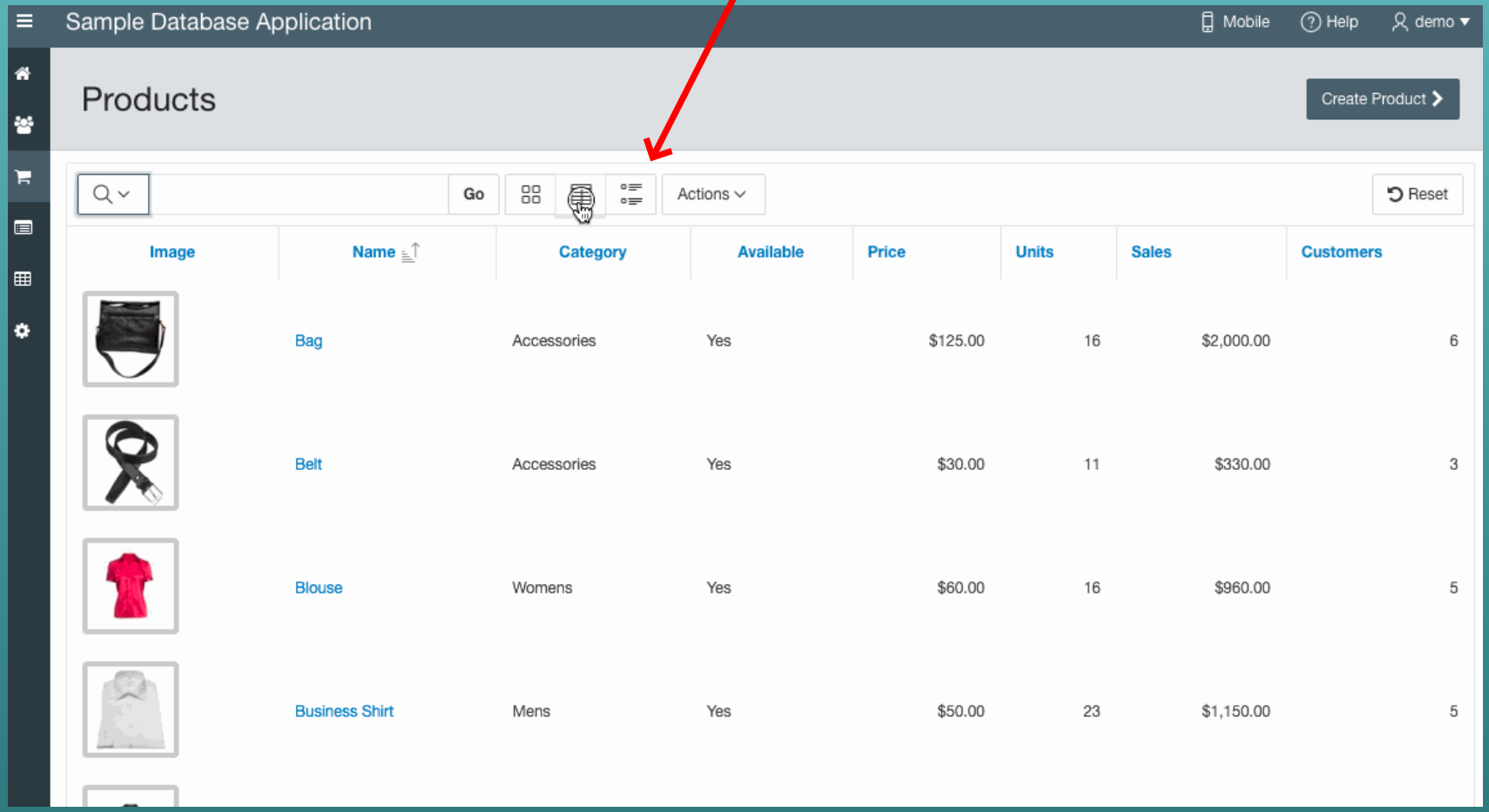
Contact List

Limitations

- Some HTML knowledge
- Templates are not that re-usable
- New columns require template changes
- Only 4 template conditions
- Potential Pagination Issues
- Limited support for Interactive Reports

Interactive Reports

Detail View



Blogs & References

- Demo App apex.oracle.com/pls/apex/f?p=89361 [Download]
- Demo Video Series
  http://rimblas.com/blog/videos/
- Using Conditions with Column Templates
  rimblas.com/blog/2014/05/using-conditions-with-column-templates/
- KISS Analytics playlist
  https://www.youtube.com/playlist?list=PLJMaoEWvHwFJDyhMLCkNSSUQWw9waFkIj
- APEX Reports: Color Row Based On Column Value
  ww.eberapp.com/pls/apex/f?p=BLOG:READ:0::::ARTICLE:5983100346022749
- APEX Reports: Custom Layout with Named Column (Row Template)
  ww.eberapp.com/pls/apex/f?p=BLOG:READ:0::::ARTICLE:5976400346831048
- Reinventing APEX Reporting
  morneau.me/reinventing-apex-reporting/
- Oracle APEX 5 Classic Report Templates
  storm-petrel.com/orablog/2015/12/20/oracle-apex-5-classic-report-templates/

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Q&A

Hooked on Classic (Reports)

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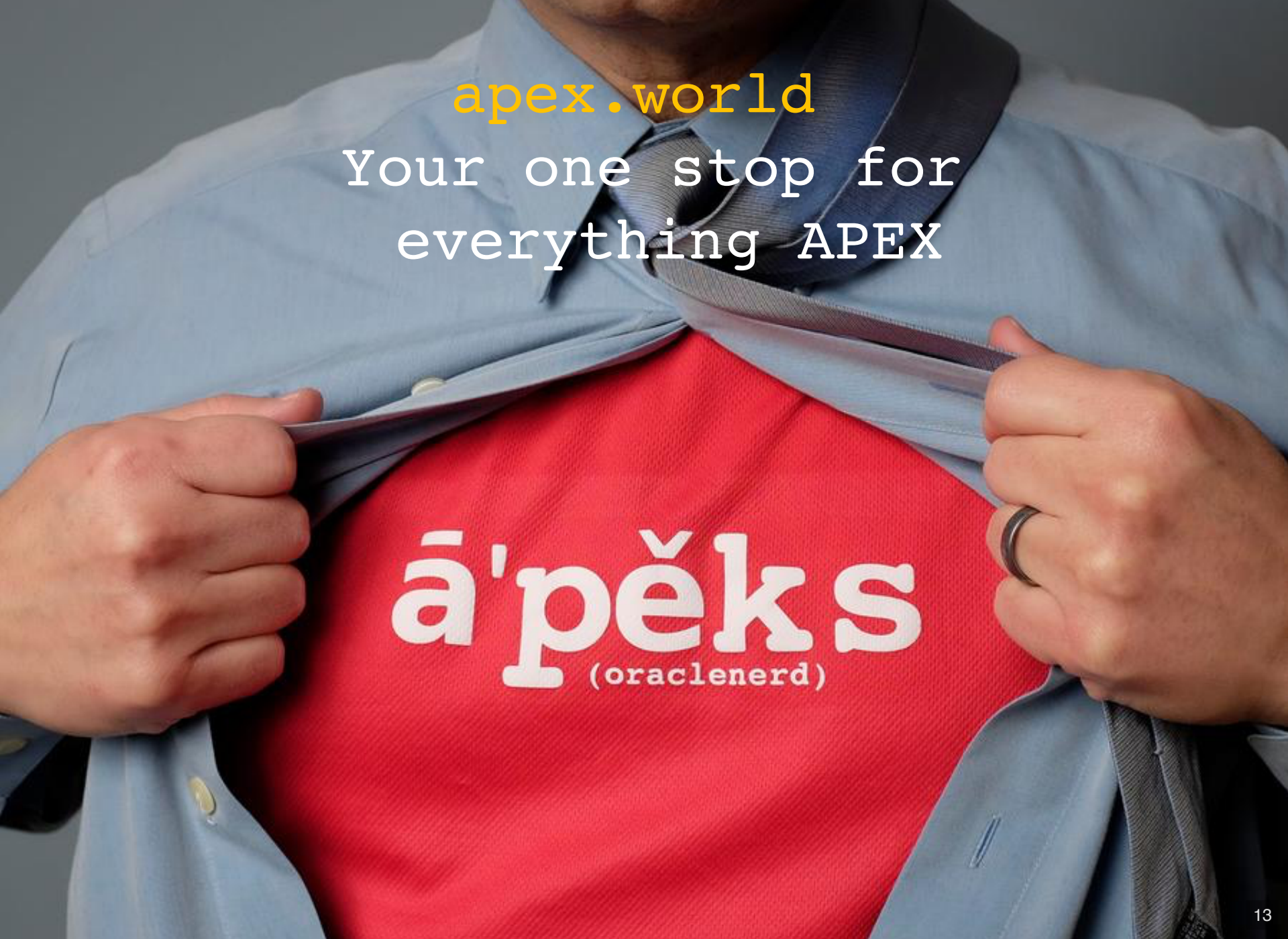
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