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OnBase by Hyland

OnBase Guide - WorkView Configuration

Goal: To configure successful WorkView Applications within the CU OnBase environment

Complexity Level: Departmental WorkView Administrators

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Background

WorkView is a module that enables low-code development of applications suited for case management. These applications are based on relational database tables allowing for one-to-many or many-to-many relationships between objects where applicable.

Since this is within the OnBase database, this also allows for integration with Unity forms and Workflow, and documents. WorkView applications are accessed through the Unity and web clients that users are already familiar with.

CU has 50 concurrent licenses for WorkView, meaning 50 users can be using developed WorkView applications in the Unity/web clients at any time. Developers configuring in Studio do not count toward this limit.

Prerequisites

OnBase Studio must be installed to configure WorkView (and any related Workflow processes). OnBase Configuration is needed to create user groups (and any document types or keyword types related to your application).

Refer to the OnBase Client Guides for installation instructions.

Required Trainings

Due to the complexity and potential impact of WorkView configuration, prior to receiving access to configure WorkView, training must be completed.

Hyland offers a WorkView Certification which requires System Administration as a pre-requisite.

The following are also available online through our subscription.

- Work View | Case Manager Hands On Lab

During the first two training days at CommunityLive, WorkView content is also usually available.

Resources

For more information, refer to:

- the WorkView MRG
- the Application Builder Community

Additional recommended trainings:

- Latest Enhancements
- WorkView: User Experience and Interface Design

- WorkView | Case Manager: A Complete Solution with Unity Forms, Workflow and WorkView
- Rapidly Develop WorkView Applications with ACE
- Empower Users with Dynamic WorkView: Hands-On Lab
- Work View | Make WorkView Tasks Quickly Accessible with ObjectPop & FilterPop

If you need assistance from UIS, please contact UIS_DM_SUPPORT@cu.edu.

User Groups & Access

Functional & WorkView User Groups

Functional groups exist to support WorkView usage and development:

- **Functional - Leve1-4**: Provides basic user access to WorkView functionality in the Unity and web clients.
- **Functional - Developer - WorkView**: Required to configure WorkView in Studio (see Required Trainings)

No WorkView configuration (applications, classes, etc.) should be assigned to these functional groups; they exist only to provide access to WorkView functionality.

All other configuration should be assigned to “WorkView” user groups (not “User Group” or “Workflow” groups) as outlined in Expectations and Tips for Certified Admins. No functional permissions should be assigned to these groups in Configuration, just create the group and add members. Then, assign only WorkView configuration (applications, classes, views, filter bars, etc.) in Studio.

MANAGER Group

Add the MANAGER group to all WorkView configuration items.

Do not enable the “Always On” option for the MANAGER group. This option can be selected for your other “WorkView” groups as needed.

Master Security

You can review a group’s access to an application by right clicking the application and choosing “Master Security”. There you can copy access between groups, eliminate all access for a group, or grant access to an entire application for a group.

WorkView Configuration Guidelines

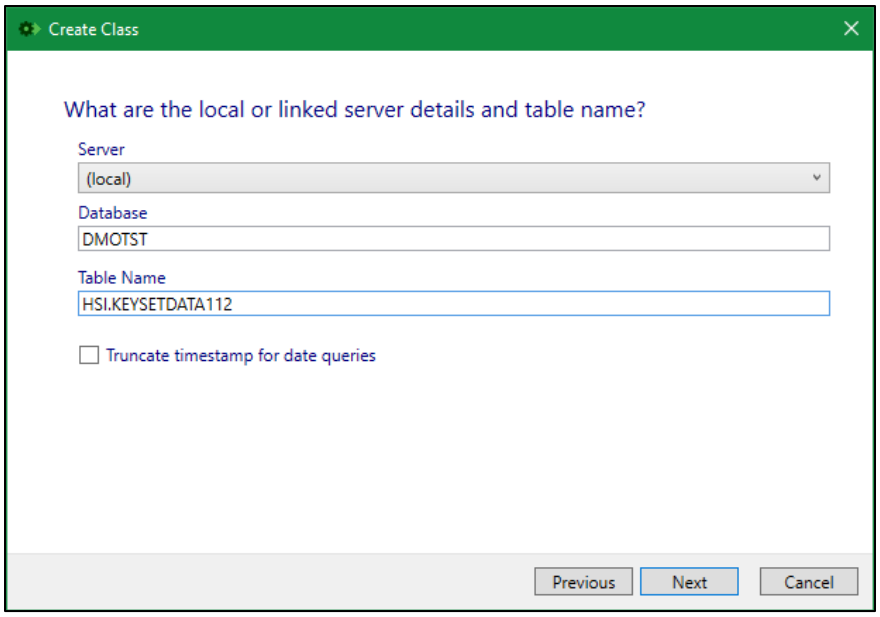
All WorkView configuration must conform with the OnBase Naming Conventions. Some items cannot include spaces or non-letter characters in their names, so the naming convention is modified accordingly.

All configuration must be developed in a non-production environment (DMOTST is recommended) and **thoroughly tested** prior to migration to DMOPRD. Refer to the Admin handbook for more information regarding OnBase environments.

WorkView requires careful consideration of the requirements and desired outcome before starting configuration, even compared to other OnBase modules.

Classes & Attributes

1. It can be difficult to remove relationships between classes once they are established. Carefully plan which classes will be needed, how they might relate to each other, and what type of relationship(s) would exist (one to one, one to many, many to many) in order to configure the correct type of classes and relationships between them.
2. If you are configuring many attributes with long names (30+ characters) on a class, this may be an indication another class structure would be better.
    - Ex rather than hard-coding descriptive attributes for each item on a "checklist" type process, create a class where those items can be entered as objects in the UI rather than requiring configuration changes for every update to the checklist.
3. **Do not** configure Shared classes between applications.
    - Changes made to a shared class in one application also changes the class in all other applications using the class.
    - Shared classes also cause all other applications using the class to be included in any export files upon migration.
    - Password protection on an application affects other applications using the shared class.
4. To use existing employee and/or student data (from AutoFill Keyword Sets), configure External Classes as follows:
    - Create a new class and choose External Class.
    - Enter the class name.
    - Choose Local or Linked Server.
    - Set Server as local and the Database as the environment name (DMOPRD, DMOSTG, DMOTST or DMODEV).
        i. For student information, enter HSI.KEYSETDATA112 as the table name.
        ii. For employee information, enter HSI.KEYSETDATA117 as the table name.



- Assign the appropriate user groups (including MANAGER). WorkView configuration should be assigned using “WorkView” user groups (not “User Group” or “Workflow” groups).
- For student information, configure attributes as follows.
    i. You can exclude any attributes you do not need but must include KEYSETNUM and Student ID.
    ii. You can adjust these names and display names but not other settings.

Name	**Display Name**	**Data Type**	**Index**	**External Data Column**
KEYSETNUM	KEYSETNUM	Integer	Unique	KEYSETNUM
StudentID	Student ID	Alphanumeric (9)		KS113
FirstName	First Name	Alphanumeric (50)		KS105
MiddleName	Middle Name	Alphanumeric (50)		KS206
LastName	Last Name	Alphanumeric (50)		KS104
DateofBirth	Date of Birth	Date		KS106
PreferredFirstName	Preferred First Name	Alphanumeric (150)		KS681

- For employee information, configure attributes as follows.
    i. You can exclude any attributes you do not need but must include KEYSETNUM and Employee ID.
    ii. You can adjust these names and display names but not other settings.

Name	Display Name	Data Type	Index	External Data Column
KEYSETNUM	KEYSETNUM	Integer	Unique	KEYSETNUM
EmployeeID	Employee ID	Alphanumeric (15)		KS102
FirstName	First Name	Alphanumeric (50)		KS105
MiddleName	Middle Name	Alphanumeric (50)		KS206
LastName	Last Name	Alphanumeric (50)		KS104
DateofBirth	Date of Birth	Date		KS106
OPERID	Operator ID	Alphanumeric (10)		KS260
Email	Email	Alphanumeric (100)		KS529
Last4SSN	Last 4 SSN	Alphanumeric (4)		KS640
PreferredFirstName	Preferred First Name	Alphanumeric (150)		KS680

5. Extension Classes
    - For sibling classes to share attributes, the attributes must be on the base class.
    - For objects that will be converted to another class (ex. Base class = Person with extension classes of Applicant and Employee, and objects converted from Applicant to Employee), create relationships on the base class.

6. External classes can be created to access data that is available in materialized views from ICS, FIN and HCM. However, these external classes must be created using an ODBC connection and must be configured by UIS.
    - External classes also have some limitations, so please refer to the MRG. For example, values from external classes cannot be used as user prompts on a filter.
    - This should not be done in a way that exposes data to users who should not have access to that data.
    - Materialized views are refreshed on an interval, the data is not real-time.

7. Disable direct object creation on classes where applicable (where users should never be able to create objects (ex. if objects will only be created by workflow) or where users should only create objects from within an embedded filter or through another defined process).

8. When creating attributes, keep in mind:

    - The appropriate data type and length
    - The term “Institution” is reserved and cannot successfully be used as an attribute name (though it will allow you to configure it). Never name an attribute Institution.
    - Do not replicate default/system values on a class with an attribute. This will also cause name conflicts when you attempt to use the attributes.

        i. Object Name
        ii. Object ID
        iii. Created By
        iv. Created Date
        v. Revision Date
        vi. Revision By
    - Naming. It can help to follow a pattern, especially for relationship attributes, ex. RelLeaveReqToEmployee.

9. WorkView folders are easier to configure than File Cabinet Folders, but do not have a hierarchical structure. Either type of folder can be added to a view to show documents related to the object.

10. Limited actions are available directly within WorkView Actions.
    - For more advanced functionality:
        i. Configure actions to add objects to workflow. Once the object is in a queue, you can use the full set of rules and actions available there. This also allows for the processing to be done on a timer, instead of tying up the user's session waiting for complex processing to run.
        ii. Configure actions to execute a System Task.
    - If an action is configured as a button on a view, it will no longer appear in the Tasks menu ribbon (it will only be available in one place).

11. Mappings/Associations.
    - More information is available Class Mappings section of the WorkView MRG.
    - When configuring mapping for object creation or document import, map as many attributes as you can.
    - When configuring mapping for searching for existing items, it's better to use fewer attributes (since AND logic is used to identify items).
    - Mapping/Association Types:
        i. Forms: Create forms based on data in the WorkView class
        ii. Document Types:
            1. Search for documents related to a WorkView object (including populating a WorkView folder)
            2. Create WorkView objects based on a document (from document retrieval or workflow)
        iii. Folder Types: Map WorkView objects to configured (filing cabinet) folder types to display the documents in the folder
        iv. Document Import: Import documents from WorkView and inherit values from the object to fill keyword values.
        v. Keyword Type Mappings: support the other mapping/association types

12. Create Mappings before creating Triggers.

13. Use Triggers when calculating values that will need to update or be used elsewhere. Calculated attributes are only evaluated once and are not as widely available for use within the application. See WorkView: Calculated Attributes for more details.

Filters and Filter Bars

1. Ensure all filters accessible to users in the clients have constraints or required prompts to limit the result list.

2. Naming filters with a prefix (along with the standard CU naming convention) makes it easier to identify where and how each filter should be used. It can also help to add the class name and the view name if applicable.
    - UI - User interface, likely used in filter bars
    - EMB - Embedded (within a view)
    - LU - Lookup (for in a view)
    - DS - Data set
    - WF - Used for Workflow
    - MAINT – Maintenance filter (deleted items)

3. When assigning the filter to a filter bar as a filter bar item, it can be given a different display name.

4. Set a User Defined Filter Bar for the application to allow users to create their own filters.

5. There are a variety of macros available to make filters more complex/flexible (see the WorkView MRG for more details).

    - The ~?FilterName option will not work if the filter used as a constraint/criteria returns more than 2,000 results.
    - Workflow properties are only available from the session property bag.

6. The “Enable Maximum Results” option on each filter overrides the global setting but use caution and test, as increasing the limit can result in performance issues.

7. Removing filter bar items requires a cache reset before users can access the app again. If a filter bar item is removed and cache is not reset, the application will fail to load in the client.

Views

1. Consider which fields should be required and/or read-only for your process.

2. Making the layout narrower makes it easier to read and use, a width of 85% works well.

3. Multiple views can be configured which will appear as tabs across the screen so that users do not need to scroll as much.

4. Any embedded items will run queries to load the items within, which can delay the load time. Embedded items such as folders may be better suited to their own views to improve load time.

5. Scripting (client side JavaScript) is sometimes necessary to make views interactive (show/hide elements, make required/not required).

    a. In some cases (like if one group should be able to change an attribute value and another group should not), it may work better to create copies of the view, adjust the settings for each view and assign to the appropriate group(s) to each view instead of using scripts.
    b. Basic changes can (in theory) be accomplished with the new "rule" option, but a view can only use a script or rule for a given event type; you cannot use both concurrently.
    c. It is currently recommended that you **DO NOT use the rule/custom action option**. A defect in version 22.1 causes orphaned rules which prevent configuration from being migrated between environments. This, in addition to limitations with the functionality and inability to copy/paste make JavaScript the better option.

Relationships in WorkView

This is not meant to be comprehensive, but to give an overview and some examples of different types of relationships that can be configured between WorkView classes.

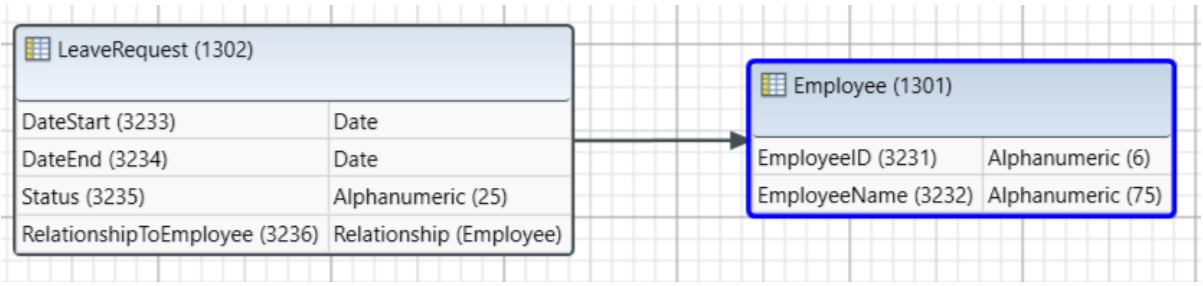
Hyland documentation includes additional information. This Community post is also a great explanation on various relationship types.

Relationship Attribute

A relationship attribute on one class will provide a reference to **exactly one** object in the related class.

Example #1: we have a class for leave requests for employees, each leave request pertains to one employee.

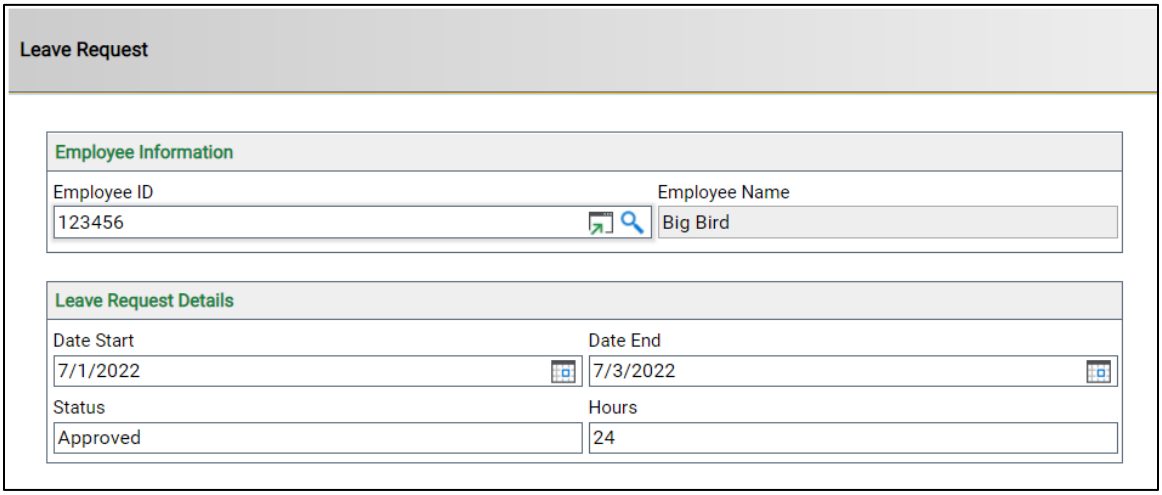
We would add a relationship attribute on the leave request class to the employee class.



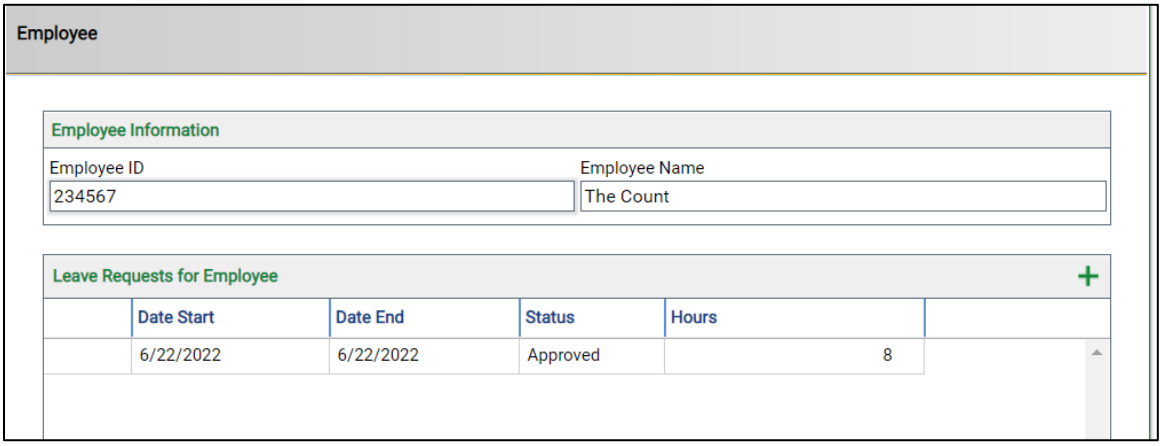
It is recommended to always name your relationship attributes in a way that indicates they are relationship attributes and includes the attribute's class name and the related class name. For example, the relationship attribute on the Leave Request class to relate those objects to Employee objects could be named RelationshipLeaveReqToEmployee. That way, if multiple classes have relationships to the Employee class, you know which relationship attribute/class you are working with based on the name.

When that relationship attribute value is set on a leave request object, the leave request object is now related to the one employee object referenced by the attribute value. In the database, this functions as a foreign key on the table containing leave requests. In this example, the table holding information on Leave Request objects will reference Employee objects by object ID.

When you are viewing the leave request, information from the employee object can also be displayed.



Multiple leave request objects can be related to the same employee object. Each leave request for that employee will have the same relationship attribute value. When viewing the employee object, the leave requests can be displayed in an embedded filter (on the leave request class).



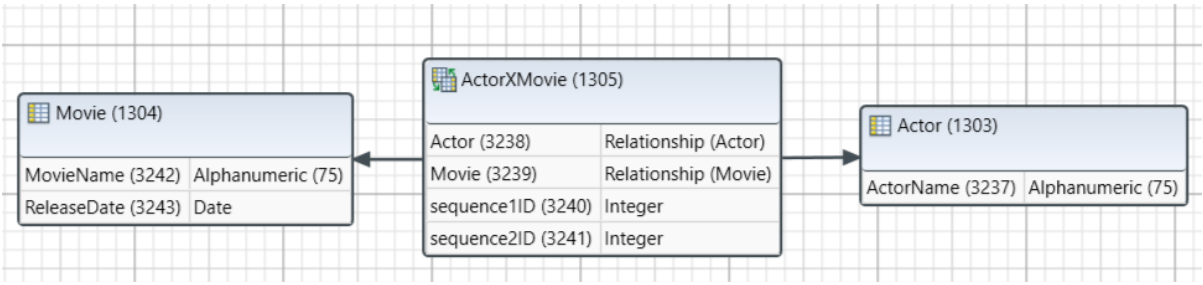
In this case we would NOT want to put a relationship on the employee class to reference the leave request class. This would mean that each employee can only relate to one leave request, but multiple employees could relate to the same leave request.

Association Class

Association classes allow for many-to-many relationships between objects. Association classes use two relationship attribute values, and no additional attributes.

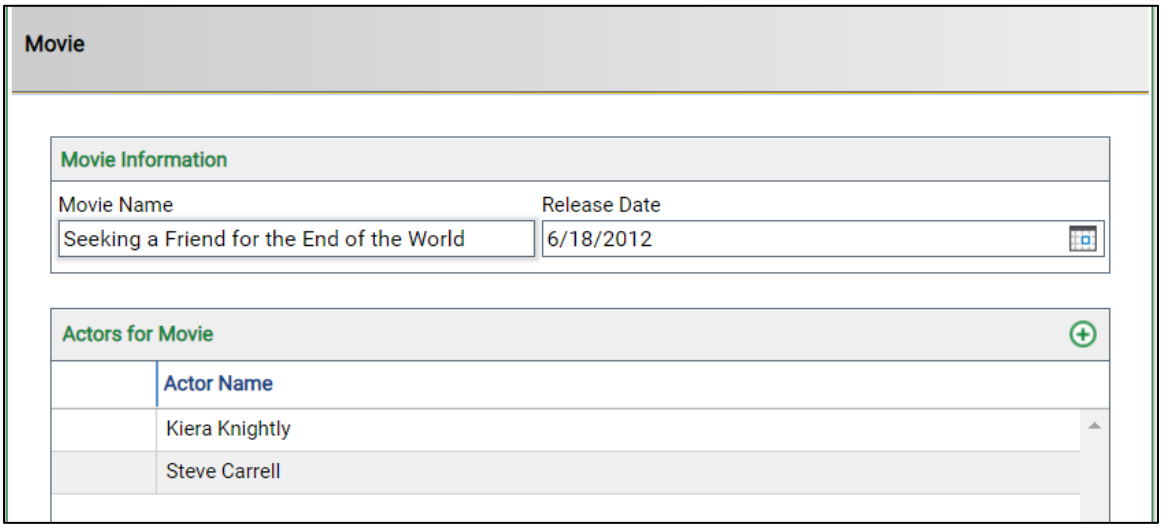
Example #2: There are many actors in a movie and actors are (or at least can be) in many movies.

We would create one class for actors, one class for movies and an association class that relates the actor class to the movie class.



In the database, the association class is a table with two foreign keys only. Each record in the association class table will reference a Movie object by its object ID and an Actor object by its object ID.

To show an actor's movies on the actor object, you'd use an embedded filter (on the association class) showing movie information. To show actors for a movie on a movie object, you'd use an embedded filter (on the association class) showing actor information.



In this example, we would NOT want to put a relationship on either the actor class or the movie class, as that would mean each actor could only relate to one movie or each movie could only relate to one actor.

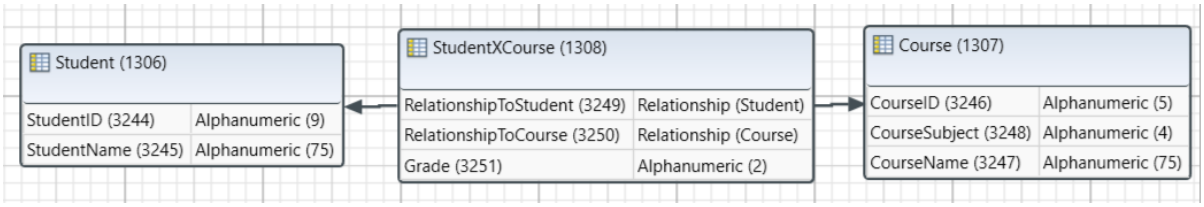
Advanced Association Classes

Advanced association classes allow for many-to-many relationships between objects while also allowing for additional attributes to be added. Advanced association classes use two relationship attribute values plus any other attributes that are needed.

To configure an advanced association class, create a standard class with exactly two relationship attributes. Then add your other attributes.

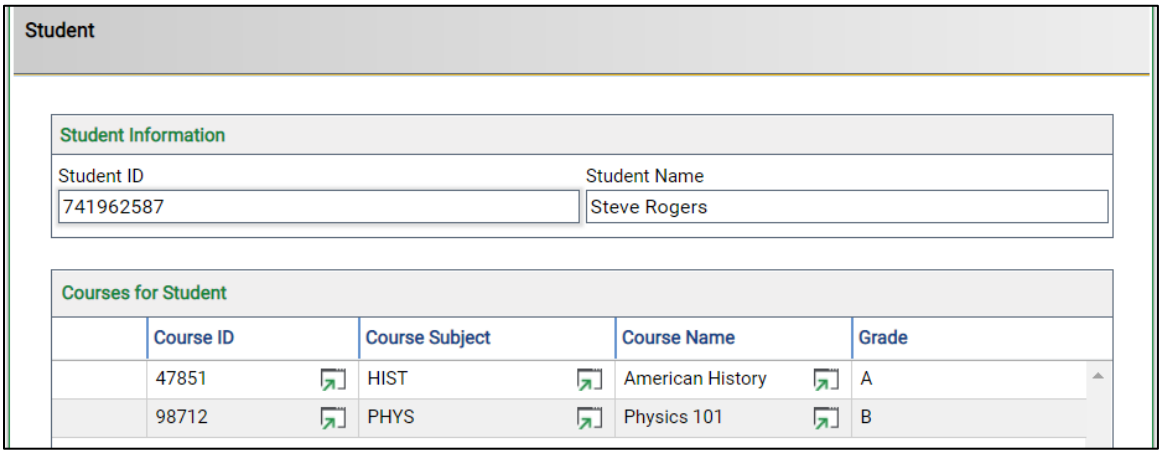
Example #3: Students are in many courses and courses have many students in them. Students earn a grade for each course.

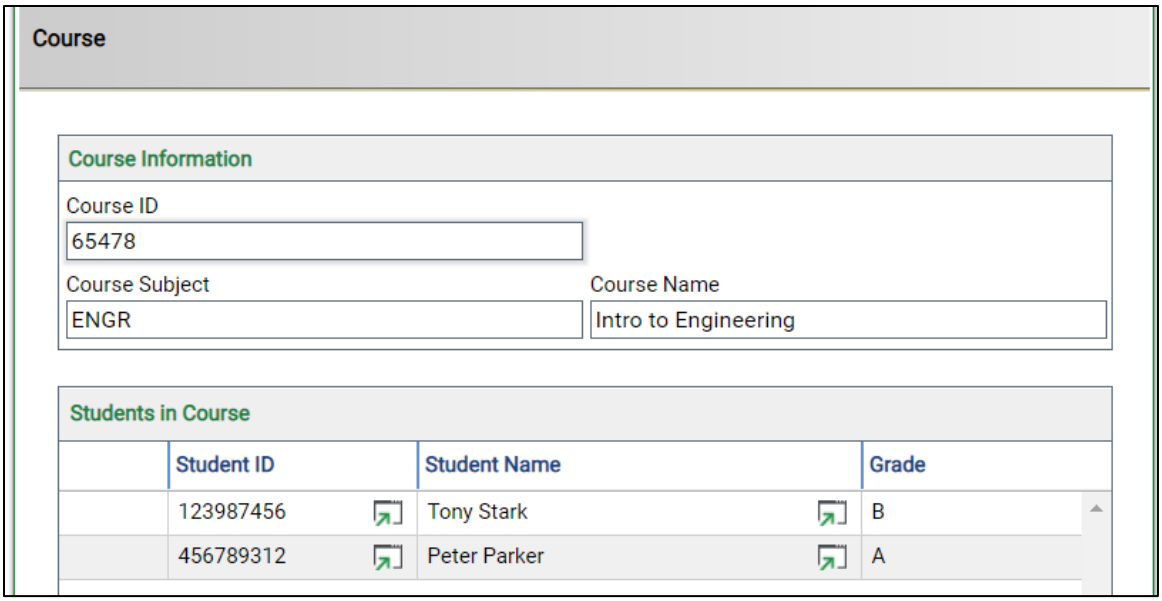
We would create one class for students, one class for courses and an advanced association class that has a relationship to the student class, a relationship to the course class and an attribute for the grade.



In the database, the association class is a table with two foreign keys plus a column for each additional attribute. Each record in the association class table will reference a Student object by its object ID and a Course object by its object ID, then include columns for the other attributes on the association

To show a student's courses on the student object, you'd use an embedded filter (on the association class) showing course information, which could include the grade as well. To show students for a course on a course object, you'd use an embedded filter (on the association class) showing student information, which could include the grade as well.





In this example, we would NOT want to put a relationship on either the student class or the course class, as that would mean each student could only relate to one course or each course could only relate to one student.

Application Creation Excelerator

This feature enables WorkView application creation based on a template created in MS Excel. This can reduce the time needed for development of applications.

Pre-defined ACE files are available on Community. A blank template can also be created from Studio.

ACE is only available for the initial creation of an application; this method cannot be used to make changes to an application.

Refer to *Application Creation Excelerator* in the WorkView MRG and [WorkView: Application Creation Excelerator (ACE)] for more details.

Testing

Resetting the app server cache **is not sufficient** for most WorkView changes to take effect in the Unity and/or web client; an app pool recycle is needed. However, recycling the app pool disrupts any other users in the environment, so it is necessary to wait until the next day to verify changes in the client. This includes, but is not limited to:

- Class creation/modification
- Permission modification
- Filter/Filter bar creation/modification

In general, plan to wait until the next day to test changes in WorkView.

Importing Data to Classes

Test data or pre-existing data can be imported from an Excel or CSV file using the WorkView menu in Studio. This is separate to any export/import of configuration.

Refer to *Exporting and Importing Data* in the WorkView MRG for more information.

Importing data (objects) does NOT require a cache reset since it is not changing configuration.

Item generator can also be used to create objects or documents used to create objects for testing purposes. Refer to *Configuring Item Generators* in the Studio MRG for more information.

Migration

Refer to the Exporting and Importing Configurations guide for details on migration. There are special considerations for migrating projects involving WorkView, especially the reporting elements.

Note that the Data Import/Export options on the WorkView menu in Studio cannot be used for WorkView **configuration** migration, this only imports or exports **data** for objects.

Purging Objects

Similar to how deleted documents can be recovered until they are purged from Document Maintenance, deleted objects still exist in the database (but are not visible to users in the client) until they are purged. There are a few different methods of purging objects, but all are **permanent and irreversible** so it is essential that you carefully review and confirm you are taking the right action.

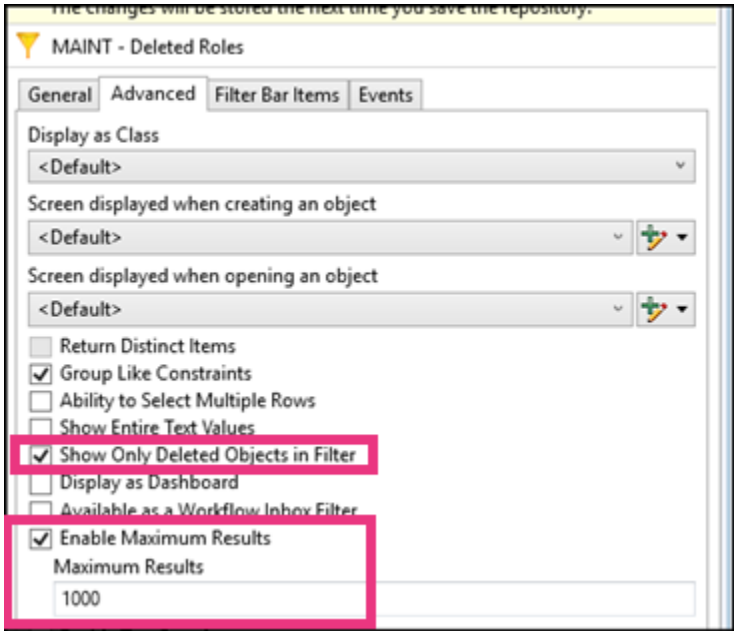
Always confirm which environment/repository you are working in. To avoid any potential mix-ups, it is recommended to only be connected to one environment in Studio when performing these actions.

If you have any doubt, please contact UIS_DM_Support@cu.edu for assistance before proceeding.

Maintenance Filters

It is a best practice to have a maintenance filter (one showing only deleted objects) for each class to facilitate purging deleted objects as needed.

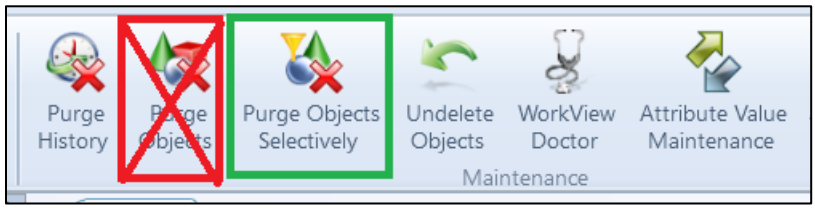
By default, filters will only show active objects, so if you want to purge objects that are already deleted, you will need a filter that is configured to show deleted objects. This is an option available on the Advanced tab in the filter configuration.



The maximum results should be set to 1000 or less, otherwise the query to identify objects to purge will fail.

Purge Objects Selectively (Recommended)

This menu option (WorkView tab in Studio) is the best way to purge objects.



A new window will open where you can select the desired application, class and filter.

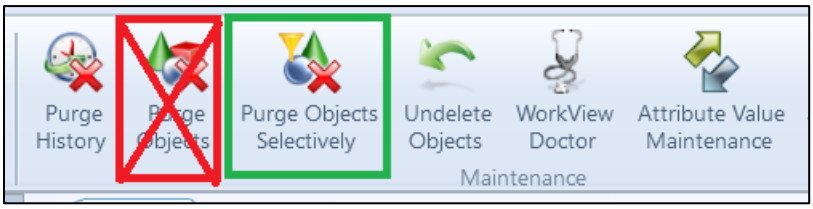
Purge Objects for a Class (Use Extreme Caution!)

After right clicking a class, there is an option in that menu to Purge Objects. This will purge ALL objects in that class, regardless of whether they are active or deleted. After doing so, no data will exist in the class.

There are cases where this may be necessary, especially while testing in non-production. Carefully review what environment you are in and the class name to ensure the right selection is made.

Purge Objects (Do not use!)

This menu option (WorkView tab in Studio) will purge ALL (regardless of application/class) inactive and deleted objects in the environment. Inactive objects are objects that were created, but were never saved. Since this will affect all applications and not just your own, do not use this option.



Using Workflow with WorkView

In order to route WorkView objects through a life cycle, the life cycle will need to be configured as (or converted to) a Unity life cycle. You can then assign application classes to the life cycle. Each life cycle can process items of one content type, documents and objects cannot go through the same life cycle.

You can also identify objects as related items when processing documents in Workflow.

"Related" Items

The "related item exists" rule type can be crucial to performing processing on or using objects in Workflow. However, when using this rule you can think of it as "item exists" or "find items meeting this criteria". The rule can operate completely independently of any relationships configured in the WorkView application; no relationship needs to exist between the item you are processing and the item(s) you are looking for with the rule.

Depending on whether your primary item is a document or object, you can search for objects meeting your criteria based on document type mappings, a filter that already exists, or custom mappings between keywords, properties and/or constant values to attribute values.

Refer to the Workflow MRG for more details on this rule type and its options, such as "Use related item for tasks".

Assigning Values to Relationship Attributes

When creating or updating an object and assigning a value to a relationship attribute on that object, the value of the relationship attribute should be set equal to the object ID of the related object.

System Events

You can also use System Events with WorkView to enhance your applications with workflow functionality. System Events are similar to System Tasks but are triggered by the specified event (ex. when an object is saved) occurring rather than a user performing the task.

More information on System Events is in the Workflow MRG (page 246 for EP3). Make sure you reference the documentation for particular rules/actions since some are only actually available in certain contexts but will be available to select regardless such that you configure them where they won't actually work.

Pop Integrations & URL Object Creation

Pop integrations allow for interaction with OnBase content through URLs. More information on the following is available in the WorkView: Notifications with ObjectPop & FilterPop course and in the following sections of the WorkView MRG:

- Using ObjectPop in Notifications (page 295 for EP3)
- Using UnityPop in Notifications (page 297 for EP3)
- Creating Objects Using ObjectPop (page 296 for EP3)
- Creating Objects Using a URL (page 396 for EP3)
- FilterPop (page 806 for EP3)
- Displaying Filter URLs (page 397 for EP3)

For any pop integration URLs, use the corresponding values for the environment:

	SERVER	VIRTUAL ROOT
DEV	dm-dev.dev.cu.edu	AppNet
TST	dm-tst.qa.cu.edu	AppNet
STG	dm-stg.qa.cu.edu	AppNet
PRD	dm.prod.cu.edu	AppNet

For any of these actions, authentication to an individual OnBase account with sufficient privileges is required.

Viewing Objects

ObjectPop can be used to direct users (with a URL) to open a WorkView object.

```
http://<Server>/AppNet/workview/objectPop.aspx?objectid=<object
ID>&classid=<class ID>
```

This can also be done with a UnityPop URL to open an existing object in the Unity client. To provide a static link to a specific object, the following format should be followed:

```
onbase://wv/object/?classid=<class ID>&objectid=<object ID>
```

Creating Objects

Objects can also be created using a URL. The ctype property defines whether the object is active or inactive (0 active; 1 inactive). You can also set attribute values on the object that is created.

ObjectPop Object Creation Example URL:

```
http://<Server>/AppNet/workview/objectPop.aspx?classid=<class ID>&ctype=<0
or 1>&<attribute ID>=<attribute value>
```

Object Creation UnityPop Example URLs:

```
onbase://wv/create/object/?classid=1001&ctype=0
onbase://wv/create/object/?classid=1001&1001=Open&ctype=0
onbase://wv/create/object/?classid=1001&Status=Open&ctype=0
onbase://wv/create/object/?classid=1001&1002.1003=John%20Adams&ctype
=1
```

Viewing Filter Results

FilterPop can be used to direct users (with a URL) to a WorkView filter. A tool exists to help with creation of the FilterPop URL:

```
https://<Server>/AppNet/workview/filterPop.aspx
```

You will end up with a URL such as:

```
https://dm.prod.cu.edu/AppNet/Workview/filterPop.aspx?filterPop=true
&filterID=XXXX&Keywords=XXXX_%3D_AND_OPEN
```

This can also be done with a UnityPop URL to view a filter's results in the Unity client. To provide a static link to a filter, the following format should be followed:

```
onbase://wv/filter/?id=1001
```

or, with constraints

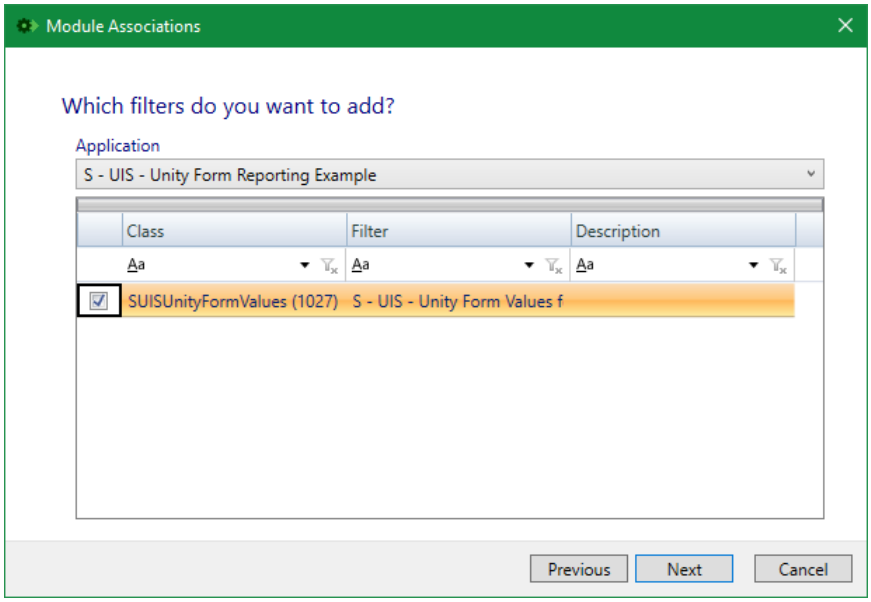
```
onbase://wv/filter/?id=1001&constraints=1001.1002_=_and__value
```

Reporting

Module Associations map to filters from WorkView applications so that they can be accessed by data providers. Instructions for creating Module Associations are

available in the WorkView MRG and in Section 2 of the [Reporting Dashboards Beyond the Basics course] on Premium.

On the WorkView tab in Studio, select **Module Associations** then click **Add** to create new. Choose **Reporting Dashboards**. Select the application and filter. Choose the desired user groups and finish.



Do not create reportable views from WV filters without consulting with UIS.