KWizCom Knowledge Worker Components

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KWizCom Corporation

Repeating Rows App

User Guide

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INTRODUCTION

GENERAL

This document provides all the information needed to install, evaluate and deploy this KWizCom product:

- Product Overview
- Installation Guide
- Administration Guide

PRODUCT OVERVIEW

The *SharePoint Repeating Rows app* enables you to easily create multi-row forms (such as expense forms) by simply using SharePoint's out-of-the-box list forms.

Once you add the Repeating Rows app to your site, you'll be able to add a new type of Repeating Rows column to your lists, which allows you to have multiple rows in your list form:
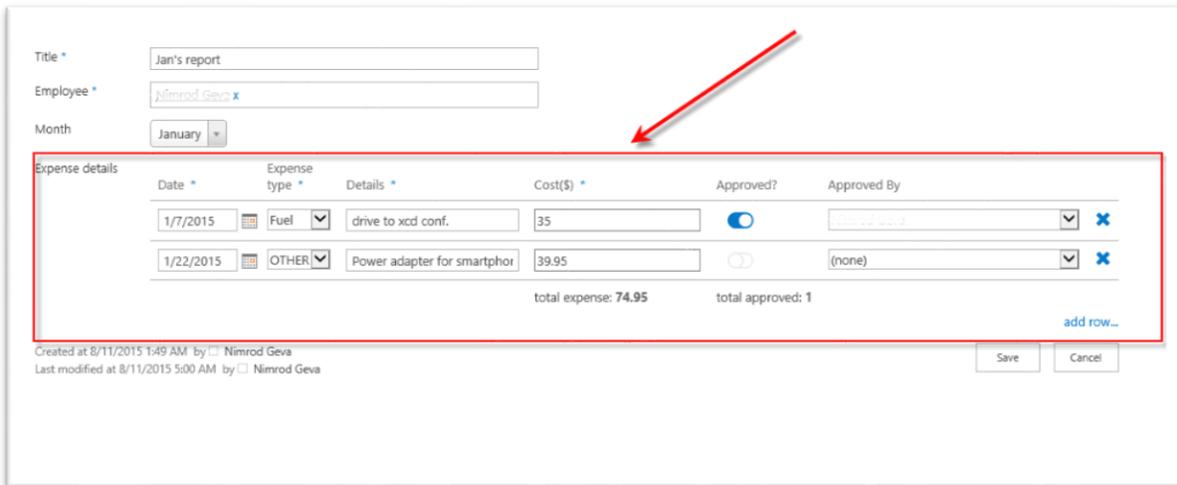

So, how does this work?

When you add a Repeating Rows column to your list, you create a lookup column that connects your list to another list, creating a relation of one-to-many between the lists.
In the screenshot above we have a list called "Expense reports" where each item is a single employee's monthly report. Each expense report includes several expenses, these expenses are stored in a second list called "Expense details".

This is how the data model looks like:
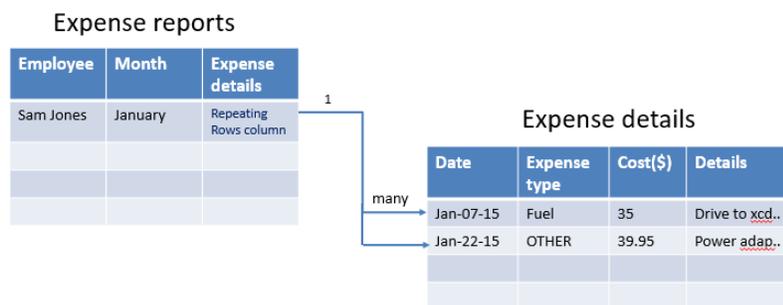
Now comes the magic: In the example above, we have created a Repeating Rows column called "Expense details" that connects every expense item to many expense details items. The Repeating Rows column renders as multi-row UI, enabling the user to fill-out multiple expenses in one form; the expense details items are stored in the connected "Expense details" list.

To learn how to install and configure this app, please review the next sections in this guide.

KEY FEATURES

Feature	KWizCom Repeating Rows app
A new column type that enables you to add/edit a list item along with multiple connected items from a remote list.	√
Connect between a "Master" list and "Details" list (such as "Expenses" and "Expense details".	√
Connect between a "Master" list and "Details" document library, enabling connecting multiple documents to a list item. (such as scanned receipts connected to an expense item)	√
Configurable column widths	√
Connected lists can be in different sites.	√
Configurable number of empty rows in "New" form	√
Configurable summary calculated fields	√
Cascaded delete: When you delete the master item, its connected items are also deleted from the remote/child list so you won't end-up with "orphan" list items.	√
Cross-browser	√

INSTALLATION

SOFTWARE REQUIREMENTS

SERVER REQUIREMENTS
- SharePoint 2013/2016 configured for app hosting
- SharePoint online (Office 365)

CLIENT REQUIREMENTS
- Windows 7+
- Microsoft Internet Explorer 9+, Mozilla Firefox (Latest version), Google Chrome (Latest version).

INSTALLATION PROCEDURE

To download and install this app please follow these steps:

1. Browse the product page on Microsoft's Office app store:
   https://store.office.com/kwizcom-PN104003805.aspx?assetid=PN104003805
2. Add the product to your site/s. This FREE evaluation version is fully functional, just displays a message letting you know that this is a trial version.
3. When you go into the app's settings page for the 1st time, it will ask you to install the *KWizCom Apps Foundation* app. This app is a utility app that provides services to all KWizCom apps, and needs to be installed in your app catalog by your tenant admin (requires tenant trust).
   For more details about *KWizCom Apps Foundation* visit our website.

ADMINISTRATION GUIDE

SETTING-UP A REPEATING ROWS COLUMN – CONNECTING 2 LISTS

The Repeating Rows is a new type of column that allows you to edit a list item along with multiple rows of connected items.

In this section, we'll use the *Expense Report* example to explain how to configure the column.

STEP 1: PREPARE YOUR LISTS

Before you create a Repeating Rows column, you need to have your connected lists – a "Master" list and a "Details" list.

In our example, we have the following 2 lists:

- **Expense reports** list – This is the "Master" list. Each item in this list is an expense report item, made by some employee.
  The list includes the following columns:
    - Employee
    - Month

- **Expense details** list – This is the "Details" list. For each expense item in the *Expense reports* list, we have here multiple *expense details* items.
  The list includes the following columns:
    - Date
    - Cost($)
    - Expense type
    - Expense details

Ok, so once you have your data model ready, it's time to create your Repeating Rows column.

STEP 2: CREATE THE REPEATING ROWS COLUMN

In the "Master" list (Expense reports), create a Repeating Rows column that will display multiple rows from the "Details" list.

To do that, click the "Manage Repeating Rows" button to open the list's Repeating Rows settings page:
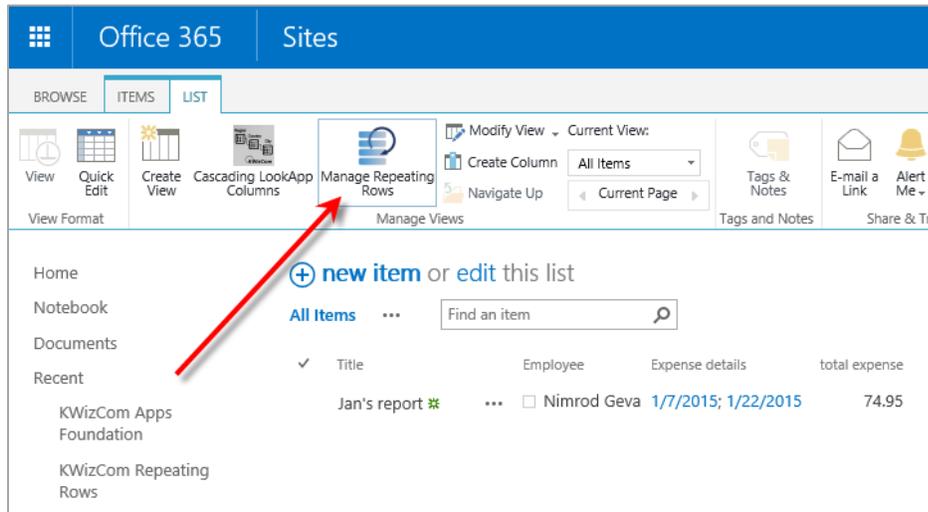
IMPORTANT:

The Repeating Rows app relies on services provided by the *KWizCom Apps Foundation* app.
When you browse the Repeating Rows settings page and KWizCom Apps Foundation is not installed, you will be prompted to install it.
For more details, please review the installation procedure section in this user guide.

Once you click the ribbon button, you'll see the following settings page:

STEP 3: CONFIGURE THE REPEATING ROWS COLUMN

Configuring a Repeating Rows column is done by following the steps:

1. Select a repeating rows column

You can create new Repeating Rows column, or edit existing ones (if created before).

If you create a new column, type its name in the "New column title" textbox.

2. Decide how many rows should be displayed by this column by default

How many rows should this column have for new items?

```
3
```

When you create a new item, the Repeating Rows column will display 3 empty rows by default, you can change that to any other number.

3. Decide if you want to allow end-users to add rows

Allow users to add rows?

☑ add row…

You can allow users to add rows to the Repeating Rows column when they add/edit items. If you choose to allow users to add rows, you can also rename/translate the caption of the "add row" link that will appear below the Repeating Rows column in new/edit item forms.

4. Connect the Repeating Rows column to a target list

Select a target list

ⓘ This list will store the rows of this column.

Expense Details ▾

Select a list to which you want to connect your Repeating Rows column. In our example that would be the "Expense details" list.

IMPORTANT

The target list should be an empty list, used only to store the Repeating Rows items. If you

connect the Repeating Rows field to a list that includes data in it, all the existing data items

will be deleted.

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5. Select which columns should be displayed in the Repeating Rows column

Click the box to add columns from the target list ("Expense details" list in our example) to the Repeating rows column. These columns will be displayed according to the order that they were added.

6. Configure columns' layout and preview

Now you can see how the Repeating Rows column will look like (column order) by looking at the preview section at the bottom of the settings page.

You can also configure a column's width* and add total function to selected columns.

To configure column width and/or a total function for it, simply click the ≡ icon – this will open the following popup:

Each total field will be also available as a Number column that can be displayed in the list views.

* Resizing field's width is not available for Date, Boolean, Choice and Lookup columns since these columns have their width pre-defined and optimized

7. Save your settings
   That's it! Now you need to click "Update" to save your settings.

STEP 4: CHECK YOUR REPEATING ROWS COLUMN IN RUN-TIME

After you've created the Repeating Rows column it is time to check your configuration by simply creating a new item in your "Master" list.

In our example, we'll create a new "Expense report" item:

So, now you can create/edit an expense report along with connected expense details rows.

Once you click the "Save" button the Expense report item will be saved, along with the expense details rows that will be saved in the "Expense details" list in our example.

> **COMMENT1**
>
> Upon clicking Save, empty rows will automatically be removed before the form data is saved.

| **COMMENT2** |
| You should NOT edit items directly in the "Details" list to which the Repeating Rows field is connected, but only by using the Repeating Rows column in the "Master" list. If you edit these items directly in the "Details" list, the summary fields will not be display correctly. Also, if you add any items directly to the "Details" list – those items will be deleted by the Repeating Rows app cleanup job. |
| **COMMENT3** |
| **Lookup** fields that are included in the Repeating Rows column will display up to 2000 items. This limitation was set to prevent performance issues (because the Repeating Rows column might display many rows, each loading thousands of lookup items). |

One more thing for you to check, is the existence of the summary fields as new columns available for list views:

So, you can display these summary fields in your list views just like any other column in your list.

SETTING-UP A REPEATING ROWS COLUMN – CONNECTING LIST TO LIBRARY

In the previous section we saw how to create a Repeating Rows column that connects to a "Details" list. In this section we'll show a different scenario where you connect the Repeating Rows column to a "Details" document library. This enables you to connect multiple documents to an item and update them while you update your item:
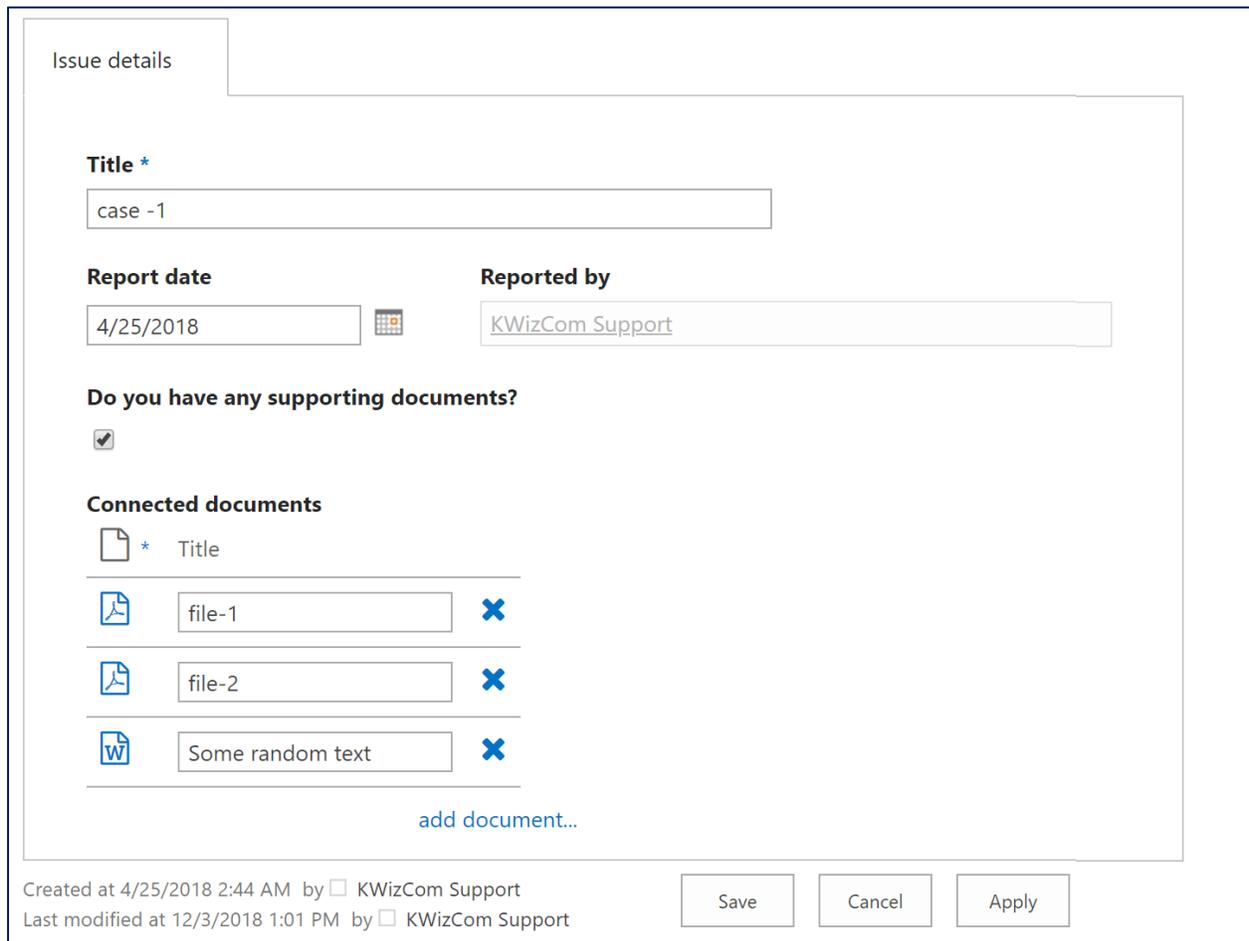
Issue details

Title *

case -1

Report date

4/25/2018

Reported by

KWizCom Support

Do you have any supporting documents?

☑

Connected documents

 * Title

📄 file-1 ✖

📄 file-2 ✖

📄 Some random text ✖

add document…

Created at 4/25/2018 2:44 AM by ☐ KWizCom Support
Last modified at 12/3/2018 1:01 PM by ☐ KWizCom Support

Save   Cancel   Apply

In the screenshot above you can see multiple documents can be connected to a single Issue item.

How is this different than SharePoint file attachments?

1. Since the actual documents are stored in a separate document library you can configure different permissions to selected documents, according to your requirements.
2. You can configure the Repeating Rows column to show selected properties of the connected documents (in attachments you don't have any properties)

Setting up connected documents is very similar to what you saw in the previous section when we connected a master list to "Details" list, however when you select a document library in the "Select a target list" property you will see the following additional properties:

- Enter sub folder name:
  you can have all connected documents grouped for better organization (rather then have them all as one huge pile of documents).
  You can type a folder name or you can select a value from the "insert a column" drop down, which enables you to create a sub folder with a dynamic name, according to selected item column.
  Example: if you want each item's connected document to be saved under a sub-folder which its name equals the item's ID, you should select the ID column:

- Show the file name in the repeating rows?
  By default, repeating rows will simply show the file type icon, but you can show the file name if you like.

OK, SO HOW DOES IT WORK?

This section provides some more details about the solution's structure.

A REPEATING ROWS COLUMN IS ACTUALLY A LOOKUP COLUMN

When you create a Repeating Rows column in your list, the result is a lookup column that connects your "Master" list to a "Details" list.

Looking at our "Expense Reports" list columns, you can see that the "Expense Details" column that displays multiple rows in the list forms, is actually a regular Lookup columns:

This enables us to link between an item in the "Master" list and its connected multiple items in the "Details" list.

But that's not all:

If you open one of the "Details" item, in our example an item in the "Expense details" list you will see a "Master Item" Lookup column:

This reverse Lookup column is automatically created in the "Details" list when you create the Repeating Rows column. We create it to enable you to navigate from a "Details" item to its "Master" item, or in our example: you can navigate from any expense details item to its expense report item.

A SUMMARY FIELD IS A NUMBER-TYPE COLUMN

When you configure a Repeating Rows column you can create summary fields for selected fields.

In the screenshot below you can see that we have configured a summary field below the "Cost($)" column:

The result of this configuration, besides the fact that users will see this summary field while they create/edit and item, is that a Number-type column is created in the list for each summary field, so you can add these summary columns to your list views.
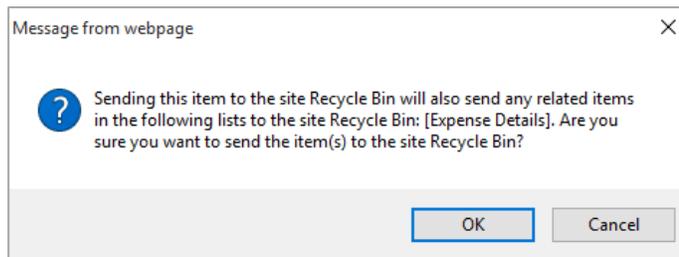
> **COMMENT**
>
> Summary fields are updated when you use the Repeating Rows column. If you bypass it by updating the "Details" items directly from the "Details" list, the summary fields in the "Master" item will not get updated.

WHAT HAPPENS WHEN YOU DELETE AN ITEM?

There are several cases to consider:

1. What happens when you delete a "Master" item?
2. What happens when you delete a "Details" item in the Repeating Rows column?

- When you delete a "Master" item, you will be prompted with the following message:

Message from webpage	✕
? Sending this item to the site Recycle Bin will also send any related items in the following lists to the site Recycle Bin: [Expense Details]. Are you sure you want to send the item(s) to the site Recycle Bin?	
	OK Cancel

Meaning: we do cascaded delete, so if you delete a "Master" item, we will delete all its connected items in the "Details" list (no point in leaving orphan items, right?)

- When you delete a "Details" item in the Repeating Rows column, it does not get deleted right away in the "Details" list. What happens instead is that its reverse Lookup that connects its "Master" item gets deleted, so it becomes orphan.
Why do we do it?
Because we cannot know for sure we really need to delete it until the user commits his action by saving the "Master" item form. If instead, he clicks "Cancel" after deleting a "Details" item, then we need to revert that deletion.
So, what we do is use a **remote event receiver**. That event handler will run the next time someone updates an item in the list, and will check for all orphan items in the "Details" list that need to be deleted, or need to be reconnected with their "Master items".
So why are we telling this to you?
So you won't be surprised to see that "Details" items that you deleted, are still there. Don't worry, they will be deleted after several minutes, and will not appear in your forms anyway.