

Getting Started with the Popfly Mashup Creator: Coming Soon to a Theater Near You

Displaying real estate properties on maps, combining RSS feeds, and embedding photos from flickr on other web sites are all examples of a new type of web application known as a mashup. In each of these cases, the parties that own or manage the data involved – real estate listings, maps, RSS feeds, and photographs – make it available to be used or combined to create new applications.

With Microsoft Popfly's Mashup editor, anyone can create mashups without previous software development experience. In this lesson you will create and interact with a mashup to access and display information about movies playing at a theater near you.



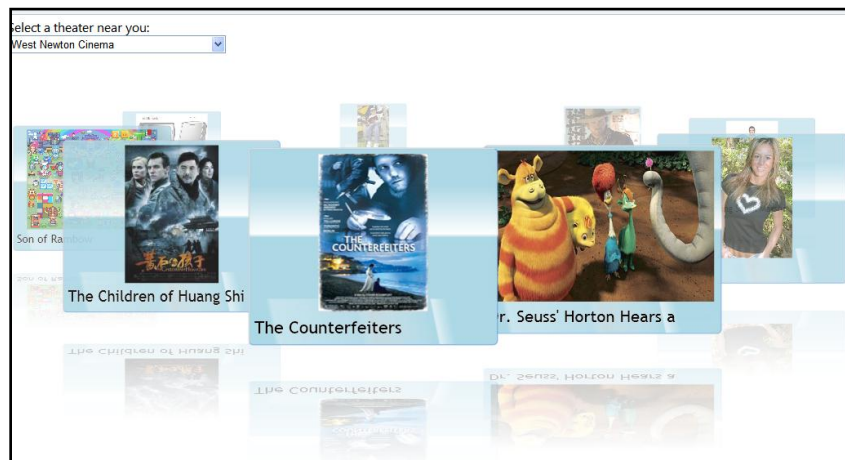
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Getting Started with Popfly Mashup Creator: Coming Soon to a Theater Near You



Professor Popfly Mashups Referenced in this Lesson:

- Local Movie Carousel
<http://www.popfly.com/users/professorpopfly/LocalMoviesCarousel>
- LocalMoviesTable
<http://www.popfly.com/users/professorpopfly/LocalMoviesTable>



Learning Outcomes

After completing this lesson, you should be able to:

- Describe what a mashup is, and give examples of some “real world” mashups
- Create, save, modify, and share a Popfly mashup
- Embed a mashup on your web site or Facebook page
- Identify the default values for a block’s operations
- Describe how changing the parameters to a mashup modifies its behavior
- Locate and Identify input, processing, and output (display) blocks in Popfly
- Relate object oriented programming concepts to Popfly blocks and mashups

Overview

Mashups are a new type of web application that combine data from different sources on the Internet in new ways. They have become a popular in recent years due to an increasing number of companies making some of their data available through the use of programming interfaces and RSS feeds.

Some examples of mashups are:

- Plotting locations of real estate properties on maps
- Combining information from multiple RSS feeds into a single view
- Displaying photos stored on one web site in interesting ways on another.

These mashups are made possible because the parties that own or manage the data involved – real estate listings, maps, RSS feeds, and photographs – make it available for anyone to access using open web standards. As a result, software developers have been able to create new applications that combine data from different companies or process data from a single source in a new way.

In the fall of 2007, Microsoft introduced a new web-based software application – Microsoft Popfly – to visually make mashups. Popfly as a platform consists of three applications:

- Popfly Mashup Creator, for visually designing mashups;
- Popfly Game Creator, for creating video games (introduced in June, 2008); and
- Popfly Web Page Creator, for creating simple web pages that can easily contain your mashups and games, and other web content.

The lessons in this series teach you how to use Microsoft Popfly's Mashup Creator to make real world web applications. With Microsoft Popfly's Mashup Creator, anyone can create new and interesting applications (mashups) with no software development experience. In this lesson you will create and interact with a mashup to access and display information about movies playing in your area.

Popfly uses constructs called blocks to obtain, process, or display data. Some Popfly blocks access data made available by a remote web site, so that other blocks within Popfly can interact with it. Other blocks process data, for example, by sorting or filtering a list of values. Many blocks display data visually, in tables, photo spheres, or graphs. By combining blocks in such a way that the output of one block may become the input to another, it is possible to describe a process for interacting with data.

This lesson uses the LocalMovies block as a source for data about movies playing at a theater near you.







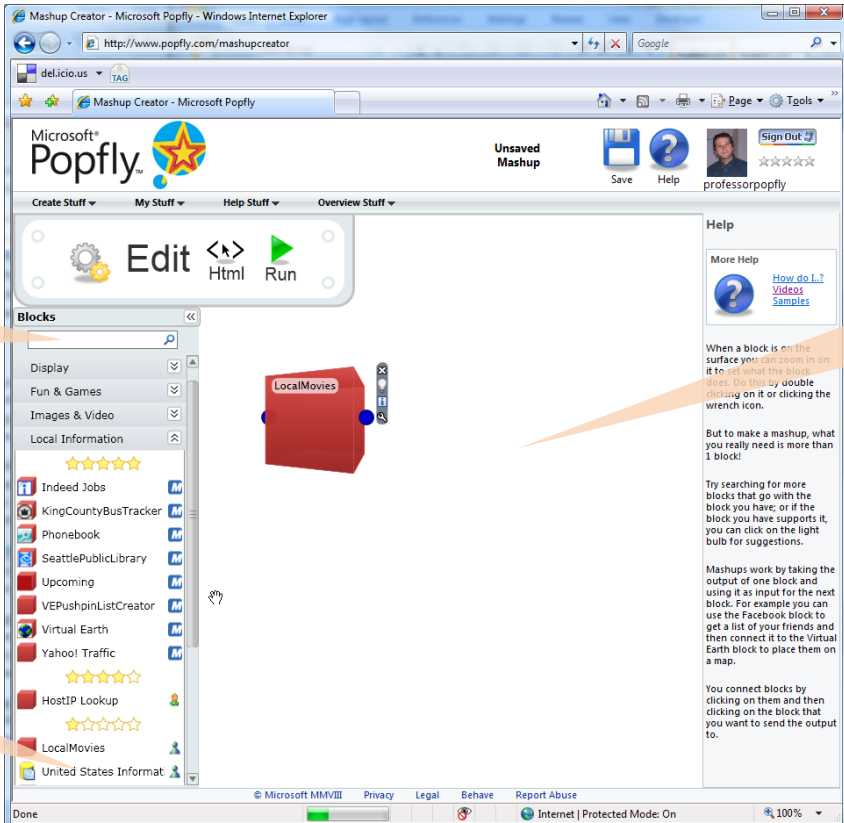
After you build a mashup, you may share it in other places such as your blog, web site, or Facebook profile, so that others may see it. You can also share the mashup with the Popfly community so that other users can see how you built it.

Blocks


On the left is a collection of blocks categorized in different groups based on their function (Display, Fun & Games, Images & Video, Local Information, etc.). These are the basic building blocks with which you can create mashups.

If you know the name of the block you want to use, you can type its name (or the first few letters) directly into the Blocks search box. Some Popfly blocks contain static data to incorporate into a mashup. Popfly indicates data blocks, such as the United States Information block, in yellow.

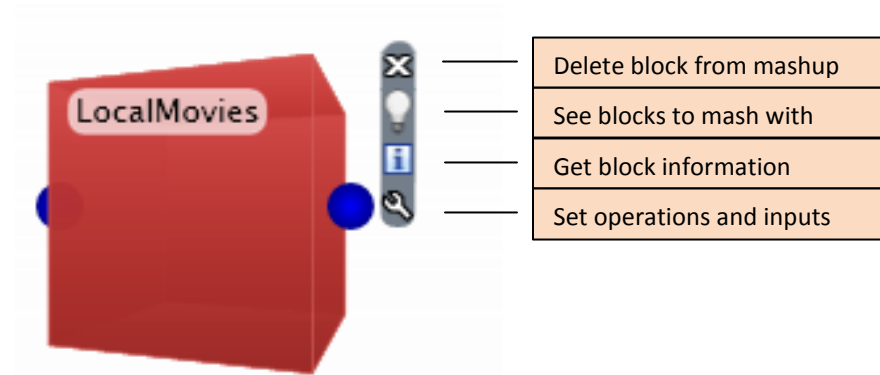
You can expand a block group by clicking , or collapse it by clicking . Blocks that the Microsoft Popfly team created are indicated with an . However, Popfly is extensible: those who know how to write JavaScript code and understand a little bit about XML may create their own blocks to share with other users on Popfly. These community-created blocks are indicated with . This ability to improve the Popfly *platform* is one of the “Web 2.0 strengths” of Popfly: the more people use it (by creating and sharing additional blocks and mashups), the better and richer it gets.



The screenshot shows the Microsoft Popfly Mashup Creator interface. On the left, there is a search box and a list of blocks categorized by function: Display, Fun & Games, Images & Video, and Local Information. The 'Local Information' category is expanded, showing several blocks, including 'LocalMovies' which is highlighted in yellow, indicating it is a data block. A red 'LocalMovies' block is being dragged onto the central design surface. On the right side, there is a help panel with a 'Help' section and a 'More Help' section. The design surface is labeled 'Design Surface'.

In the Popfly mashup editor you can find out more about what a block does by hovering over it on the right hand side in the block list. You can also drag the block to design surface and click on the  icon to see its details page.

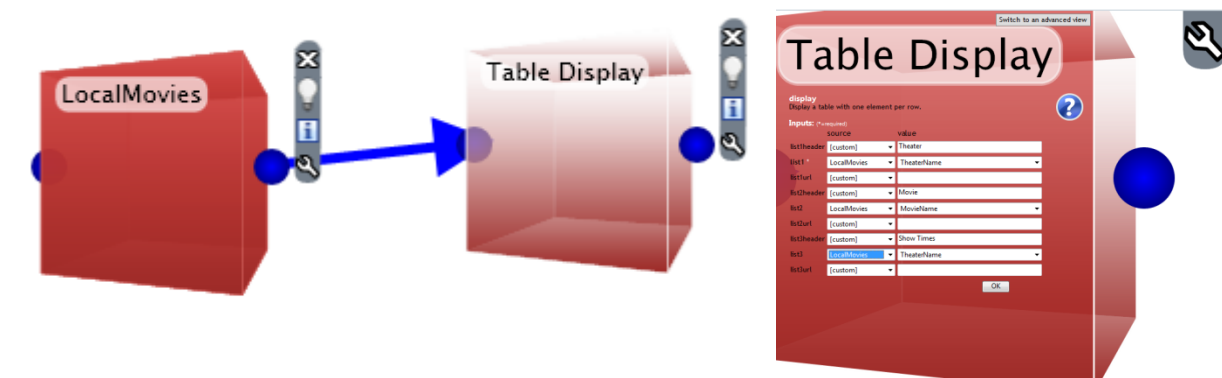
There is a panel to the right of each block placed on the design surface. Each symbol performs a special task:



Connecting Blocks Creates a Flow of Information

When planning a mashup, think about the work flow or tasks required in order to complete it. Then find Popfly blocks and operations to handle each task. Popfly blocks contain operations (also called functions or methods) that obtain, process, or display information. Clicking a block’s wrench icon opens the block so you may select an operation, and specify its inputs.

To connect one block to another, click the blue circle on the right hand side of the “starting” block and then click the blue circle on the left hand side of the “ending” block. This indicates that you want the output of the first block to connect to the inputs for the second. It’s important to think about where data originates and which blocks later on in the information flow need data from earlier ones. In simpler mashups, only one block may connect to another; however, in more complicated mashups, it’s likely that one block will have many others connected to it.



Data Types

Popfly defines several intelligent data types to know what kind of information the data that it's working with is. Rather than simply stating "this is character data", or "this is numeric data", Popfly also recognizes data that will be used, for example, as a latitude or longitude, the URL of a thumbnail image, or the name of a city.



This allows Popfly to make some intelligent guesses regarding which outputs of one block might serve as inputs to other connected blocks. When it is ambiguous, or Popfly cannot make any suggestions, the connecting block displays yellow caution symbol to alert you to specify additional information.

Popfly needs to know about the structure of the information that a block outputs and how it might be used. For example, a block might return URLs that are links to images. If Popfly can determine that that the URLs point to images (rather than web pages or RSS Feeds, for example,) Popfly can recommend that the user mash the block with an image display block.

To accomplish this, Popfly has created a series of Data Types to classify the different kinds of information that one block might make available to another. The following table presents some of the more widely used Popfly data types.

Data Type	Description
title	A short description of an object
description	A longer description (may contain HTML)
url	Any URL that isn't one of the other URL Types
imageUrl	URL pointing to a full sized image
thumbnailUrl	URL pointing to a thumbnail image
feedUrl	URL for an RSS or ATOM feed
longitude	A longitude value in decimal format
latitude	A latitude value in decimal format
custom	A value that the user must specify
city	The name of a city
state	The name of a state
zipCode	The zip code of a location in the United States

Common Mashup Tasks

One of the most difficult parts of using Popfly is knowing which blocks to use to perform tasks that make up your mashup. The table below lists some common mashup tasks and Popfly blocks you might use to accomplish them.

	If you want to:	You might use operations in these blocks:
Obtain Data	Let a user enter or select from a list of values	<ul style="list-style-type: none"> • User Input • User Input v2_brian
	Obtain images from the other web sites	<ul style="list-style-type: none"> • Yahoo! Images, • flickr • Live Image Search • Image Scraper
	Obtain text-based data	<ul style="list-style-type: none"> • RSS , • Live News, • LocalMovies, • Imdb, • iTunesTopSongs • PhoneBook
Process Data	Process lists of data	<ul style="list-style-type: none"> • Filter (with ConditionBuilder), • RSS Filter (with ConditionBuilder), • Sort, • RSSDateSort, • Bentley_TextTools (RemoveDuplicates), • Combine, • Text Util (to split text input)
	Process text values	<ul style="list-style-type: none"> • TextAppender, • Bentley_TextTools, • Text Util , • Text Helper, • Logic (with ConditionBuilder)
Display Data	Display images using a Silverlight visualizing block	<ul style="list-style-type: none"> • Carousel, • MovingSlideShow, • PageTurner, • PhotoFlip, • PhotoShow, • PhotoSphere, • PhotoStack, • PhotoTiles, • SimpleImage
	Display information on a map	<ul style="list-style-type: none"> • GeoNames • YahooGeoCoding • VEPushpinListCreator • Virtual Earth
	Display information in a table	<ul style="list-style-type: none"> • Table, • Table Display, • RSSTableDisplay, • StevesTableWithHotFirstColumn, • BlockOutputInspector, • RSS List, • ListOfLinks

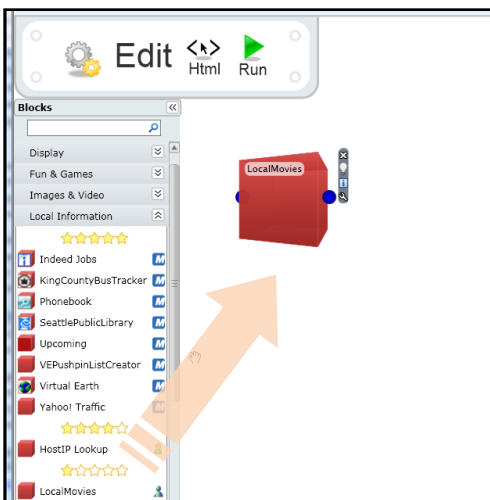
Note that many of these blocks have been shared by Popfly users, and therefore they are not maintained by the Microsoft Popfly team. While every effort has been made to list blocks that “work”, it is possible that some block authors may modify or unshare their blocks in the future. Popfly saves a copy of the current state of each block you use in a mashup along with the mashup, so your mashups will always run later on, even if a user-shared block has changed or been removed.

Example 1: Starting the Local Movies Mashup in Popfly

The mashups described in this lesson make use of a block called LocalMovies that obtains movie and theater data over the Internet from a free service provided on the web by <http://www.ignyte.com>. (See <http://www.ignyte.com/services-web-services.html> for more information.)

Follow these three steps to launch Popfly’s Mashup Creator:


1. Open a web browser and go to www.popfly.com.
2. Login to Popfly using your Windows Live ID (or create one if you don’t already have one). If it is not installed on your computer already, Popfly will require you to install Silverlight in order to run. Microsoft® Silverlight™ is a cross-browser, cross-platform browser plug-in that enables your web browser to display some advanced visualizations and user interface elements found in the current generation of Web applications.
3. Once you’re logged in to Popfly, click on Create and select Mashup. You’ll see a screen with the Blocks Toolbar on the left, Save options for your mashup at the top, an action tool bar for editing your mashup, adding custom HTML to your mashup, or running it, and a big design surface in the middle, where you can design your mashup. A Help panel on the right offers suggestions and tips for using Popfly.
4. Locate the LocalMovies block within the Local Information group of the blocks Toolbar on the left hand side of the Popfly mashup editor. Alternatively, you might start to type *Local Movies* in the Blocks Toolbar search box, and let Popfly find the block for you.
5. Once you find the block, drag it from the toolbar onto the design surface.

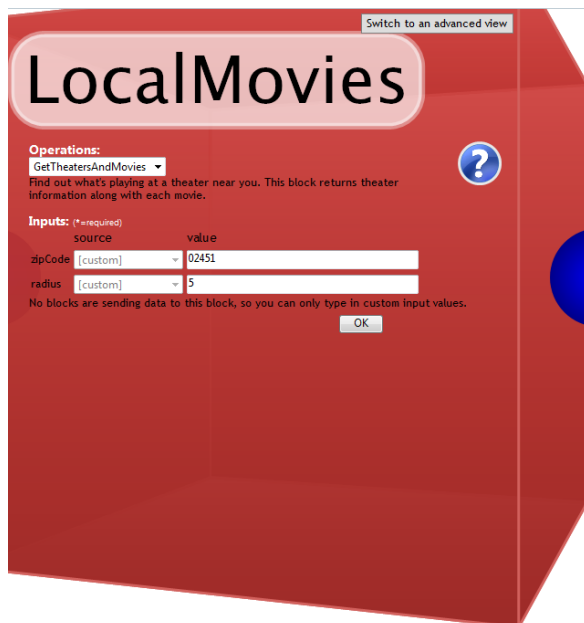


6. Click on the wrench icon to “zoom in” and see the operations that the block supports, as well as the default values for each.

Operations describe the functions or tasks that a block can perform. Each operation may have one or more inputs (parameters) that provide information needed for the operation to run. Some inputs have default values that the operation will use if you don't specify a value. Inputs that are required are shown in bold with an asterisk.

If there is more than one operation available, a drop down box shows the list of all the operations available for the block. Below the drop down box is a list of inputs for each operation. You can either specify a value from a block connected to this one (the names of connected blocks will appear in the source column) or specify "custom" in the source column to enter a specific value in the value column.

7. Select the GetTheatersAndMovies operation from the dropdown list.
8. Replace the default zip code value in the value column with your zip code.
9. Click the wrench again (or the OK button) to close the block and go back to the design surface.
10. Click  to see the raw data that this block produces. When you click Run, Popfly invokes the GetTheatersAndMovies operation from a third-party web service, which provides it with data about movies playing in the zip code you specified. Popfly gathers that data, and then displays it as a list of several theaters in your area, and the movies that they are currently showing.



TheaterName = Embassy Cinema
TheaterAddress = 16 Pine Street, Waltham, MA
Rating = R
MovieName = Refusenik
RunningTime = 1 hr 29 mins
ShowTimes = 1:00pm | 3:40pm | 6:40pm | 9:25pm

TheaterName = Embassy Cinema
TheaterAddress = 16 Pine Street, Waltham, MA
Rating = PG-13
MovieName = Savage Grace
RunningTime = 1 hr 43 mins
ShowTimes = 1:30pm | 4:20pm | 7:10pm | 9:35pm

TheaterName = Embassy Cinema
TheaterAddress = 16 Pine Street, Waltham, MA
Rating = PG-13
MovieName = The Happening
RunningTime = 1 hr 32 mins
ShowTimes = 1:50pm | 4:40pm | 7:30pm | 9:40pm

TheaterName = Embassy Cinema
TheaterAddress = 16 Pine Street, Waltham, MA
Rating = PG-13
MovieName = The Visitor
RunningTime = 1 hr 53 mins

Note that this application is technically not a mashup, because it contains only one block that obtains raw data from over the Internet and outputs its values. It does not use any blocks to process or display the data.



Example 2: Displaying Data in a Table

In the previous example, the LocalMovies block obtained data about local movies from a third-party web service, and then displayed that raw data formatted as text in the browser window.

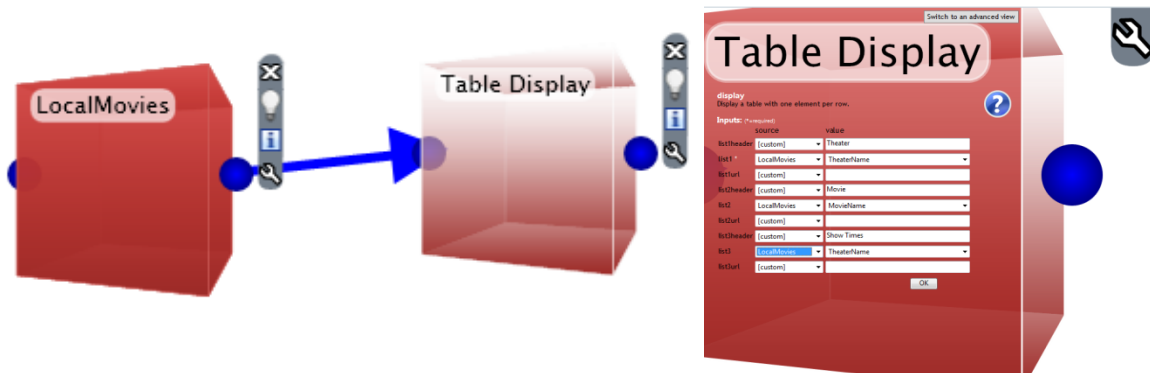
Popfly provides many different blocks to visualize this data: for example, you might display the data in a table; you might ask the user to select a movie and then plot the locations of all of theaters where it is playing; you might display photographs related to the title of each movie on a Carousel.


This example describes how to display the raw movie data using a TableDisplay block.


Suppose you didn't know this block existed, but you knew you wanted to output the data in a Table. Type *Table* in the Block Search box, and you'll find all of the blocks that have something to do with tables.

Continuing where Example 1 left off, follow these steps to display the data in a table:

1. Drag a TableDisplay block onto the design surface,
2. Connect the LocalMovies block to it,
3. Click the wrench on the TableDisplay to set its properties as shown below.



4. Click  to preview the mashup again.
5. While the mashup is running, notice the Debug toolbar that appears. Click the Debug / Console

icon  to display the console window, which contains the real-time activity that's going on as your mashup is running – it “logs” of all of the blocks in your mashup along with the operations called and their input values. This can be a helpful tool if a mashup is not working the way you expect that it should. Clicking the Debug icon again closes the console window.

The TableDisplay block shows the output for movies in your area. Sample output looks like this:

Theater	Movie	Show Times
AMC Burlington 10	Indiana Jones and the Kingdom of the Crystal Skull	2:05pm 5:00pm 8:00pm 10:45pm
AMC Burlington 10	Iron Man	1:30pm 4:20pm 7:40pm 10:30pm
AMC Burlington 10	Kung Fu Panda	12:20pm 1:10pm 2:40pm 3:50pm 5:20pm 6:05pm 7:45pm 8:30pm 10:00pm 10:45pm
AMC Burlington 10	Sex and the City	3:00pm 6:50pm 9:55pm 10:25pm
AMC Burlington 10	The Chronicles of Narnia: Prince Caspian	12:30pm 3:40pm 7:10pm
AMC Burlington 10	The Happening	12:50pm 3:20pm 5:50pm 8:20pm 10:40pm
AMC Burlington 10	The Incredible Hulk	1:50pm 4:40pm 7:30pm 10:20pm
AMC Burlington 10	The Strangers	2:20pm 4:30pm 6:40pm 9:00pm
AMC Burlington 10	You Don't Mess With the Zohan	1:20pm 4:05pm 7:00pm 9:40pm
AMC Chestnut Hill	Speed Racer	2:00pm 5:00pm
AMC Chestnut Hill	The Chronicles of Narnia: Prince Caspian	1:30pm 4:45pm 8:00pm
AMC Chestnut Hill	The Happening	1:00pm 3:15pm 5:30pm 7:45pm 10:00pm
AMC Chestnut Hill	What Happens in Vegas	8:15pm 10:30pm
AMC Chestnut Hill	You Don't Mess With the Zohan	12:45pm 1:45pm 3:30pm 4:30pm 6:30pm 7:30pm 9:15pm 10:15pm
AMC Framingham 16	Indiana Jones and the Kingdom of the Crystal Skull	10:45am 12:30pm 1:40pm 3:50pm 4:45pm 6:45pm 7:45pm 9:40pm 10:35pm
AMC Framingham 16	Iron Man	10:10am 1:10pm 4:10pm 7:25pm 10:25pm

The TableDisplay block is one of several blocks that uses Silverlight to display information. It supports some user-interface features. For example, by clicking on one of the column header items in the first row, you can sort the results by the values in that column.

Example 3: Save Your Mashup

You can save your work at any time by clicking on the Save or Save As icons at the top right of the mashup editor. If you want others to be able to view your mashup, click on Share. Be sure to fill in the description text box so that other users will know what your mashup does.



Continuing from the end of example 2, follow these steps to save the mashup:

1. Click the Save icon.
2. Enter a name for your mashup. While Popfly allows you to include spaces in your mashup names, it's simpler if you limit your mashup names to include only upper and lower case characters. Begin each word in your mashup name with a capital letter, as in LocalMoviesTable.
3. Add a description and tags for your mashup. Tags are descriptive words that will help people find your mashup by searching on the tag. You might tag the mashup with words about what the mashup does, or blocks that it uses.

Save As
Please choose a name for your project.

LocalMoviesTable


Description:
Display local movies using a TableDisplay block.

Tags: (space separated)
professorpopfly localmovies table display

Remember that, by posting your submission, you're affirming that you have enough rights to make this posting and to give others the right to use what you submitted. This is explained more fully in Section 6 of the [Terms of Use](#).

Accept and Save Cancel

4. Look for your saved mashup on your Projects page.

Projects 

LocalMoviesTable
Last Edited: Thursday, July 03, 2008 2:03 AM
Display local movies using a TableDisplay block.
Private Edit Tweak It Delete Share

LocalMoviesCarousel
This project has not been rated.
Last Edited: Thursday, July 03, 2008 1:42 AM
What's playing at a theater near you?
Edit Tweak It Delete Unshare MashOut

LocalMoviesCarouselWithUserInput
Last Edited: Thursday, July 03, 2008 1:40 AM
What's playing at a theater near you? Enter your zip code in an input box.
Private Edit Tweak It Delete Share

Saved Mashup

Clicking Share makes it public.

Clicking UnShare makes it private.


Mashout provides options to link or embed a mashup.

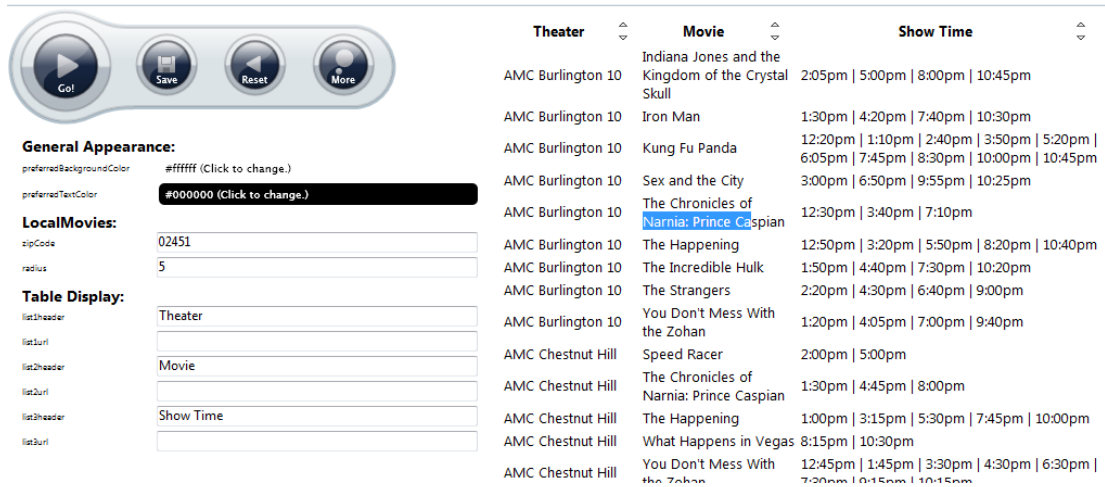
You can open any of your saved projects by going to “My Projects” on the “My Stuff” menu on the top navigation menu. Clicking Share will make your mashup available for other Popfly users to see how you built it, and potentially for anyone on the Internet to view. You can always unshare a shared mashup; doing so will make it no longer public.

Example 4: Tweaking a Mashup

Tweaking a mashup lets you change the inputs to any of the blocks without having to go into the Mashup editor, click the wrench on each block, and specify new values. This is a good way to experiment with the behavior of a mashup.

Follow these steps to “tweak” a mashup.

1. Go to your projects page (My Stuff → Projects).
2. Click **Tweak It** to modify the behavior of a mashup.
3. Tweak this mashup by specifying a different zip code for the input to the LocalMovies block.
4. Click  Go! To see the results of the mashup using the value of the input parameter you just specified.



The screenshot shows the Mashup Creator interface. On the left is the 'Tweak It' panel with a 'Go!' button and a 'Save' button. The 'General Appearance' section has 'preferredBackgroundColor' set to #ffffff and 'preferredTextColor' set to #000000. The 'LocalMovies' section has 'zipCode' set to 02451 and 'radius' set to 5. The 'Table Display' section has 'listHeader' set to Theater, 'listUrl' set to empty, 'listHeader' set to Movie, 'listUrl' set to empty, 'listHeader' set to Show Time, and 'listUrl' set to empty. On the right is a table of movie listings.

Theater	Movie	Show Time
AMC Burlington 10	Indiana Jones and the Kingdom of the Crystal Skull	2:05pm 5:00pm 8:00pm 10:45pm
AMC Burlington 10	Iron Man	1:30pm 4:20pm 7:40pm 10:30pm
AMC Burlington 10	Kung Fu Panda	12:20pm 1:10pm 2:40pm 3:50pm 5:20pm 6:05pm 7:45pm 8:30pm 10:00pm 10:45pm
AMC Burlington 10	Sex and the City	3:00pm 6:50pm 9:55pm 10:25pm
AMC Burlington 10	The Chronicles of Narnia: Prince Caspian	12:30pm 3:40pm 7:10pm
AMC Burlington 10	The Happening	12:50pm 3:20pm 5:50pm 8:20pm 10:40pm
AMC Burlington 10	The Incredible Hulk	1:50pm 4:40pm 7:30pm 10:20pm
AMC Burlington 10	The Strangers	2:20pm 4:30pm 6:40pm 9:00pm
AMC Burlington 10	You Don't Mess With the Zohan	1:20pm 4:05pm 7:00pm 9:40pm
AMC Chestnut Hill	Speed Racer	2:00pm 5:00pm
AMC Chestnut Hill	The Chronicles of Narnia: Prince Caspian	1:30pm 4:45pm 8:00pm
AMC Chestnut Hill	The Happening	1:00pm 3:15pm 5:30pm 7:45pm 10:00pm
AMC Chestnut Hill	What Happens in Vegas	8:15pm 10:30pm
AMC Chestnut Hill	You Don't Mess With the Zohan	12:45pm 1:45pm 3:30pm 4:30pm 6:30pm 7:30pm 9:15pm 10:15pm

5. If you like these results, you can then click the Save button to save the mashup using your new values.

Example 5: Sharing a Mashup

You can also share the mashup with other Popfly users. Follow these steps:

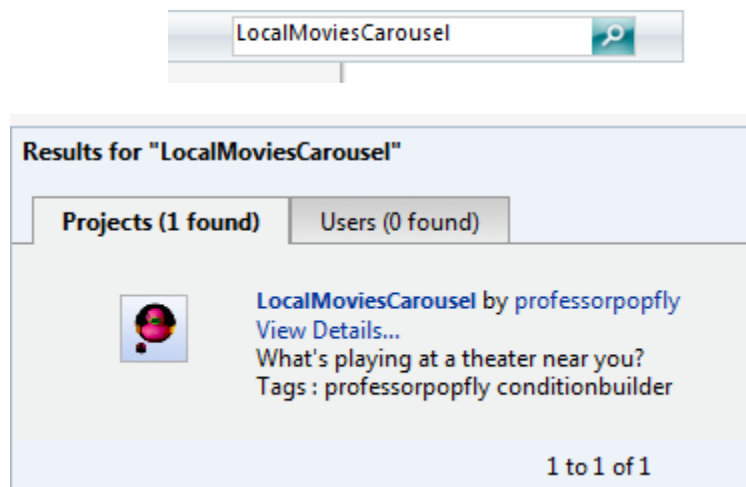
1. Go to your projects page (My Stuff → Projects).
2. Click **Share**, and then specify how to share the mashup using the Share tool bar. Options include saving as a Windows gadget, embedding on Facebook, sharing with digg or Reddit (social networking sites), or by email. Clicking Link gives a URL for the mashup that you can copy and paste. Clicking Embed gives HTML code that you can copy and paste on a website or blog.



Example 6: Opening Another User's (Shared) Mashup

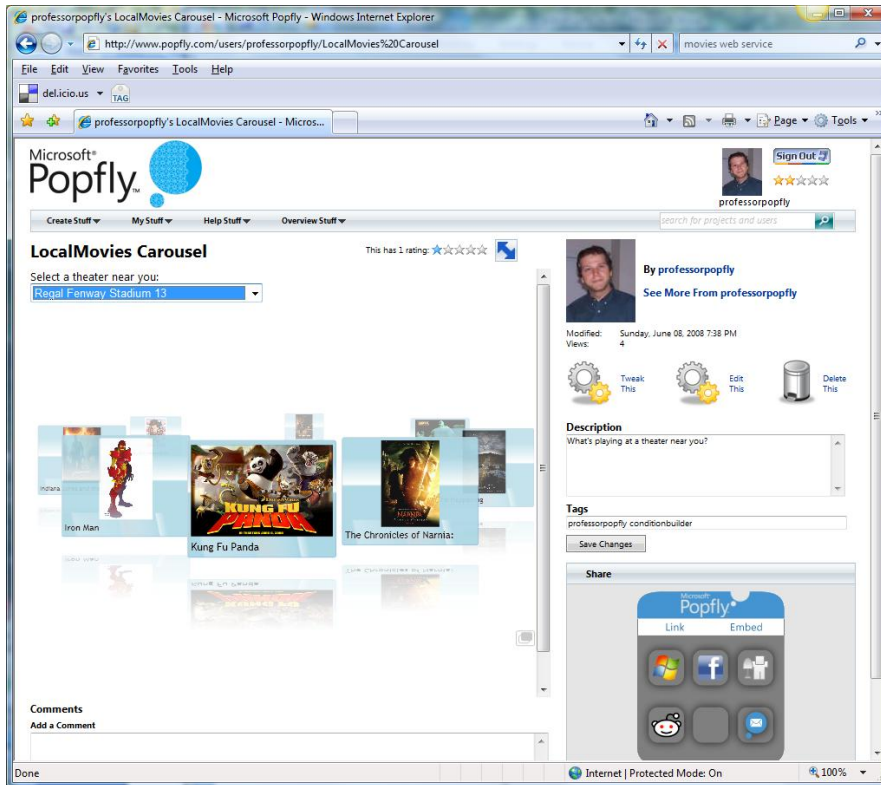
When other users share their mashups, you can open them, tweak them, or “rip” them, to see how they were constructed. Follow these steps to open another user’s shared mashup.


1. Go to your projects page (My Stuff → Projects).
2. Search for Professor Popfly’s *LocalMoviesCarousel* mashup by entering that name (or the tag professorpopfly) in the search box (located near the top right of the page).

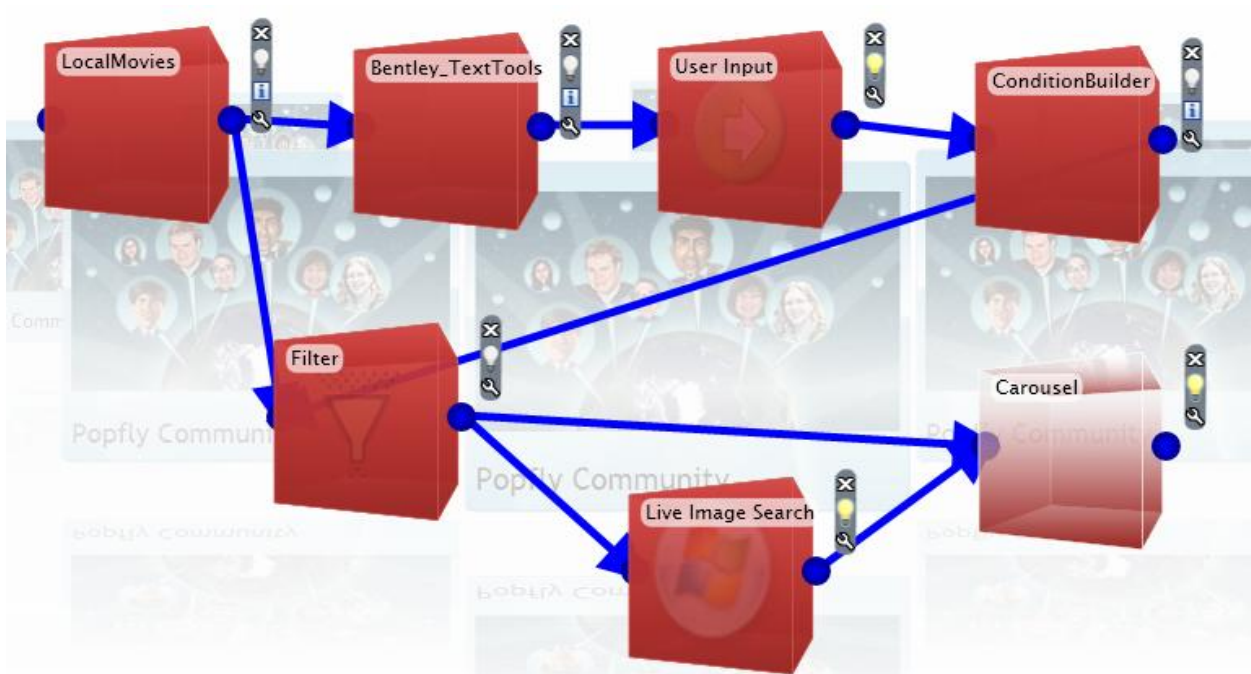


3. Click the title link to learn more about this mashup and who created it.
4. Run the mashup to see what it does by selecting a theater from the dropdown list.

In Professor Popfly’s *LocalMoviesCarousel* mashup, after the user selects a nearby theater, the *LocalMoviesCarousel* mashup uses Microsoft’s Live Image Search to find an image related to the movie, and displays that image along with the title of the corresponding movie, in a Carousel display.



5. Click the “gears” icon  near *Edit This* to edit the mashup (and see how it was constructed). This is how the LocalMovies Carousel mashup is hooked up:



Don't be frightened by the fact this mashup has seven blocks and this is only the first lesson! The purpose of this example is to give you a sense of what mashups can do with data from different sources. This mashup does four things:

1. Displays a list of theater names in a dropdown list
2. Displays a list of movies playing that the user selected from the dropdown list.
3. Finds images of the movies playing at that theater
4. Displays those images in a carousel

Here's how the mashup provides this software solution:

1. To display a list of theater names in a dropdown list:

The mashup begins with the LocalMovies block, to obtain movies playing at theaters near a given zip code. The output is sent to Bentley_TextTools. The Bentley_TextTools block has a RemoveDuplicates operation which is set up to remove all of the duplicate theater names obtained from the LocalMovies block. (As we saw in Example 1, the output of the LocalMovies block repeats the name of the theater with each movie it finds.) The list of unique theater names is connected to the User Input block, and displayed in a dropdown list, so that the user can select one of them.

2. To display a list of movies playing at the theater that the user selected from the dropdown list:

The next step is to search all of the movies from LocalMovies and filter out only those which are playing at the selected theater. The ConditionBuilder block creates a condition to check if a TheaterName (from LocalMovies) is equal to the name of the theater that the user selected in the User Input block. The Filter block receives all of the local movie information and finds only those movies that match the name of the selected theater, as specified in the condition from ConditionBuilder.

3. To find images of the movies playing at that theater:

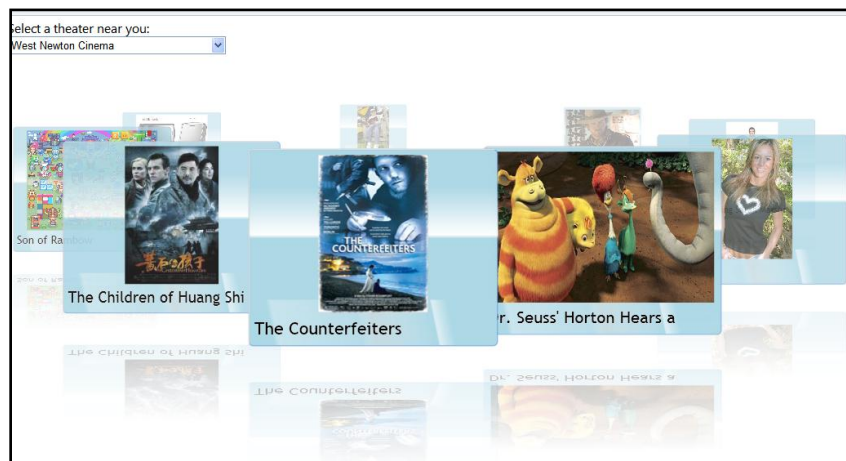
The mashup searches for exactly one picture associated with each movie (using Live Image Search). It gets the name of each movie from the Filter block.

4. To display those images in a carousel:

The Live Image Search returns a list of image URLs, and that is connected to the Carousel block (along with the name of the corresponding movie from the Filter block) for a fancy, animated Silverlight display.

If you're curious, you can click on the wrenches for all of these blocks to see the operations and default values that they use.

Note: You may notice that sometimes the movie names don't correspond with the images for those movies when displayed in the Carousel. This is a known issue in Popfly, and is due to the fact that the images are obtained asynchronously ... so Popfly doesn't wait until all of the images are loaded before displaying them. Sometimes, the movie images will come back from Live Image Search in a different order than they were requested, occasionally causing a mismatched image for a movie title.



Popfly PopQuiz

1. Where can you find information about the different Microsoft-supported blocks in Popfly?
2. After playing with Popfly, name three different blocks for displaying information.
3. Name two different ways to provide a value to a Popfly block.
4. Name two rules for connecting Popfly blocks.
5. What does tweaking a block let you do?
6. How can you share Popfly mashups?
7. Why does the order that you connect blocks in a mashup matter?

Try It in Popfly

Modify or build these Popfly mashups to demonstrate your understanding of this lesson. The more ducks, the bigger the challenge.



Create a new mashup in which you connect the LocalMovies block to the Sort block (to sort the movies by title) and then connect the Sort block to the Table block, to display the movie information in a three-column HTML table. In the Sort block, be sure to select the [entire GetTheatersAndMoviesVal object] as the list so that all of its elements will be available to display in the Table block.

The screenshot shows the configuration interface for the 'Sort' block. The title 'Sort' is displayed in a large, white, rounded font on a red background. Below the title, the text 'sort' is followed by the description 'Sorts the input list.' Underneath, the 'Inputs: (*=required)' section is shown. It contains three rows of dropdown menus. The first row is labeled 'list *' and has 'LocalMovies' in the 'source' column and '[entire GetTheatersAndMoviesVal object]' in the 'value' column. The second row is labeled 'field' and has 'LocalMovies' in the 'source' column and 'MovieName' in the 'value' column. The third row is labeled 'increasing' and has '[custom]' in the 'source' column and 'true' in the 'value' column. An 'OK' button is located at the bottom right of the configuration area.

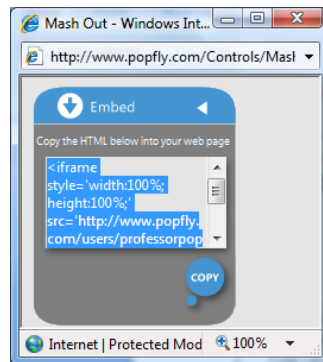


Open Professor Popfly's *LocalMoviesCarousel* mashup. Add a User Input block so that the user might specify a zip code (rather than using a static value in the Local Movies block). Connect the User Input block to the rest of the Mashup.

Select a different display block for output (such as a PhotoSphere). Run the resulting mashup, and then save the mashup with a new name.



To embed this mashup on your blog or web site, click *MashOut* for this project on your Popfly projects page. Choose *Embed* and copy the HTML code, then paste it in the appropriate place on your blog or web site.



```
<iframe style='width:100%; height:100%;'
src='http://www.popfly.com/users/professorpopfly/ProfPopflyRSSFeed.small'
frameborder='no'
allowtransparency='true'></iframe>
```

Tip: Change the 100% for width and height to 320px and 240px (the px means pixels) or another appropriate size so it fits nicely in your blog or web site.



Modify the LocalMovies Carousel mashup so that instead of displaying local movies in a carousel, you use the Table Display block to display the movies for a selected theater. Hint: To display the images from Live Image Search, you will need to also use the SimpleImage block to create an the HTML for an image from each mediaURL that Live Image Search provides, and use that value as one of the columns of the TableDisplay.

Select a theater near you:

Fresh Pond 10

Photo	Movie	Theater
	The Incredible Hulk	Fresh Pond 10
	The Chronicles of Narnia: Prince Caspian	Fresh Pond 10
	The Strangers	Fresh Pond 10
	Iron Man	Fresh Pond 10
	You Don't Mess With the Zohan	Fresh Pond 10
	Kung Fu Panda	Fresh Pond 10

Learn More about Popfly

- Building Popfly Mashups
<http://www.popflywiki.com/Building%20Popfly%20Mashups.ashx>
- List of Popfly Blocks
<http://popflywiki.com/List%20Of%20Popfly%20Blocks.ashx>
- Popfly Tutorial Videos
<http://www.popfly.com/Videos>
- Silverlight
<http://www.silverlight.net>
- Popfly Team Blog
<http://popflyteam.spaces.live.com/>
- Popfly Wiki
<http://popflywiki.com/>
- Learn More about the Ignyte.Com Movie Web Service used in the LocalMovies block
<http://www.ignite.com/services-web-services.html>