

Editing problem set definitions for yourCourse

There are currently four topics when you get into option 4 “Enter Build Problem Set Page” from the Professor’s page.

1. Build problem sets for yourCourse;
2. Simple editing of yourCourse Set Definition files;
3. Simple editing of yourCourse Set Header files
4. Destroy and Rebuild Problem Sets for yourCourse.

By default, the topic 4 is not enabled since it is quite dangerous if it is used inappropriately. To enable it, you will have to edit the course environment file `webworkCourse.ph`.

A problem set consists of a set definition file “`setname.def`”, two set header files, and problems’ source files in the set.

- ❖ The set definition file is an ASCII file that defines the set. It defines the set name, opening, due, and answer dates, optionally header files for the set, and finally the list of problems (with optional values, limits on attempts allowed, and links --- see below). The set definition file **MUST** be named `setxxx.def` where `xxx` is the name of the set. E.g. `set1.def`, `setExam.def`, and `setsample7.def` define sets named 1, Exam, and sample7 respectively. Set names are case sensitive, e.g. `setexam1.def` and `setExam1.def` give different sets, as do `set1.def` and `sef01.def`.
- ❖ Set header files explain things about the problem set. There are two header files for each set: one is printed on the screen and one is printed on the hard copy.
- ❖ Problem sources define the question in the set.

All these files are located in the course templates directory. The set header files and the source files are usually in a subdirectory named “`setname`”, consistent with “`setname.def`”.

To modify a set definition file, go to the professor’s page, select option 4 “Enter Build Problem Set Page”. In topic 2 “Simple editing of yourCourse Set Definition files”, select the `setname.def` in the pull-down menu and click the “Edit Set Definition File” button. The editing window will be displayed. Here we select `set1.def` in a demoCourse as an example. The annotated set definition file is given below:

openDate = 9/6/02 at 6:00am

The date/time the set opens and problems can be viewed and answered by students
##(Professors can view sets before the open date).

dueDate = 9/23/02 at 2:00am

After this date/time, students may view and work on the problems
but answers will not be recorded.

answerDate = 9/23/02 at 2:01am

After this date/time, the student can view the correct answer(s) and solutions ## (if available).
Professors can view these at any time.



▲ Up

WeBWorK Set Definition File(s) Editor for demoCourse

From this page, you can edit your Set Definition file(s). You can both save over old files and create new ones. You can even open one file, make changes and then save those changes under a different file name.

```

### Blank lines or comment lines (anything following a # is a
### comment) may be used for clarity.

openDate = 9/6/02 at 6:00am
dueDate = 9/23/02 at 2:00am
answerDate = 9/23/02 at 2:01am

paperHeaderFile = set1/paperHeaderFile1.pg
screenHeaderFile = set1/screenHeaderFile1.pg
## The above two line are optional.
## The default Header files will be used if these lines are not present

problemList =
set1/lh1-1_1-4.pg
set1/lh1-1_10.pg , 1 , 4 , 1

set1/lh1-1_12.pg , 2 , 5
set1/lh1-1_25.pg , 5 , -2
set1/lh1-1_26.pg , 1 , 4 , 1

set1/lh1-1_30.pg , 1 , 5,
set1/lh1-1_55.pg , 3
set1/lh1-1_64.pg , 3, -1
set1/lh1-2_12.pg
set1/lh1-2_13.pg
  
```

set1.def Open

set1.def Save Save as For "Save As" choose a new filename.

Revert to original and Resize message window

Rows: 20 Columns: 90

If you resize the message window, you will lose all unsaved changes.

Logout Feedback Problem Sets Enter Professor's Page

Current time: 10/31/02 at 11:40 AM

paperHeaderFile = set1/paperHeaderFile1.pg

This line is optional.

The default paper Header file will be used if this line is not present

screenHeaderFile = set1/screenHeaderFile1.pg

This line is optional.

The default paper Header file will be used if this line is not present

The above 5 lines can occur in any order, but must proceed the “problemList=” line.

The openDate, dueDate, and answerDate must be in chronological order.

problemList =

All lines following the “problemList=” line give the filenames (and optionally the values, limits on attempts, and links) of the problems in the set. The first line gives problem 1; the second line gives problem 2, etc. Blank lines may be inserted say every 5 lines for clarity. The format for each line is:

ProblemFileName, value, maximumAllowedAttempts, linkToPreviousProblem

Don't forget the commas (,) unless you want default values.

The problem value is assumed to be a nonnegative integer. All non-digits are discarded so -5 becomes 5, 4+5 becomes 45, etc. If there are no digits, the problem value defaults to 1. The scoring routines use this value to determine the value of a problem.

The maximumAllowedAttempts is assumed to be an integer. A negative integer means allow unlimited attempts (the default). All non-digits except the minus sign (-) are discarded so 4+5 becomes 45, etc. If there are no digits, the value defaults to -1. After the allowed number of attempts answers will not be recorded.

The linkToPreviousProblem is assumed to be 1 (true) or 0 (false, the default). If 1 this means, for every student, this problem will have the same seed as the previous problem. This means you can have a connected or linked series of problems that share the same "random data." For this, the linked problems have to define the same random variables in the same order (it is the responsibility of problem authors to do this. An example of linked problems is illustrated below.) Note: this is set to 0 for the first problem regardless of what is listed. Also 0 and 1 are Perl's truth values and other values are interpreted as true or false according to Perl's rules.

```
problemFileName           is equivalent to:      problemFileName , 1 , -1, 0
problemFileName, 2       is equivalent to:      problemFileName , 2 , -1 , 0
problemFileName, 2 , 3   is equivalent to:      problemFileName , 2 , 3 , 0
```

An example of linked problems

Problem 1. A ball is shot straight up into the air with initial velocity of $V = 46 \text{ ft/sec}$. Assuming that the air resistance can be ignored, how high does it go? (Hint: The acceleration due to gravity is 32 ft per second squared.)

Note: V here is a random variable that is assigned a value of 46

Problem 2. A ball is shot straight up into the air with initial velocity of $V = 46$ ft/sec. Assuming that the air resistance can be ignored, how long after it was shot up will it reach the maximum height? (Hint: The acceleration due to gravity is 32 ft per second squared.)

Note: Here V also is a random variable. If for some reason, you want a student to use the same initial velocity, you can do so by linking these two problems together. This way, whatever value was assigned to V in Problem 1 will also be assigned to V in problem 2.

set1/lh1-1_1-4.pg

Problem 1 is given by the file <templates>/set1/lh1-1_1-4.pg
It has default option on: 1-point value and unlimited attempts allowed.

set1/lh1-1_10.pg , 1 , 4 , 1

Problem 2 is given by the file <templates>/set1/lh1-1_10.pg. The three fields followed denote
“value”, “number of attempts allowed”, and linkage to the previous problem.
Problem 2 carries 1 point, students are allowed unlimited attempts, linked to previous problem.
These fields are separated by commas. If left empty, the default options are as in problem 1

set1/lh1-1_12.pg , 2 , 5

Problem 3 is given by the file <templates>/set1/lh1-1_12.pg
It carries 2 points, students are allowed 5 attempts only, it is not linked to the previous problem.

set1/lh1-1_25.pg , 5 , -2

Problem 4 is given by the file <templates>/set1/lh1-1_25.pg
It carries 5 points, students are allowed unlimited attempts, it is not linked to the previous problem

set1/lh1-1_26.pg , 1 , 4 , 1

Problem 5 is given by the file <templates>/set1/lh1-1_26.pg
It carries 1 point, students are allowed 4 attempts, it is linked to the previous problem

set1/lh1-1_30.pg , 1 , 5,

Problem 6 is given by the file <templates>/set1/lh1-1_30.pg
It carries 1 point, students are allowed 5 attempts, it is not linked to the previous problem

set1/lh1-1_55.pg , 3

Problem 7 is given by the file <templates>/set1/lh1-1_55.pg
It carries 3 points, students are allowed unlimited attempts, it is not linked to the previous problem

set1/lh1-1_64.pg , 3, -1

Problem 8 is given by the file <templates>/set1/lh1-1_64.pg
It carries 3 points, students are allowed unlimited attempts, it is not linked to the previous problem

set1/lh1-2_12.pg

Problem 9 is given by the file <templates>/set1/lh1-1_12.pg

It carries 1 points, students are allowed unlimited attempts, it is not linked to the previous problem

set1/lh1-2_13.pg

Problem 10 is given by the file <templates>/set1/lh1-1_25.pg

As in problem 9, it carries default option: 1 point, unlimited attempts, not linked to previous problem.

One may choose to comment out a particular problem by putting a # sign before that problemFileName. E.g.

set1/lh1-2_13.pg will leave problem 10 out.

One may also add a particular problem by uncomment (deleting # sign preceding) the problemFileName.