NCKU Moodle Instruction Manual – Grade

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Grade feature record student’s grade in course and provide several aggregation function.

I. Introduction

The grade category, grading item and grade are composed grade. “Grade category” classify the calculate method, like assignment grade and quiz grade. “Grading item” are the item that been calculating. “Grade” means student’s score.

II. Grade Aggregation

The aggregation determines how grades in a category are combined, such as

- Mean of grades
The sum of all grades divided by the total number of grades.
For example:
A1 70/100, A2 20/80, A3 10/10, category max 100:
\[(0.7 + 0.25 + 1.0)/3 = 0.65 \rightarrow 65/100\]

* Weighted mean of grades
Each grade item can be given a weight, which is then used in the arithmetic mean aggregation to influence the importance of each item in the overall mean.
For example:
A1 70/100 weight 10, A2 20/80 weight 5, A3 10/10 weight 3, category max 100:
\[(0.7\times10 + 0.25\times5 + 1.0\times3)/18 = 0.625 \rightarrow 62.5/100\]

* Weighted sum of grades
Each grade item can be given a weight and get the sum of them.
For example:
A1 70/100 weight 10, A2 20/80 weight 5, A3 10/10 weight 3, category max 100:
\[(0.7\times10 + 0.25\times5 + 1.0\times3) = 11.25 \rightarrow 11.25/100\]

* Sum of grades
The sum of all grade values.
For example:
A1 70/100, A2 20/80, A3 10/10:
\[70 + 20 + 10 = 100/190\]

* Mean of grades (with extra credits)
A value greater than 0 treats a grade item's grades as extra credit during aggregation. The number is a factor by which the grade value will be multiplied before it is added to the sum of all grades, but the item itself will not be counted in the division.
For example:

Item 1 is graded 0-100 and its "Extra credit" value is set to 2

Item 2 is graded 0-100 and its "Extra credit" value is left at 0.0000

Item 3 is graded 0-100 and its "Extra credit" value is left at 0.0000

All 3 items belong to Category 1, which has "Mean of grades (with extra credits)" as its aggregation strategy

A student gets graded 20 on Item 1, 40 on Item 2 and 70 on Item 3

The student's total for Category 1 will be 95/100 since \[20\times2 + (40 + 70)/2 = 95\]

* Lowest grades
The result is the smallest grade after normalization.
For example:
A1 70/100, A2 20/80, A3 10/10, category max 100:
min(0.7 + 0.25 + 1.0) = 0.25 --> 25/100

• Highest grades
  The result is the highest grade after normalization.
  For example:
  A1 70/100, A2 20/80, A3 10/10, category max 100:
  max(0.7 + 0.25 + 1.0) = 1.0 --> 100/100

III. View Grade

1. Grade analysis bar chart

Show all students’ grade by chart. Enter grade page and click “View” → “Grade analysis bar chart”

![Grade analysis bar chart](image)

2. Grader report

It show all grade items and total grade in course. Turn edit mode on and teacher can modify the grade manually.
(1) View grader report

Click “View” tag → “Grader report”

<table>
<thead>
<tr>
<th>Surname</th>
<th>First name</th>
<th>ID number</th>
<th>HW01</th>
<th>HW02</th>
<th>Course total</th>
</tr>
</thead>
<tbody>
<tr>
<td>test01</td>
<td></td>
<td></td>
<td>86.00</td>
<td>75.00</td>
<td>80.50</td>
</tr>
<tr>
<td>test02</td>
<td></td>
<td></td>
<td>87.00</td>
<td>76.00</td>
<td>81.50</td>
</tr>
<tr>
<td>test03</td>
<td></td>
<td></td>
<td>88.00</td>
<td>77.00</td>
<td>82.50</td>
</tr>
<tr>
<td>test04</td>
<td></td>
<td></td>
<td>89.00</td>
<td>78.00</td>
<td>83.50</td>
</tr>
<tr>
<td>test05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>test06</td>
<td></td>
<td></td>
<td>90.00</td>
<td>79.00</td>
<td>84.50</td>
</tr>
<tr>
<td>test07</td>
<td></td>
<td></td>
<td>91.00</td>
<td>80.00</td>
<td>85.50</td>
</tr>
</tbody>
</table>

(2) Edit grade report

i. Turn edit mode on
ii. Manually input grade and click "Update" button

【Note】The updated grade will mark as different background color
3. User report

This feature uses to view the grade, rank of all student or single student.

<table>
<thead>
<tr>
<th>Surname First name</th>
<th>ID number</th>
<th>HW01</th>
<th>test2</th>
<th>HW01</th>
<th>HW02</th>
</tr>
</thead>
<tbody>
<tr>
<td>試用帳號01</td>
<td>test01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>試用帳號02</td>
<td>test02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>試用帳號03</td>
<td>test03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>試用帳號04</td>
<td>test04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>試用帳號05</td>
<td>test05</td>
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<tr>
<td>試用帳號06</td>
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<tr>
<td>test07</td>
<td>test07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>試用帳號08</td>
<td>test08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
IV. Categories and Items

1. Simple view

Click “Categories and Items” tag → Simple view

(1) Aggregation
The aggregation determines how grades in a category are combined.

(2) Grade category
This block classify the calculate methods. Each contain their own method.

(3) Function icon

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✴</td>
<td>Edit</td>
<td>Edit items</td>
</tr>
</tbody>
</table>
A grade calculation is a formula used to determine grades. The formula should start with an equal (=) sign and may use common mathematical operators, such as max, min and sum. If desired, other grade items may be included in the calculation by typing the ID numbers in double square brackets.

For example,

=average([[Quiz.1]], [[Quiz.4]], [[Assignment.1]])

=average(max([[Quiz.1]], [[Quiz.4]], [[Assignment.1]]), min([[Quiz.1]], [[Quiz.4]], [[Assignment.1]]))
Please refer to moodle.org to get more calculations.

(4) Move selected items to
Select items which desire moved then select destination in drop-down menu.

(5) Add category and grade item
It can add category for example, course extra credits.

2. Full view
This page contain more setting item than simple view.

<table>
<thead>
<tr>
<th>Name</th>
<th>Aggregation</th>
<th>Max grade</th>
<th>Aggregate only non-empty grades</th>
<th>Aggregate including subcategories</th>
<th>Drop the lowest</th>
<th>Keep the highest</th>
<th>Multiplication</th>
<th>Offset</th>
<th>Actions</th>
<th>Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW01</td>
<td>-</td>
<td>100.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.0</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>test12</td>
<td>-</td>
<td>100.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.0</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HW01</td>
<td>-</td>
<td>100.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HW02</td>
<td>-</td>
<td>100.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course total</td>
<td>-</td>
<td>100.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Aggregate only non-empty grades
This setting determines whether empty grades are not included in the aggregation or are counted as minimal grades.

(2) Aggregate including subcategories
This setting determines whether grades in subcategories are included in the aggregation.

(3) Drop the lowest
This setting enables a specified number of the lowest grades to be excluded from the aggregation.

(4) Keep the highest
If set, this option will only keep the X highest grades, X being the selected value for this option.
(5) Multiplicator

The multiplicator is the factor by which all grades for this grade item will be multiplied, with a maximum value of the maximum grade.

(6) Offset

The offset is a number that is added to every grade for this grade item, after the multiplicator is applied.

V. Grade Import

Moodle provide grade import feature. This document will import CSV format as example. The import file must contain the fields as follow:

- Field name (ex: studentID, exam 1)
- StudentID and grade

![CSV Table]

(1) Click “Import” tag → CSV file. Upload CSV file and select encoding type then click “Upload grades” button.
(2) Preview the import content
Identify user by
Map from: Select the field that represents studentID.
Map to: The system will set ID number as default, don’t change it.

Grade item mappings
The grade will map to the grade field.

Click “Upload grades” button
(3) Grade import success
VI. Grade Export

The system provide grade export feature. The export format contain OpenDocument spreadsheet, Plain text file, Excel spreadsheet and XML file.

1. NCKU format file
   
   In order to compatible with “Online Grades Register System”, moodle can export students’ grade as grade log file of “Online Grades Register System”.

   【Note】This feature is enabled during “Online Grades Register System” open upload.

   1) Click “Export” tag → NCKU format file

   ![Export to NCKU format file]
   
   No NCKU format file, because the time is not within the required time

2. Excel spreadsheet
   
   1) Click “Export” tag → Excel spreadsheet

   Make export settings and select the item you want to export and click “Submit” button.
Preview the page and click “Download” to export to excel file.
VII. Application Example

1. Different weight for each assignment

   Q: There are three assignments in the course. However, the weight are 30%, 30%, 40%.
   How should I set the grade aggregation?

   A: Click “Categories and items” tag → Simple view. Select “Weighted mean of grades” and
   input the weight.
2. How to adjust all grades at once?

Q: How to plus 5 point for every student

A: Click “Categories and items” tag → Full view. Input the point you want to add in the offset field.
3. How to filter the grade item by score?

Q: There are three assignments but only the two highest grades will be calculate.
A: Click “Categories and items” tag → Full view. Input the number of highest grades you want in the “Keep the highest” field.
4. Contact Us

If you have any questions and suggestions about the system, please contact Teaching & Learning Technology Division, Extension 61024 \ 61029.