Creating an Approval Workflow & Interface

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Agenda

- What is the problem with form approvals?
- What are the requirements?
- What are the options available?
- My new solution!

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What's the Problem?

- Approval processes and forms are everywhere
- Out-of-Box workflows and actions don't cut it
- User interface is confusing
- It's a lot of work / hours / cost to create more custom solutions

The Requirements

- A standardized approach to all request forms in the organization
- Tasks are assigned to people for approvals.
- Infinite number of types of requests
- Requests are easy to manage
- Approvers can't edit the original request
- Approvers can see a list of items awaiting their action
- Don't use InfoPath form library forms

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One Site?

- What if we created one site for all request forms?
- All request forms would be lists in the site
- All tasks would be in the same site

Single Site Method- Pros

- One task list for all tasks
- Requests in separate lists, all in the same site
- Lookup relationships
- Easy to create views
- Report off of one big list of tasks

Single Site Method - Cons

- The lists and tasks in one site could get very large
- Workflows can't be part of a list template
- Permissions could get complicated.
- Each time a new request is needed, it's a lot of work:
  - Create the list
  - Create the lookup to the task
  - Create or add the workflow

Hmmm…

People ask for this all the time…

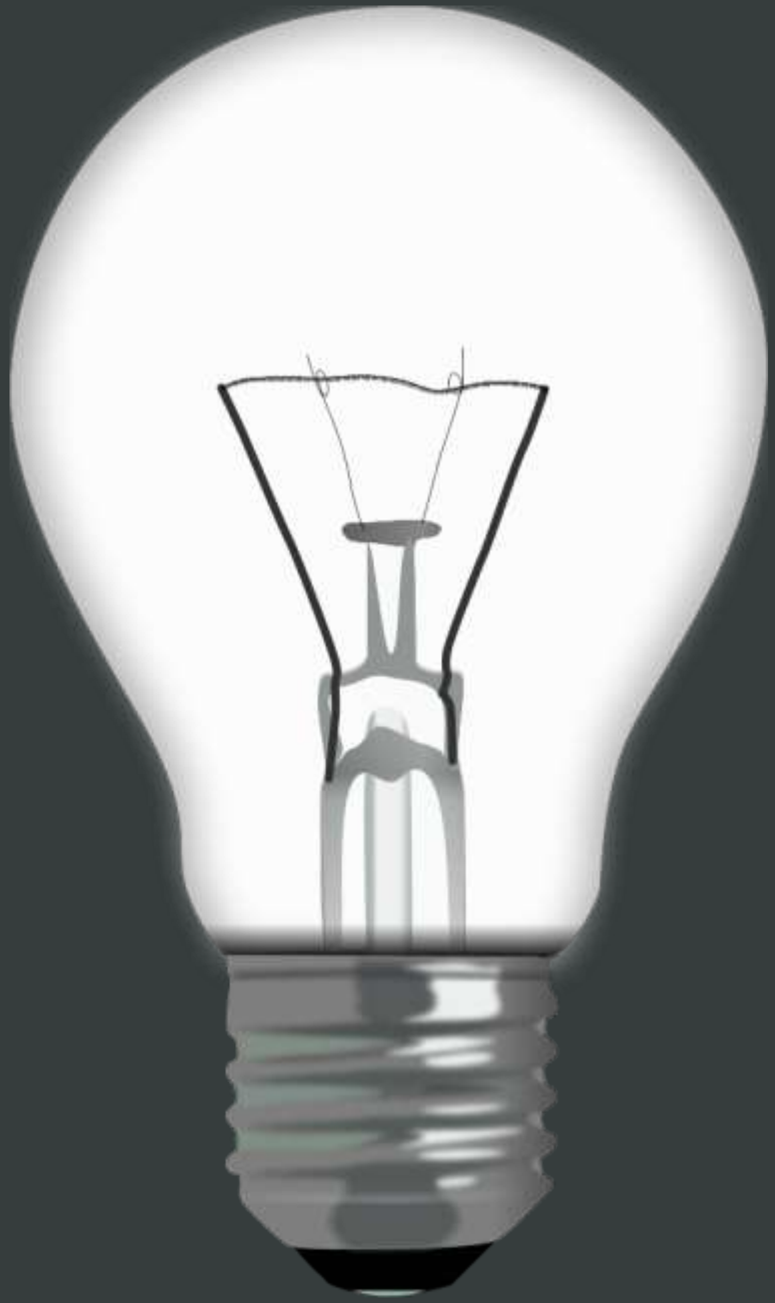
There’s GOT to be a better way…

My Solution

Portable, extendable, customizable solution

Solves most requirements

Drum roll..



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My Solution

- Each type of request form… is a subsite!
- Create one site, save it as a template, which contains:
  - Request form (list)
  - Form Info List
  - Task list
  - Workflows
  - Web parts and dashboards
- Site columns are used, with content search web parts for rollups!

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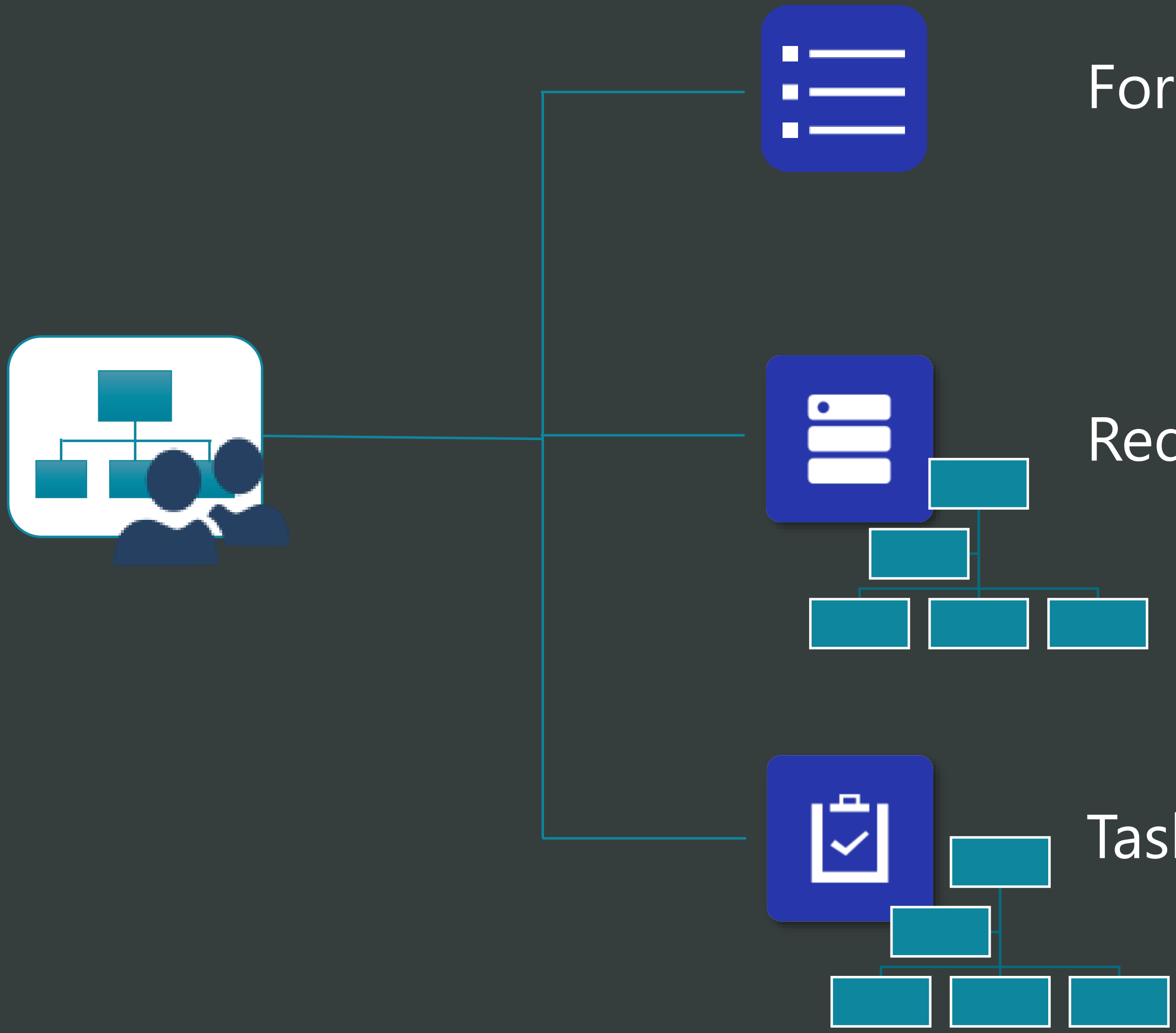
DEMO

REQUEST FORM SITES

Request Form Site



Form Information List
(one item)

Request Form List and Workflow

Task List and Workflow

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Form Information List

- Like metadata for the subsite
- Only one item in this list
  - Form Name
  - Form Description
  - Form Outcome Type (Approval or Process)
  - Email body
  - Task 1 Assignment (and task 2 and 3)
  - Completion notification

Form List

- This is the request form itself, with common columns
  - Form Type Lookup – Approval or Process (outcomes)
  - Form Status – Approved, Rejected, Completed
  - Current Approver
  - Comments
  - First Approval (and 2nd and 3rd) – these are dates
- For each unique request form, create additionally needed columns.
  - Lookup to Tasks (Count)

Task List

- Just a regular task list, plus…
  - Completed By
  - Completion Date
  - Form Lookup
  - Outcome

Each New Request Type

- Create a new sub-site using the template
- Fill out the “Form Info” item.
- Create a new promoted link at the root level site
- Set up permissions on the two lists:
  - Form list – form users (everyone) add new forms
  - Task list – Form approvers “contribute”

Workflows

There are two workflows:

1. Initial Task Creation – runs when a new form is filled out
2. Changed Task – runs when a task is modified (completed)

Workflow: Initial Task Creation

- Runs on the form list.
- Runs only when a new item is created.
- What does it do?
  - Creates the first task for the first approval
  - Sends a notification email to the assignee

Workflow: Changed Task

- What does it do?
  - If there is not another approver, it's done
  - If there is a next approver, it creates the task and email
  - There's a lot more… [demo]
- Runs on the task list.
- Runs only when an existing item is changed.

Setup Steps

Create content types and a subsite.
1

Configure the subsite: lists, workflows, web parts
2

Save subsite as a template, create rollups
3

- Create content types in a hub or just the root of the site collection.
- Create a sub-site to use as a template that all request forms will be created from.

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Setup Steps

Create content types and a subsite.
1

Configure the subsite: lists, workflows, web parts
2

Save subsite as a template, create rollups
3

- Create the 3 lists in the sub-site.
- Create lookup:
  - Task list – Form lookup to form list
- Create the two workflows
- Customize the list form web part page.

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Setup Steps

Create content types and a subsite.
1

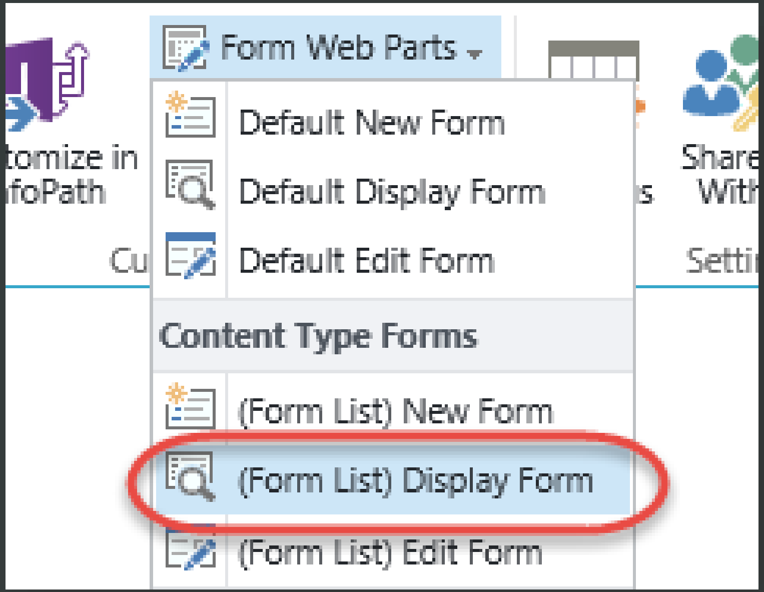
Configure the subsite: lists, workflows, web parts
2

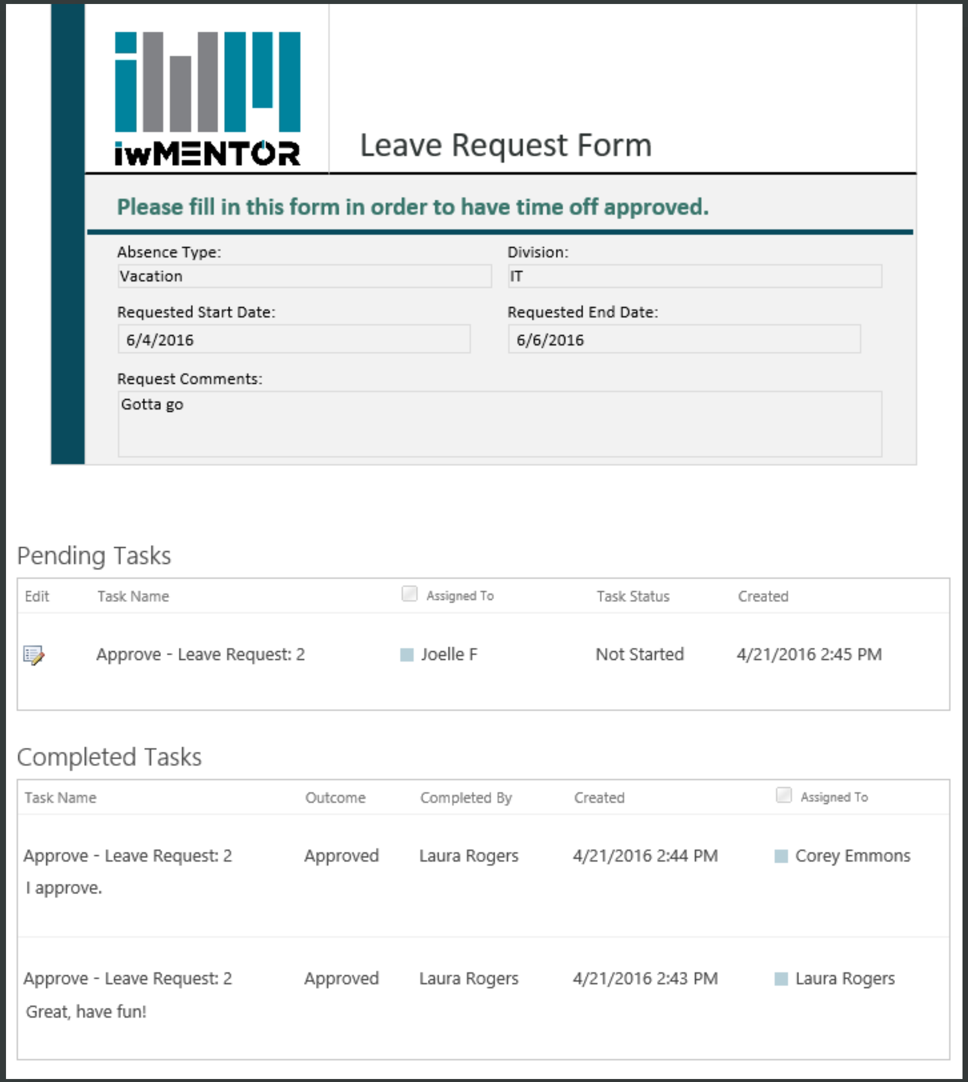
Save subsite as a template, create rollups
3

- Save site as a template
- From the root site, create other request forms using this template
- *Bonus: enable publishing feature ONLY on the root site, and have the ability to control sub-site creation to ONLY that template.*
- At the root site, use content search web part to display rollup list data.

Form Web Parts

- The SharePoint list form
- The Query String URL Filter Web Part
- Pending tasks
- Completed tasks



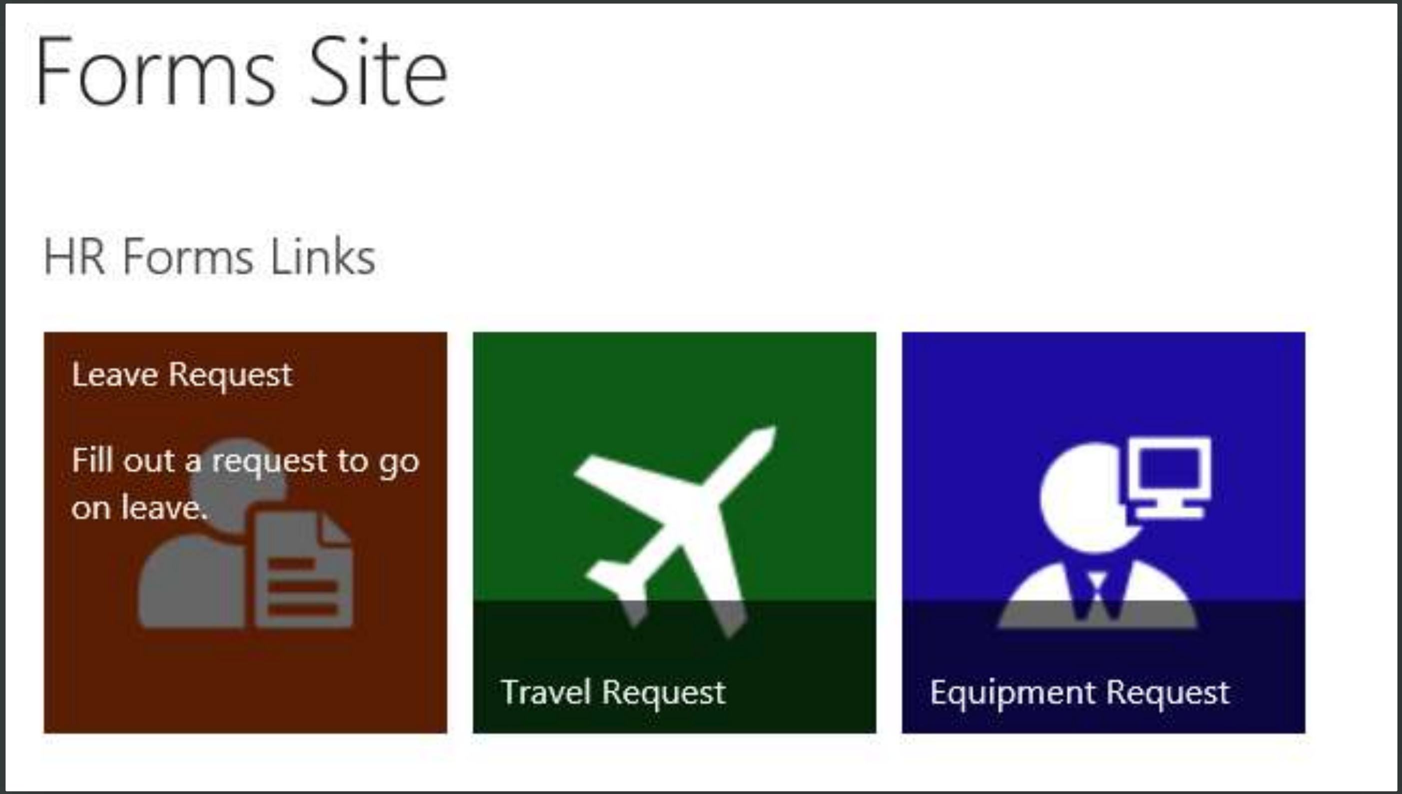


User Interface

- Homepage
- Rollups
- Super simple

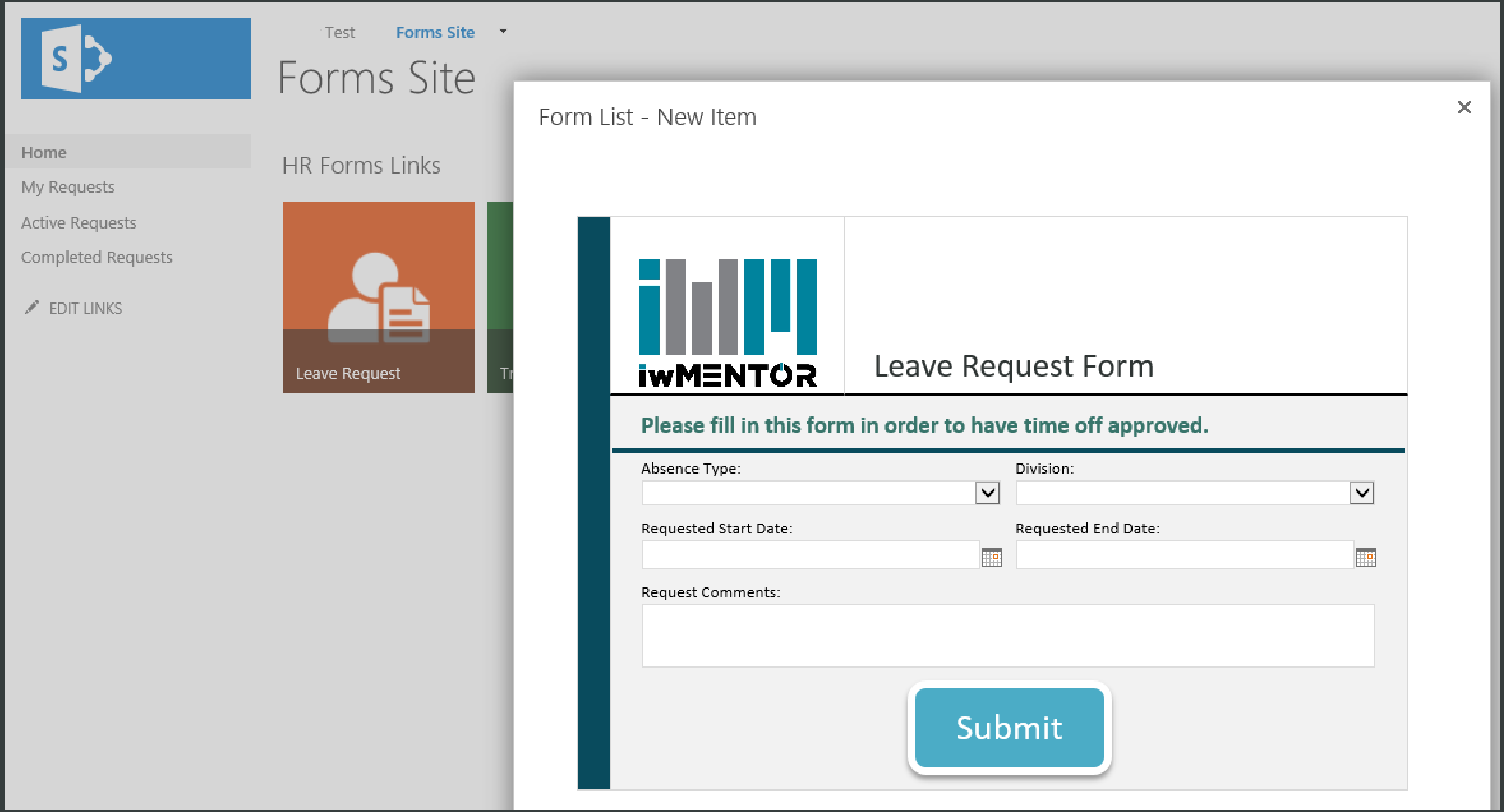
There isn't a reason for end users to actually go to the sub-sites.

Homepage



Users have one simple page
to start filling out
any form.

Fill Out a Form



Rollup Web Parts

- Dashboards are created, using the Content Search Web Part:
  - My Requests
  - Active Requests
  - Completed Requests
- These are pages at the root site.
- Permissions can be used so that only approvers can see the latter two.

Pros and Cons

PROS

- Easy to spin up new request types
- Simple, standard interface for end users
- One place to go for all forms
- Workflows are already in place
- Web parts are already in place
- Content Types can be created in a hub, in case this solution needs to be used in multiple site collections.
- Less worry about reaching list throttling limits.

CONS

- Strict set of requirements/standards to apply to all forms
- Creating new rollup views can entail creating or editing display templates.
- For reporting, there isn't one big list of all requests or all tasks.
- If a workflow change needs to be made, it needs to be done on all sites.

Security

- Form List – Advanced settings – item level security is set.
- Task list – End users only have read access.
- SharePoint groups can be used for approvers.
  - There can be one group of approvers
  - Or each request form can have its own group of approvers
- Form Users – Create a custom permission level that doesn't allow personal views.

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Optional Functionalities

- What else can I do with it?
  - Add a “Claim Task” button to the task form
  - Common lookup lists can be created at the root level, used as site columns.
  - Create approval SharePoint groups per department or division.
  - Create very cool rollups / dashboards with your own display templates
  - Forms – use whatever form solution you want, if not InfoPath

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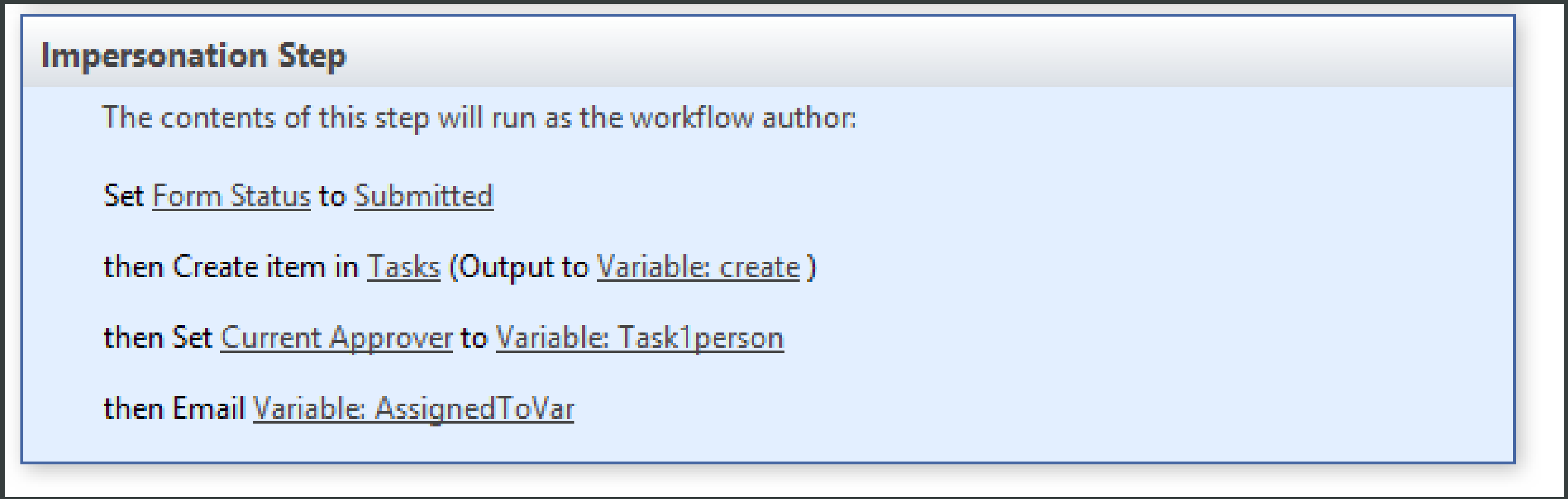
Screenshot: Initial Task Workflow

- “Task1person” variable = “Task 1 Assignment” field from the Form Info List – as a display name
- “AssignedToVar” variable = “Task 1 Assignment” field from the Form Info List – as a login name



Screenshot: Changed Task Workflow

set variables

Set Variable: OutcomeType to Form Info:Form Outcome Type

then Set Variable: FormTitle to Form List:Title

then Set Variable: FormURL to [%Workflow Context:Current Site URL%]...

then Set Variable: CountTasks to Form List:Count Tasks

then Set Variable: Task2person to Form Info:Task 2 Assignment

then Set Variable: Task3person to Form Info:Task 3 Assignment

Impersonation Step

The contents of this step will run as the workflow author:

If Current Item:Task Status equals Completed

Set Completed By to Current Item:Modified By

then Set Completion Date to Workflow Context:Date and Time Started

then Set Variable: CompletionNotify to Form Info:Completion Notification

If Variable: OutcomeType equals Approval

Set Variable: TaskPrefix to Approve

Else

Set Variable: TaskPrefix to Process

If Variable: CompletionNotify is empty

Set Variable: CCfield to Form List:Requestor

Else

Set Variable: CCfield to Variable: CompletionNotify

If Current Item:Outcome equals Rejected

Update item in Form List

then Email Form List:Requestor

then Stop the workflow and log rejected and finished

If Variable: CountTasks equals 1

Set Variable: NextPerson to Variable: Task2person

then Update item in Form List

Else if Variable: CountTasks equals 2

Set Variable: NextPerson to Variable: Task3person

then Update item in Form List

Else

Update item in Form List

If Variable: NextPerson is not empty

Create item in Current List (Output to Variable: create)

then Update item in Form List

Else

Update item in Form List

then Email Form List:Requestor

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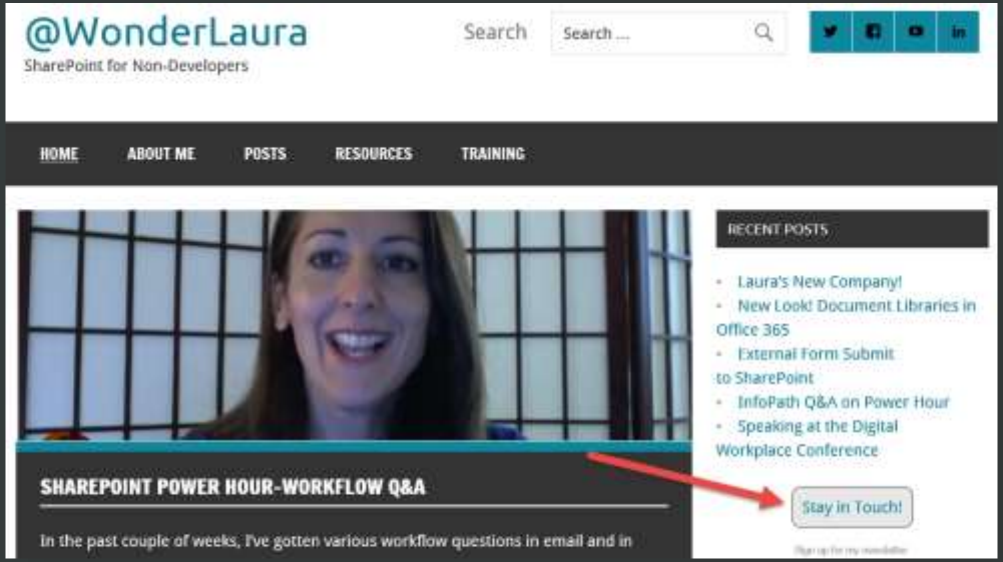
Further Resources

- Check out my blog for more posts about workflows, and click the STAY IN TOUCH button to be notified. www.wonderlaura.com
- Check out my free SharePoint Power Hour every Wednesday at 11 central on my YouTube channel: https://www.youtube.com/user/WonderLaura



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