Step-By-Step build Advanced InfoPath Form and SharePoint Designer Workflow

Workshop:

One the Request Form we will design a sample process of "Employee Vacation Request" with Approval process workflow.

Required Tools:

- InfoPath 2010 Designer.
- SharePoint 2010 Enterprise environment.
- SharePoint 2010 Designer.

Steps:

On InfoPath Designer:

- Create New SharePoint Form Library and set the target SharePoint Site
- Create following objects on the Form:

1- **Five Fields:**

- RequestNumber (String).
- Justification (String) multi line Mandatory
- StartDate (Date). Mandatory
- EndDate (Date). Mandatory

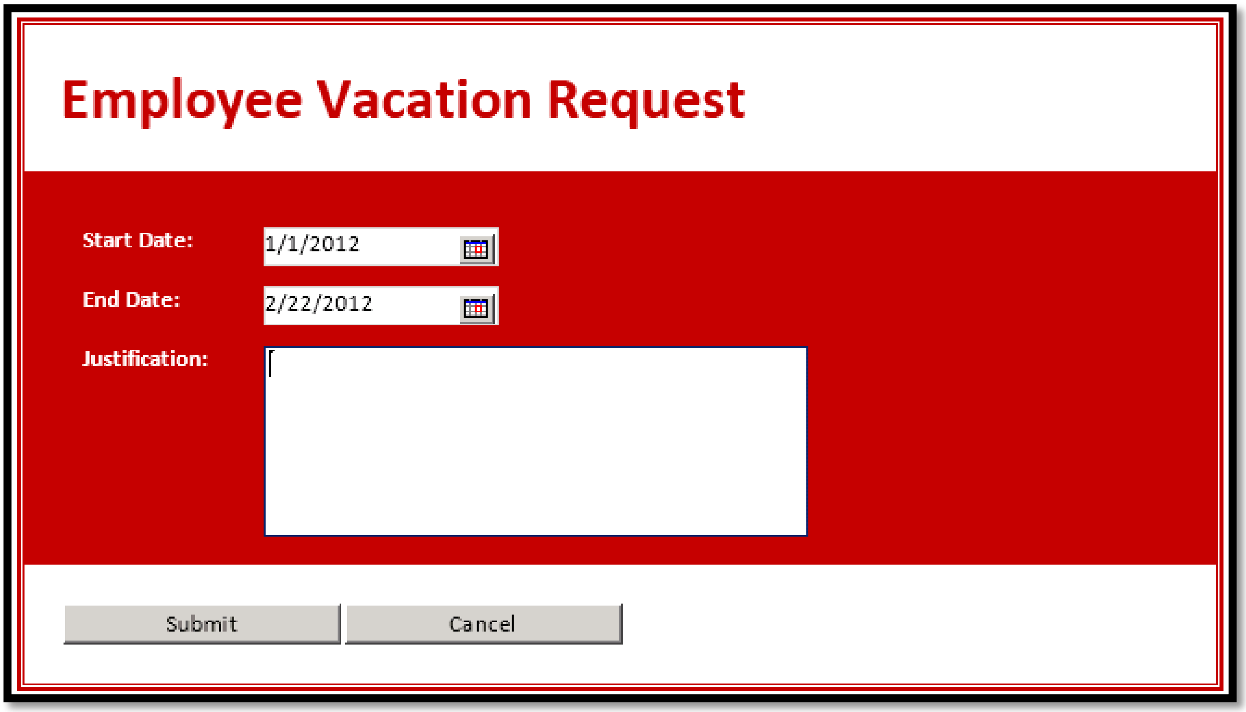
2- **Two Buttons:**

- Submit.
- Cancel.

3- **Three Views:**

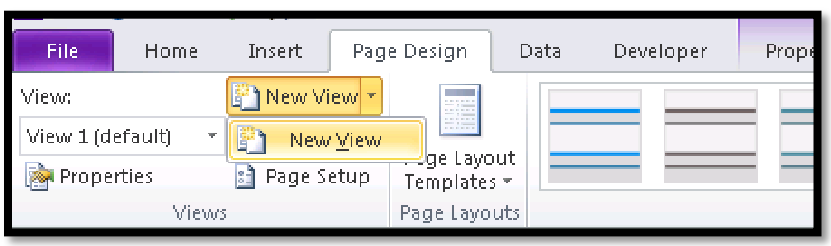
- Default View (Edit mode view & default view)
- Read Only View (If the form submitted all the controls will be on read only mode)
- Thanks View(After Submitting Request rule will switch to this view with Request Number)
- Add table and drag the mandatories fields created, final view of the form will be as below:

Default View (edit mode) snapshot



How to add new view?

Ribbon menu >> Page Design >> New View

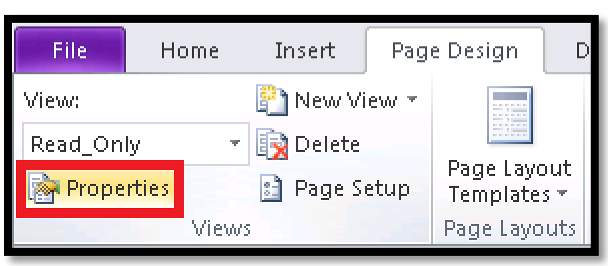


Add new view with read only mode

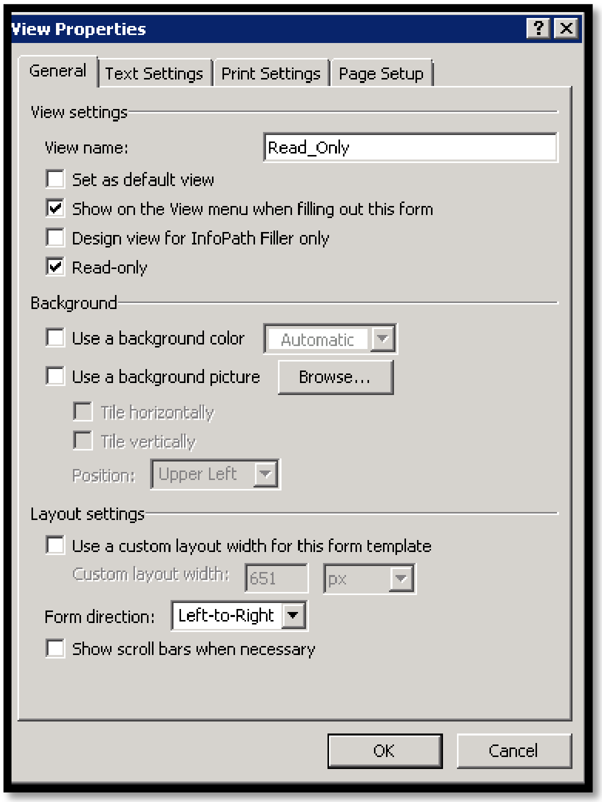
Name it “ReadOnly”

Remove the default table and copy the table and content form default view.

Now after copy the table to read only view set the read only property from the view properties

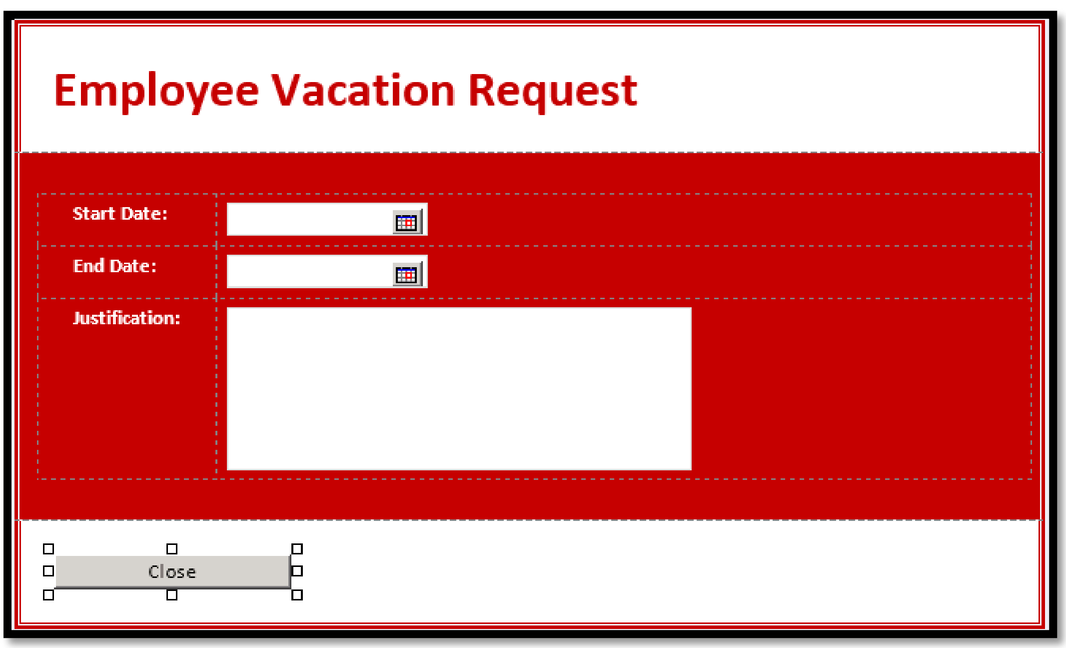


Check “Read only” option then click on OK.



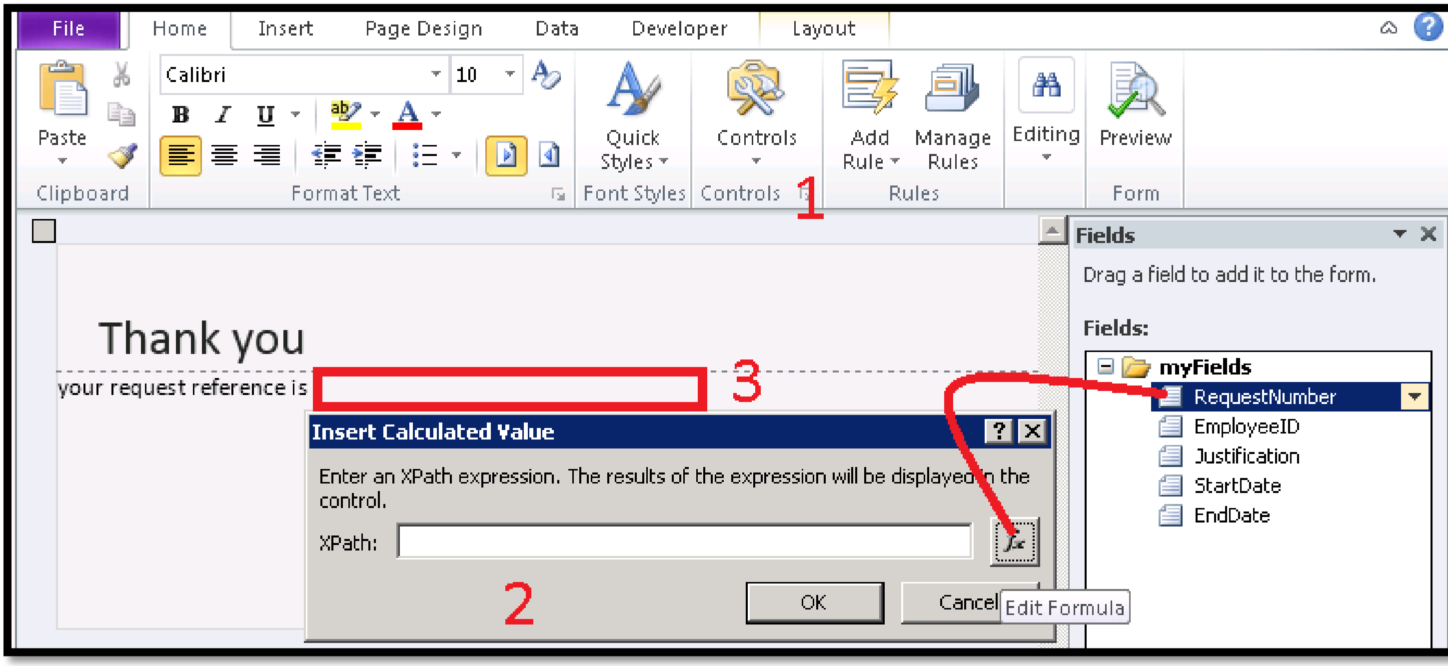
Now on the read only view remove all the buttons and add new to close the form and set rule to close the form

So, the final view of read only will be like below snapshot:



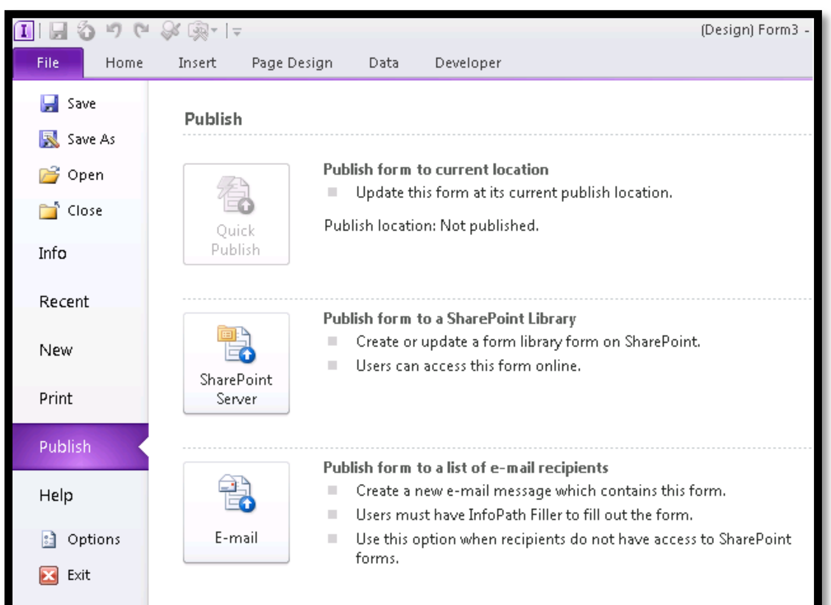
Now repeat same steps to create “Thank You View”

This view will contains only one calculated control of “Request Number” as request reference to inform the user about his request.

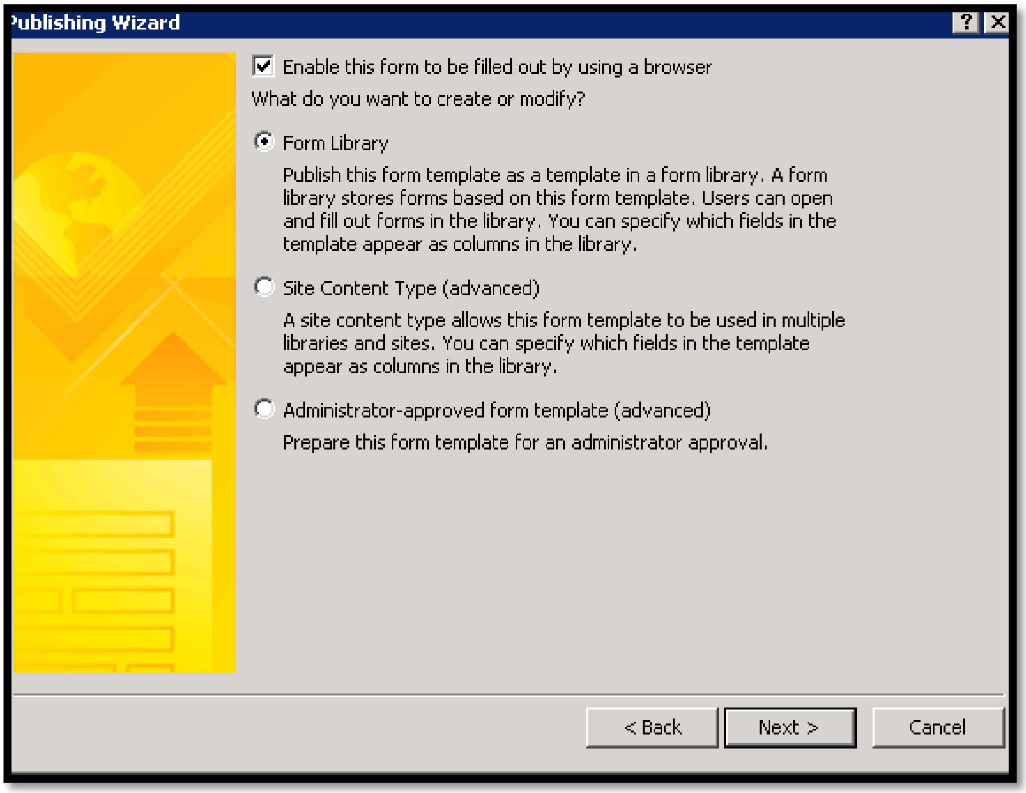


1- Add calculated control.
2- Insert from the formula from field “**RequestNumber**”.
3- Move the control after the text “Your request ….”

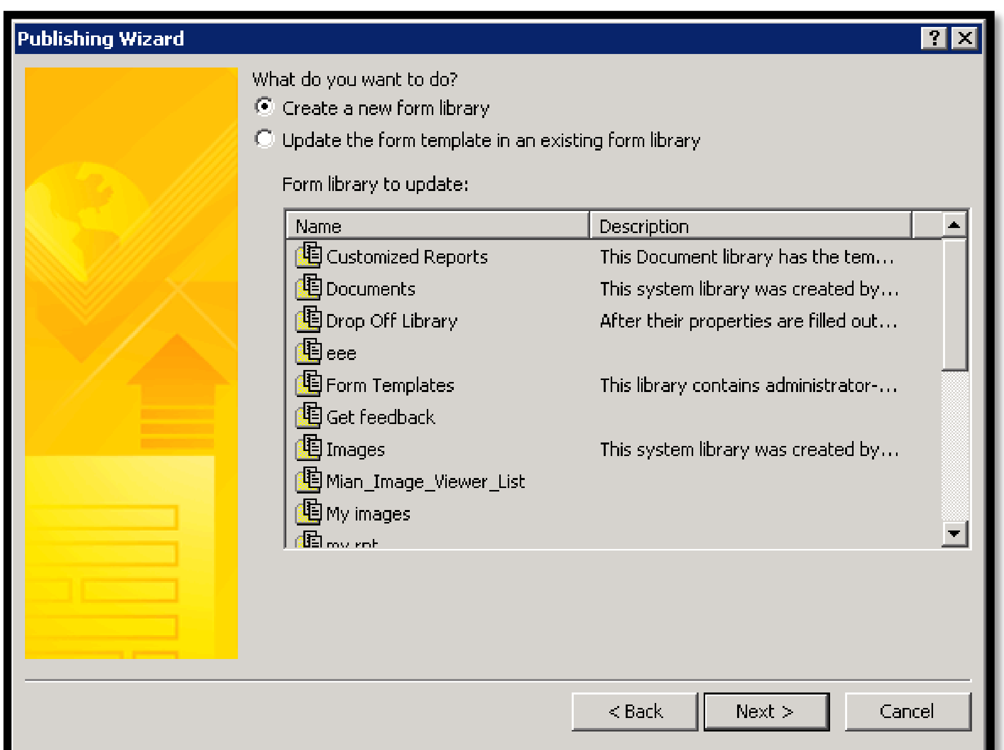
Publish the Form to SharePoint Server as a Form using the publishing wizard.



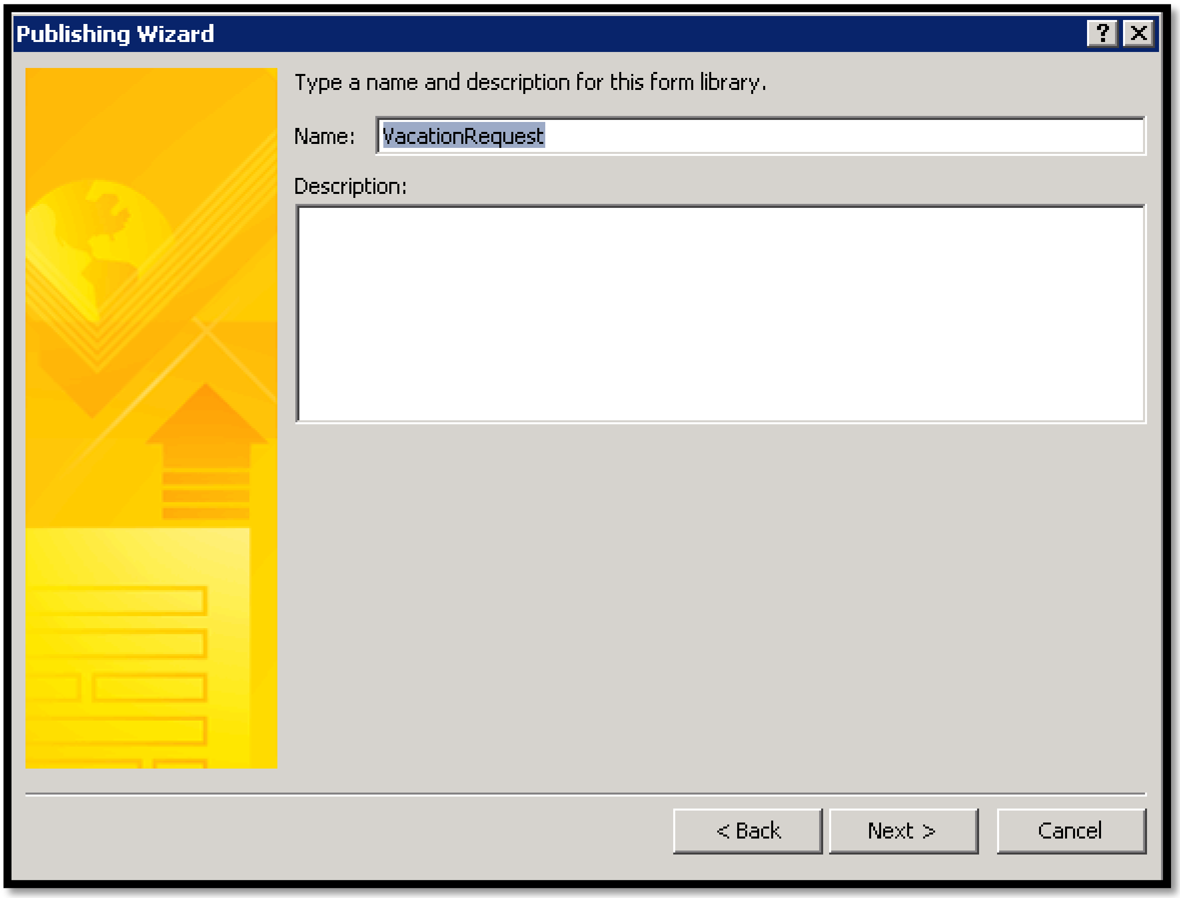
Add target SharePoint Site URL



Create new Form Library.



Name it “Vacation Request”

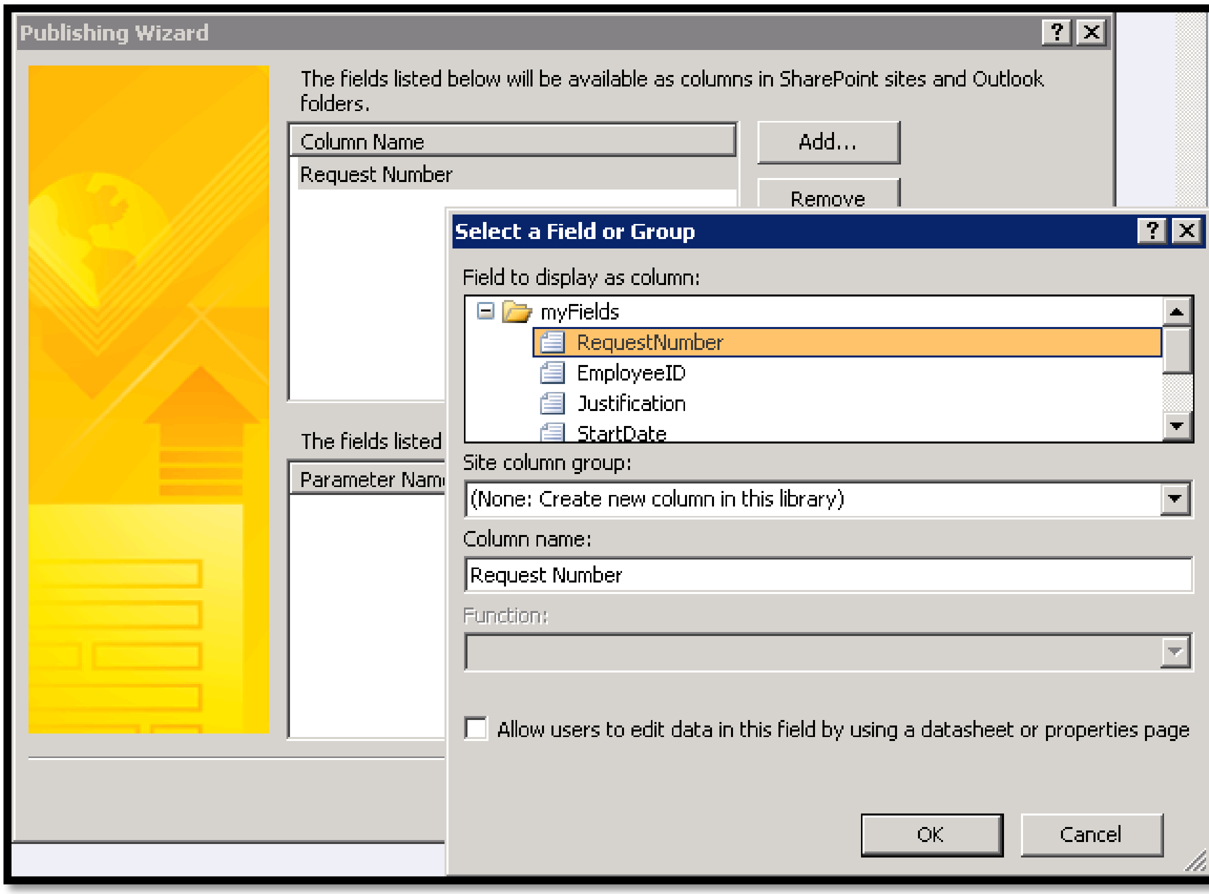


Expose the fields to SharePoint

By adding following fields as columns on SharePoint Form Library

- "Request Number"
- "Start Date"
- "End Date"
- "Justification"

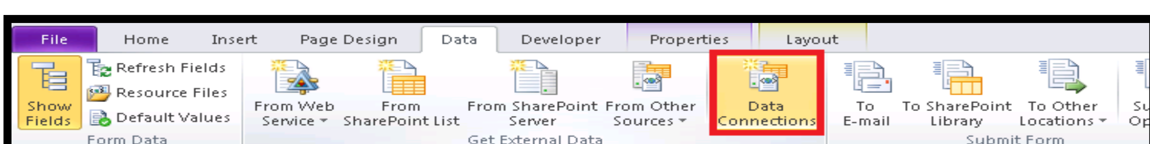
(I will explain this on SharePoint Designer Workflow step).



Connections & Rules:

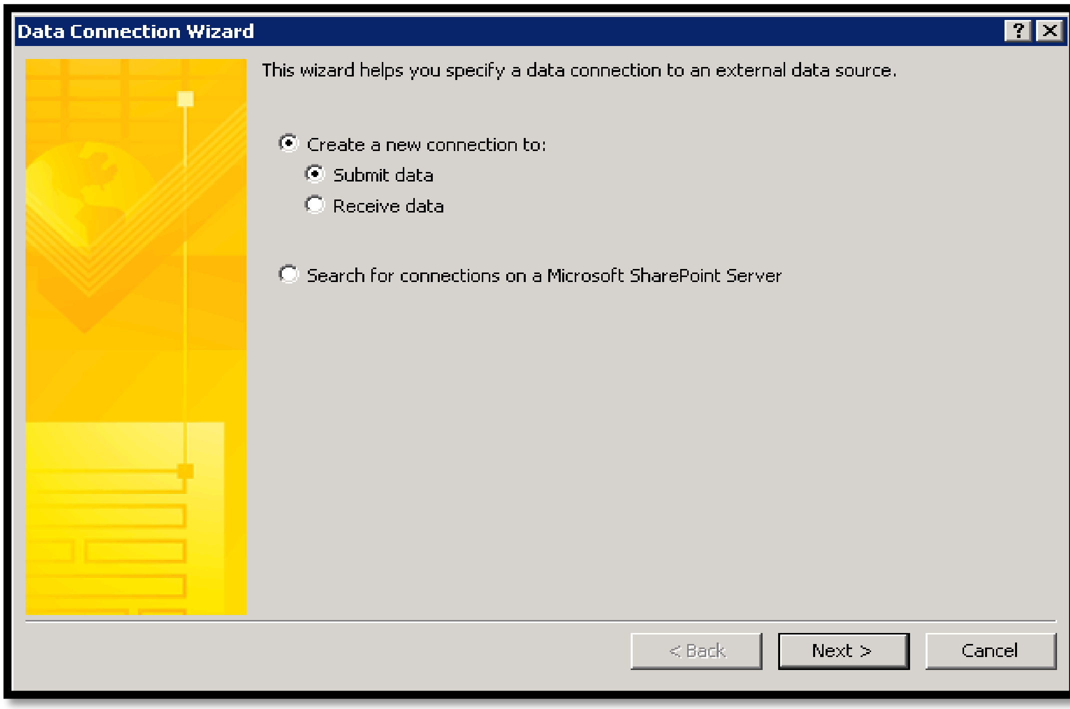
We have to set the submit connection to save the form on the targeted library

Add new Data Connection:

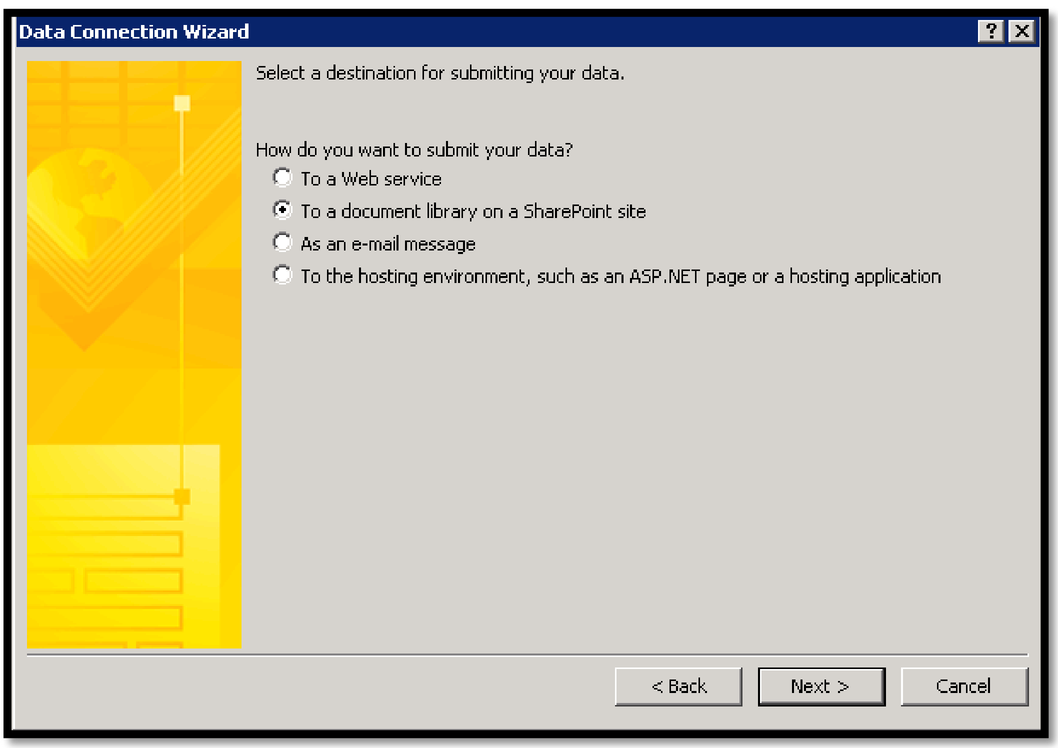


Use add connection wizard:

Submit data



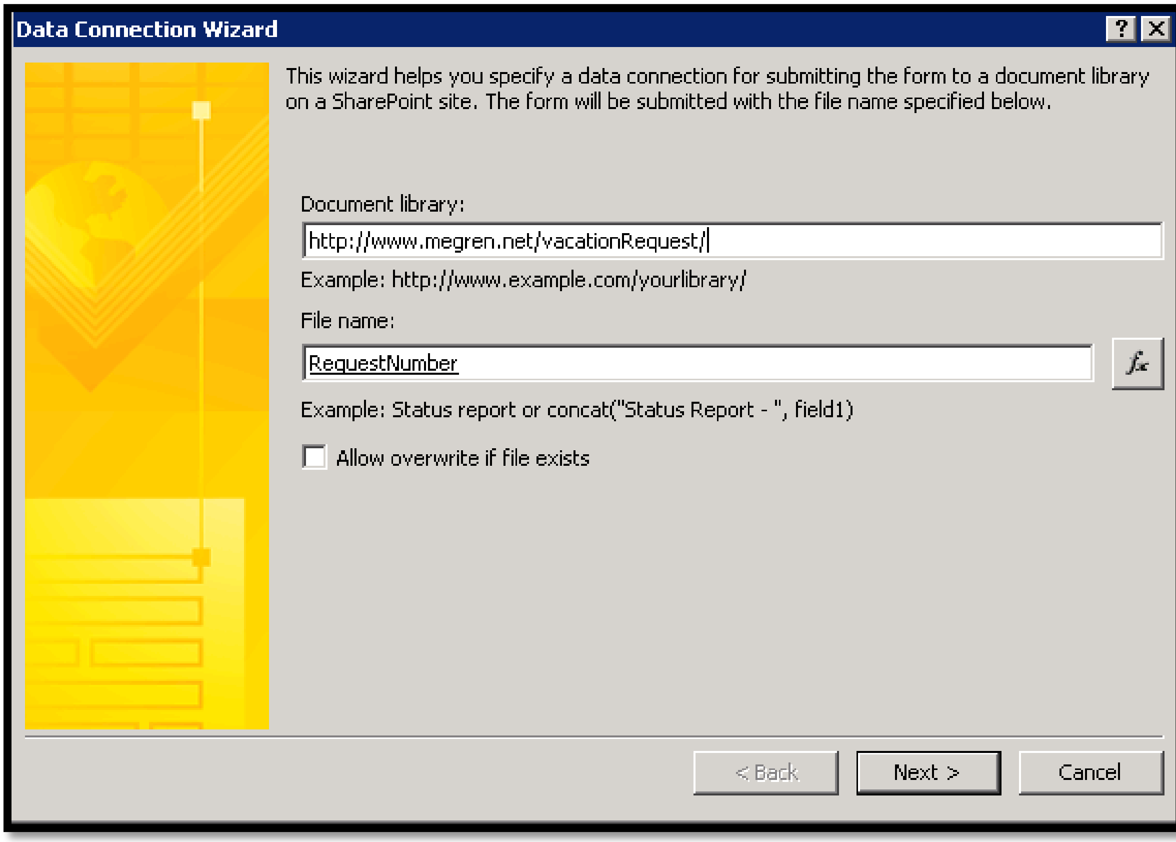
To a document Library



Set the target for library and the name of the form to be saved on each request submitted

On File name add “RequestNumber” form field:

Note: Request Number will calculate a unique ID which I will explain on next step

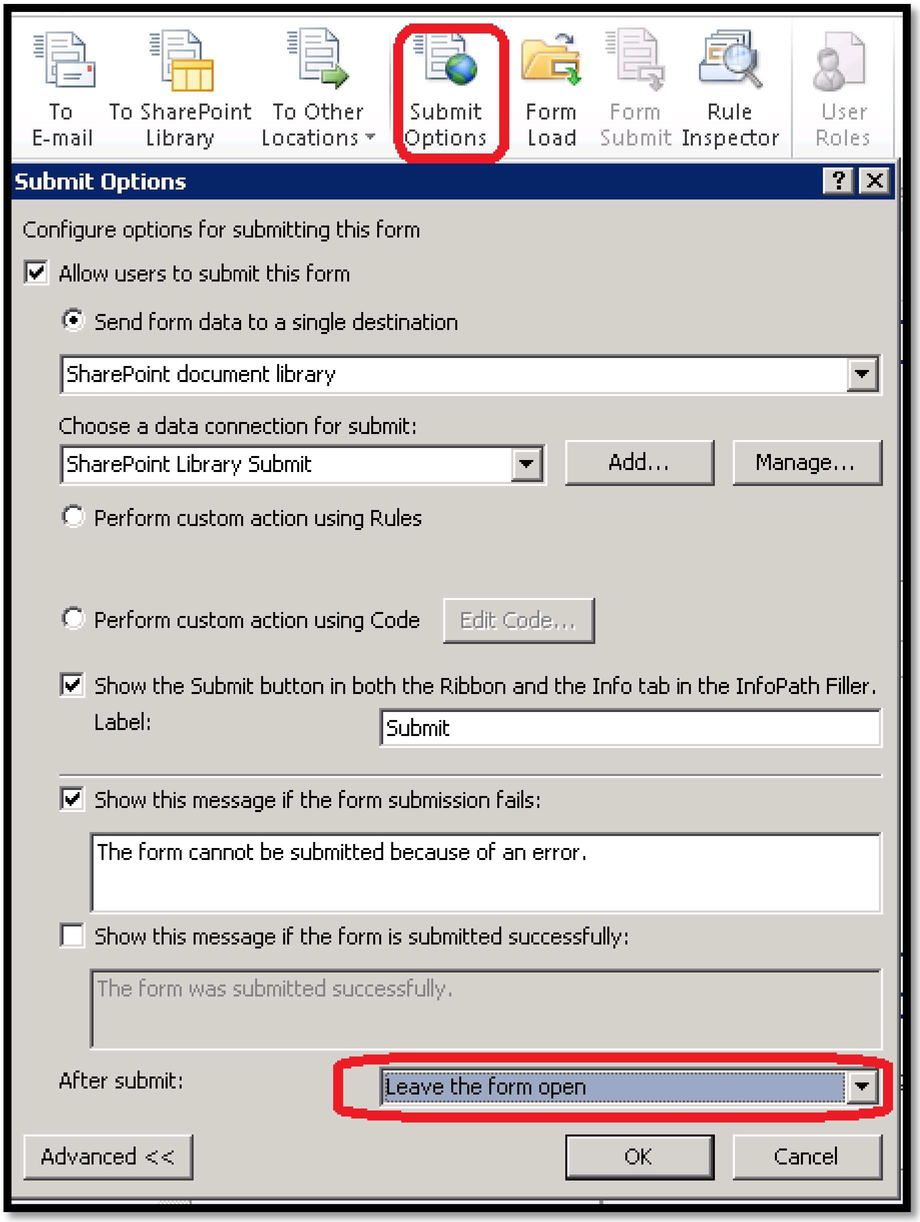


Give the connection any name and make it as default submit connection.

We have to change the submit option to leave the form open after submit because by default it set to close the form after submit.

Steps:

Ribbon menu >> Data > Submit Options >> then expand advanced options >> change the value of after submit to be “leave the form open”



On Form Load Rules

1- Rule one:

Now we have to check when the form opening if it's new request or existed request

To switch the view either to edit mode or read only view.

Steps:

Under the data menu from ribbon menu >> click on Form Load

Add new Action rule with condition

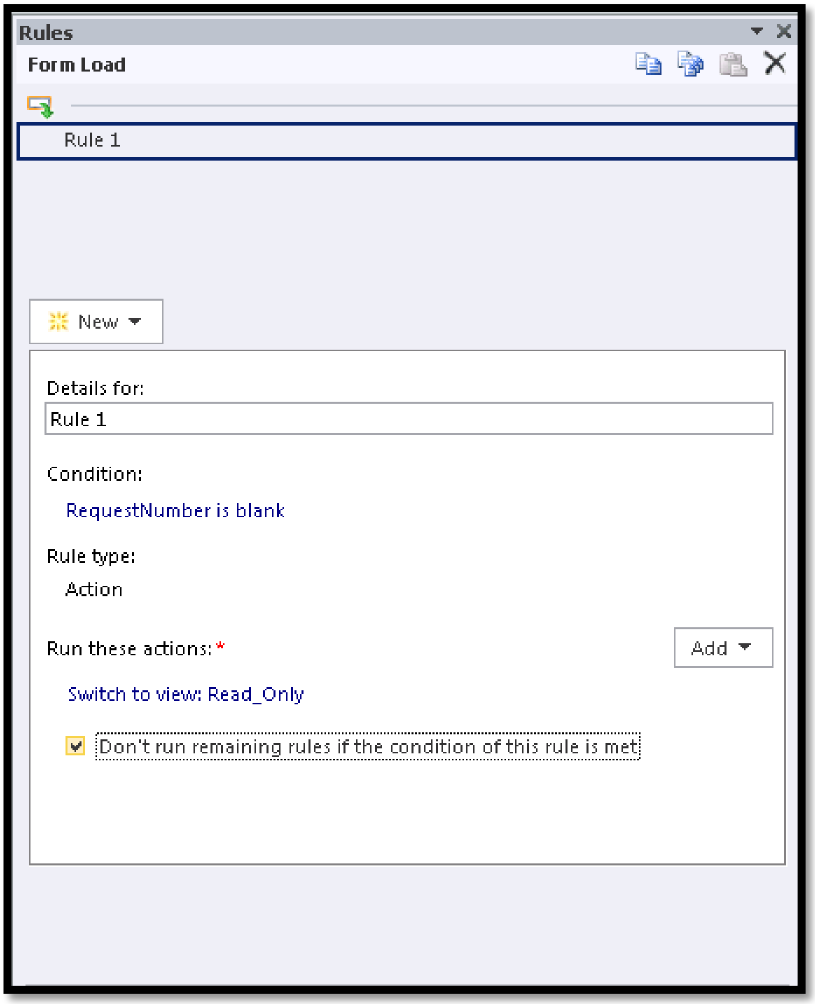
If the RequestNumber is not blank

Then run these actions:

Switch view to Read Only View

Important! Click on don't run remaining rules option; to only execute this rule only if the condition is met and not continue the rules (Break Action)

The rule window will be like below snapshot



2- Rule two:

Build and calculate the Request Number dynamically if it's new request.

By set following formula on the field "RequestNumber"

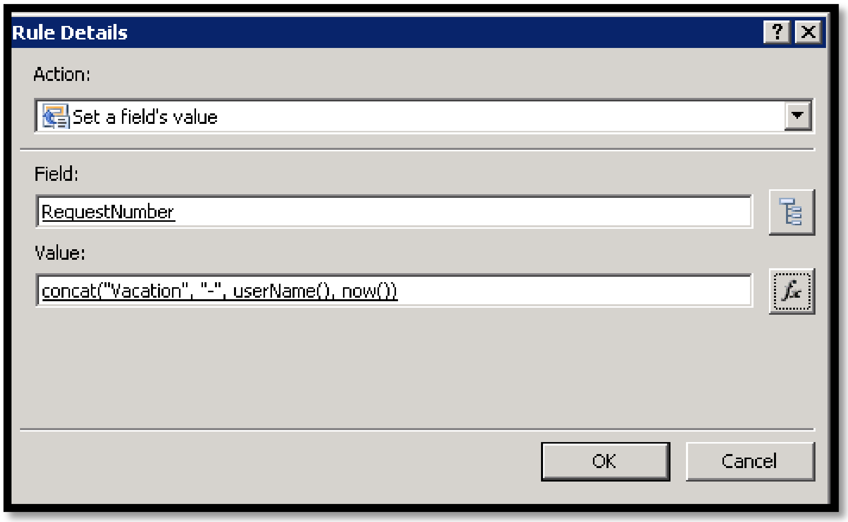
```
concat("Vacation", "-", userName(), "-", now())
```

Steps

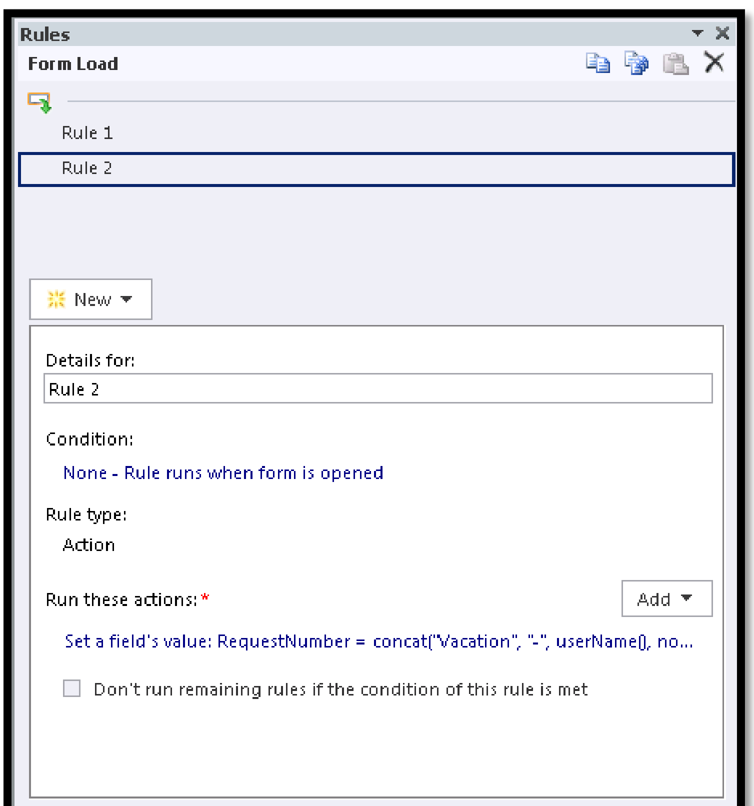
Add new Action without condition

Run these actions:

Set a field's value



So, on Form Load rules window will be like below



Submit Rules:

On submit button we will save the Form data to SharePoint Library

Using the previous Data connection carted on above steps

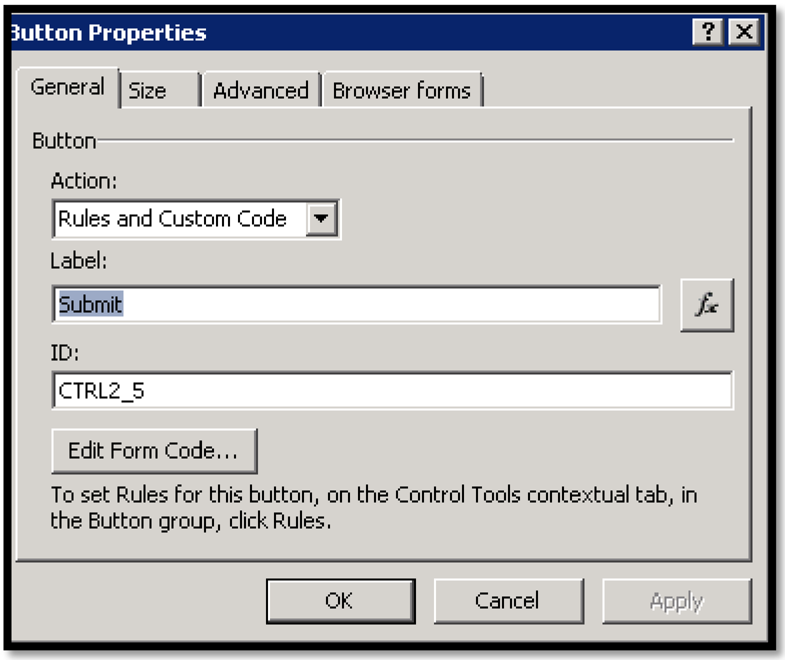
Then switch the view to "Thank You View" which is crated to above steps as well

Steps:

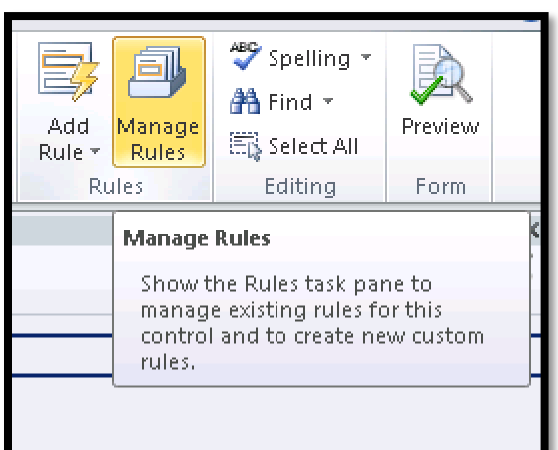
Select the submit button then right click >> Properties

Under drop down Actions select "Rules and Custom Code" option.

Then Click "Ok"



Now click on form Ribbon menu >> Home >> Manage rules To show all the rules



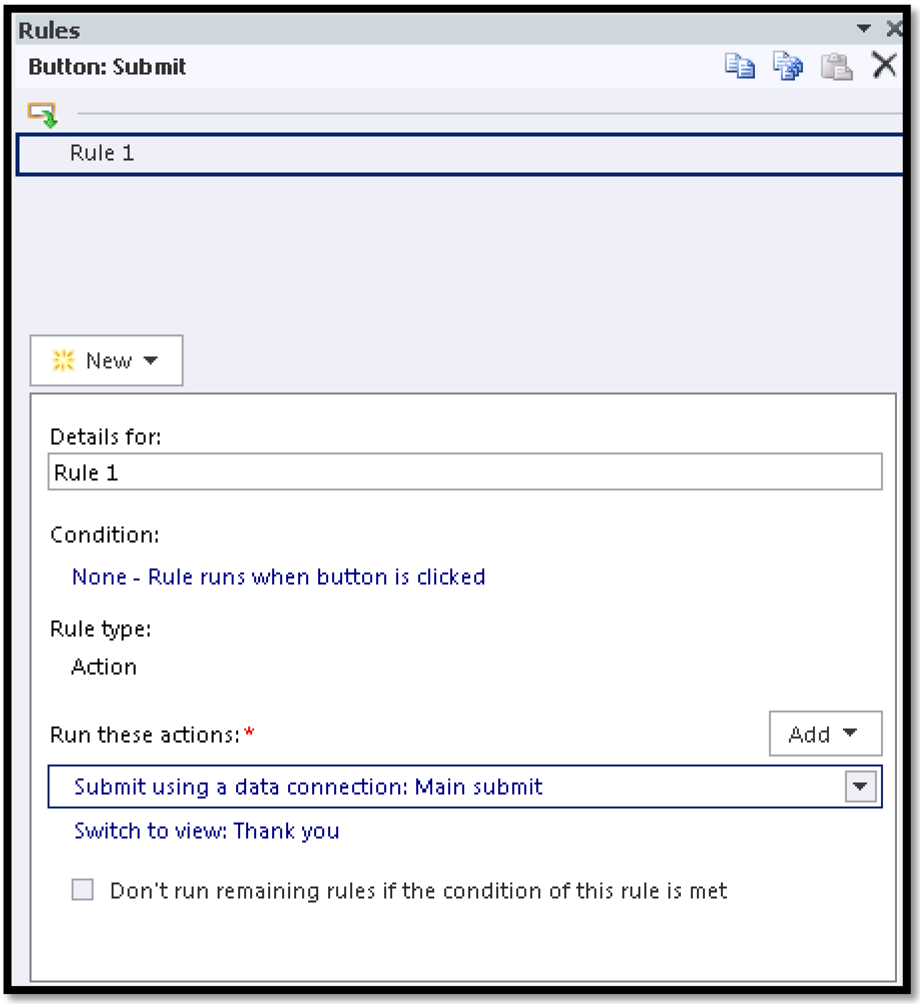
Now, select the button again then add new rule from the rules window

We can add condition to validate or we can leave it none.

Then under "Run these actions":

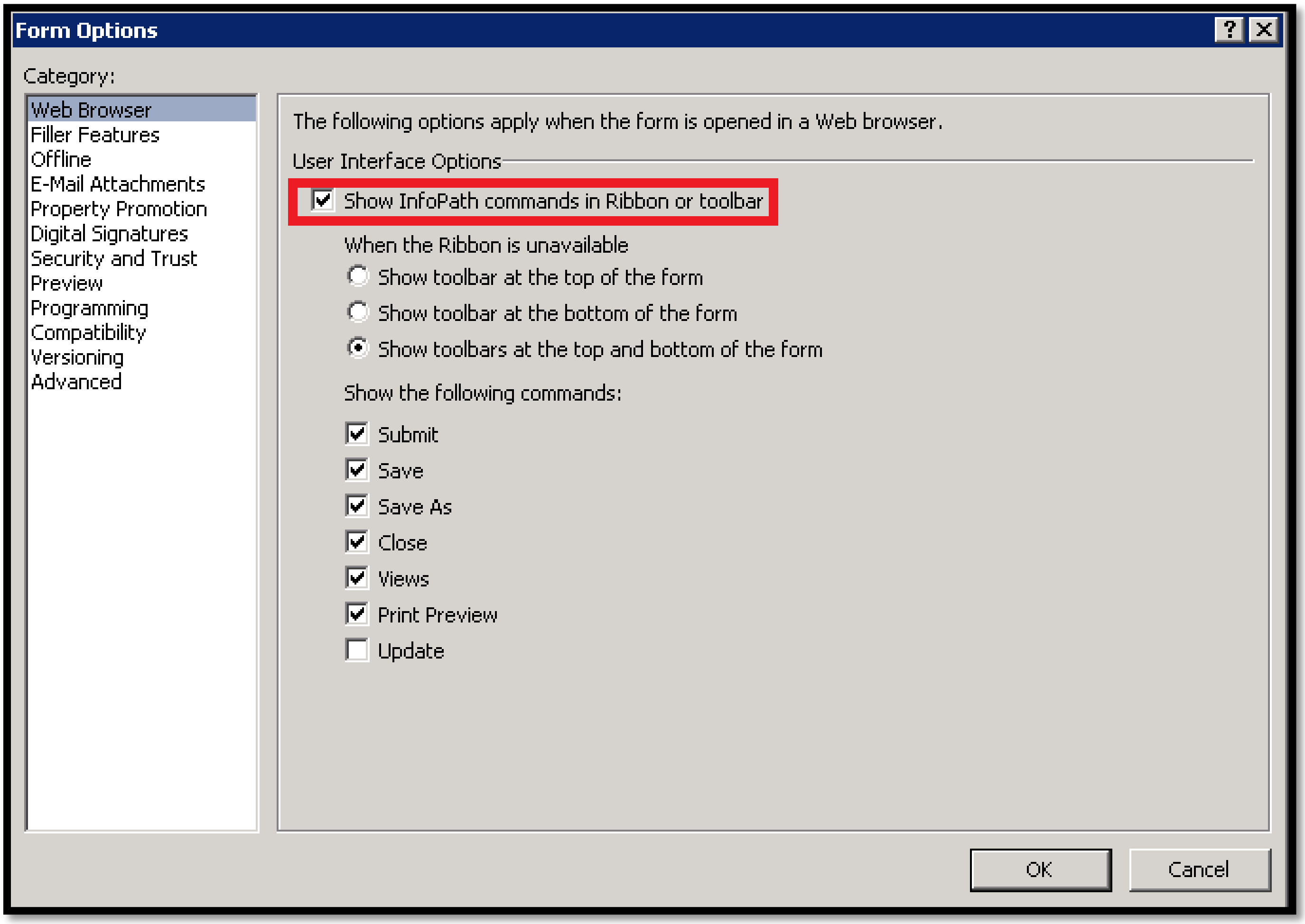
- Add submit data action then select the pervious data connection created.
- Add switch view action to switch to "Thank you view" created above.

The final view will be like below snapshot:



One options we have to consider it is the form ribbon menu has options which should be hide

To hide it from The InfoPath designer >> File Menu >> Form Options



Publish the form File Menu >> click on Quick Public.

Congratulation, the InfoPath form level and we can test it from SharePoint by add new item on the Form library and check the Request Number

It will generate number like below

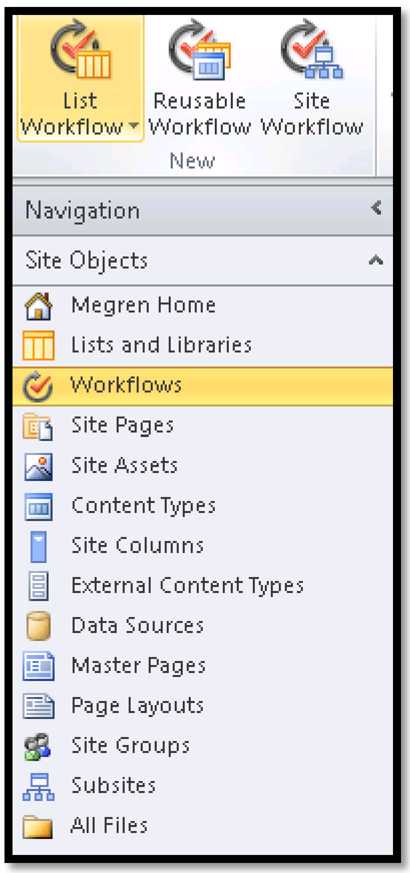
Request Number: **Vacation-Megren-2012-01-25T16:21:35**

SharePoint Designer 2010:

We will design a Workflow to assign Approval Task Process to be associated with our pervious Vacation Request library and customize the task form:

Steps:

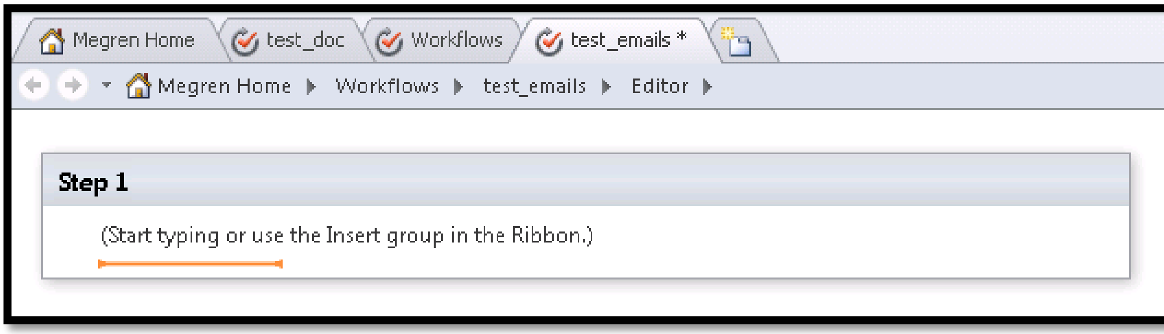
Open SharePoint SPD and connect to the site contain the targeted document library ➔ open workflow menu form the side navigation window.



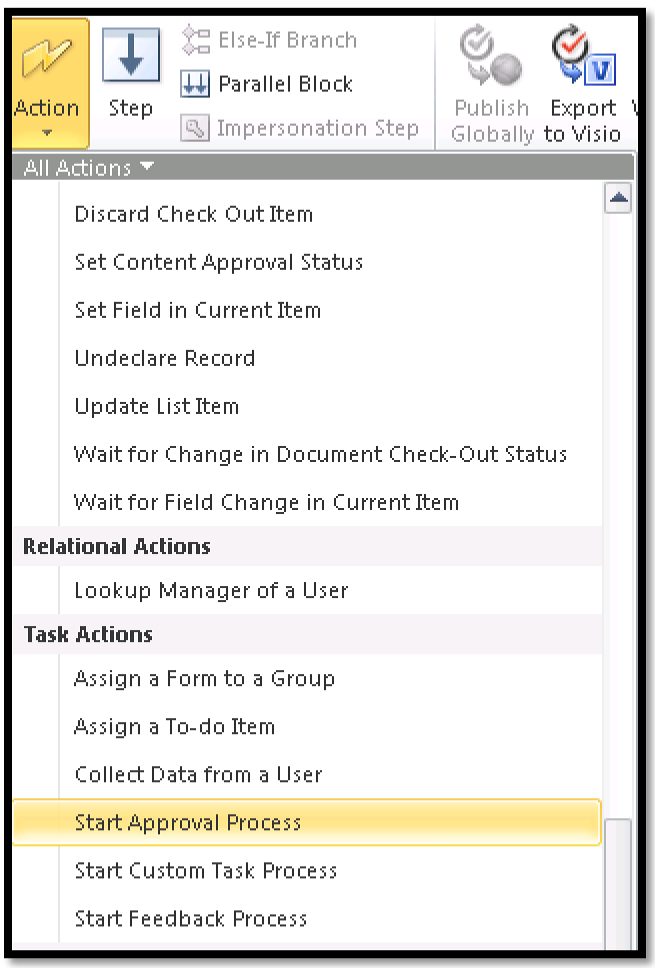
Form the ribbon menu click on List workflow and pick our Vacation Form library need to associate the workflow on it.

Writ the workflow name and put the description.

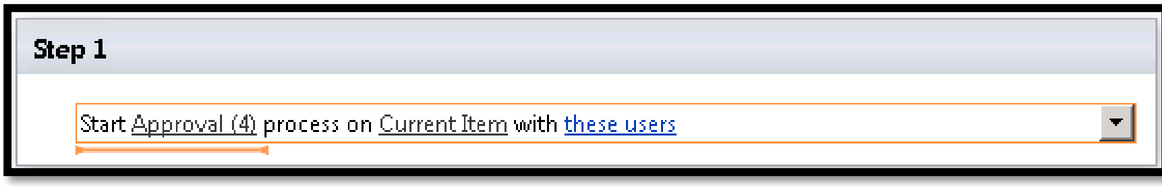
Workflow Editor Window will opened



From the ribbon menu add action ➔ inside task action sector chose “Start Approval process”

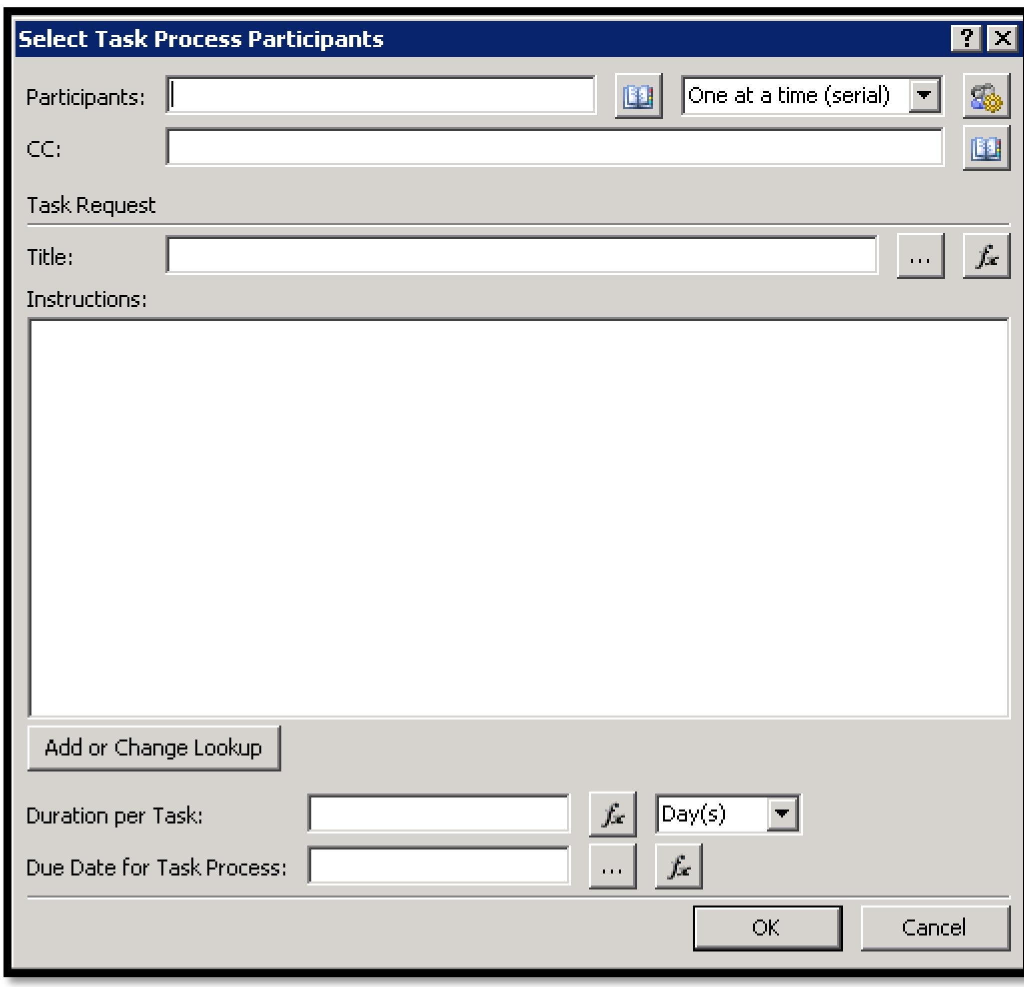


We will see a new action added as a line on the workflow editor



We're going to set task process participants users, by clicking on "these users" link

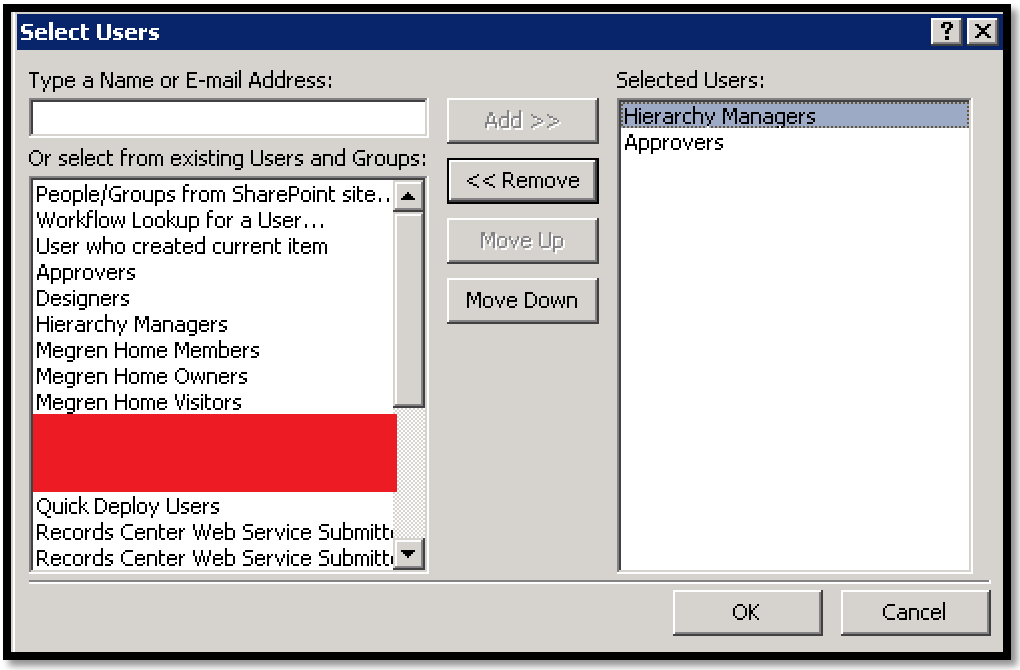
And pick the users from SharePoint groups or single users.



In the first field add the participants IDs and there is an option to send the task to the users I in parallel or one at time (sequential)

And here is snapshot for sequential approval task for 2 exists groups

From top to bottom



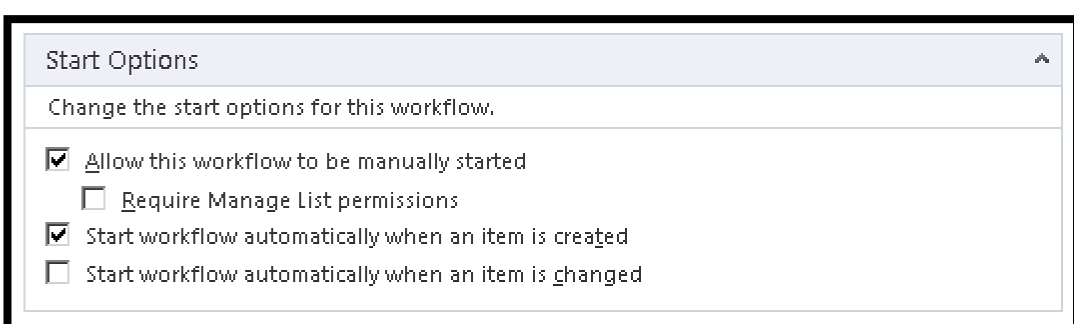
So the task will be assigned to Hierarchy Managers group ➔ if approved ➔ Approvers group

No need to add any title or instructions but may you need to set the task duration time and due process date if required.

Finally we need to trigger this workflow when an item added to the document library.

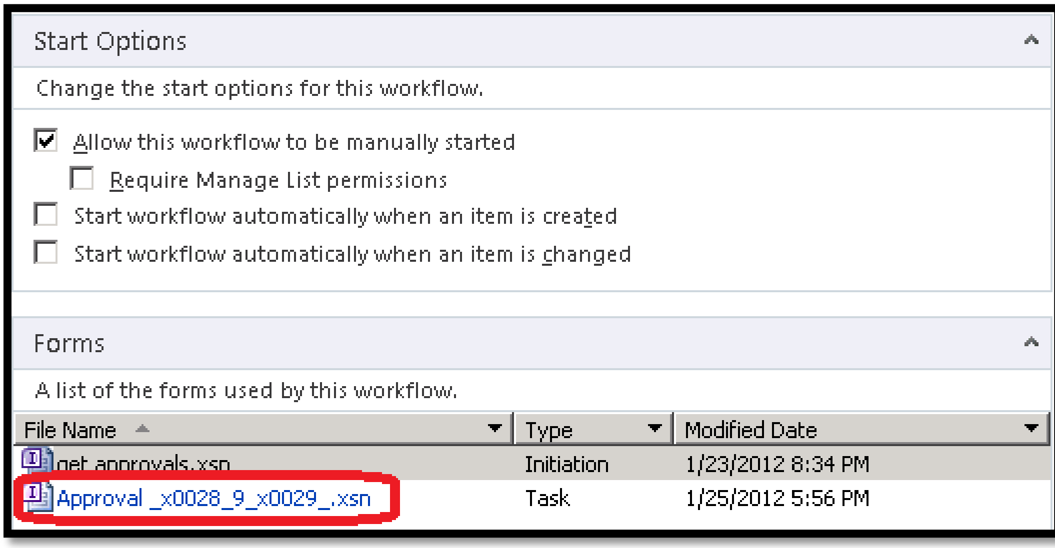
So, we have to click on Workflow settings form the ribbon menu.

Then under Start Options check box of start workflow automatically when item created as below



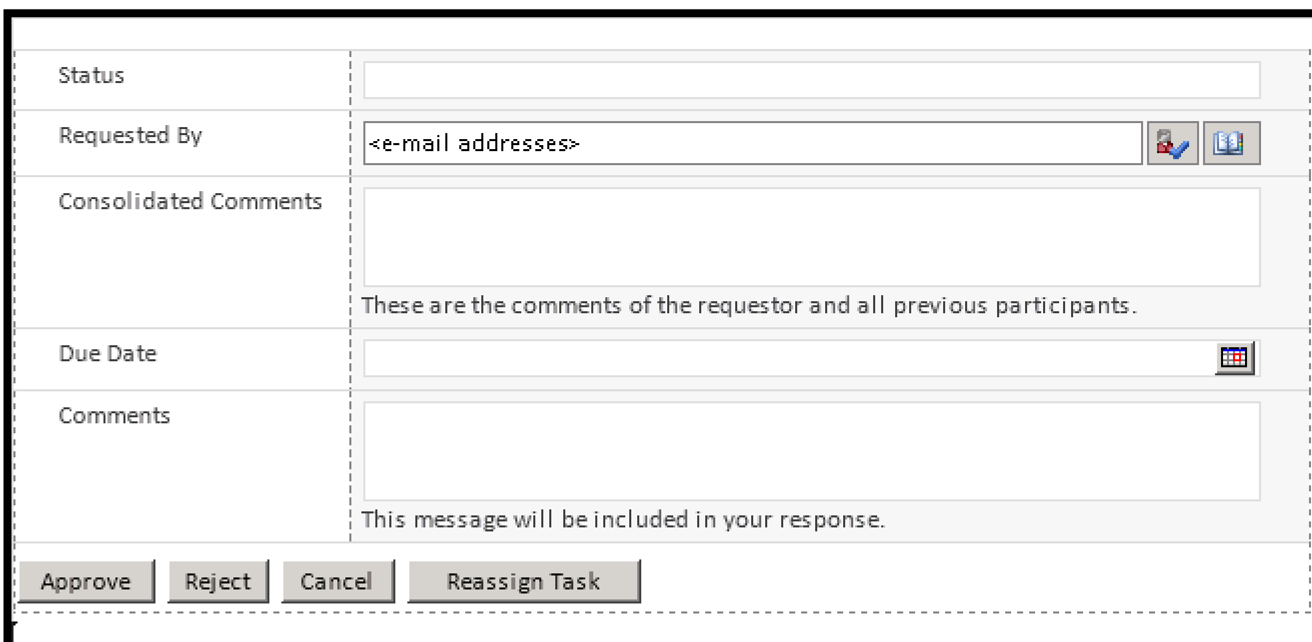
Save and publish the workflow from the ribbon menu.

You will noticed that after publishing a new Task form added on the workflow Forms



This form will be opened by approvers to approve the vacation request or reject it.

We can open it by click on it form the same window above.



It has only requester Name and little information related to the task.

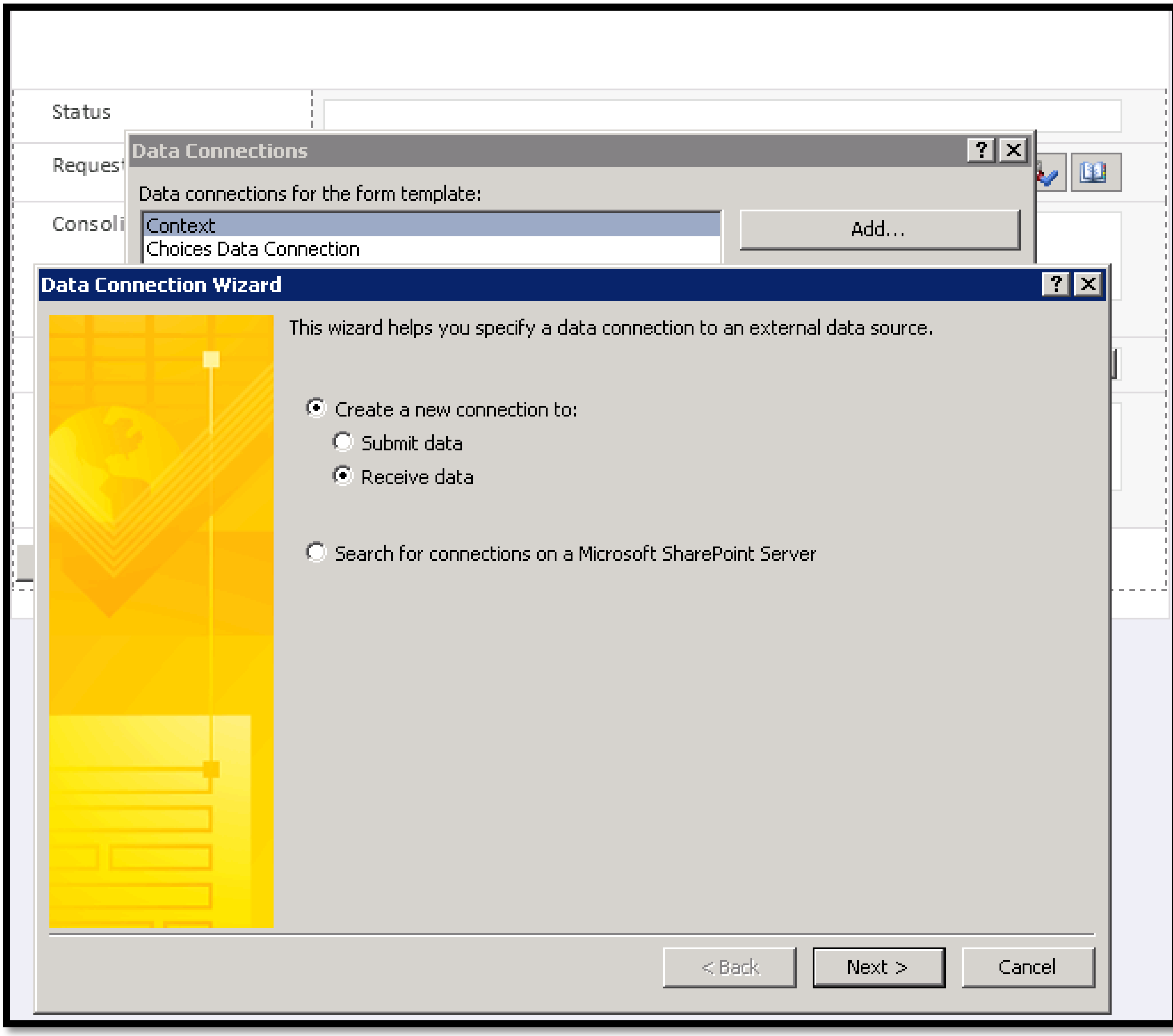
You need to get the request data (Vacation Start Date, Vacation End Date and Justification)

How fetching Request's Data to Form Task?

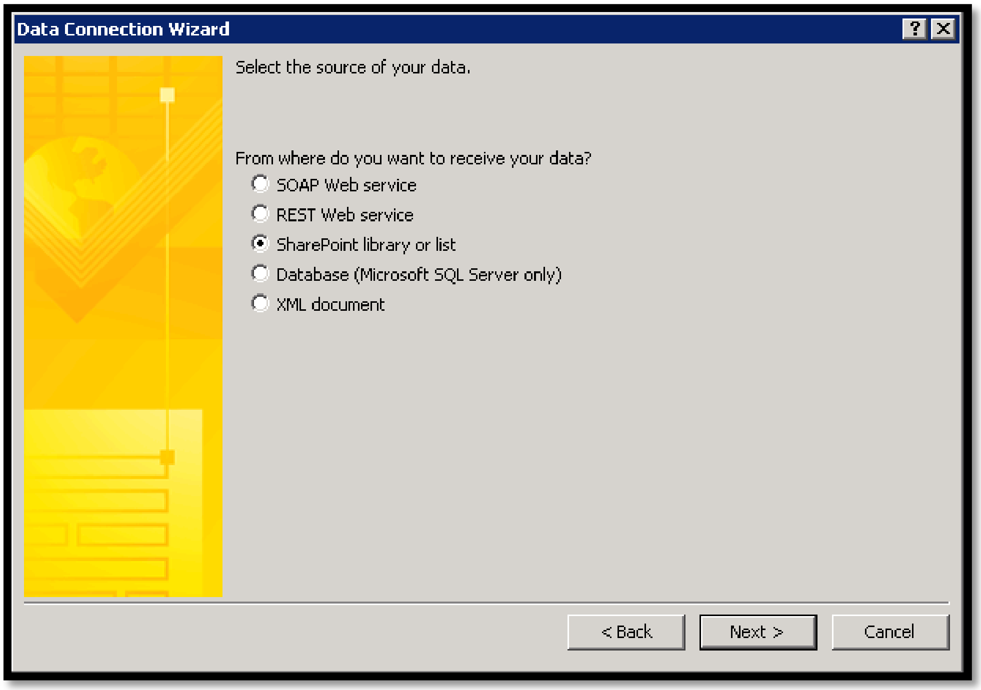
Steps:

On the Task Form add a new connection >> Data Menu >> Data Connection.

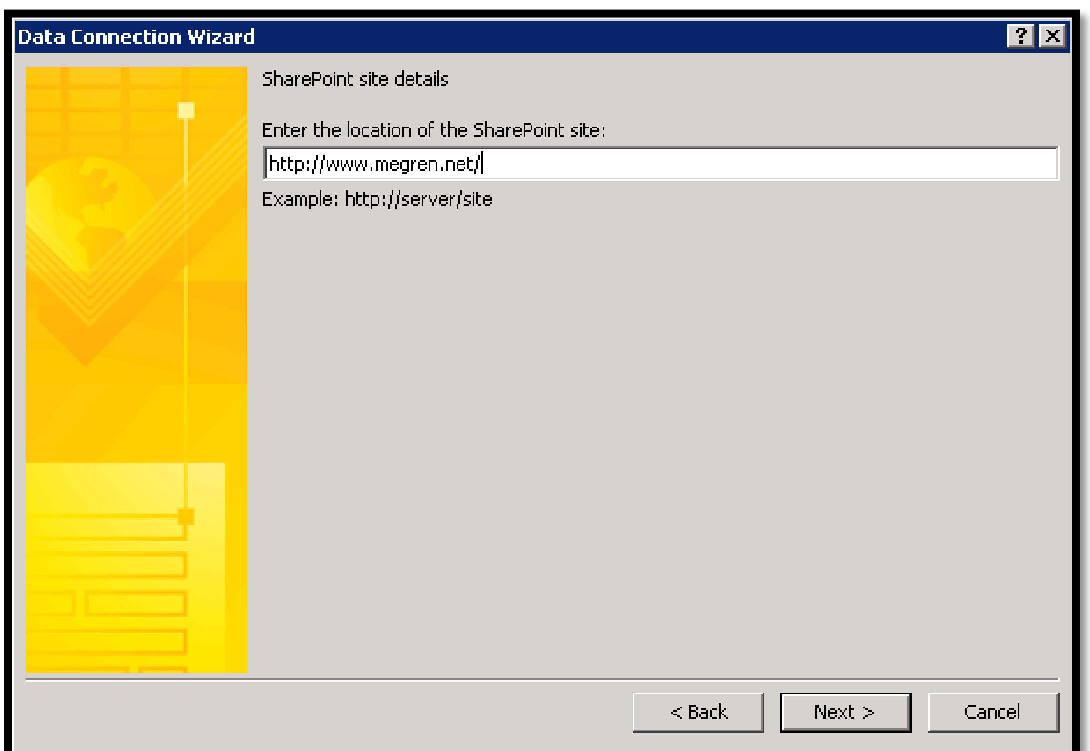
Choose receive data option



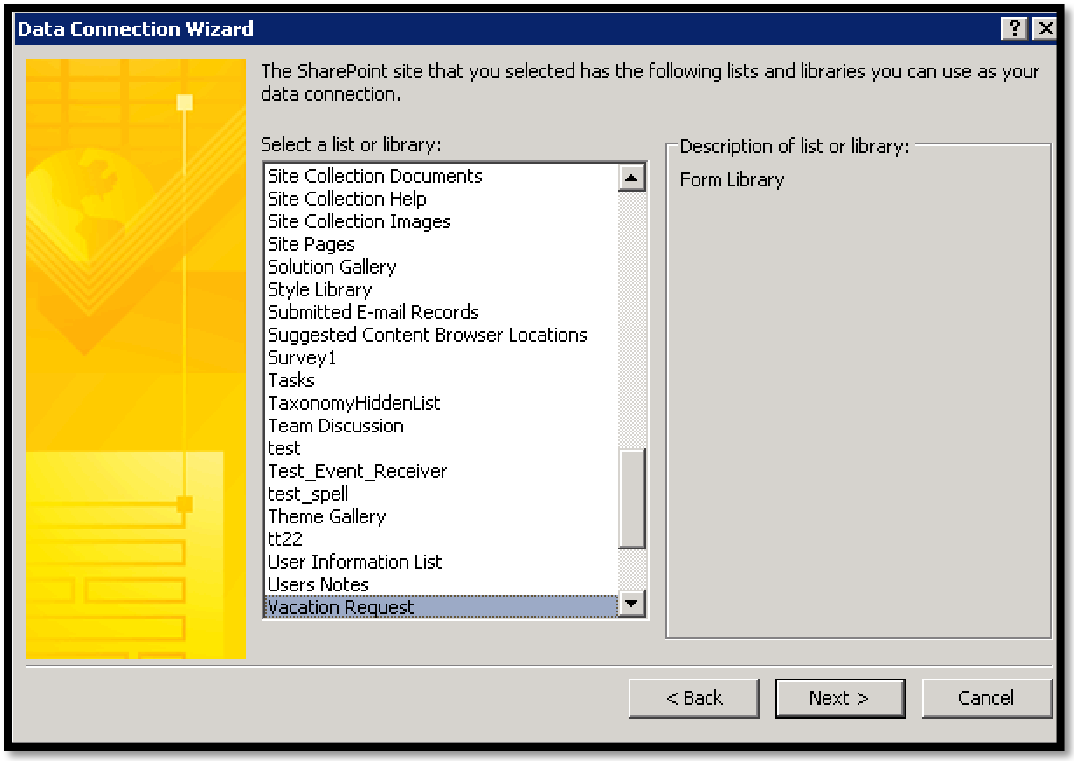
Choose SharePoint Library or List



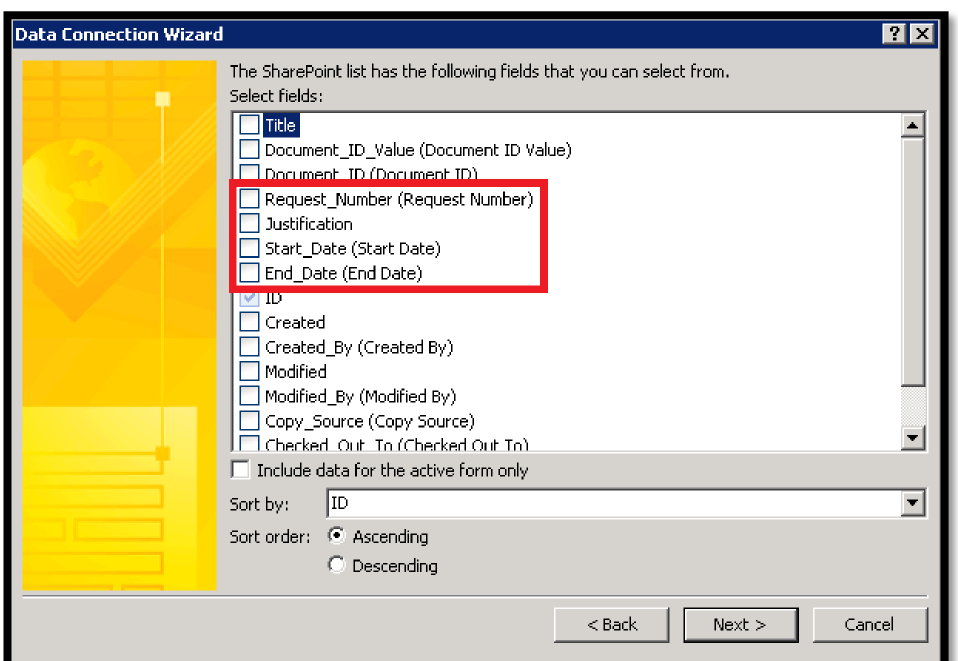
Put the SharePoint site that has the Vacation Request form library



Select the Vacation Request library

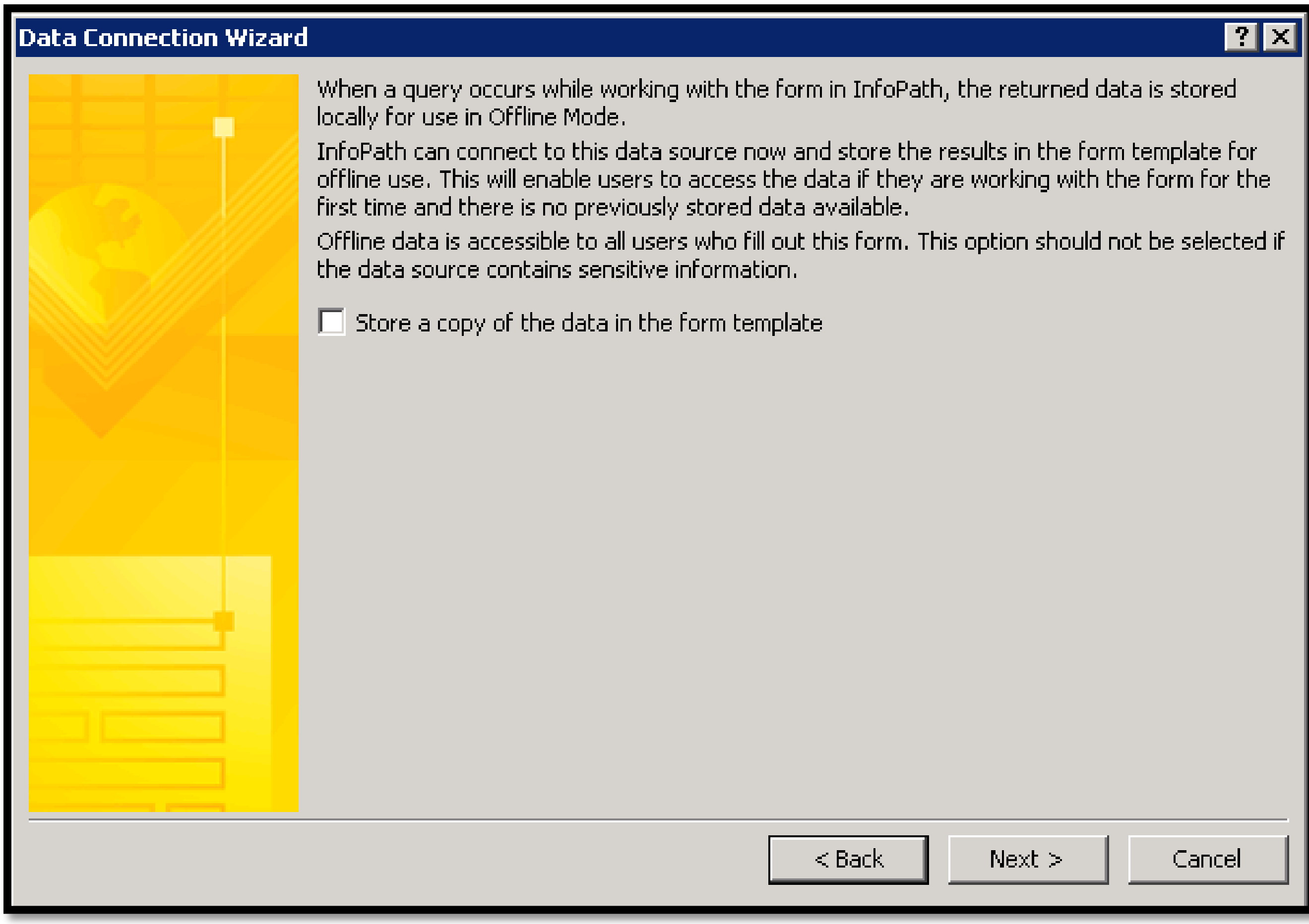


The following window shows us the available fields on the selected library



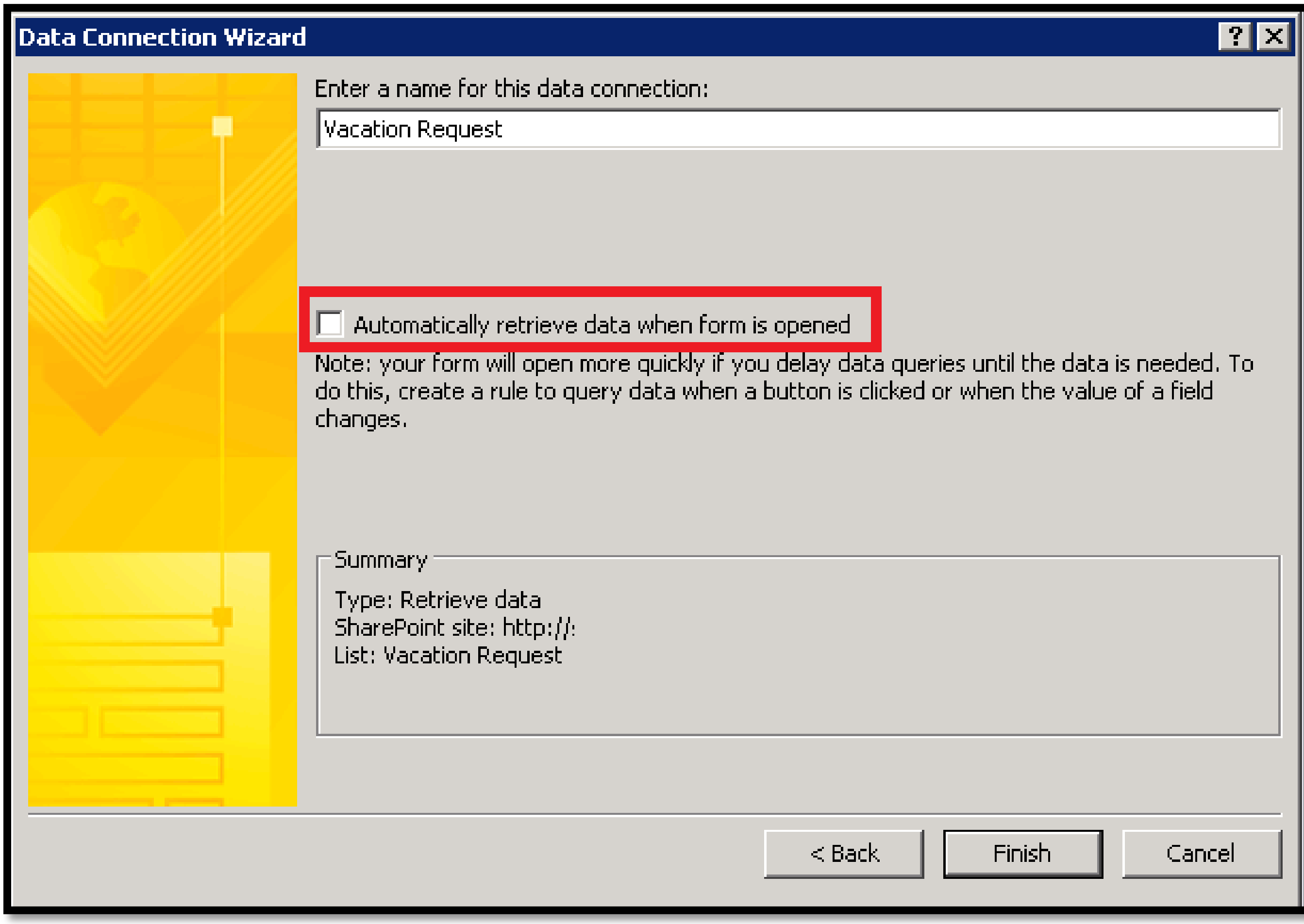
Note: highlighted fields shown here because the previous step when initiating the Vacation Form we expose these fields. We will select all of them plus the title field.

Keep store a copy option unchecked.



On the last screen uncheck the automatically retrieve option then click on finish.

Important If checks this option it will bring all the requests and maybe affect the site performance!!!



We have the connection but we need to get only the currant task related request data.

If you remember what we have the request number as a unique value so we will use it

How to do that?

On the Task Form Load

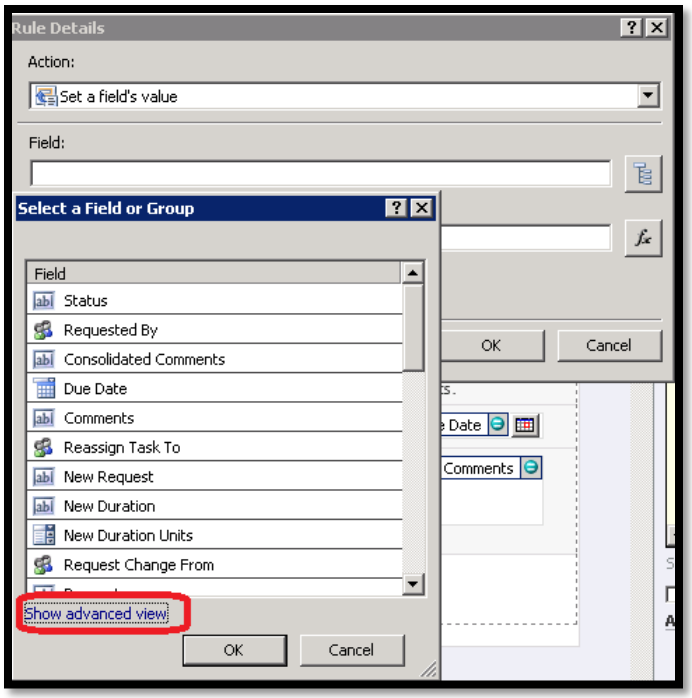
Add rule to set vacation request connections to bring only the item which has the same tile of the task related.

Add new rule

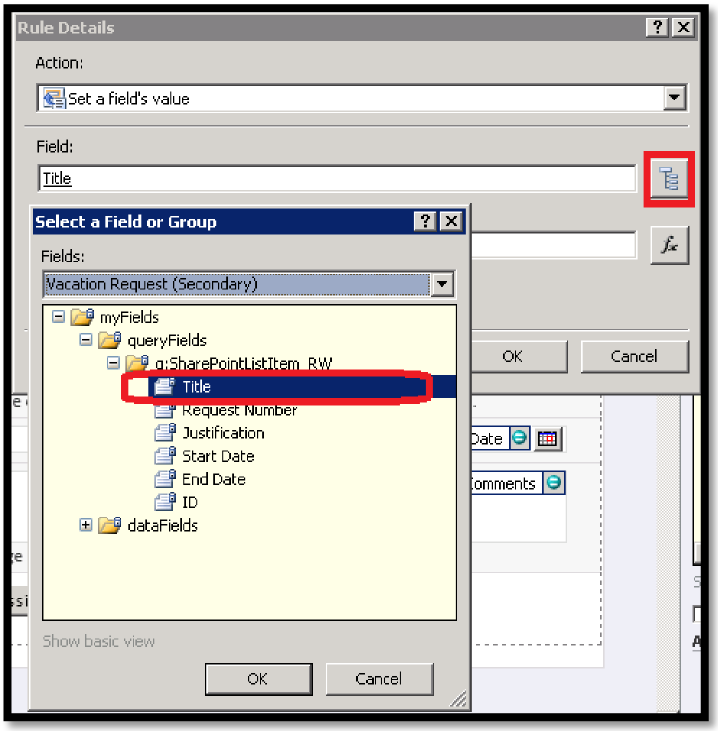
Run these actions:

Set a field's value of the new created connection query title field to be the currant task related task discretion

Click the field to be set and click on show advanced view option

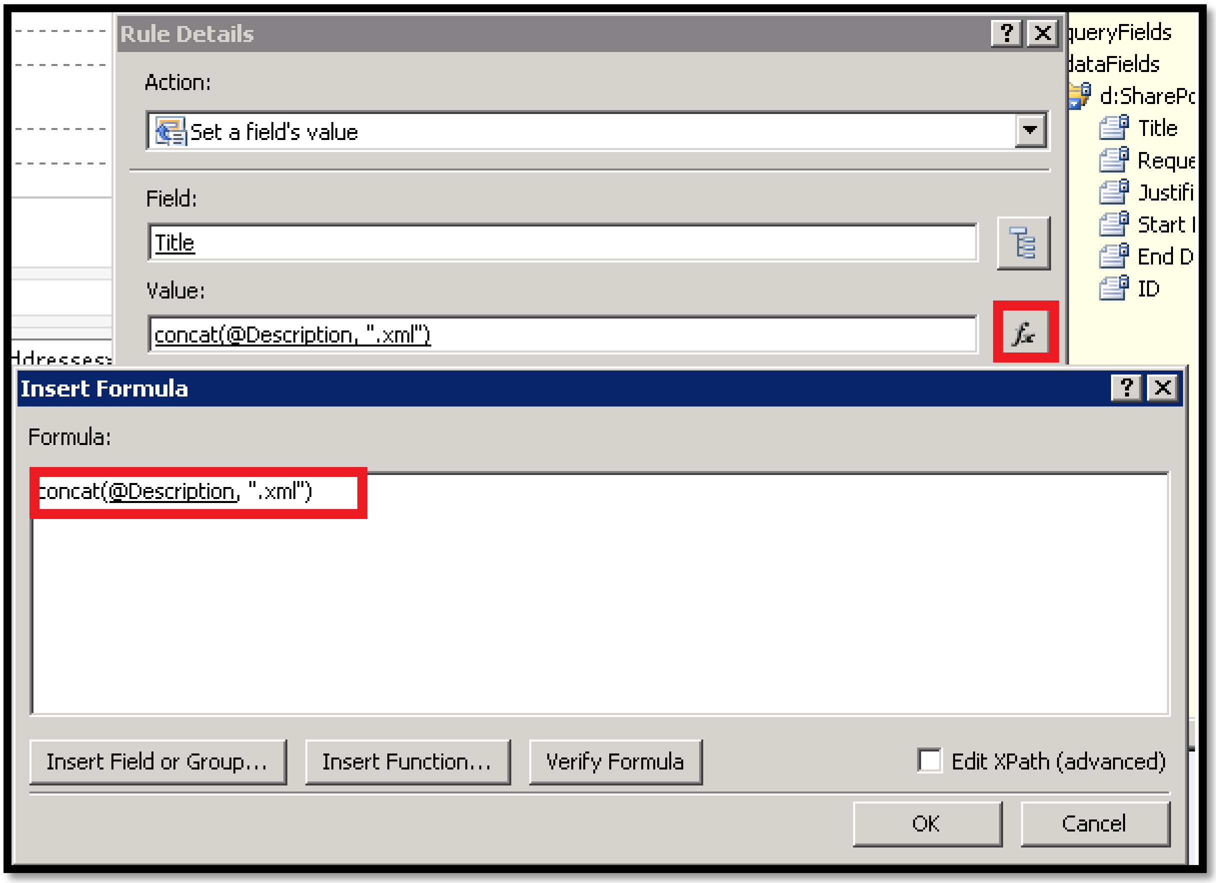


Select the vacation request connection (secondary) >> under query fields select the title which we will use it for the query.

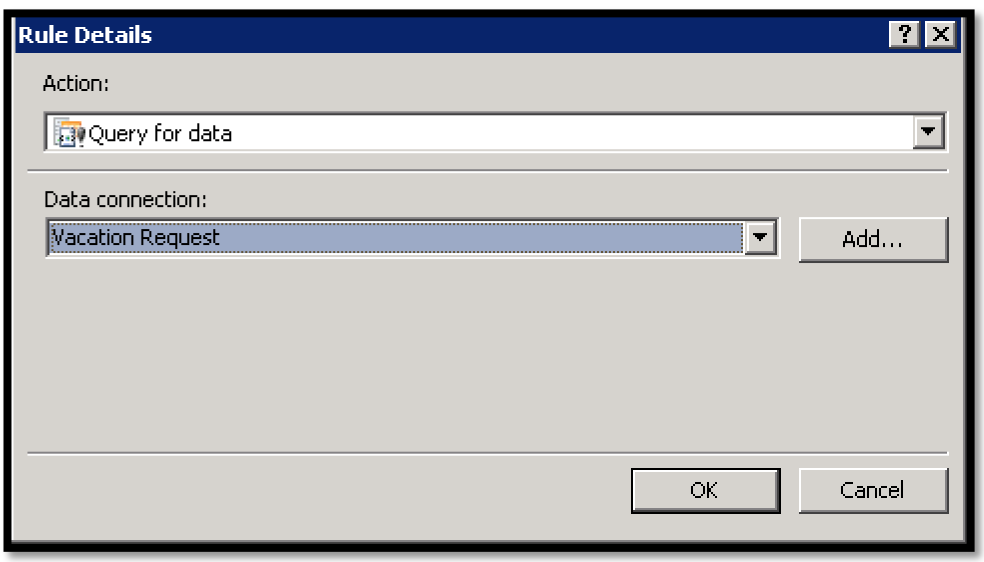


Set the value to be equal the following formula

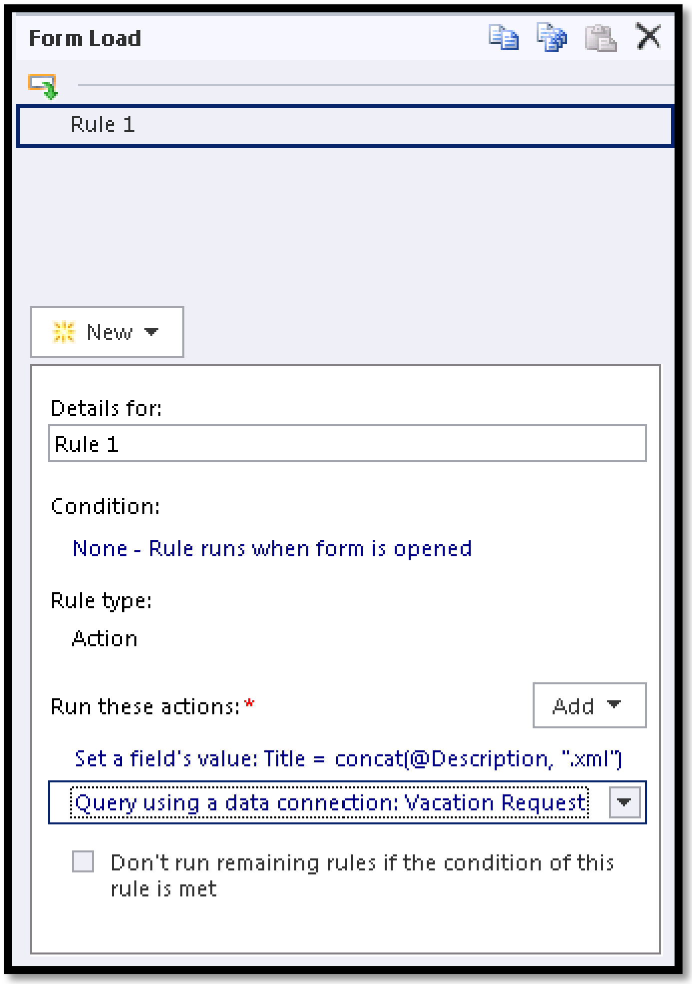
concat(@Description, ".xml")



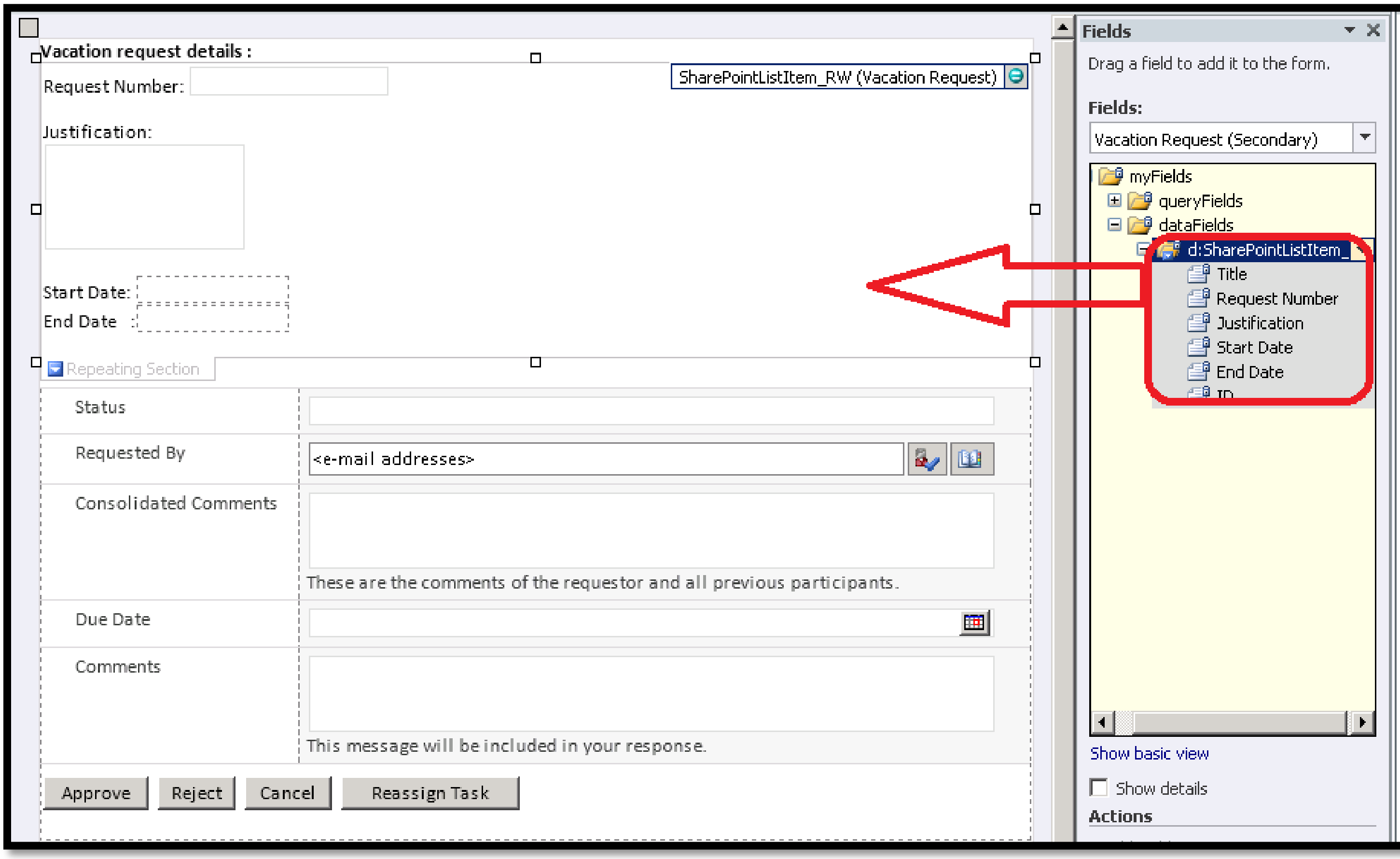
Add the second action for query using connection



The final form load rule's actions will be like below:

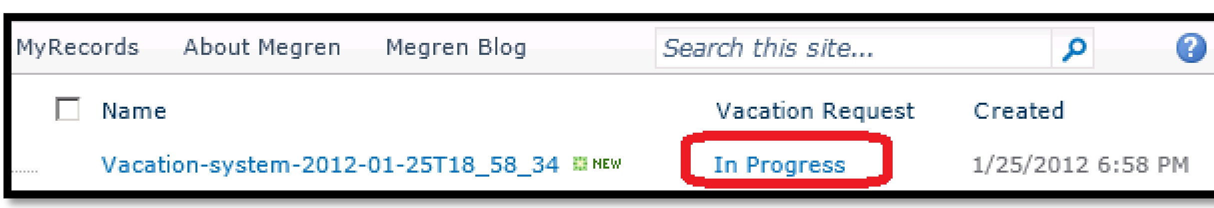


Explore the fields and add them to the task form as extra details or table



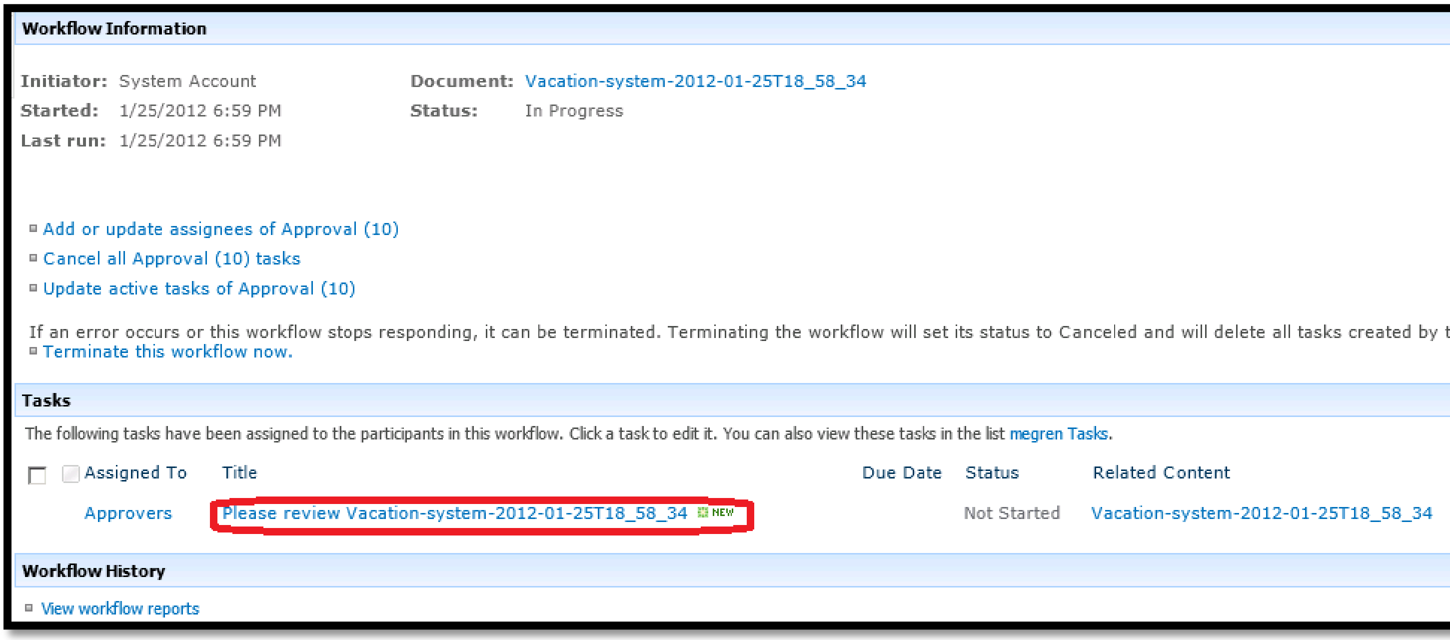
Publish the form.

Submit new vacation request the check the document library new item



You will notify that, there is a new column added named as workflow name “Vacation Request”

Let's click on the "In Progress" link and check the task assigned



Now we will open the Task form to check the request as an approver