# Team Based Assignments

## Overview

The purpose of this modification is to allow an assignment to which individuals can contribute together, as a team, to a common submission. Although the submission is created as a team, each member of the team is still graded individually, to allow for the maximum flexibility. The teams are based on group membership within the course. “Group” and “team” may be used synonymously throughout this document.

### Notable behaviors

Instructor

* When an assignment is created, an option has been added for the creator to designate the assignment as a “Team Assignment”, meaning each member of the team contributes toward the same submission. This option is only available when the assignment is in a ‘group mode’ other than ‘none’.
* When an instructor grades the assignment, each member of the team is graded individually.
  + Team submissions are denoted as such in the grading view, and show the team name.
  + Once an individual has been graded, the grading view also indicates that this was originally a team submission.
  + The grades that are entered into the gradebook are specific to an individual only.
  + If downloading a zip of all assignments, team submission files are prepended with the name of the team, not the name of the specific individual.

Student

* When student submit files to the assignment, all team members contribute to the same submission.
* Everyone within the same team can manage the submission.
  + Each team member can add files, remove, rename, etc.
  + The ‘author’ for the individual files is recorded as the person that uploaded it.
  + Any member of the team can ‘send for marking’

Administrators

* A few settings in the language pack are defined, within the module language file.
  + What to call the ‘team based assignment’ in the menu when creating an assignment
  + How to annotate a team submission in the grading view
  + How to annotate an ‘individualized’ team submission in the grading view

## Testing

### Test cases setup

1. Ensure that a number of sample users exist within the moodle environment.
2. Create a new course
3. Create at least two groups of participants
4. Ensure there is a participant who is not a member of any group, but is enrolled in the course.
5. Ensure there is a participant who is a member of multiple groups.
6. Ensure that the assignment allows students who are not a member of a team to view it.

### Test cases

#### Create a team based assignment

1. In the course created in the setup, create a new assignment of type ‘Advanced file upload’
2. Ensure group type of ‘separate groups’ is selected.

Ensure the ‘Team based Assignment’ option is available

1. Set the ‘Team based Assignment’ option to ‘Yes’.

#### Submit a document as a student from one of the teams

1. Login as a student who is a member of one of the teams defined in the setup
2. Navigate to the team based assignment created earlier
3. Add a file to the submission.

Ensure that the file is added as normal.

#### Add a document as another student from the same team

1. Login as a student who is in the same team as the student chosen for the last test.
2. Navigate to the team based assignment created earlier

Ensure that the file the previous team member added is displayed.

1. Add another file to the submission.

Ensure that both files are displayed as part of the submission.

#### Add a document as a student from a different team

1. Login as a student who is a member of a different team that the students chosen for the previous tests.
2. Navigate to the team based assignment created earlier

Ensure that no files appear to have been submitted yet.

1. Add a file to the submission.

Ensure that the file is added as normal.

#### Add a document as a student who is not a member of any team

1. Login as a student who is a participant of the course, but not a member of any team
2. Navigate to the team based assignment created earlier

Ensure that no files appear to have been submitted yet.

1. Add a file to the submission.

Ensure that the file is added as normal.

#### Add a document as a student who is a member of more than one team

1. Login as a student who is a member of both teams used for the above tests.
2. Navigate to the team based assignment created earlier

Ensure that the ‘group’ dropdown appears, allowing the student to select which group they are working as a part of.

Ensure that the files displayed are appropriate for the group currently displayed.

1. Add a file to the submission.

Ensure that the file is added as normal, and displayed with the correct group files

1. Change the group selection box, to select a different group.

Ensure that the files displayed are appropriate for the group displayed.

1. Add a file to the submission.

Ensure that the file is added as normal, and displayed with the correct group files

#### Instructor view is appropriate

1. Login as the instructor for the course
2. Navigate to the team based assignment created earlier

Ensure that the ‘number of submissions’ is appropriate as per the following rules:

* 1. Each team submission counts as a single submission
  2. Graded team submissions do not affect the submission count.
  3. Submissions by individuals not in teams are counted appropriately.

1. Navigate to the ‘submissions’ page, by clicking the ‘number of submissions’ link.

Ensure that the appropriate files exist for each group and individual.

Ensure that the file for the individual not in any group appears properly.

Ensure that the files from both groups are listed for the individual in more than one group.

1. Click to download a file

Ensure the file is downloaded properly.

1. Click the ‘grade’ link in one of the rows.
2. Enter a grade and comment for the submission, and click the ‘Save changes’ button.

Ensure that the grade and the comment apply only to the individual, not the team.

1. Enable Quick grading in the preferences box.
2. Enter a few grades and comments for all participants, then click ‘Save all my feedback’.

Ensure that the entered grades and feedback are consistent with what was entered.

## Algorithms / Code changes

### Database changes

1. Extended the assignment\_submissions table to include an integer ‘groupid’ column, to allow the tracking of the GroupID for each submission.
2. Extended the assignment table to include a Boolean ‘group\_assignment’ column, to allow each assignment to be marked as a group assignment or not.

### Logic changes

1. Extended the get\_submission function
   1. allow passing an integer groupid and a Boolean groupassignment .
   2. if groupassignment is true, and a groupid is passed, the group submission is returned instead of the individual submission.

1. Most calls to ‘get\_submission’ were updated
   1. If the assignment is marked as a group\_assignment, we still look for an individual submission first, and if none exists, we get a group submission. This allows for the correct handling of submissions after they have been graded.
   2. Exceptions to this are when we’re displaying files… we always want to show the group files, even after an individual submission has been created from the team assignment.

1. Updated the grading logic
   1. Updated both the quick grade and the full-form grading logic.
   2. When a participant is graded based on a team submission, we create an exact copy of the submission (except the files), as attribute it to the individual.

1. Update the SQL logic used to create the ‘quick grading’ table view.
   1. Created two subqueries, one which would return any group submission information, and one (the original) which would return any individual submission information. If the individual information is NULL, use the return information.

1. Update the display code for the ‘quick grade’ table view
   1. Display Team information if the displayed row is a team submission, or if the submission was derived from a team submission.
   2. If a participant is a member of more than one team, display the files from each team in their row.

1. Update the count\_submissions function
   1. Team submissions count as a single submission
   2. Individual submissions that were created from graded team submissions are not counted (because they are counted as a single team submission)
   3. Individual submissions that are not part of a team are counted as normal.
2. Update the participant’s ‘submission’ page code
   1. If the participant is a member of a team, display/contribute to the team submission
   2. If the participant is a member of more than one team, display/contribute to the submission from the team displayed in the group selection dropdown.
   3. Extended the ‘upload’ form to allow passing a groupid from the group selection dropdown.

1. Created a group\_assignment\_participant function
   1. Returns a true, if given a specific user and group, and that user is a member of a team in that particular assignment.
   2. Is used to determine if a group submission should be used, or if an individual submission should be used.
2. Create a current\_group function
   1. If the groupid is passed in the URL, from the group selection dropdown, return that group (after checking if it exists, and the user is a member).
   2. Given a userid, use the current course context to determine the group the user is in.

1. Update the download zip of all submission files functionality
   1. If the files are part of group submission, prepend the filename with the groupname, instead of the username.

1. Update the administration settings when an ‘Advanced File Upload’ assignment is created
   1. Provide a dropdown to set the assignment as a ‘Shared Team Assignment’.
   2. Only allow the assignment to be set as a ‘Shared Team Assignment’ type if the assignment is set for a groupmode other than ‘none’
   3. Pull the terminology from the language pack.