Webwork2: Importing Images to Problems

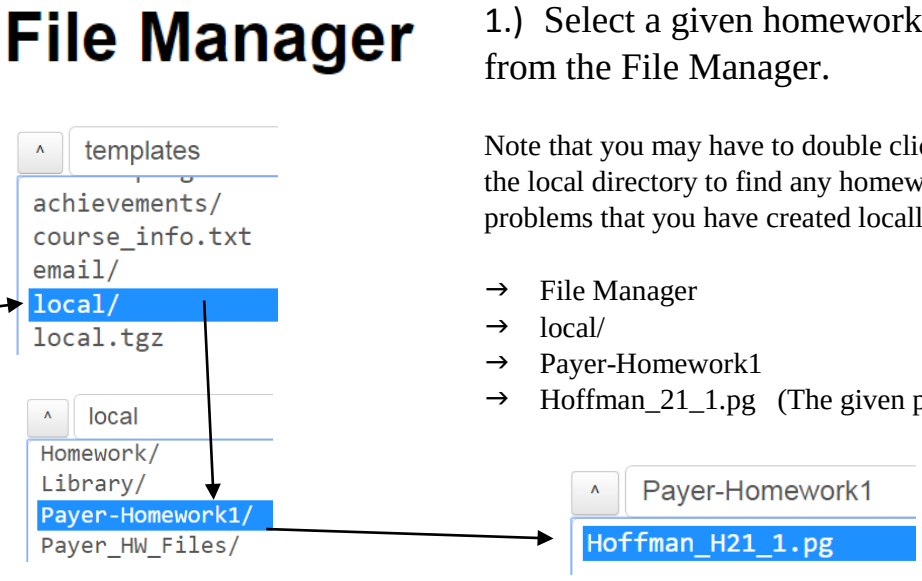
Below is an outline of the steps for loading an image into a webwork homework problem:

- Create a gif or png image file and save it to a folder in your computer.
- Select a given *.pg file from within webwork's file manager for which you want to insert an image.
- Create a directory (folder) with the same name as the *.pg file and thereby move the *.pg file into the new folder.
- Upload the image file into the new folder.
- Note the pixel dimensions of the image file.
- Affix the image within the HW problem by using a [@ (image…..) @]* command.
- For images created by others, obtain permission and credit image sources.

Male White-legged Damselfly in difficulties at Farndon 5.6.07. Photo © Bryan Roberts 2007

Note! Imported images must be in the form of gif or png files, not jpg files as jpg is proprietary. (According to 2015 Problem Authoring webwork workshop.)

Before starting you should have a given homework problem that you have either retrieved from the Open Public Library or created in webwork and a corresponding image saved in your computer for which you want to insert into the given homework problem.



1.) Select a given homework problem from the File Manager.

Note that you may have to double click on the local directory to find any homework problems that you have created locally.

→ File Manager
→ local/
→ Payer-Homework1
→ Hoffman_21_1.pg (The given problem)

Do Not open the *.pg file! We just want to work within the given problem's directory.

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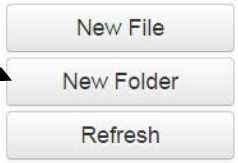
2.) Create a new folder that uses the same name as the *.pg file.

→ Click on New Folder.
→ In the dialogue box name the folder with the same name as the *.pg file (without the suffix).

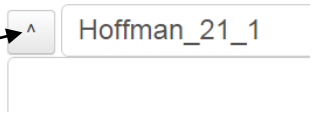


File Manager

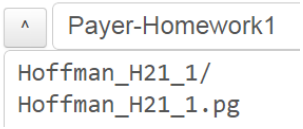
→ Click on New Folder.

→ The empty folder is opened.

→ Click on the up arrow to see the contents of the directory that holds this empty folder.

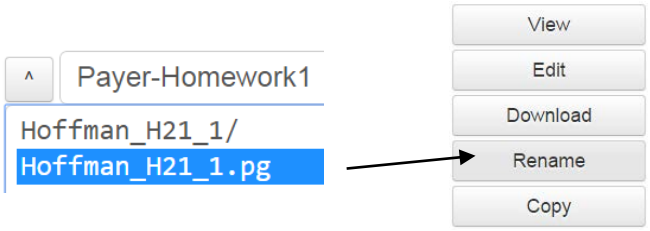


→ Note that both the *.pg file and folder of the same name are next to each other. (There may be other *.pg problems in your file.)



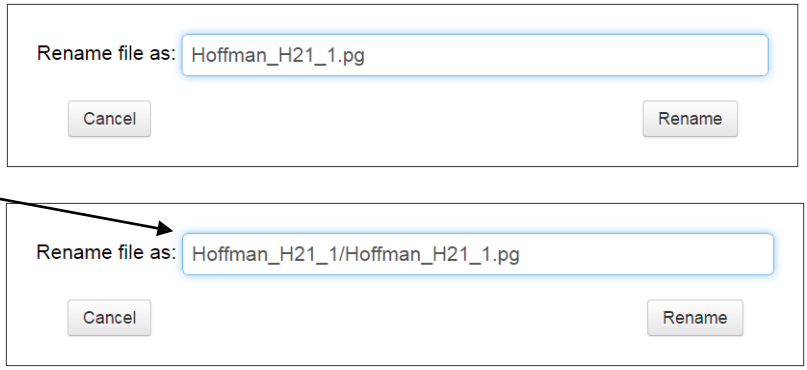
3.) Rename the *.pg file by affixing the new file name, thereby moving the file.

→ Select the *.pg file and click on Rename.



→ In the dialogue box affix the file name to the *.pg file as a prefix.

→ Click on Rename.



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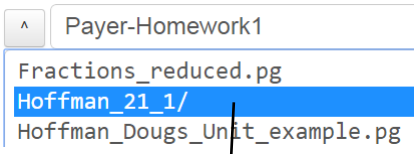
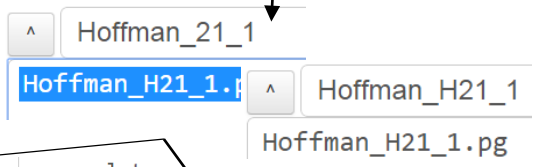
→ Note that image file is no longer visible within its original directory. The Rename button executes the mv Linux command which enables us to move files into a folder. If the file names share the same name as the folder the two can be linked together to enable graphic images to be imported into webwork problems!



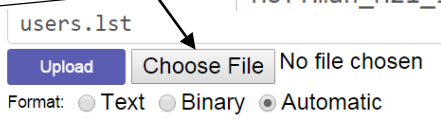
4.) Upload the image file to the *.pg file.

→ Open the folder you just created with a double click and confirm that the contents of the new folder is the *.pg file.



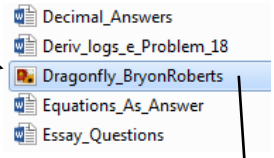
→ Select the *.pg file.

→ Click on Choose File.

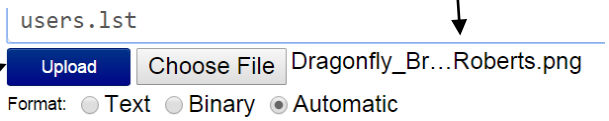


→ Find the *.png file in your computer.

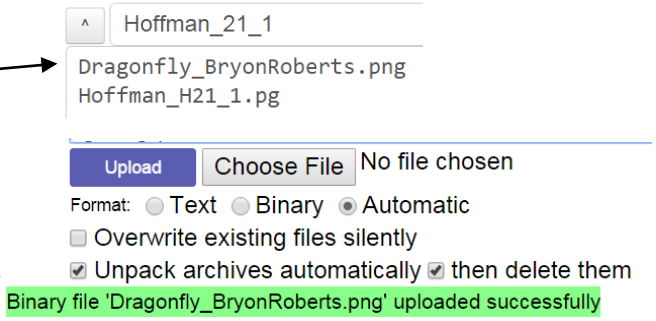
→ Double click to select the file for loading.



→ Note the name of the file selected. It should appear beside the "Choose File" button.

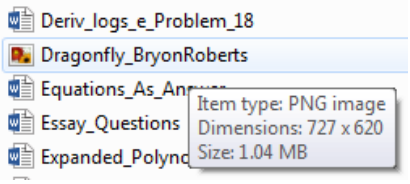


→ Click on Upload to load the *.png file and note the green field confirming that the image file was successfully uploaded.



5.) Obtain the pixel dimensions of the image.

→ Return to your computer folder that holds the *.png file. Let your pointer hover above the name of the file and the dimensions of the image should be revealed:



Dim:727 x 620

We will need these dimensions when attaching the image to the *.pg file.

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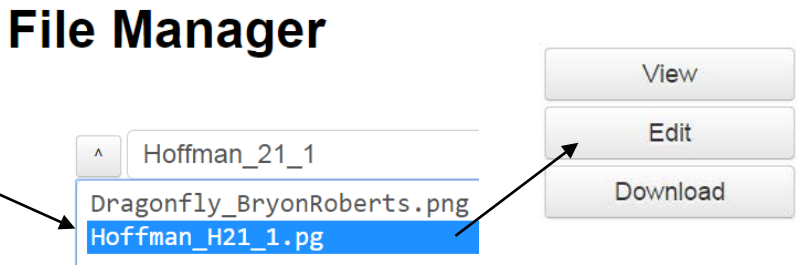
6.) Edit the *.pg file to receive the image.



→ Return to the File Manager.
→ Select the *.pg file.
→ Click on Edit.

After the BEGIN_PGML statement incorporate the dimensions of the image (727 x 620) with the following code:

In General:
>> [@ image("file.png", width=> *enter pixel count*, height=> *enter pixel count*, tex_size=>*portion of 1000*) @]* Caption. <<

This Specific case:
>> [@ image("Dragonfly_BryonRoberts.png", width=>727, height=>620, tex_size=>500) @]* Bryon_Roberts_Copy_Right_2007.<<

Where the tex_size (500) specifies the portion of 1000 that the image should occupy within the problem.

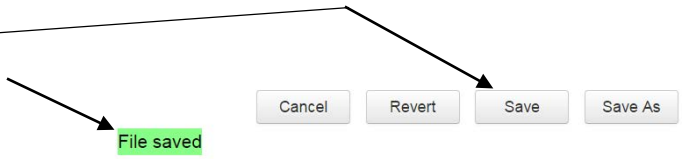
templates/local/Payer-Homework1/Hoffman_H21_1/Hoffman_H21_1.pg

```
#$g1 =Compute("($cbr-1)");
$g1 =Formula("exp(-$ex*$T)*($po+($R/$ex)*(exp($ex*$T)-1))");
$g2 =floor($g1);


TEXT(beginproblem());
BEGIN_PGML
>> [@ image("Dragonfly_BryonRoberts.png", width=>727, height=>620, tex_size=>500) @]* Bryon_Roberts_Copy_Right_2007.
<<
During the summer months a dragonfly population at the Musky marsh follows a survival and renewal equation with an initial
population of [`P_0 = [$po]`] dragonflies, a renewal rate of [`R = [$R]`] , and a survival function of [``S(t) = e^{-[$ex] t}``] at time [`t`]
in weeks. Find the population of dragonflies at [`T = [$T]`] weeks.
*Note!*  Round your decimal answer down to the number of complete dragonflies.


[_____]{$g2}
```

→ Click on Save.
→ Note the confirmation.



And then open the homework file to confirm the image is in place?....Not Yet. Still problems…