HACKING SHAREPOINT

TAKING ADVANTAGE OF SHAREPOINT'S (NOT SO KNOWN) FEATURES

WHAT THIS PRESENTATION IS ABOUT

- DEVELOPER FOCUSED
- COVERS DIFFERENT WAYS TO PROGRAMMATICALLY RENDER SHAREPOINT LIST DATA
  - JavaScript
  - XSL
  - XML
  - HTML
  - CSS and libraries like Bootstrap

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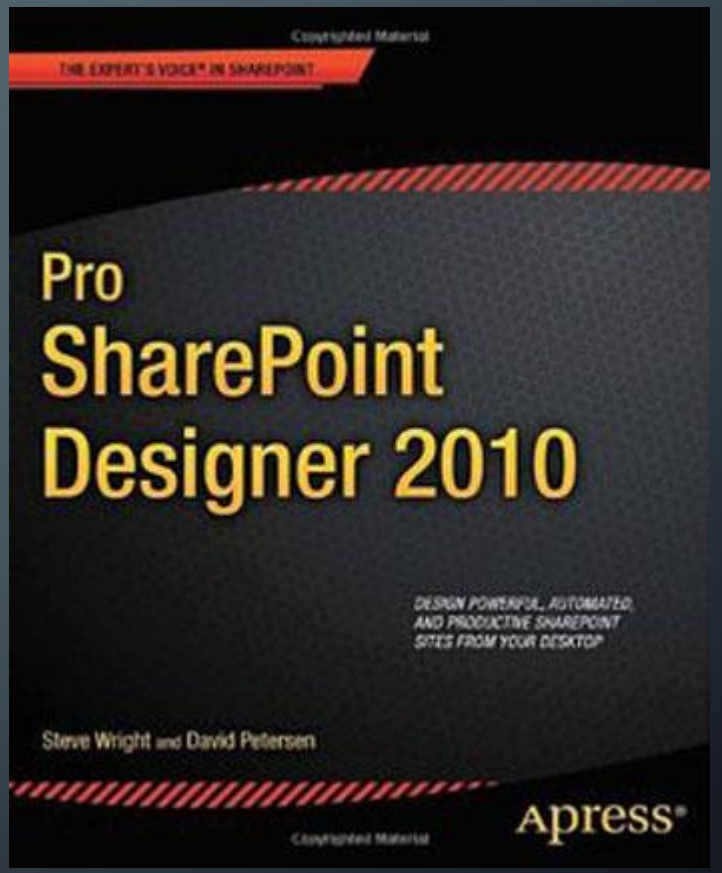
Free 1 year lic. to Fusion - SP Saturday Omaha

DAVID PETERSEN

- Independent Consultant
- Co-Author of Pro SharePoint Designer 2010
- Blog - http://whatsthesharepoint.com
- Co-Leader, Omaha SharePoint User Group
- Organizer of SharePoint Saturday – Omaha



david@dipetersen.com
@dipetersen
http://linkedin.com/in/dpetersen

What's The (Share)Point?

Another resource for MS SharePoint information.

Home | About | Presentation Notes | SharePoint Sucks | Speaking Engagements

SharePoint Sucks

By **David Petersen**, May 8, 2012 1:15 pm

In most of my presentations, you will hear me say, "SharePoint doesn't suck, your implementation of SharePoint sucks!" I "tweeted" this once and a lively discussion ensued to the point that **Dux Raymond Sy** sent me this t-shirt! I am sure that if you searched for "SharePoint Sucks" you weren't expecting this page, but while you're here, enjoy the pictures. I'll try to bring this shirt to all the events I attend so I can get even more pictures!

After a few beers at our October SharePint, I convinced a few people to "Wear the shirt"!

Picture #5 – The Manager

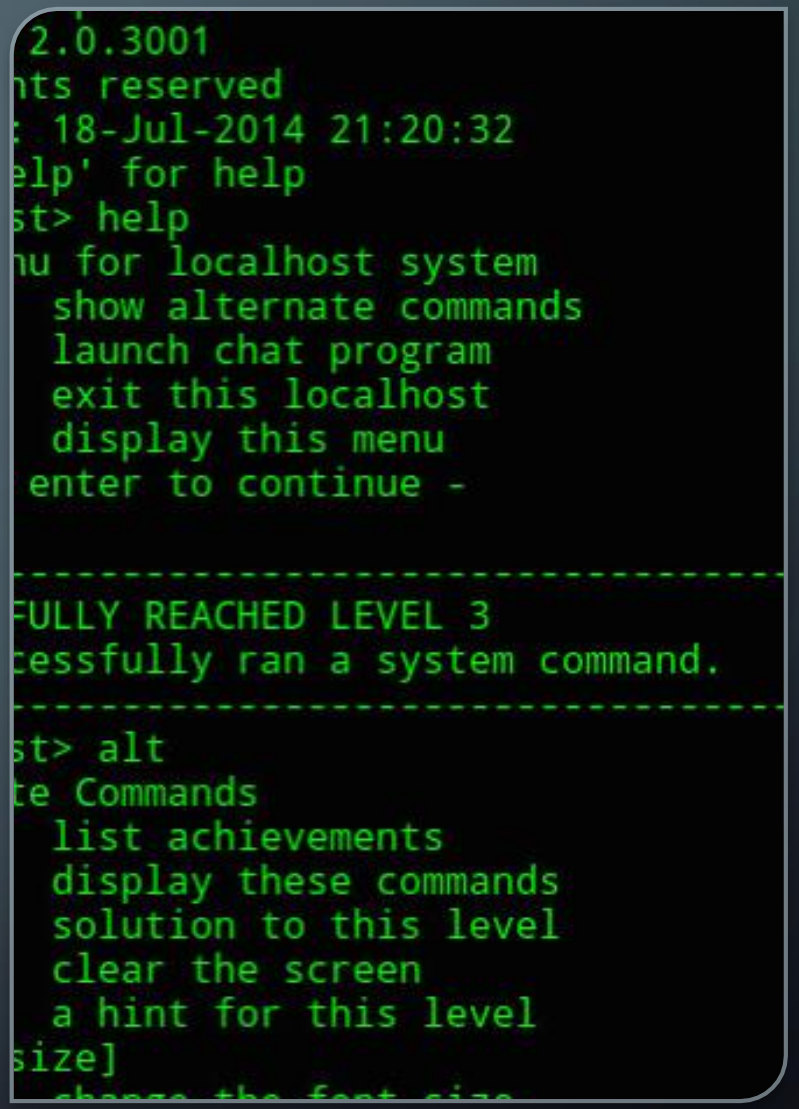
Picture #4 – The Legal Administrator

HACK

to devise or modify a computer program, usually skillfully

Or if not done skillfully,

“to damage or injure by crude, harsh, or insensitive treatment; mutilate; mangle”



MY DEFINITION

Using all the tools available in the toolbox to transform SharePoint data to fit your needs.

WHAT DO WE USE

- JavaScript
  - jQuery, jQueryUI
  - Other frameworks (AngularJS, Knockout)
- CSS
  - Bootstrap
- XSL and XSLT
- CSR/JSLink
- HTML
- Web Services
  - SOAP
  - REST

THIS PRESENTATION'S FOCUS

- XSL/XSLT
- CSR (JSLink)

TRANSFORM DATA WITH XSL

- Ever since WSS 2.0 we can use data from the following sources
  - SQL Server
  - CSV Files
  - Anything with OLEDB Provider
    - Lotus Notes
    - Access
    - Exchange Mailboxes
    - Excel Files
    - MySQL
    - PostGreSQL
    - Any URL that returns XML (e.g. RSS, Atom, - Server Side Scripts)
    - SOAP Web Services

TRANSFORM DATA WITH XSL

- With 2010
  - REST * with some odd limits (NO JSON)
    - Tickets – HTTP Get retrieves a ticket, HTTP Post Creates/Updates/Deletes a ticket
  - WCF
- With 2013
  - Improved REST
  - Added support for OData

EVERY LISTVIEW RETURNS DATA AS XML

Use Custom XSL to transform that XML into the display that you want

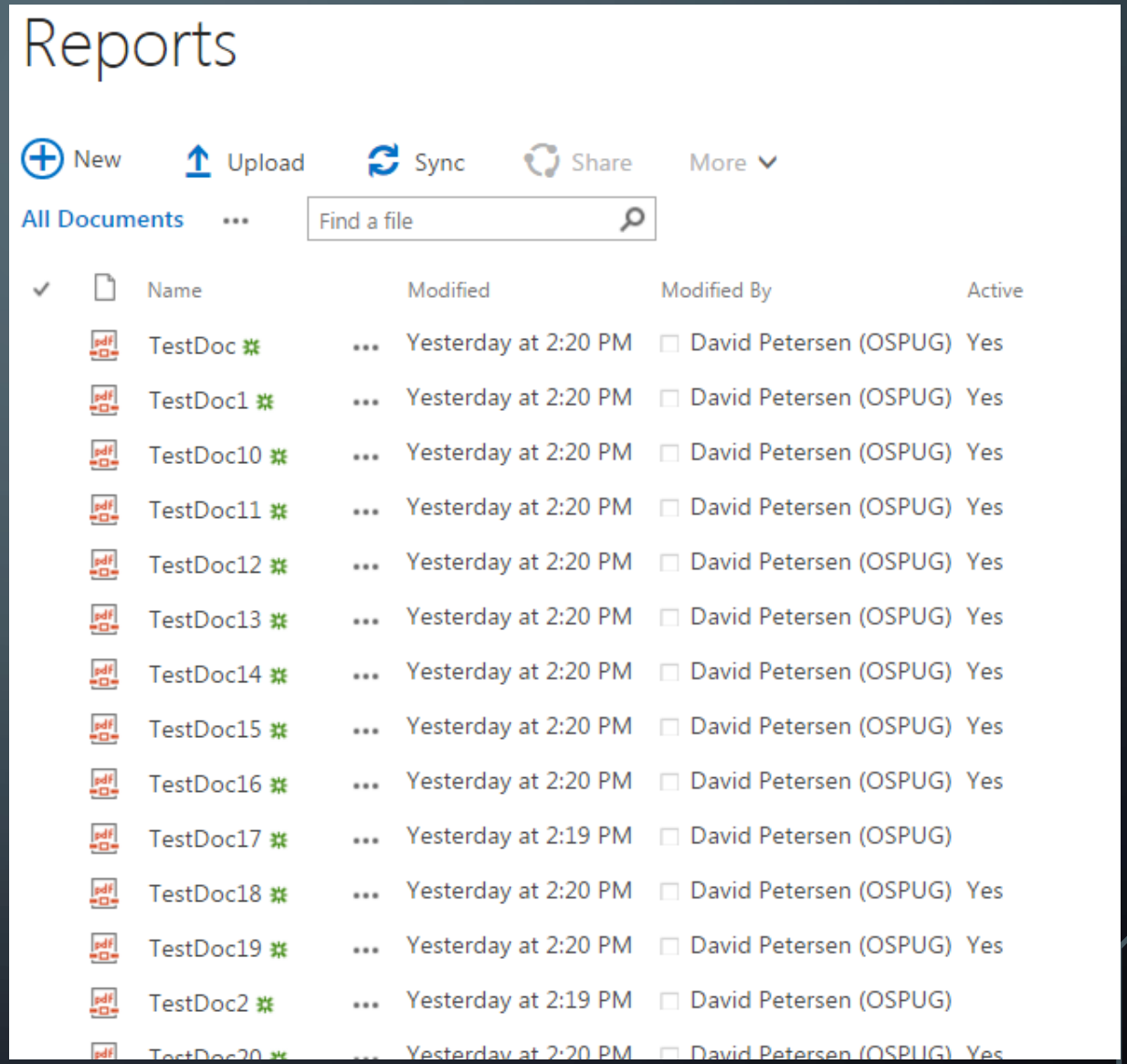
TOOLS

- Jsfiddle.net – javascript playground
- CodePen.io
- SublimeText.com – Text Editor – https://www.sublimetext.com
- Atom – https://atom.io
- Visual Studio Code - https://code.visualstudio.com/
- XPathTester.com
- W3 Schools XSLT Tester - http://www.w3schools.com/xsl
- XML Editor – http://oxygenxml.com
- Firefox Addons – great list at http://addons.Mozilla.org/en-us/firefox/collections/SharePoint_Experience/spexp
- SVG Editor - https://github.com/SVG-Edit/svgedit

BASE XSL TEMPLATE

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
   <xsl:output omit-xml-declaration="yes" indent="yes" />
   <xsl:strip-space elements="*" />
   <xsl:template match="/">
       <!- This is the wrapper -->
        <xsl:apply-templates/>
       <!- End wrapper -->
   </xsl:template>
   <xsl:template match="/dsQueryResponse/Rows/Row”>
        <!- Markup for each item →
   </xsl:template>
</xsl:stylesheet>
```

TURN THIS


Reports
New
Upload
Sync
Share
More
All Documents
Find a file
Name
Modified
Modified By
Active
TestDoc Yesterday at 2:20 PM David Petersen (OSPUG) Yes
TestDoc1 Yesterday at 2:20 PM David Petersen (OSPUG) Yes
TestDoc10 Yesterday at 2:20 PM David Petersen (OSPUG) Yes
TestDoc11 Yesterday at 2:20 PM David Petersen (OSPUG) Yes
TestDoc12 Yesterday at 2:20 PM David Petersen (OSPUG) Yes
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TestDoc18 Yesterday at 2:20 PM David Petersen (OSPUG) Yes
TestDoc19 Yesterday at 2:20 PM David Petersen (OSPUG) Yes
TestDoc2 Yesterday at 2:19 PM David Petersen (OSPUG)

INTO THIS

PROGRAM DOCUMENTS
TestDoc
TestDoc1
TestDoc10
TestDoc11
TestDoc12
TestDoc13
TestDoc14
TestDoc15
TestDoc16
TestDoc18
TestDoc19

FeaturedItems

Title	Air Quality
Body	Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh
Image	
FeaturedLink	Air Quality
ParentLink	Environment
ParentButtonName	Environment
DisplayOrder	1
SliderImage	

Featured Pages

Air Quality

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

Cancer

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

Population

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

Health Snapshots

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

FeaturePanels

Air Quality

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

Environment

Cancer

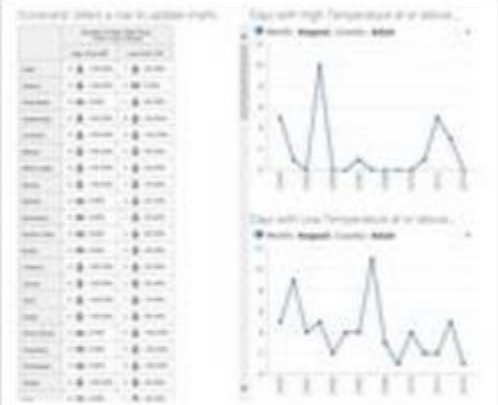
Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

Health Effects

Population

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

People



Health Snapshots

Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit.

Reports

FeatureSlider

DEMO

WHAT'S AVAILABLE IN 2013/OFFICE365?

JSLINK (CSR)

- Javascript and HTML
- Replacement for XSL
- Numerous Ways to Deploy
- People usually mean CSR when they talk about JSLink

JSLINK (CSR)

- CSR – Client-side Rendering
- Most use JSLink and CSR interchangeably but they are different.
- You can do CSR without JSLink.
- JSLink allows you to inject JavaScript into the rendering of a form, view, edit and display form.

JSLINK (CSR)

- Objects that have a JSLink Property
  - List Views (excluding Calendar View)
  - List Forms (New, Edit, Display)
  - List View and List Form Web Parts
  - Site Column
  - Content Type

WAYS TO DEPLOY CSR

- Can do CSR in a Script Editor Web Part
- Use JSLink Property
- Use Visual Studio and create a solution that deploys as a Feature
  - Can attach functionality to all lists of a certain type
  - Create custom lists with custom functionality and display

IMPORTANT!

~sitecollection/[path to js file]

JSLINK PATTERN

```
(function() {
  'use strict';
  var options = {
    // options
  };

  SPClientTemplates
    .TemplateManager
    .RegisterTemplateOverrides(options);
})();

```

```

var options = {
  OnPreRender: /* function or array of functions */,
  Templates: {
    View: /* function or string */,
    Body: /* function or string */,
    Header: /* function or string */,
    Footer: /* function or string */,
    Group: /* function or string */,
    Item: /* function or string */,
    Fields: {
      'Field1 Internal Name': {
          View: /* function or string */,
          EditForm: /* function or string */,
          DisplayForm: /* function or string */,
          NewForm: /* function or string */
      },
      'Field2 Internal Name': {
          View: /* function or string */,
          EditForm: /* function or string */,
          DisplayForm: /* function or string */,
          NewForm: /* function or string */
      },
      // .... and so on
    }
  },
  OnPostRender: /* function or array of functions */
};

```

SAMPLES AND LINKS

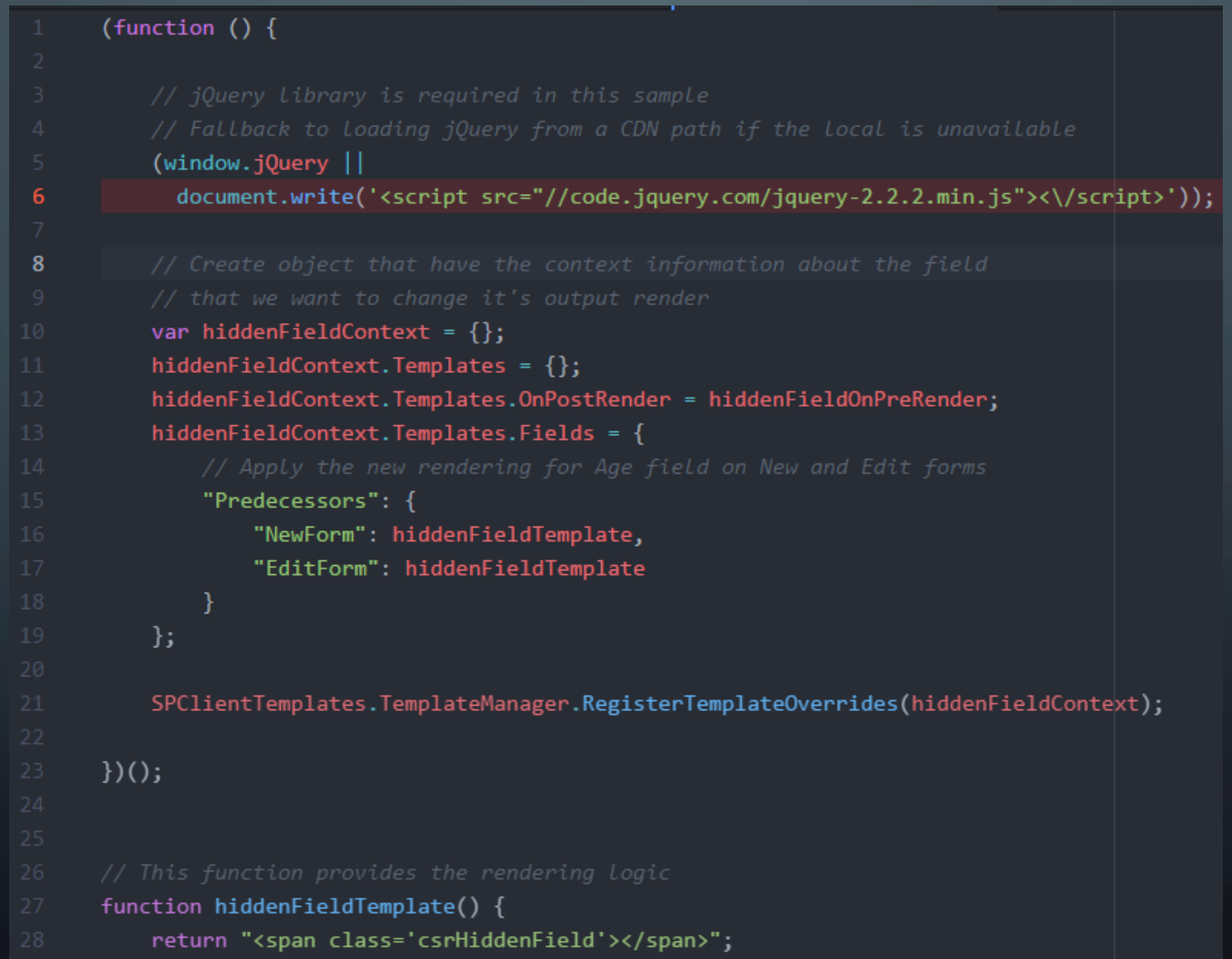
HTTPS://CODE.MSDN.MICROSOFT.COM/OFFICE/CLIENT-SIDE-RENDERING-JS-2ED3538

HTTP://WWW.IDUBBS.COM/BLOG/JS-LINK-AND-CSR/

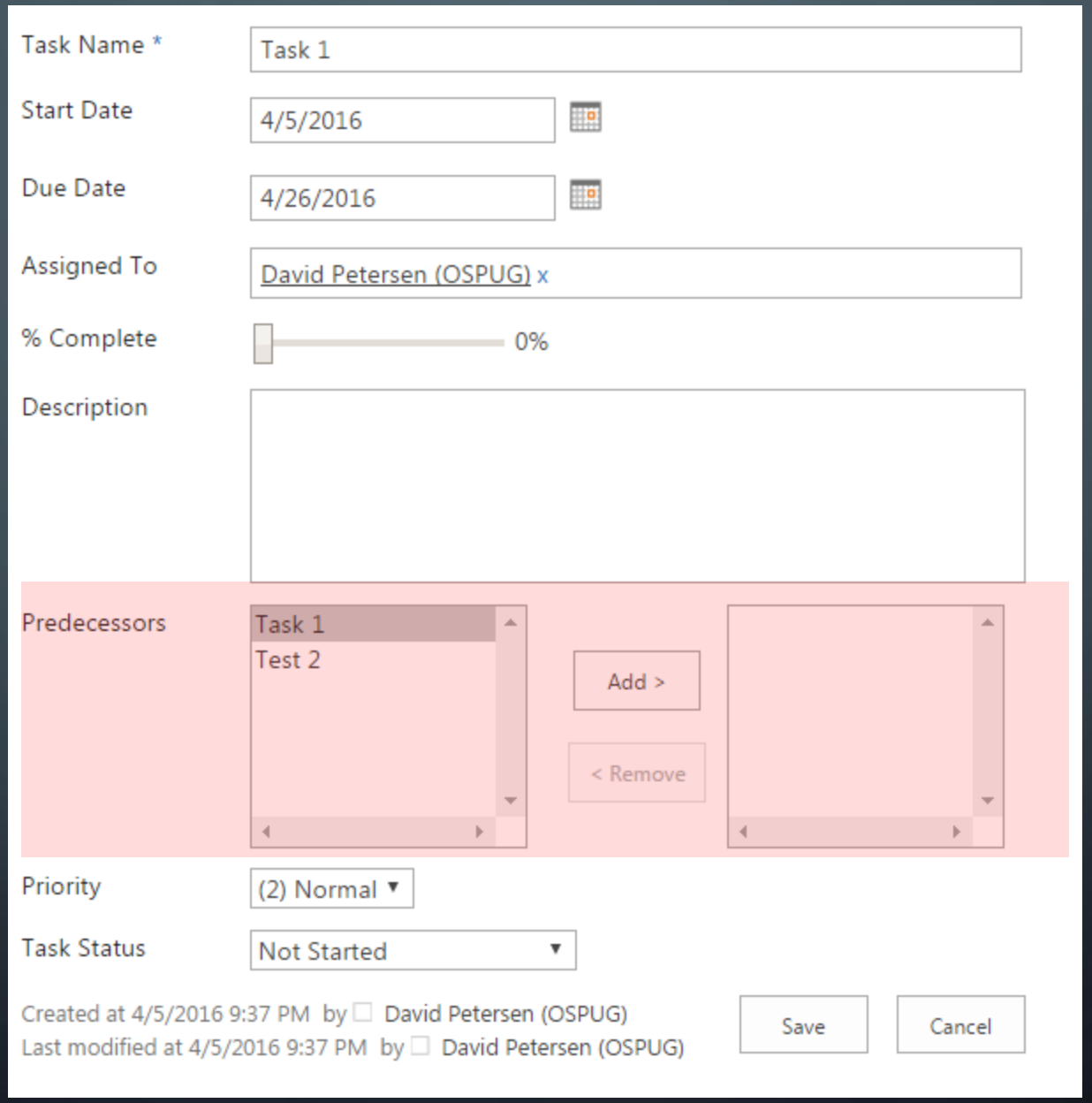
HTTPS://GITHUB.COM/SPCSR

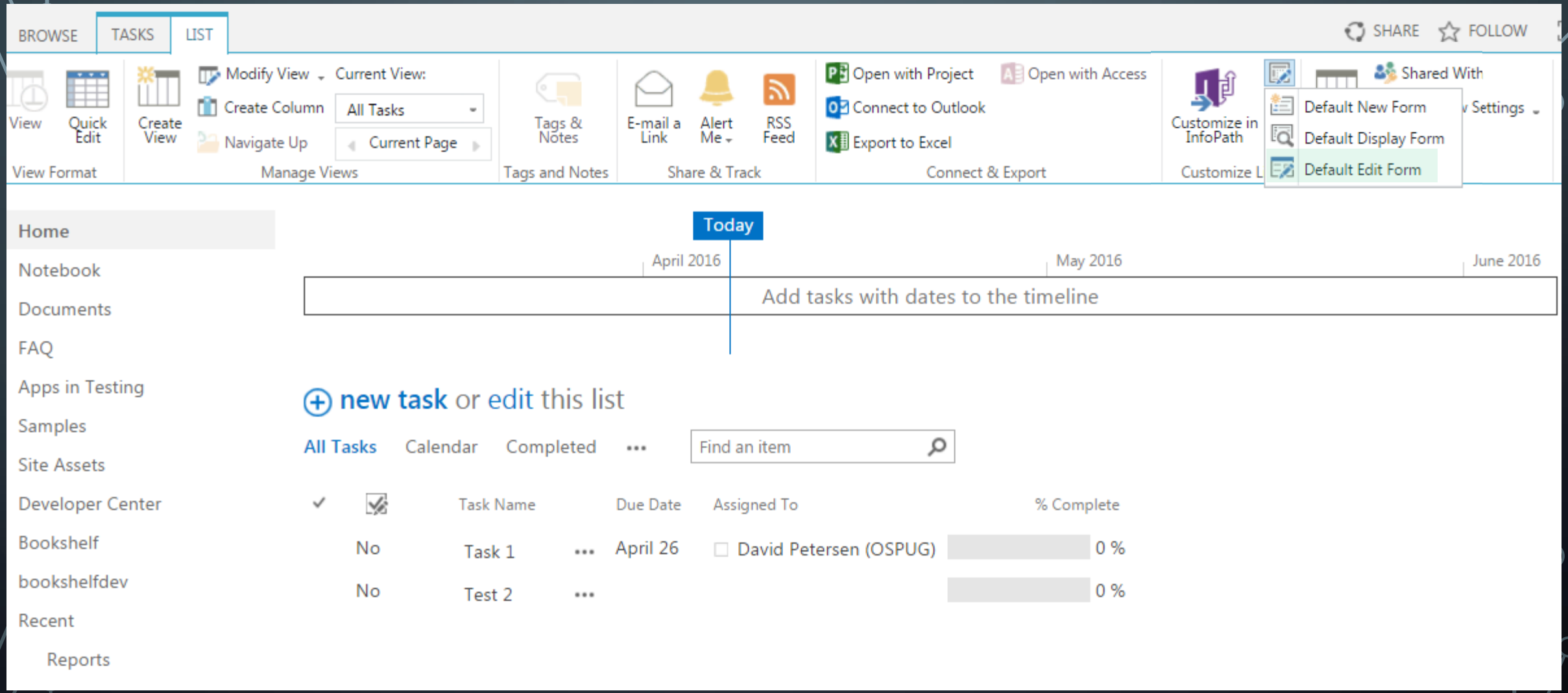
JSLINK SAMPLE

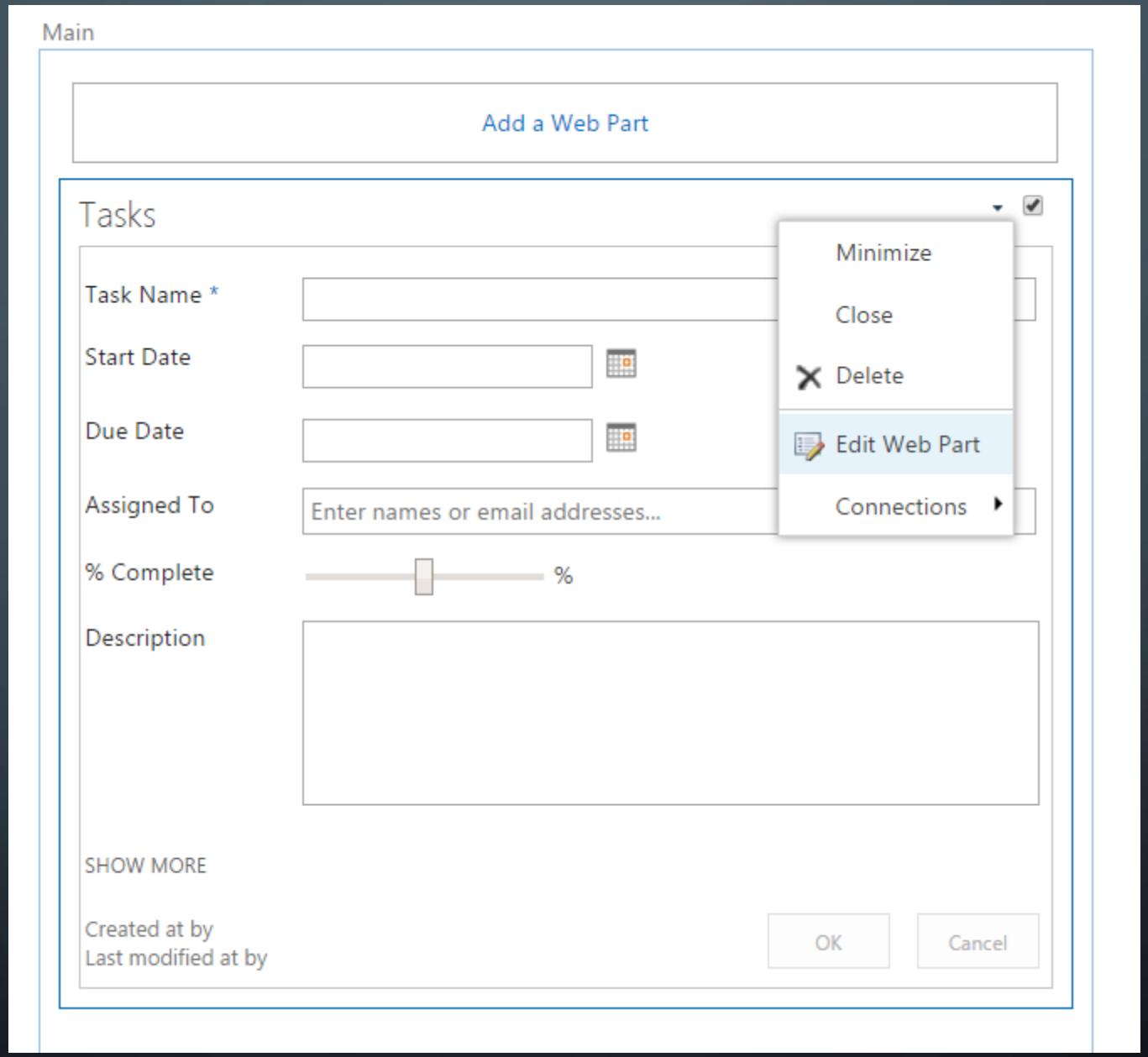
```
// List view, display, add and edit - Percent Complete Sample

(function () {

    // Create object that have the context information about the
    // field that we want to change it's output render
    var percentCompleteFiledContext = {};
    percentCompleteFiledContext.Templates = {};
    percentCompleteFiledContext.Templates.Fields = {
        // Apply the new rendering for PercentComplete field on List View, Display, New and Edit forms
        "PercentComplete": {
            "View": percentCompleteViewFieldTemplate,
            "DisplayForm": percentCompleteViewFieldTemplate,
            "NewForm": percentCompleteEditFieldTemplate,
            "EditForm": percentCompleteEditFieldTemplate
        }
    };

    SPClientTemplates.TemplateManager.RegisterTemplateOverrides(percentCompleteFieldContext);

})();
```

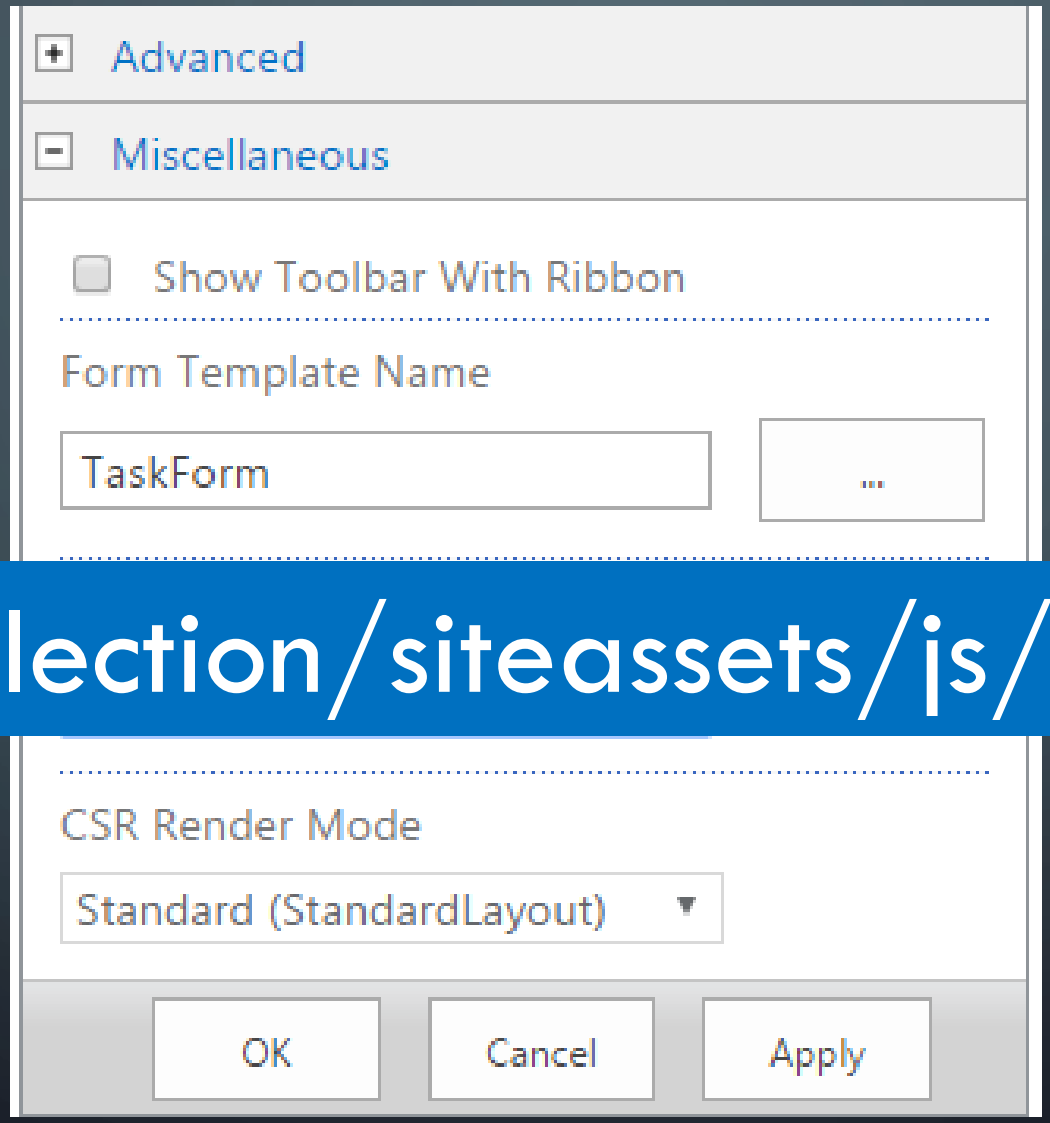


```
(function () {

    // jQuery library is required in this sample
    // Fallback to loading jQuery from a CDN path if the local is unavailable
    (window.jQuery ||
      document.write('<script src="//code.jquery.com/jquery-2.2.2.min.js"><\/script>'));

    // Create object that have the context information about the field
    // that we want to change it's output render
    var hiddenFieldContext = {};
    hiddenFieldContext.Templates = {};
    hiddenFieldContext.Templates.OnPostRender = hiddenFieldOnPreRender;
    hiddenFieldContext.Templates.Fields = {
        // Apply the new rendering for Age field on New and Edit forms
        "Predecessors": {
            "NewForm": hiddenFieldTemplate,
            "EditForm": hiddenFieldTemplate
        }
    };

    SPClientTemplates.TemplateManager.RegisterTemplateOverrides(hiddenFieldContext);

})();


// This function provides the rendering logic
function hiddenFieldTemplate() {
    return "<span class='csrHiddenField'></span>";
```

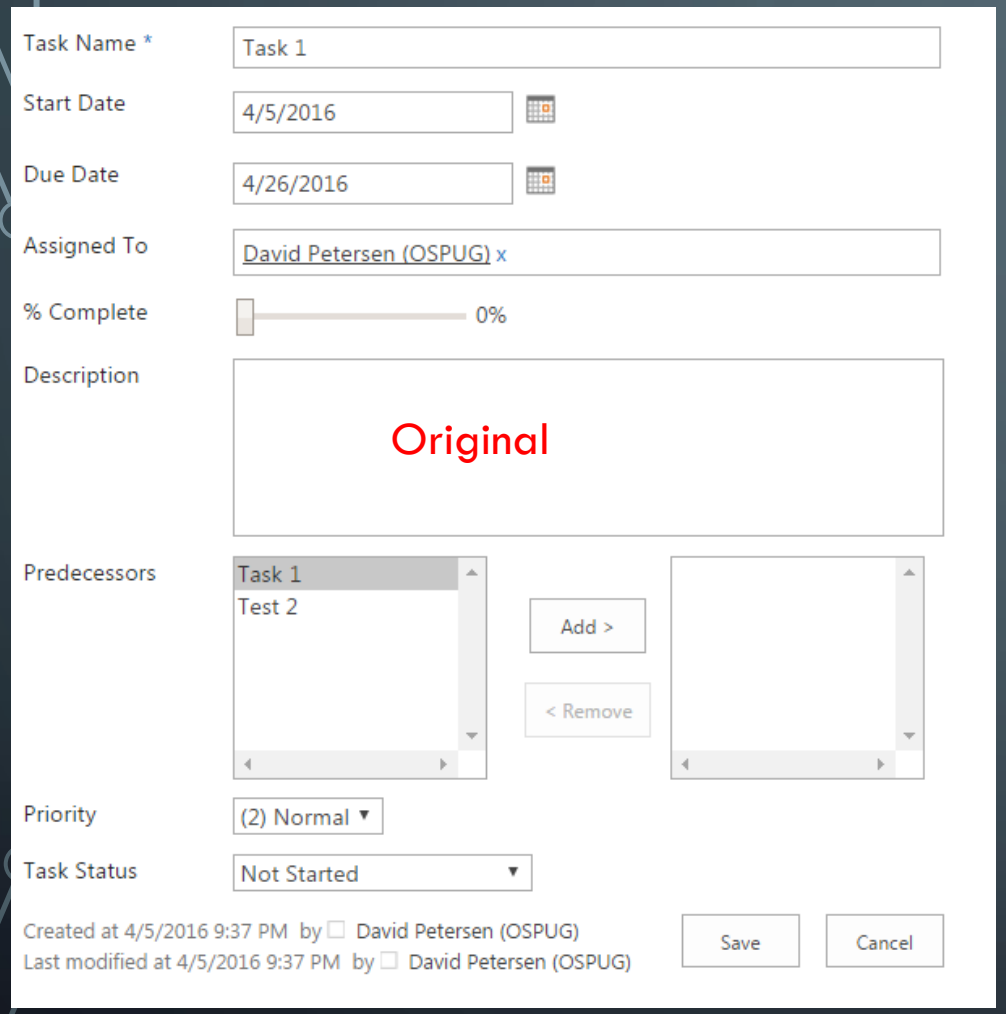

Task Name *
Task 1
Start Date
4/5/2016
Due Date
4/26/2016
Assigned To
David Petersen (OSPUG) x
% Complete
0%
Description
Predecessors
Task 1
Test 2
Add >
< Remove
Priority
(2) Normal
Task Status
Not Started
Created at 4/5/2016 9:37 PM by David Petersen (OSPUG)
Last modified at 4/5/2016 9:37 PM by David Petersen (OSPUG)
Save
Cancel


BROWSE
TASKS
LIST
SHARE
FOLLOW
View
Quick Edit
View Format
Create View
Modify View
Current View:
Create Column
All Tasks
Navigate Up
Current Page
Manage Views
Tags & Notes
Tags and Notes
E-mail a Link
Alert Me
RSS Feed
Share & Track
Open with Project
Open with Access
Connect to Outlook
Export to Excel
Connect & Export
Customize in InfoPath
Customize L
Shared With
Settings
Default New Form
Default Display Form
Default Edit Form
Home
Notebook
Documents
FAQ
Apps in Testing
Samples
Site Assets
Developer Center
Bookshelf
bookshelfdev
Recent
Reports
Today
April 2016
May 2016
June 2016
Add tasks with dates to the timeline
new task or edit this list
All Tasks
Calendar
Completed
Find an item
Task Name
Due Date
Assigned To
% Complete
No
Task 1
April 26
David Petersen (OSPUG)
0 %
No
Test 2
0 %


Main
Add a Web Part
Tasks
Minimize
Close
Delete
Edit Web Part
Connections
Task Name *
Start Date
Due Date
Assigned To
Enter names or email addresses...
% Complete
%
Description
SHOW MORE
Created at by
Last modified at by
OK
Cancel



~sitecollection/siteassets/js/hidefield.js


Task Name *
Task 1
Start Date
4/5/2016
Due Date
4/26/2016
Assigned To
David Petersen (OSPUG) x
% Complete
0%
Description
Original
Predecessors
Task 1
Test 2
Add >
< Remove
Priority
(2) Normal
Task Status
Not Started
Created at 4/5/2016 9:37 PM by David Petersen (OSPUG)
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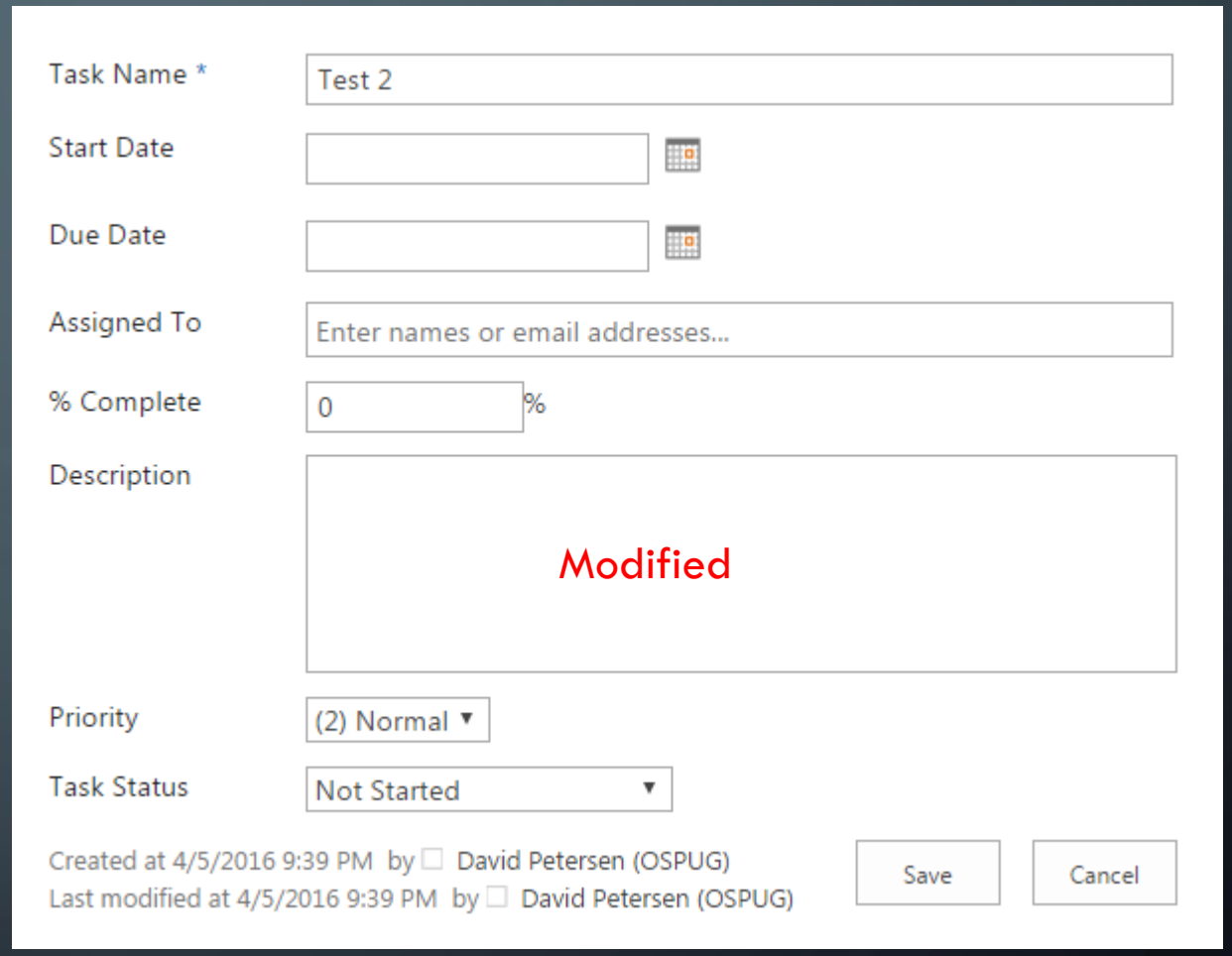
Save
Cancel


Task Name *
Test 2
Start Date
Due Date
Assigned To
Enter names or email addresses...
% Complete
0
%
Description
Modified
Priority
(2) Normal
Task Status
Not Started
Created at 4/5/2016 9:39 PM by David Petersen (OSPUG)
Last modified at 4/5/2016 9:39 PM by David Petersen (OSPUG)
Save
Cancel

DEMO

JSLINK / CSR REFERENCE

- http://www.idubbs.com/blog/2012/js-link-for-sharepoint-2013-web-partsa-quick-functional-primer/
- http://www.rbradbrook.co.uk/blog/2013/04/14/introduction-to-client-side-rendering-in-sharepoint-2013/
- http://msdn.microsoft.com/en-us/library/jj220045%28v=office.15%29.aspx

RECAP

- ListView
  - Javascript
  - jQuery
  - XSL
  - Web Services
- In 2013 – JSLink