



# Horus

User Manual

The Horus Team  
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## 1 General Information

Horus is a web application for managing sign-offs in a course. It can be found on <https://horusapp.nl>. This manual will provide all the information necessary for applying this application in your course. All user data displayed in this manual is entirely fictional and automatically generated. Keep this manual for later reference!

## 2 Authentication

For authentication, Horus relies on the Single Sign-On service of the University of Twente. To be able to authenticate on Horus, you must be in the possession of a valid IT account on the University of Twente. Everyone with such an IT account is able to authenticate themselves. To authenticate yourself, go to <https://horusapp.nl>. You should now see a screen similar to Figure 1.

**i** If you see the courses page, then you have already been authenticated.

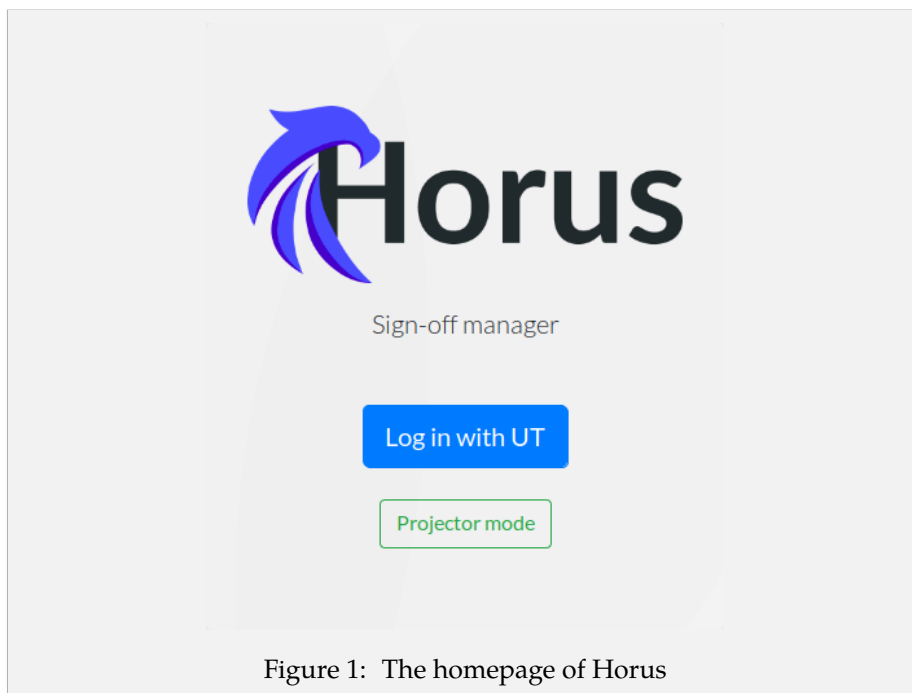


Figure 1: The homepage of Horus

On this page, you can click “Log in with UT” to authenticate yourself at the University of Twente. You will either immediately get redirected to the courses page or you will get redirected to the authentication service of the University of Twente. After authenticating at the University of Twente, you will get redirected to the courses page.

### 3 Getting Started

To get started using Horus , first make sure you are a Teacher on the Canvas page of your course. Then follow the steps below.

1. Set up your group sets on Canvas.
2. Go to <https://horusapp.nl/canvas/import> and import your course into Horus . (See subsection 4.7.1).
3. After the import has finished, go to the assignment set manager by clicking “Manage assignment sets” on the course administration page (See subsection 4.2).
4. Create your assignment sets, fill in your assignments, optionally add milestones and link group sets to your assignment sets (See subsection 4.2).
5. You now have a basic course ready to be used in Horus !

### 4 Course set-up

This section features all relevant information for setting up a course in Horus . It will explain the general concepts of Horus and how to use them, as well as the more advanced managing features.

! In order to use the features in this section, you have to be part of the teaching staff of the course you want to set up. For more information related to permission, see subsection 4.5

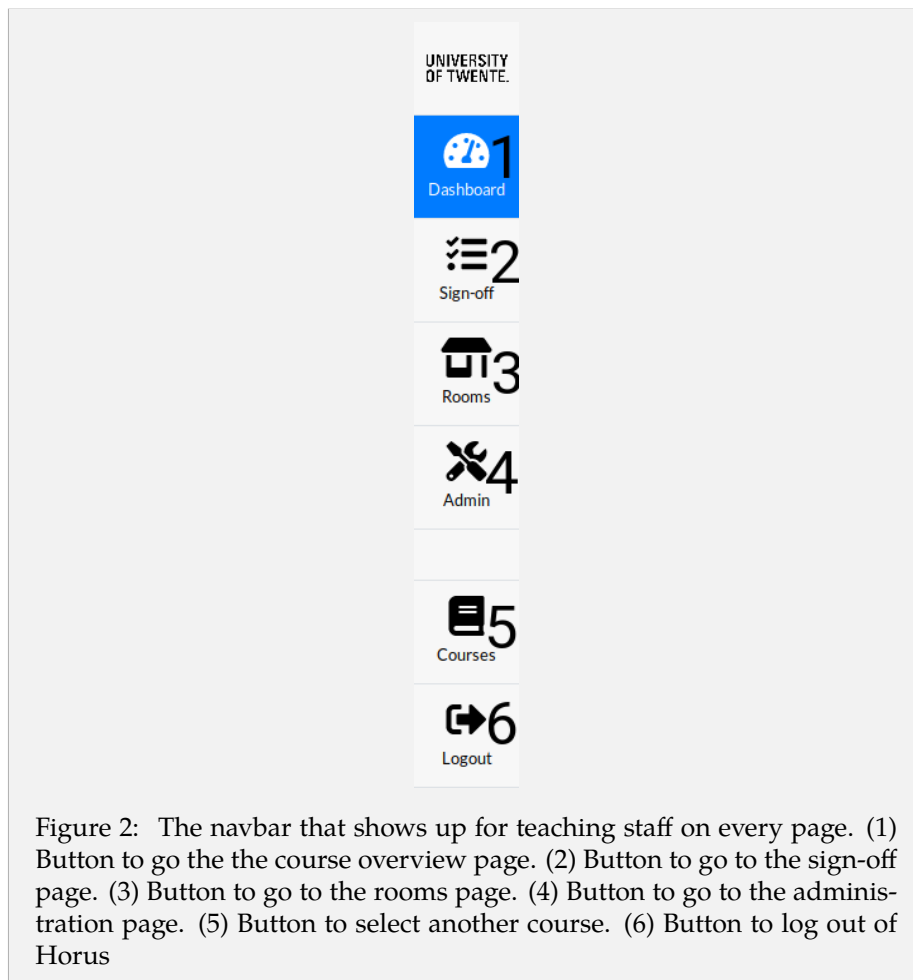
#### 4.1 Main Concepts

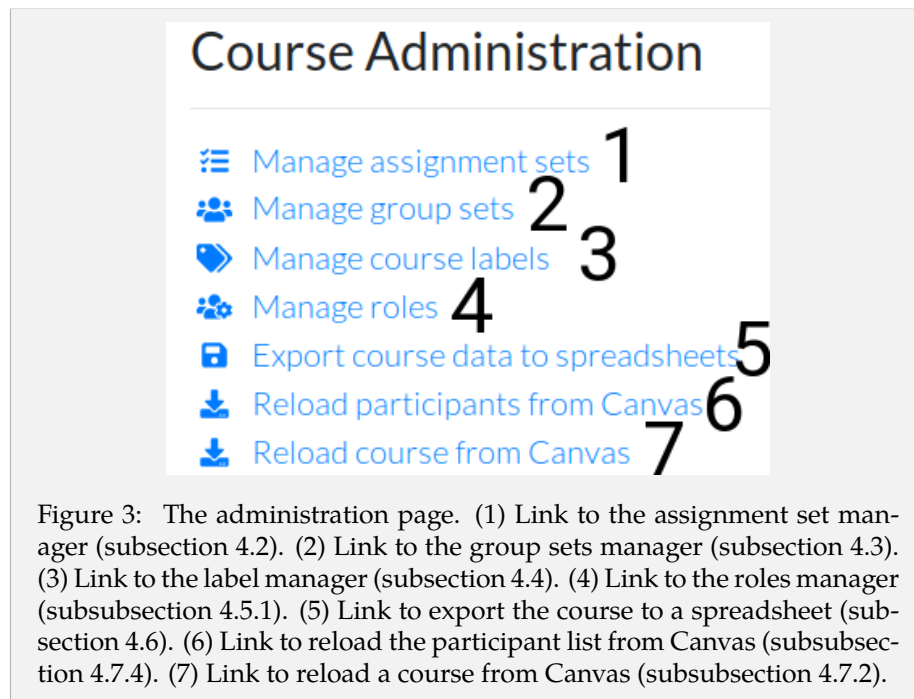
In general, a course in Horus consists of assignment sets and group sets. Group sets are collections of groups of students. They are directly connected to their Canvas counterpart. Information related to the synchronization of group sets and groups is provided in subsection 4.7.

Assignment sets are collections of assignments. Students can be signed off on the assignments in an assignment set if they are in a group that is in a group set connected to the assignment set of that assignment. So, all students in groups of a group set can be signed off on all assignments in the assignment set that is connected to the group set.

The next subsections contain an explanation on how to set up these assignment sets and group sets, as well as some explanation on more advanced features. All of these features can be found on the course administration page. This page can be reached by clicking the admin button (4) as can be seen in Figure 2.

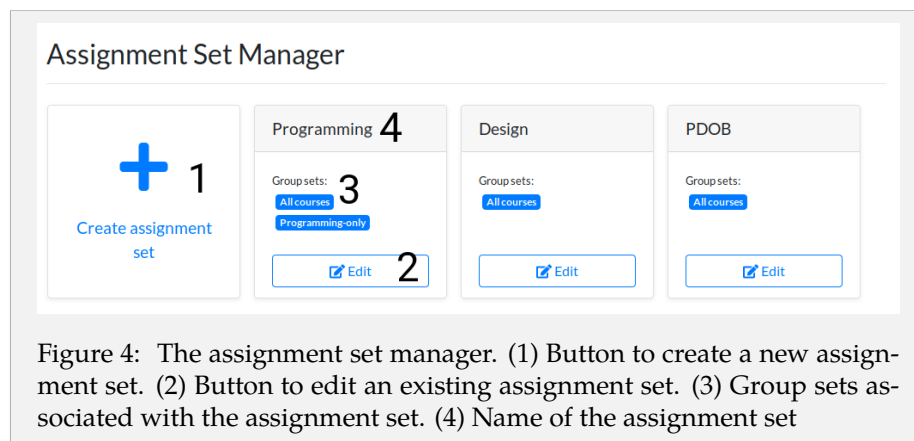
! In this section, there are many references to UI components. If you do not see some of the components referenced in this section, this means you do not have permission to use them. For more information related to permission, see section subsection 4.5.



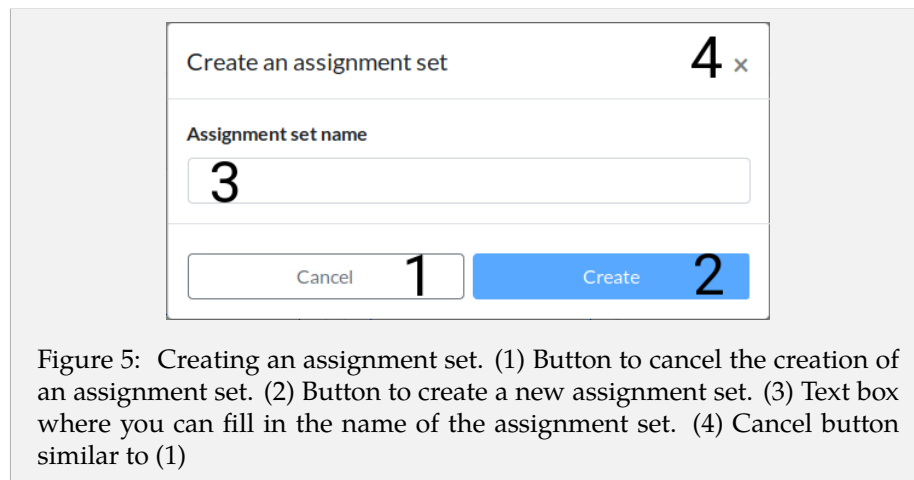


## 4.2 Assignment Sets

Assignment sets can be managed using the assignment sets manager. The assignment sets manager can be found on the course administration page, by clicking (1) in Figure 3. This will navigate you to the assignment sets manager as can be seen in Figure 4.



This page lists all assignment sets in your course. (4) is the name of your assignment set and (3) displays the group sets that this assignment set is associated with. To create a new assignment set, press (1). This will open a screen like in Figure 5.



To create an assignment set, you fill in the name of the assignment set in (3) and press (2) to confirm. If you change your mind, you can press (1) or (4) to cancel the creation. Afterward creating an assignment set, you can press (2) from Figure 4 to fill in the rest of the details, like the assignments and in what order they should appear. You can also use (2) to edit an assignment set you have previously created.

#### 4.2.1 Editing

After pressing (2) in Figure 4, you will see something similar to Figure 6. This screen allows you to configure your assignment sets in detail. You can change the name of the assignment set in (1). You can associate group sets with this assignment set by clicking (3) and selecting one of the group sets that show up in (4).

**Adding assignments** You will also need to add assignments to this assignment set. Figure 6 shows the assignment editor with a few assignments already in place. At the bottom of the list of assignments, there is a text-box (not shown in Figure 6) to create new assignments. Simply typing in this box creates a new assignment. You can press the tab key to add another assignment. In this way, you can quickly add all your assignments to the assignment sets.

**Reordering assignments** It is useful to have your assignments in a logical order. This makes it easier for you to see the progress of students quickly and it allows teaching assistants to easily sign off students on these assignments. (8) is a button that you can use to reorder the assignments. Just drag and drop the assignment to the desired position.

**Milestones** A milestone is an advanced feature that allows for more overview of the student progress. By clicking any of the blue flag buttons (6), you insert a milestone under the corresponding assignment. You can recognize a milestone by the blue bar in the list of assignments. Milestones ensure that there will be a percentage of the students progress displayed on the overview screen. More about the use of milestones can be found in subsection 5.2.



**Deleting assignments** You can delete assignments by clicking any of the red cross buttons at (7). You can also delete the whole assignment set by clicking (9). If you delete assignments for which there are already sign-off results, you will be given the warning to confirm your actions. It will show you which of the assignments you are about to delete actually contain sign-off results.

**Saving changes** Any changes made to the assignment set are local. This means that if you click cancel (10) or close the editor using (12), your changes will not affect the assignment set. The save button (11) allows you to save the changes you have made. So, if you made an accidental change, the best thing to do is to click cancel (10) and start again. This ensures that your change did not affect the assignment set.

**!** Deleting an assignment set (9) has an immediate effect unless there are already sign-off results on this assignment set!

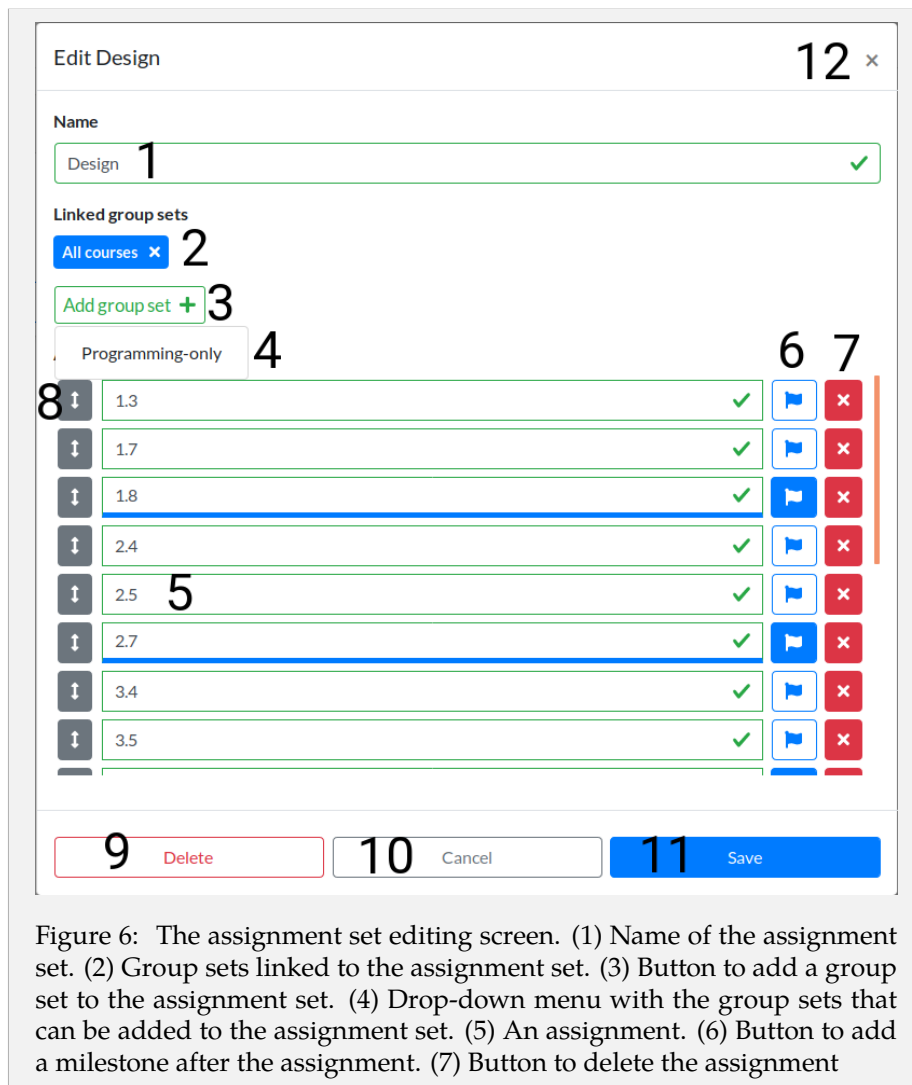


Figure 6: The assignment set editing screen. (1) Name of the assignment set. (2) Group sets linked to the assignment set. (3) Button to add a group set to the assignment set. (4) Drop-down menu with the group sets that can be added to the assignment set. (5) An assignment. (6) Button to add a milestone after the assignment. (7) Button to delete the assignment

### 4.3 Group Sets

Horus mostly relies on Canvas for the group sets. It is therefore recommended to manage group sets using Canvas. Still, Horus also provides a group sets manager with some limited functionality. In general, it is only possible to view group sets and the groups within the group sets. The group set manager can be reached by clicking (2) in Figure 3.

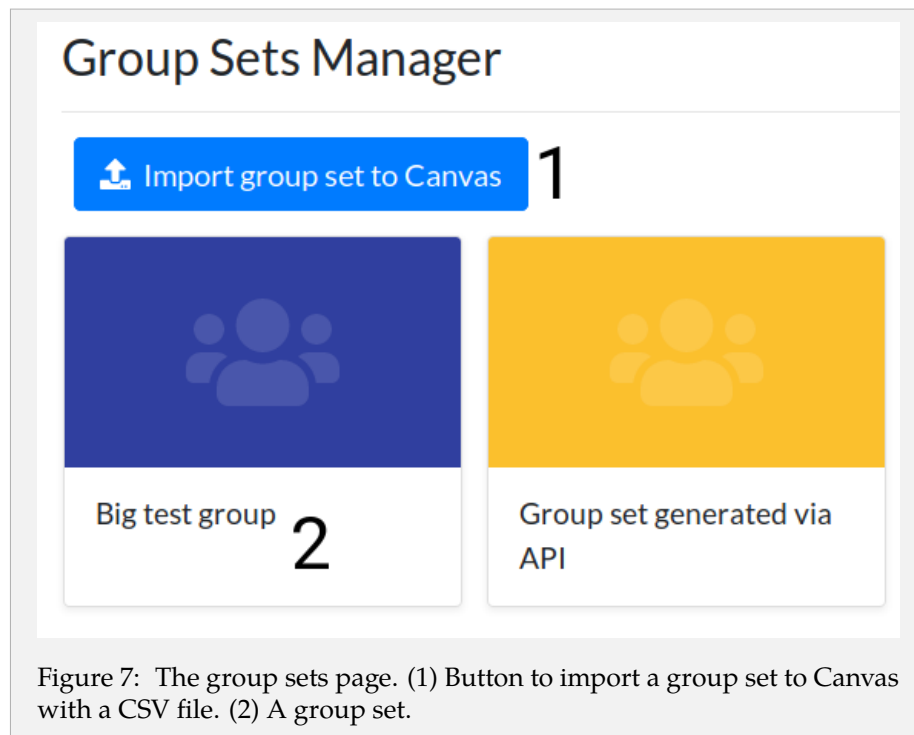


Figure 7: The group sets page. (1) Button to import a group set to Canvas with a CSV file. (2) A group set.

This will navigate you to a page similar to Figure 7. On this page, you will see a button that allows you to import groups to Canvas. This functionality is discussed in subsection 4.7. You can click on a group set (2) to go to the group set manager of that group set. That will navigate you to a page similar to Figure 8

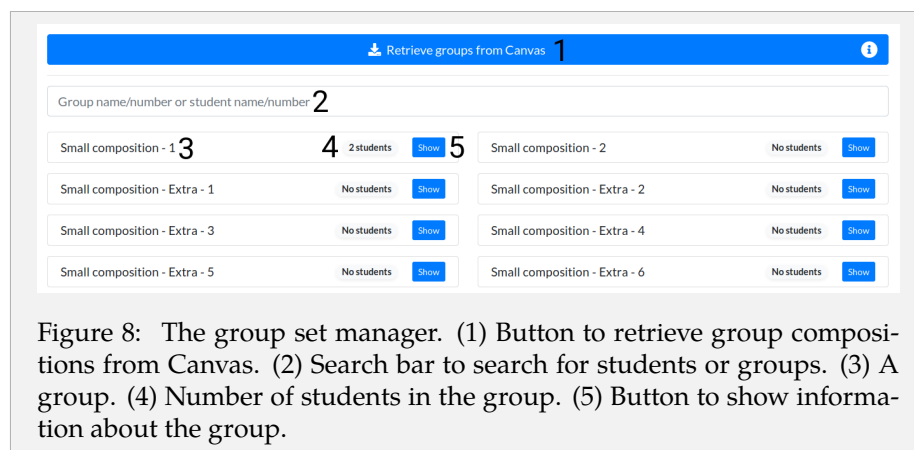


Figure 8: The group set manager. (1) Button to retrieve group compositions from Canvas. (2) Search bar to search for students or groups. (3) A group. (4) Number of students in the group. (5) Button to show information about the group.

On this page, you will see an overview of all the groups that are in the group set. In order to find a group or a student, you can use the search bar (2). You can see how many students are in the group with (4). Clicking on (5) will open the sidebar which will show the students in the group and their student numbers. In the sidebar, you will also see the comments about this group and the comments about the students. For more information about comments, see section 7.

On the same page, you will also see a large blue button (1). This button will retrieve the group composition from Canvas again. For more information about Canvas integration, see subsection 4.7.3.

**Editing group sets** Editing group sets is currently not supported in Horus . Since Horus has close integration with Canvas, editing group sets should be done on Canvas. Afterwards, you can re-synchronize Horus with Canvas as explained in subsection 4.7.

## 4.4 Labels

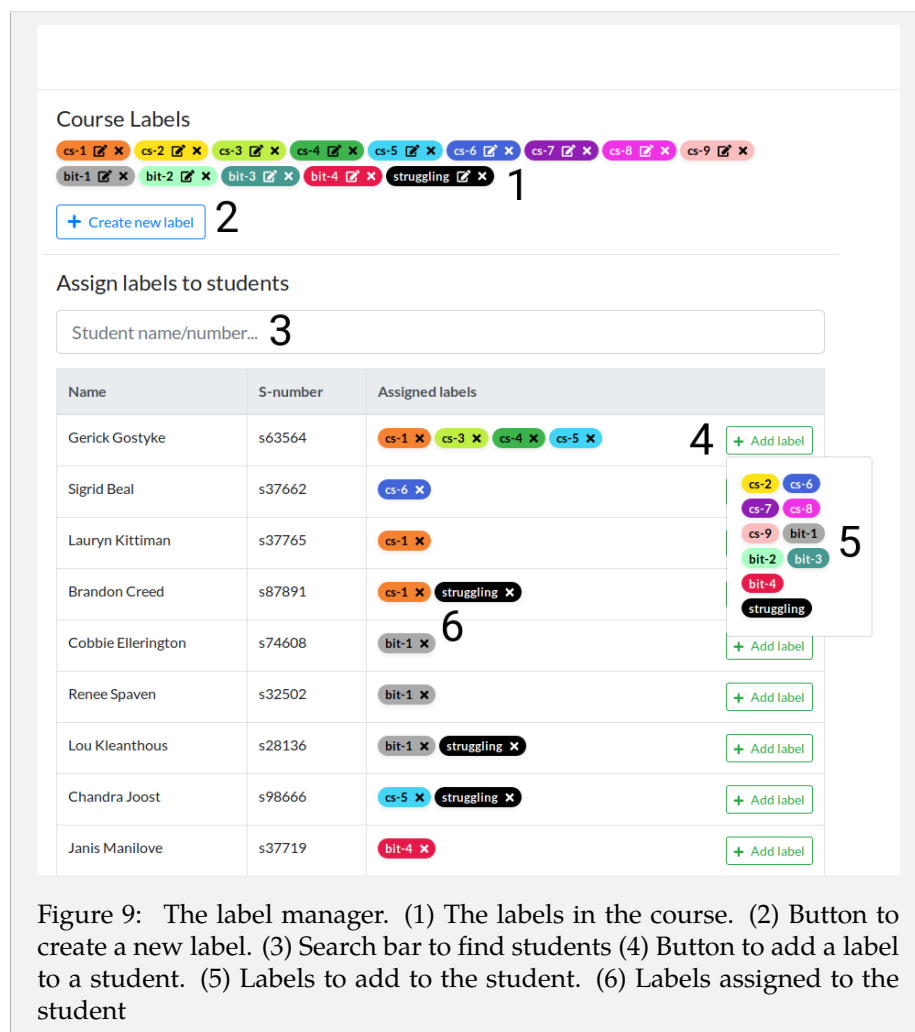
Labels are an advanced feature for classifying students. A possible use case is to mark students that are struggling to keep up with a “struggling” label or to mark students that are known for plagiarism with a “fraud-case” label. Labels can be used to quickly filter out specific students and monitor their progress. They are not visible to students.

### 4.4.1 Labels vs Group Sets

At first, the label functionality might seem very similar to the group sets functionality. After all, you could make a group set called “Labels” containing groups corresponding with the labels. An important problem with doing this is that groups and group sets are public information to students. Students know what group they are in. Labels allow for the “grouping” of students without students seeing their grouping.

There are some use cases, however, where the choice between using group sets and labels is not very clear. For example, what if we want to divide students based on what lab room they will be in. In that case, we could make a group set called “Lab groups” which could contain groups with the room numbers. We could also make labels for each lab group instead. The choice for using group sets or labels is, in this case, a matter of preference. A general guideline one can take is: should the grouping be public to students? If yes, use group sets, else use labels.

**i** Groups and group sets are public to students, labels are not.



#### 4.4.2 Manage Labels

In order to set up labels, go to the course administration page and click (3) in Figure 3. This will navigate you to the label manager. You will see something similar to Figure 9. On this page, you can see the labels you have currently configured on your course, as well as how these labels have been assigned to students.

**Creating labels** In order to create labels, press (2). This will open a screen like Figure 10. On this screen, you can enter the name and colour of the label. The name of the label has to be lower case and cannot contain spaces. The label colour can be chosen by clicking on the coloured bar (2). This will open a colour picker. (3) and (5) allow you to cancel the creation of the label. (4) allows you to save your label.

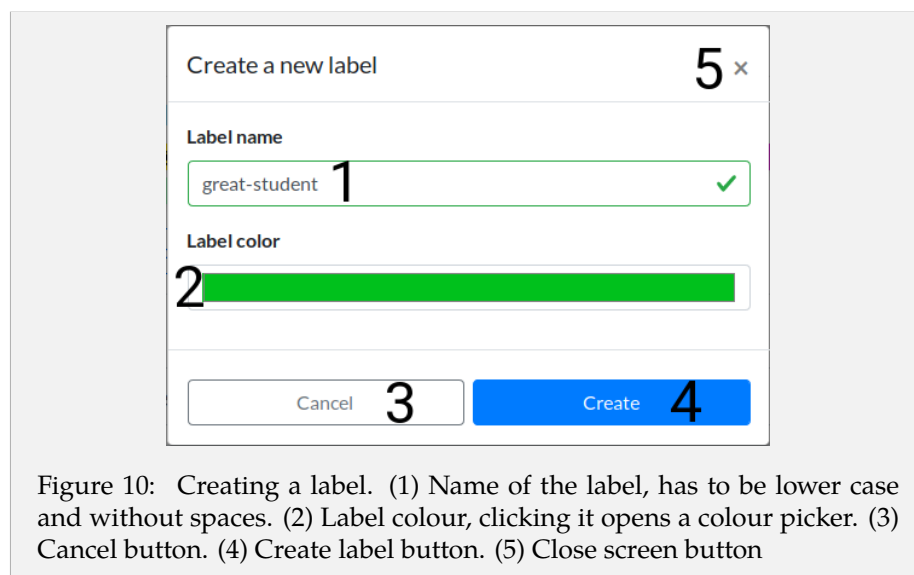


Figure 10: Creating a label. (1) Name of the label, has to be lower case and without spaces. (2) Label colour, clicking it opens a colour picker. (3) Cancel button. (4) Create label button. (5) Close screen button

**Editing labels** Editing existing labels can be done via the small pencil icon next to the label name in (1) of Figure 9. This will open a view very similar to Figure 5. For information on how to edit a label, see the previous paragraph on the creation of labels. Editing a label's name or colour changes the label's appearance for every student that has been labelled with this label.

**Deleting labels** To delete a label, click on the small cross icon next to the label name in (1) of Figure 9. You will be asked to confirm your choice. If you confirm, the label will be deleted from the course. This means that the label also disappears from every student that had been labelled with it.

**Labeling students** After having created some labels, you can start using them to label students. Use (3) of Figure 9 to search for a student. You can search for students either by name or by student number. This will populate the table underneath with search results. (6) shows the labels assigned to a student. You can choose to remove a label from a student by clicking the small cross next to the label name. You can add labels to students by clicking the "Add label" button (4). This will open a drop-down with the labels to add (5). Clicking a label will add that label to the student. It is also possible to add labels to students when importing them to a group set. For more information about this feature, see subsection 4.7.5.

**Filtering on labels** Filtering on labels can be done in the sign-off overview page. For more information regarding filtering, go to subsection 5.3.

## 4.5 Permissions

Horus has an advanced permission system. By default, Horus is shipped with three roles: Student, Teacher and Teaching Assistant. These roles are automatically configured based on the roles in Canvas. So, a teacher in Canvas will also

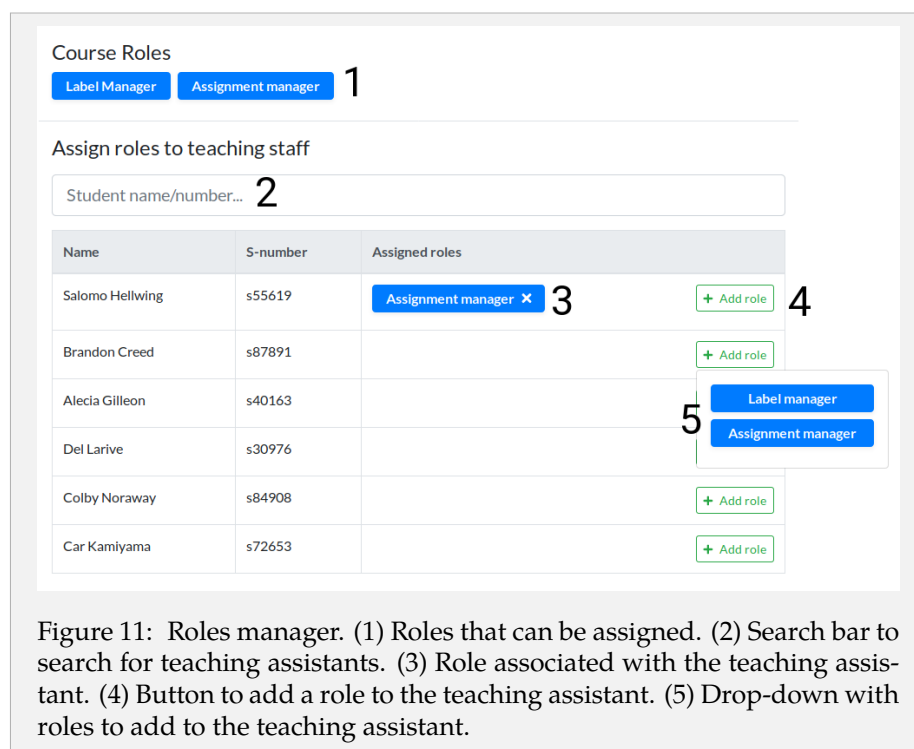
Canvas	Horus
Teacher	Teacher
Course Designer	Student
TA	Teaching Assistant
TA no grading	Teaching Assistant
Student	Student
Observer	Student
(any future role)	Student

Table 1: Mapping from Canvas roles to Horus roles

be a teacher in Horus . The mapping between Canvas roles and Horus roles can be seen in Table 1. The default permissions associated with these roles can be seen in Table 2.

#### 4.5.1 Supplementary roles

For most use cases, the permissions as in Table 2 should suffice. As a teacher, however, you may want to designate some tasks to teaching assistants. For that, it is possible to assign supplementary roles to teaching assistant. Supplementary roles can be assigned using the roles manager . The roles manager can be reached by clicking (4) in Figure 3. This will get you to a page similar to Figure 11.



Here you can see the roles that can be assigned and the teaching assistants to whom the roles have been assigned. (1) lists the supplementary roles that can

Action	Teacher	Teaching Assistant	Student
view roles	✓	✓	✗
assign roles	✓	✗	✗
unassign roles	✓	✗	✗
create new roles	✗	✗	✗
view sign-offs	✓	✓	(only their own)
edit sign-offs	✓	✓	✗
delete sign-offs	✓	✓	✗
view assignment sets	✓	✓	✓
edit assignment sets	✓	✗	✗
create assignment sets	✓	✗	✗
view group sets	✓	✓	✓
view groups	✓	✓	(only their own)
canvas full sync	✓	✗	✗
canvas groups sync	✓	✗	✗
canvas participants sync	✓	✗	✗
import groups to canvas	✓	✗	✗
view comments	✓	✓	✗
create comments	✓	✓	✗
edit comments	✓	(only their own)	✗
delete comments	✓	✓	✗
export data to spreadsheet	✓	✓	✗
view labels	✓	✓	✗
create labels	✓	✗	✗
assign labels	✓	✗	✗
delete labels	✓	✗	✗
create rooms	✓	✓	✗
delete rooms	✓	✓	✗
edit rooms	✓	✓	✗
enter queue	✗	✗	✓

Table 2: Default permissions



be assigned to teaching assistants. Some of these roles come pre-shipped with Horus but new roles can be delivered on demand. See Table 3 for the permissions of the pre-shipped roles. To add new roles to your course, contact your system administrator.

Action	Assignment editor	Canvas syncer	Label signer	as-	Label editor	Comment manager	Admin
view roles	✓	✓	✓		✓	✓	✓
assign roles	✗	✗	✗		✗	✗	✓
unassign roles	✗	✗	✗		✗	✗	✓
create new roles	✗	✗	✗		✗	✗	✓
view sign-offs	✓	✓	✓		✓	✓	✓
edit sign-offs	✓	✓	✓		✓	✓	✓
delete sign-offs	✓	✓	✓		✓	✓	✓
view assignment sets	✓	✓	✓		✓	✓	✓
edit assignment sets	✓	✗	✗		✗	✗	✓
create assignment sets	✓	✗	✗		✗	✗	✓
view group sets	✓	✓	✓		✓	✓	✓
view groups	✓	✓	✓		✓	✓	✓
canvas full sync	✗	✓	✗		✗	✗	✓
canvas groups sync	✗	✓	✗		✗	✗	✓
canvas participant sync	✗	✓	✗		✗	✗	✓
import groups to canvas	✗	✓	✗		✗	✗	✓
view comments	✓	✓	✓		✓	✓	✓
create comments	✓	✓	✓		✓	✓	✓
edit comments	(only own)	(only own)	(only own)		(only own)	✓	✓
delete comments	✓	✓	✓		✓	✓	✓
export data to spreadsheet	✓	✓	✓		✓	✓	✓
view labels	✓	✓	✓		✓	✓	✓
create labels	✗	✗	✗		✓	✗	✓
assign labels	✗	✗	✓		✗	✗	✓
delete labels	✗	✗	✗		✓	✗	✓
create rooms	✓	✓	✓		✓	✓	✓
delete rooms	✓	✓	✓		✓	✓	✓
edit rooms	✓	✓	✓		✓	✓	✓
enter queue	✗	✗	✗		✗	✗	✗

Table 3: Default supplementary roles

Column	Content
Login ID	Student number
Name (sortable)	Sortable name according to the database of the University of Twente.
Name (full)	Fullname according to the database of the University of Twente.
Email	Email address according to the database of the University of Twente.
Labels	Labels associated with the students (comma separated)

Table 4: Columns in the students tab of the data export.

To add a role to a teaching assistant, you can first use (2) to look up the teaching assistant. Afterwards, you can click (4) at the row of the teaching assistant which will open a menu similar to (5). (5) will list the roles that can be assigned to the teaching assistant. Click one of the roles to assign the role to the teaching assistant. It will show up like (3). If you would like to remove a role from a teaching assistant, you can click the cross next to the role name in (3).

## 4.6 Data Export

Exporting the data can be done by clicking (5) in Figure 3. This will download an Excel file (.xlsx) with several tabs. The first tab will be called "Students". It will have columns of data according to Table 4. The other tabs will contain all information of a single assignment set. These tabs have columns according to Table 5. The content in the assignment columns will be conditionally coloured. "C" means the assignment was complete, "I" means there was a sign-off attempt but it was not considered complete. An empty cell means there was no sign-off attempt yet. All comments about students, groups, assignments and sign-off results are also added as comments to the spreadsheets.

## 4.7 Canvas Integration

Horus is closely integrated with Canvas. It is possible to import a course from Canvas. This will import all teaching staff, students, group sets and groups to Canvas. Because Canvas currently has limited support for group management on a large scale, Horus provides you with an easy way to import groups into Horus and Canvas. If you want to know more about this feature, refer to subsection 4.7.5.

**i** If you are a course designer that is not planning on using Canvas for group management, please contact your system administrator to set up group sets manually in Horus .

### 4.7.1 Course Import from Canvas

The first step to getting started with Horus is to import your course from Canvas. To import a course from Canvas, go to <https://horusapp.nl/canvas/import/>. If this is the first time you are importing a course from Canvas, you

Column	Content
S-number	Student number
Name	Sortable name according to the database of the University of Twente.
Group-ID	Internal unique group-ID used in Horus
Group name	Name of the group in Horus (imported from Canvas)
<assignment name>	Results for the student on the assignment
...	...
<assignment name>	Results for the student on the assignment

Table 5: Columns in the assignment set tabs of the data export.

will be redirected to <https://horusapp.nl/canvas/token>. On this page you should submit your personal canvas token. To get a token, go to <https://canvas.utwente.nl/profile/settings>. Under “Approved integrations:”, click “New access token”. For “Purpose” fill in “Horus” and do not fill in an expiration date. Copy the code next to “Token: ” and paste it into Horus. Click “Submit”. If the token is valid, you will be redirected to <https://horusapp.nl/canvas/import>.

On this page, you will see a dropdown to select the courses you can import. Select a course and click “Submit” to start a course import task. This process can take up to 10 minutes, depending on the size of your course. For more information on how to see the progress of this task, see subsection 4.7.6

#### 4.7.2 Course Reload from Canvas

Reloading the course from Canvas can be done by clicking (7) in Figure 3. This could be necessary when many aspects of your course have changed, or when a group set has been added to Canvas. This will reload all details from Canvas, including group compositions and the participant list. A task will be started. See subsection 4.7.6 for more information about tasks.

#### 4.7.3 Groups Reload from Canvas

Sometimes, group compositions on Canvas change. For example, if students can self-enroll in groups. In that case, reloading the groups from Canvas is needed. To do that, press (1) in Figure 8. This will start a task. See subsection 4.7.6 for more information about tasks.

#### 4.7.4 Participant Reload from Canvas

It could be that roles are changed or students are added on Canvas. In that case, it is useful to reload all the participants and their roles from Canvas. You can do so by clicking (6) in Figure 3. This will not start a task as it should be finished in a second.

! If you degrade a teacher or teaching assistant to student, make sure you do a participant reload so that the student no longer has access to teacher and teaching assistant features!

### 4.7.5 Groups Import from CSV

Since Canvas has limited functionality for creating groups in bulk, Horus provides the functionality to import a complete group set into Canvas (and therefore also in Horus ). To do this, go to the group sets of your course (Figure 7) click (1). This will open a view similar to Figure 12.

Figure 12: Group sets CSV import. (1) Group set name. (2) Number of additional groups to create. (3) CSV file selector. (4) Button to cancel the import. (5) Button to start the import. (6) Button to close the dialog.

To do an import, fill the name of the group set into (1) and select your CSV file at (3). If you want some extra groups added to your group sets, give the number of extra groups you want at (2). This could be useful if students are still being added to the course for example. Finally, click (5) to start the importing. This will start a task. See subsection 4.7.6 for more information about tasks.

! It is not possible to overwrite a group set using the CSV import. If you want to overwrite a group set, delete the group set from Canvas first!

**CSV file format** Each line in the CSV file is a student. The first column should be the student number. The second column should be the group identifier (typically a number). Group names will be formed using this identifier, preceded by the group set name. Students with the same group name will be put in the same group. The largest group will be the group size for every group. Any

other columns afterward the group name can be used to label students. You may also provide labels in a single column and separate the labels within the columns. There should not be any headers in the file. Columns may be between quotes but it is not necessary. Underneath an example file is provided.

```
"s1111111", "1", "label", "anotherlabel"  
"s2222222", "1", "label"  
"s3333333", "2a"
```

This will create a group set with two groups of size two. The first group will contain students s1111111 and s2222222 and the last group will contain s3333333 and one free spot. Another possibility is to submit the file as seen below.

```
s1111111, 1, label, anotherlabel  
s2222222, 1, label  
s3333333, 2a
```

#### 4.7.6 Tasks

After having started any long tasks, you will see an hourglass button appear in the navigation bar as you can see in Figure 13. After clicking it, you will see your task. It can show up as Figure 14, Figure 15 or Figure 16. If your task is still in progress (Figure 15), you might notice the progress bar go back a few times. That is normal and is due to the amount of work being unpredictable at the start.

After a while, your task will either have completed or have failed. In the first case, you can simply click the cross on the top-right corner to remove the task. If all of your tasks have been removed, you will notice the menu item also disappear in the navbar.

It could be that a task fails. This can have various reasons. To understand why the task failed, you can click "Show error details". This will show you a description of the failure, although not always in a very user friendly manner. If the failure seems out of place, contact the Horus team and send them the details.

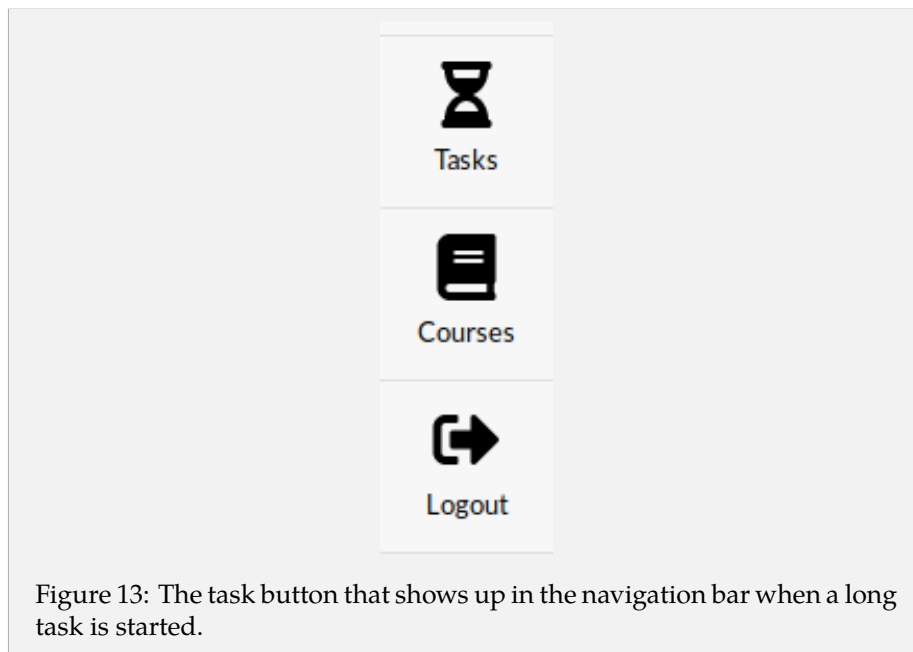


Figure 13: The task button that shows up in the navigation bar when a long task is started.

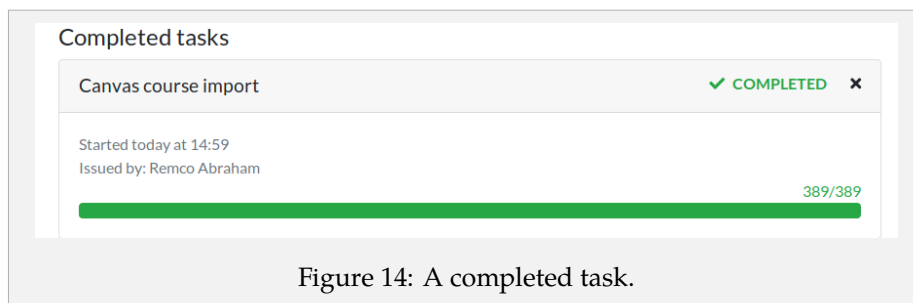


Figure 14: A completed task.

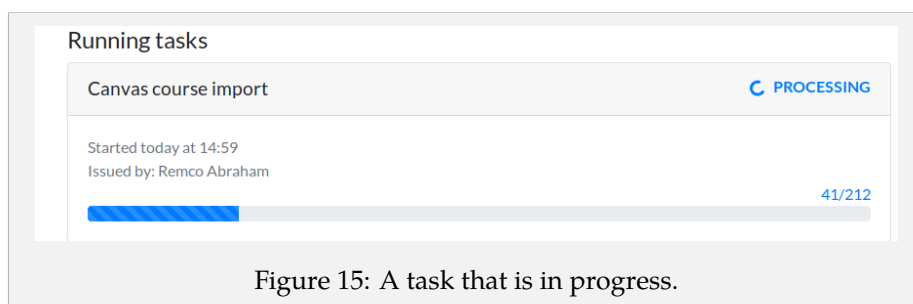
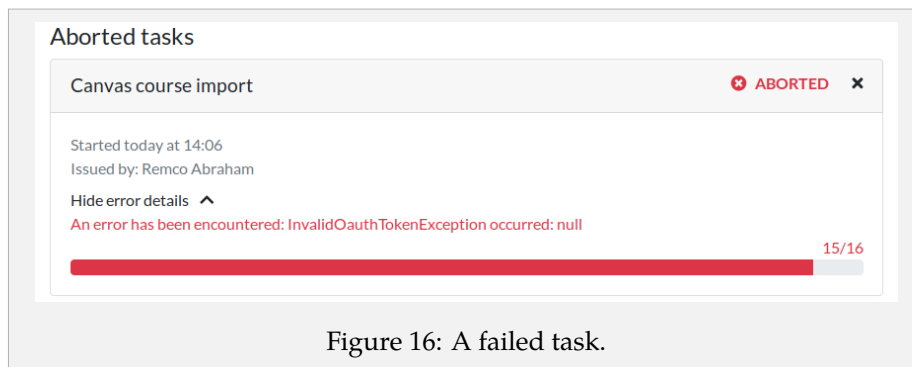


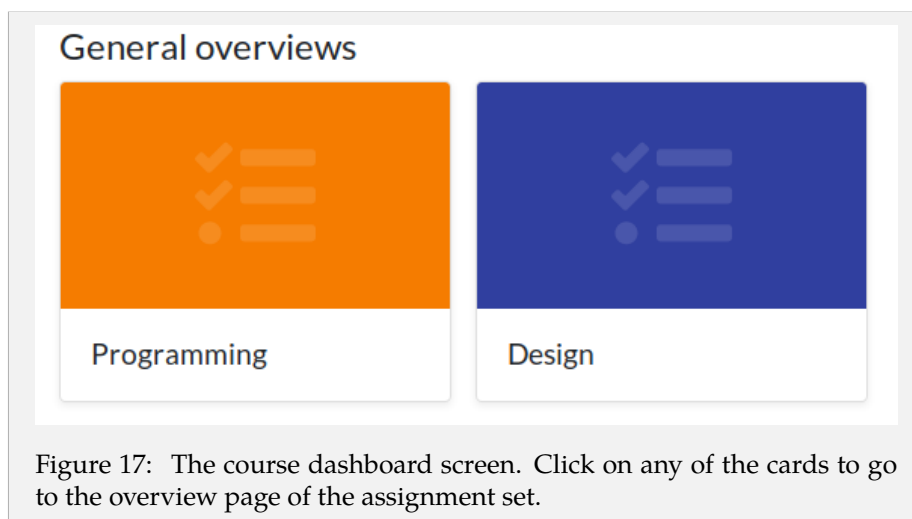
Figure 15: A task that is in progress.



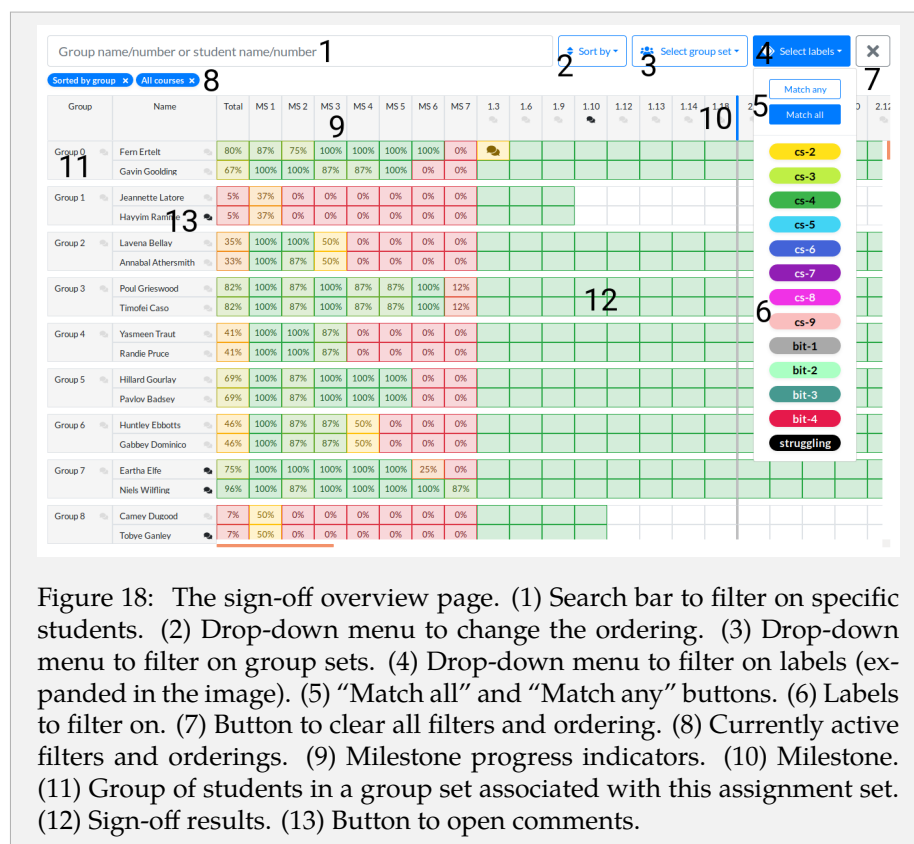
## 5 Progress monitoring

In order to get an overview of the progress of your students, there is a general overview page. To navigate to this page, you can click (1) in Figure 2. This will get you to a page with cards like in Figure 17. These cards correspond with the assignment sets in your course. Click on a card to go to the overview page of that assignment set. This will get you to a screen similar to Figure 18. This page is intended to give you an overview of the progress of your students. It is not intended for signing off. If you want to sign off a student, see section 6.

! The overview page is not live updated! You will see the state of the sign-offs at the time of loading the page.







## 5.1 Sign-off results

On the overview page, you can see the individual sign-off results for each student. All the coloured cells without a percentage number in them are sign-off results for the student in that row. You can see them in Figure 18 at (12). A green cell means the assignment (assignments are the columns) has been signed off completely. A white cell means there was no attempt to sign off the exercise before and a yellow cell means the assignment has only been partially signed off. Probably, the student made a small mistake or missed something. Teaching assistants should have left a comment with more details. You can recognize that a sign-off result has comments by the comment icon that shows up in the centre of the cell. For more information about how to access comments, see subsection 5.4

If you want more information about the sign-off result, you can click the result. This will open the sidebar. In the sidebar, you will see among other things a view similar to Figure 19. In here, you can see which teaching assistant signed off the assignment for this student, and at what time this was done. There also is a button to open a history view. For more information about the history view, see subsection 5.5.

**i** Clicking on a white cell will not open the sidebar. A white cell means there has been no attempt yet, and there is, therefore, no information to

be shown.

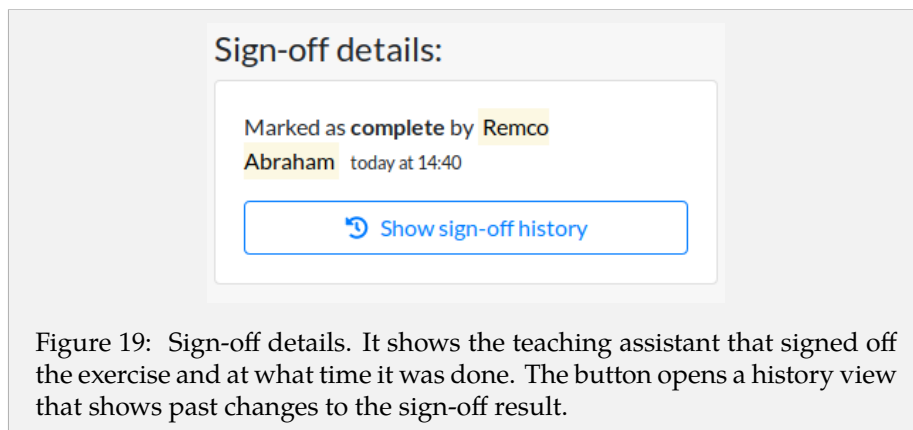


Figure 19: Sign-off details. It shows the teaching assistant that signed off the exercise and at what time it was done. The button opens a history view that shows past changes to the sign-off result.

## 5.2 Milestones

In order to get a more global overview of the progress of your students, the milestones you have set up are displayed here and used to aggregate the results of your students. You can recognize a milestone in the overview page by the blue bar between the assignments, which acts as a divider.

Left of all the sign-off results of the students, you will see coloured cells with a percentage in it. This is the completion percentage up until the milestones. Only complete sign-off results count, so if all assignments up until the milestones are completed (green), then the percentage box will say 100%. All white and yellow cells reduce the percentage. The percentage box is coloured in such a way that 0% makes the box red, 50% makes the box yellow, 100% makes the box green, and all the other percentages will be shades of these colours.

## 5.3 Filtering

In order to get a more specific view of the students, it is possible to filter on the students displayed. Filtering can be done based on group sets, labels or a search query. Any filters that you have set will show up like (8). You can click the small cross next to the filter to remove it. You can also click (7) to clear all the filters.

**Filtering on group sets** Filtering on group sets can be done by clicking (3). This will open a drop-down showing the group sets associated with the assignment set. Click on any of these group sets to filter on the group sets. If you are already filtering on a group set and you click another group set in the drop-down, the current group set filter will be removed and replaced by the new group set filter.

**Filtering on labels** To filter on labels, you can click (4). That opens the drop-down as can be seen in Figure 18. You can click on any of the labels shown at (6) to filter on them. You can also select multiple labels. If you have selected multiple labels, then the setting of (5) will determine the behaviour. “Match

any” means that if a student has any of the labels you selected, it will show up in the overview. “Match all” will cause only the students to show up that have all the labels you selected.

**Filtering on search query** You can search for students directly by using (1). Type any student’s name or student number. After pressing enter, it will show up in the overview.

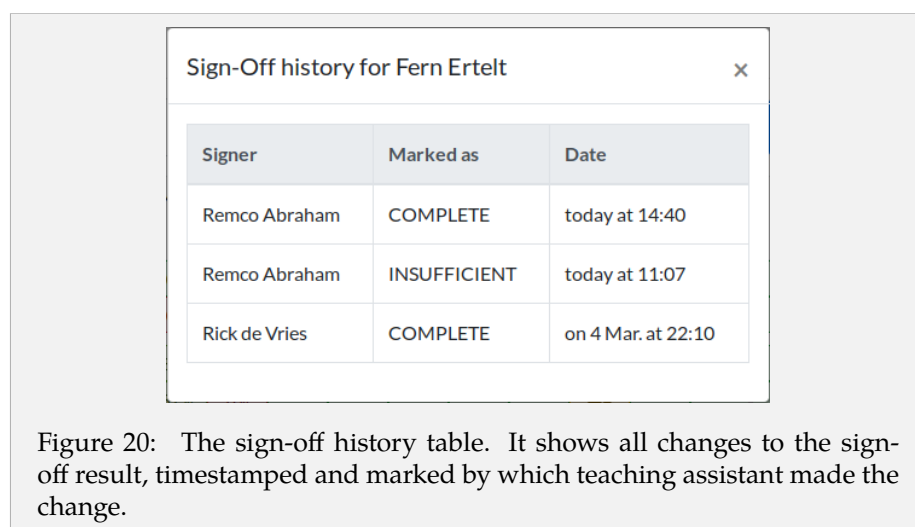
## 5.4 Comments

Comments can be recognized by the small comment icon (13). If the icon is grey, it means there are no comments yet. If it is black, this means there is at least one comment. You will see these comment icons next to the groups, next to the students, underneath the assignments and in a sign-off result. Clicking on any of these icons will open the sidebar, which includes a view as in Figure 24. If you want to know more about how to use comments, refer to section 7.

## 5.5 History

Sign-off results may change over time. A student, for example, may have missed a part of the exercise and has resolved the issue so it could be signed off. In order to see these changes, you can open the history of a sign-off result. You can do so by clicking the “Show sign-off history” button in Figure 19. This will open a view similar to Figure 20. In this table, you can see all the changes that have been made to the sign-off result. It will also show at what time the change was made and by which teaching assistant.

**i** An entry in the sign-off history is only made if a teaching assistant changes a sign-off result by another teaching assistant, or if the teaching assistant does not change the result again within 5 minutes. This ensures that accidental changes that are immediately undone by the same teaching assistant do not show up in the sign-off history.



## 5.6 Labels

Labels are an advanced feature discussed in subsection 4.4. You can assign labels in the sign-off overview screen. If you click the comment icon of a student or of a sign-off result, a view will show up in the sidebar similar to Figure 21. Here you can see the current labels assigned to the student. You can also add or remove them. Removing a label can be done by clicking the small cross next to the label's name and adding a label can be done by clicking the "Add label" button. This will open a drop-down menu with the labels that are available to add. Click on any of the labels to add the label to the student.

! By default, labelling students can only be done by teachers.

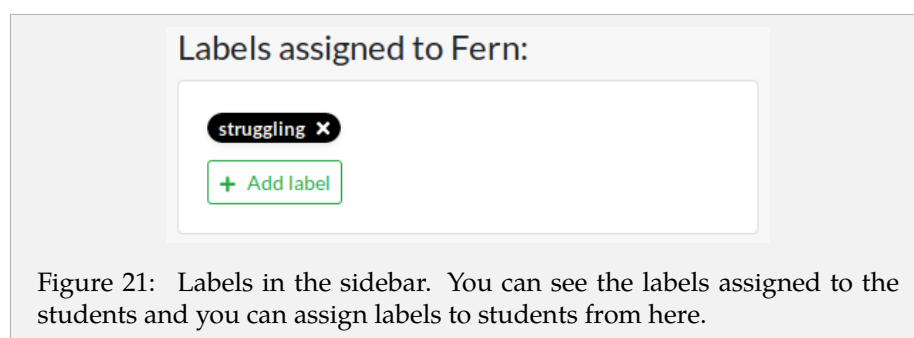
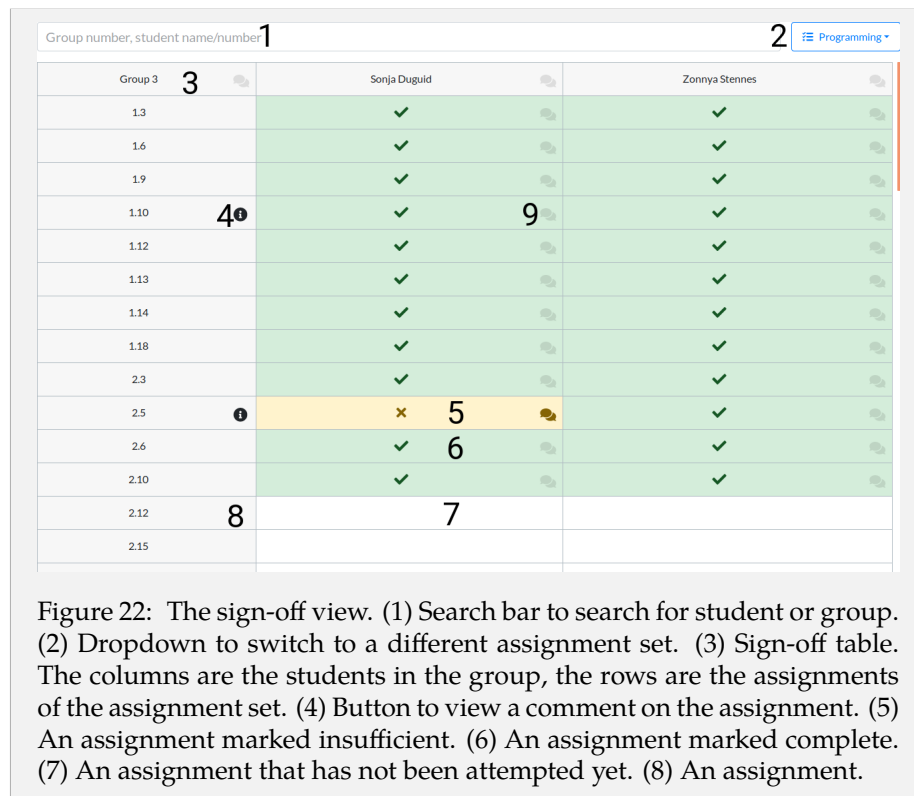


Figure 21: Labels in the sidebar. You can see the labels assigned to the students and you can assign labels to students from here.

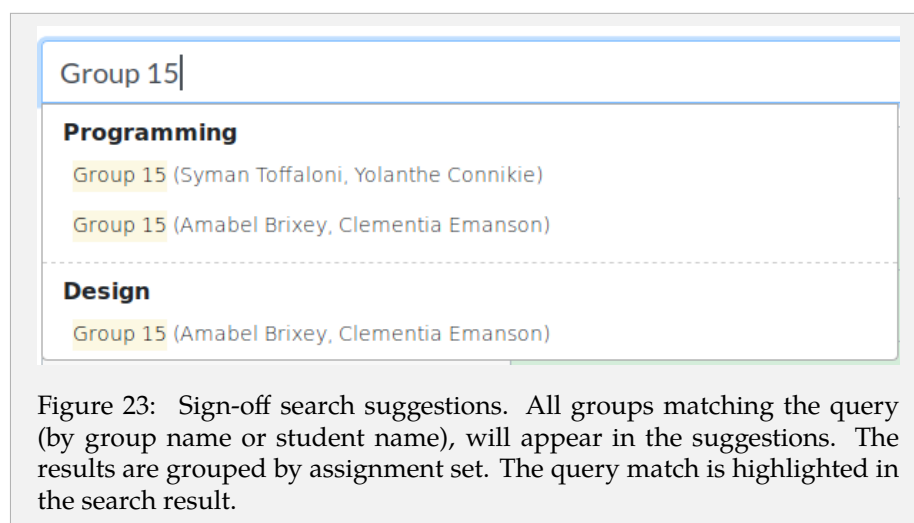
## 6 Signing off students

The sign off screen as can be seen in Figure 22 is used for signing off students. You can get to this screen in several ways. The most obvious is by clicking (2) in Figure 2. Another option is to click the green "Go to sign-off mode" on the course dashboard if you are on your phone. The final way to reach this screen is by accepting someone on a queue with an associated assignment set. For more information about this option, see subsection 8.6.



## 6.1 Searching

In order to sign-off a student, you will first have to find the students results. (1) is a search bar you can use for this purpose. You can use (2) to indicate for which assignment set you would like to sign-off. When typing a search query in (1), you will see some suggestion appearing like in Figure 23.



These suggestions are grouped by assignment sets. The bold words are the

names of the assignment sets. The highlighted text is the text that matched your query. You will see the group name and the students in that group in the search suggestions. If you selected an assignment set using (2) in Figure 22, then the results with this assignment set will be placed on top. Pressing enter in the search bar will show you the sign-off results of the topmost suggestion. Alternatively, you can click any of the other suggestions to go to those sign-off results.

## 6.2 Signing off

After you have found the student that you want to sign-off, you can sign off the student by finding the assignment that has to be signed off in the table. Signing off the student can be done by **double** clicking a white cell like (7) in Figure 22 or a yellow cell like (5). Just like at the sign-off overview page (see, subsection 5.1) a white cell means there has been no sign-off attempt yet, a green cell means the assignment was fully signed off and a yellow cell means there was a sign-off attempt but the exercise was not considered complete. After double clicking a white or yellow cell, you will see it changing to green. Any changes are immediately saved.

Alternatively, you can also mark an assignment as insufficient (yellow) by double clicking a green cell (you can cycle through the states). You will immediately be prompted to fill in what was wrong with the sign-off attempt. In this way, the next teaching assistant knows what to look for.

**i** Although leaving a comment when marking an assignment as insufficient is optional, it is highly recommended. The next teaching assistant will be able to use this comment in the next attempt.

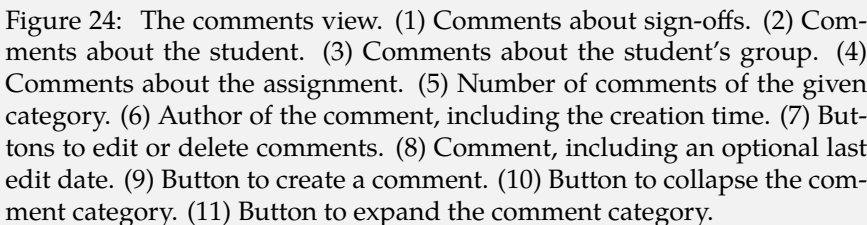
Sign-off results are individual to students. Still, it can be expected that students in the same group are working together. Therefore it is possible to sign-off all students in a group in one go. This can be done by double-clicking the assignment (8). It is only possible to double click an assignment if all students in the group have the same state for that assignment (e.g. they all have not made an attempt yet.)

### 6.2.1 Accidental sign-off

Although double clicking should prevent most accidental sign-offs, it can of course still occur. To undo an accidental sign-off, keep double clicking the accidental change until it is back at its original state. If you are prompted to leave a comment, you can ignore it. If you have successfully undone your change within 5 minutes and before another teaching assistant modified it again, your changes will not be archived.

## 6.3 Comments

Similar to the sign-off overview screen (see subsection 5.4), the sign-off screen has comment icons in several places. It is again possible to see and make comments on students, groups and sign-off results. The comment icons are similar



## 7.1 Using comments

To create a comment, press (9). This will open a view that allows you to put in a comment. Pressing "Create" will create the comment and pressing "Cancel" will cancel the creation of a comment. If a comment is placed, it can be edited by pressing the pencil icon at (7). This will open a view similar to the creation view. It can also be deleted by pressing the trash can icon at (7) and clicking "Yes" at the confirmation.

## 8 Queuing

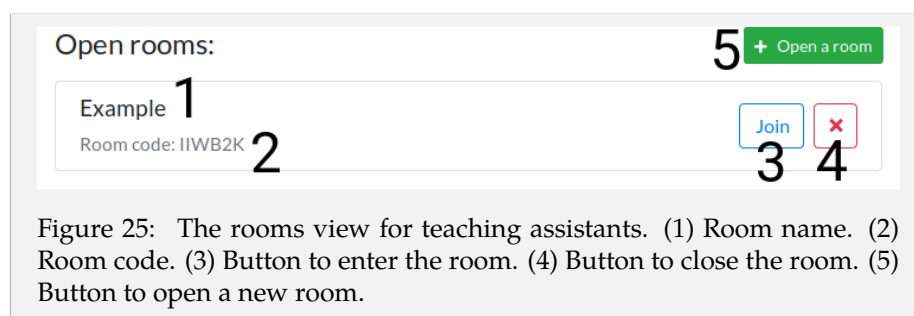
Horus has a queuing system integrated into it. It allows students to put themselves on queues to request help. Teaching assistants can then work their way through the queues in order to help students in a first come first served matter. They can add several queues to prioritize certain topics or to use as sign-off queues. Sign-off queues have the added benefit that they are linked up with the sign-off system. If a teaching assistant goes to help someone from a sign-off queue, the teaching assistant will immediately get their sign-off results and the possibility to sign-off new assignments.

In Horus, queuing is done in rooms. Each room is intended to represent a physical room. Everyone in the physical room uses the corresponding Horus room. In these rooms, teaching assistants can create queues and announcements and students can put themselves on the queue to request attention from a teaching assistant.

### 8.1 Rooms

In order to start using the queuing system, a teaching assistant must first create a room. This can be done by clicking (3) in Figure 2. This will get you to a page similar to Figure 25. On this page, you will see a list of all currently open rooms in the course. If there are open rooms, you can click (3) to join them or (4) to close them. You can also see the room code of the room at (2). This will be used in subsection 8.4.

! Closing a room removes all students from all queues in that room!



If you want to create a new room, click (5). You will be prompted to enter a room name. Generally, it is good practice to name your room according to the physical room you are in so that students also know which room to pick. After



you have created the room, you will be redirected to the room's page (Figure 26). This is the same page as you would reach by clicking (3) for that room.

**i** All rooms will be closed automatically at 4:00 AM!

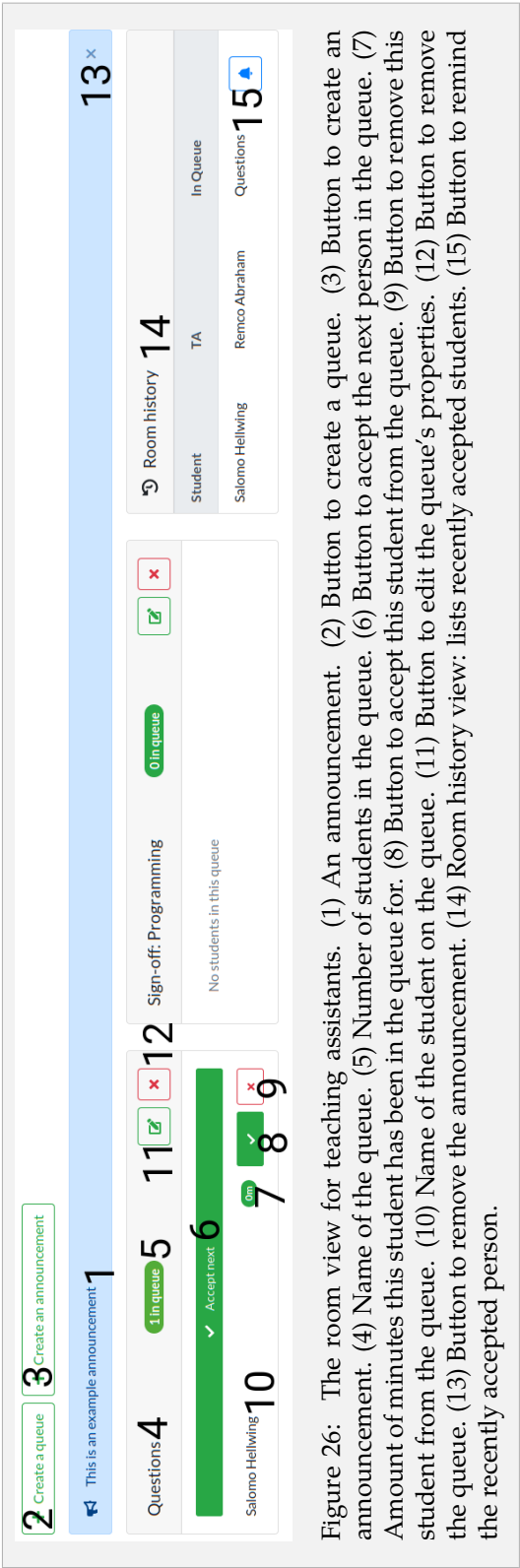
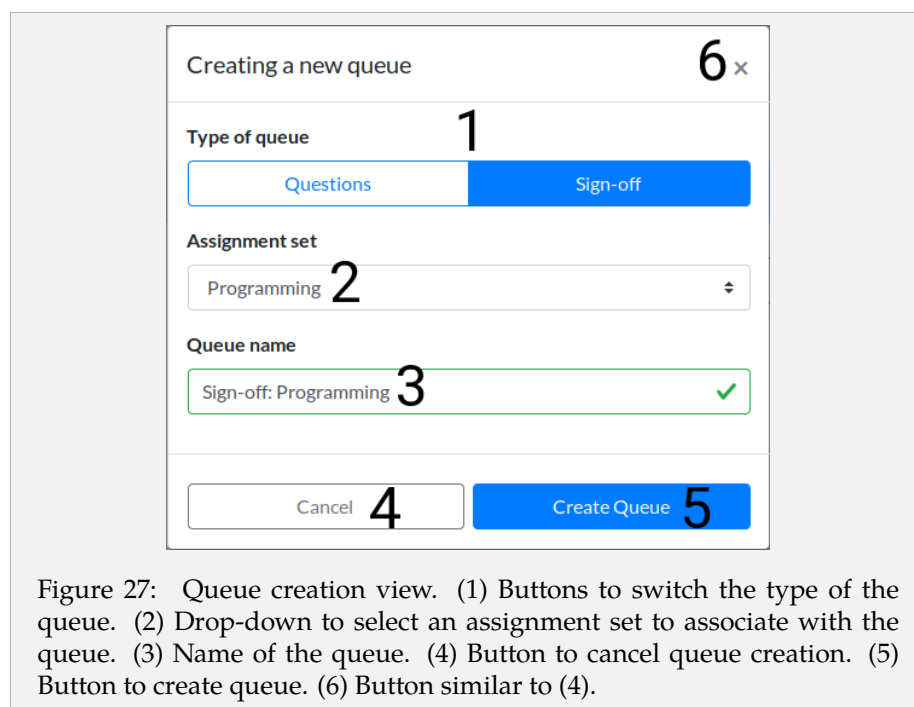


Figure 26: The room view for teaching assistants. (1) An announcement. (2) Button to create an announcement. (4) Name of the queue. (5) Number of students in the queue. (6) Button to accept the next person in the queue. (7) Amount of minutes this student has been in the queue for. (8) Button to accept this student from the queue. (9) Button to remove this student from the queue. (10) Name of the student on the queue. (11) Button to edit the queue's properties. (12) Button to remove the queue. (13) Button to remove the announcement. (14) Room history view: lists recently accepted students. (15) Button to remind the recently accepted person.

## 8.2 Queues

Initially, a room has no queues. To create a queue, press (2) in Figure 26. This will open a screen similar to Figure 27. Before continuing, you first need to decide whether you want a questions queue or a sign-off queue. The only difference between a questions queue and a sign-off queue is that a sign-off queue has an assignment set linked to it. Only students that are doing the assignments of that assignment set can then add themselves to this queue. When teaching assistant accepts students on a sign-off queue, the teaching assistant will immediately see the sign-off results for that student.

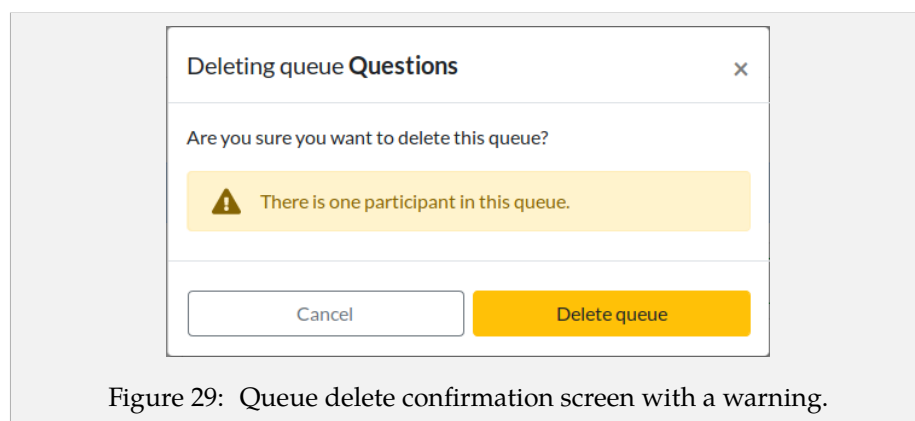
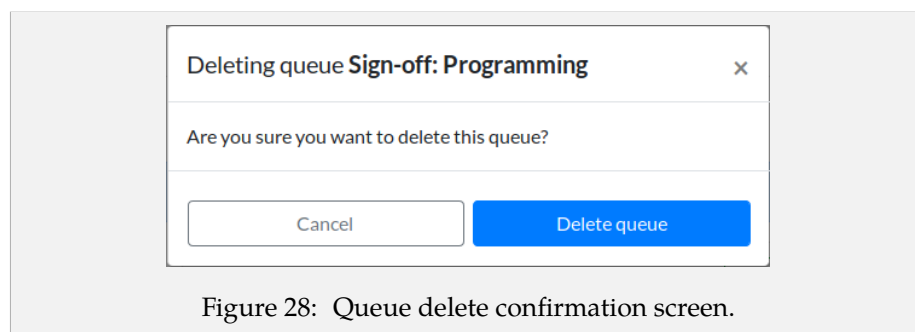


After you have made your decision on the type of queue, you can select it using (1) in Figure 27. If you decided to create a sign-off queue, you can use (2) to select an assignment set. (3) will already contain a suggestion for the name of the queue. Change the name if necessary and then press (5) to create the queue. The queue will immediately show up on everyone's screen.

**i** It is required to select an assignment set if you create a sign-off queue. If you want a queue for sign-offs and do not want it linked to an assignment set, use a questions queue instead and change the queue's name.

**Deleting queues** If you want to delete a queue, you can press (12) in Figure 26. This will show you a screen similar to Figure 28. You can then click "Delete queue" to confirm or click "Cancel" to cancel.

It could be the case that there are still students in the queue you are about to delete. In that case, you will see a different screen. You will see a screen similar to Figure 29. You will be warned that there are still students in the queue.



**Editing queues** To edit a queue, click (11) in Figure 26. This will allow you to edit the name of the queue. You cannot edit the type of the queue or the assignment set of a sign-off queue. Delete the queue and make a new queue instead.

### 8.3 Announcements

Sometimes it is desired to communicate a message to every student in the room. For example when an assignment turns out to have a mistake in it. In these situations, a teaching assistant can create an announcement in the room. These announcements will appear on everyone's screen.

**Creating announcements** To make an announcement, click (3) in Figure 26. This will open a screen like in Figure 30. Simply enter your announcement in the text box and click "Create". It will now show a pop-up on all student's screens like in Figure 35. If you create multiple announcements, the most recent announcement will be displayed as in Figure 35. All announcements will also show up as (1) in Figure 26. The most recent announcement will be put on top.

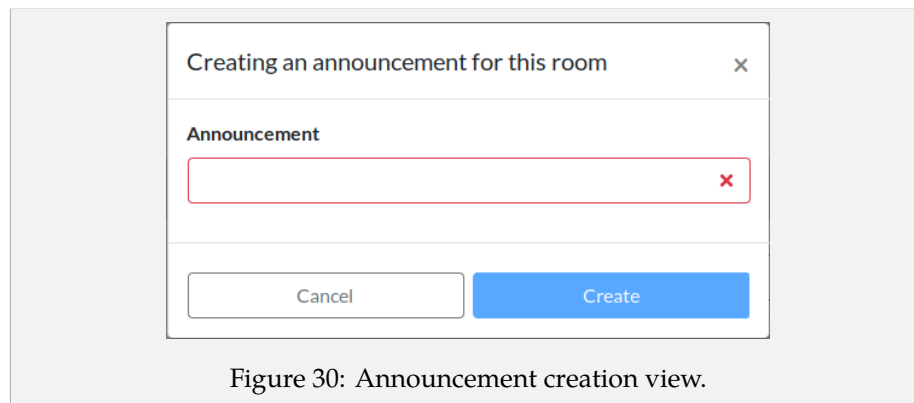


Figure 30: Announcement creation view.

**Deleting announcements** You can click (13) in Figure 26 to delete an announcement. You will be asked to confirm your decision to delete the announcement. After deletion, the blue announcement bar (1) in Figure 26 disappears. Any open pop-ups like in Figure 35 will remain open until a student closes it.

## 8.4 Projector Mode

For students and for teaching assistants, it could be helpful to have a quick overview of the state of all the queues. For this reason, a special projector mode has been included. Not only does this mode provide everyone with an overview, but it also acts as an attention grabber when students are removed from the queue. The projector will show a large message for every student being accepted on the queue.

To enter the projector mode, it is required to know the room code. The room code is a 6-character upper-case alphanumeric code and can be seen in the room's page title or in the rooms page ((2) in Figure 25). After having found the room code, go to <https://horusapp.nl/projector/>. Enter your room code on this page.

The projector mode is view only. Students can not use it to put themselves on the queue and teaching assistants cannot use it to alter the queues or create announcements. It serves two purposes. One is to use it, as the name suggests, to project onto the physical room's projector. The other is for teachers to get a quick glance and the workload to evaluate the number of teaching assistants.

## 8.5 Queue lengths

If the physical rooms are close together, teaching assistants may want to distribute themselves more efficiently. To facilitate this, every room's page has an extra column that shows the length of the queues in the other open rooms. This can help teaching assistants to determine a more efficient distribution.

**i** Queue lengths of other rooms will only show up if there are multiple open rooms.

## 8.6 Using queues

When all queues are in place and students start to add themselves to the queues, teaching assistants will want to work their way through these queues. If teaching assistants have no preference over which queue to help first, they can make their decision based on the amount of time the top student has been waiting. This can be seen in (7) in Figure 26. You will notice the colour changing from green to red as the students are waiting in the queue.

If the teaching assistant decided on the queue to use, they can press (6) in Figure 26 to accept the next student on the queue. Alternatively, they can press (8) to accept a specific student instead. This student will now show up in the room history view (14). If for some reason, the student does not raise its hand, you can press (15) to send an additional notification to the student to grab their attention.

**Removing students from the queue** It may happen that instead of wanting to grab the attention of the student, you want to silently remove the student from the queue. This could happen if you are already helping the student or if you notice the student leave. In this case, press (9) in Figure 26. It will silently remove the student from the queue, allowing the student to re-enter the queue.

**Uneventful periods** During a session, it may become very quiet after a while. Teaching assistants may then devote their attention to other tasks. In these situations, teaching assistants do not need to regularly check the queuing page for students. If a student enters a queue when previously all queues were empty, the teaching assistants of that room will get a notification. Depending on your browser, this notification may include a button to accept this student from the queue. In this way, there is no need to go to the room's page at all.

## 9 Student environment

Although Horus has been engineered mainly for teaching assistants and teachers, it has some helpful features for students. First of all, Horus provides students with the possibility to see their own sign-off progress. Furthermore, students can put themselves on a queue to ask questions or sign-off exercises. In this section, the student's usage of queuing will be discussed. For a more elaborate discussion on how to use the queuing system, see section 8.

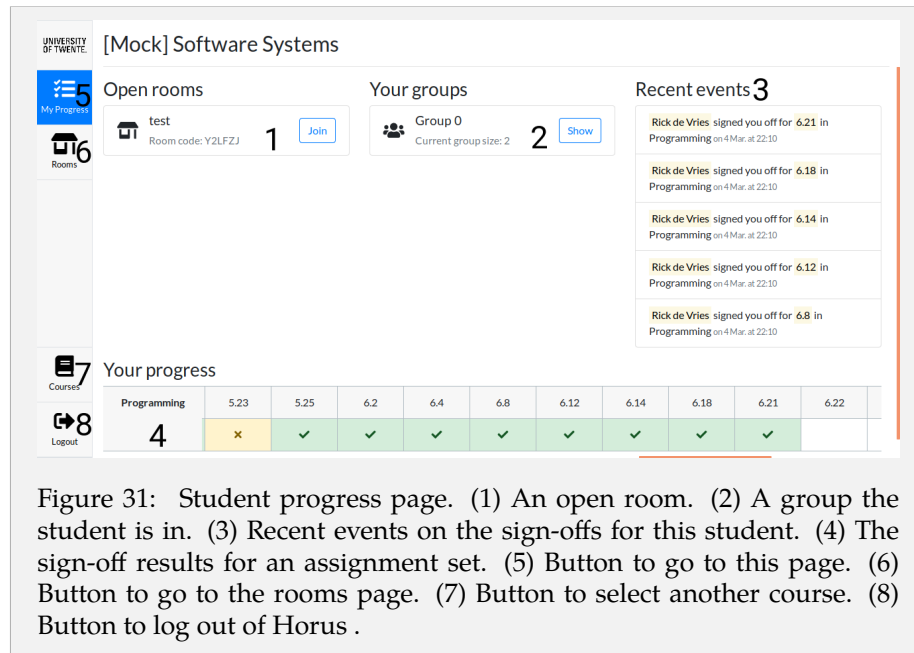
### 9.1 Progress

When a student logs in, he will see a similar page as to what teaching assistants and teachers will see. After they have selected their course, they will be redirected to the progress page as can be seen in Figure 31. This page provides the student with all the information he needs.

First of all, at (1) all currently open rooms of the course show up. A student can click "Join" to join this room. Next to this, all groups the student is in are displayed (2). This feature is similar to Canvas. A student can click "Show" to show the other students that are also in that group. On the right, a student

can see the five most recent changes to his sign-off results (3). It will show the teaching assistant that signed the student off and at what time it happened.

On the bottom, the student can see his current progress. Progress is indicated per assignment set in a separate horizontal table. In Figure 31 only a single assignment set is visible. Yellow boxes mean the result was insufficient and green boxes mean the sign-off was completed. A white box means there was no attempt to sign-off yet.

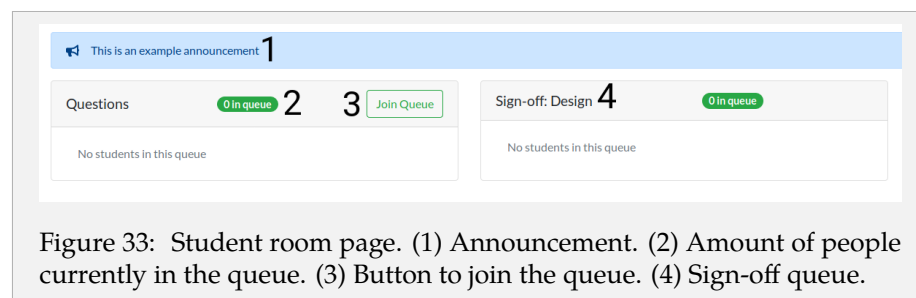
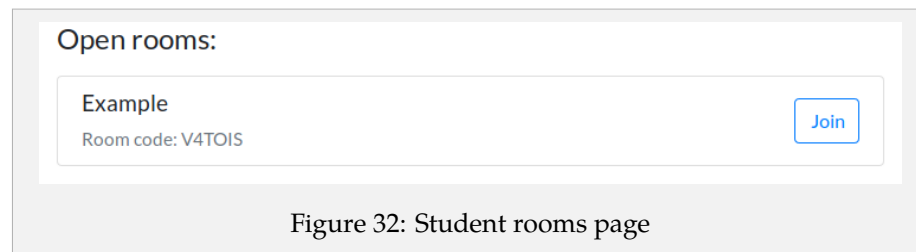


## 9.2 Queuing

Students can join a room by either clicking the “Join” button for the room they want to join on the progress page as described in subsection 9.1 or by clicking (6) in Figure 31 to go to the room page. If the latter option is chosen, then the student will see a page similar to Figure 32. Students can click the “Join” button to join the listed room.

Both methods will direct the student to the room page. For students, this will look similar to Figure 33. Students see announcements made in the room as (1) and can add themselves to a queue using (3). After having added themselves to the queue, the button changes in a button to remove themselves from the queue. A student can add themselves to multiple queues.

**i** Students cannot add themselves to sign-off queues that are associated with assignments sets that the students is not participating in. For example, if a student does not do the “Design” part of a course, then the join queue button does not show up for that sign-off queue (4).



After having added themselves to a queue, a teaching assistant will eventually want to help the student. When a teaching assistant accepts the student from the queue, the student gets a browser notification (if notifications have been enabled) as well as a large message on the students screen like in Figure 34. The message will also show up on the projector (see subsection 8.4).



Similarly, if an announcement is made by a teaching assistant, students will get a message on their screen. There will be no browser notification however! An announcement message for students will look like Figure 35



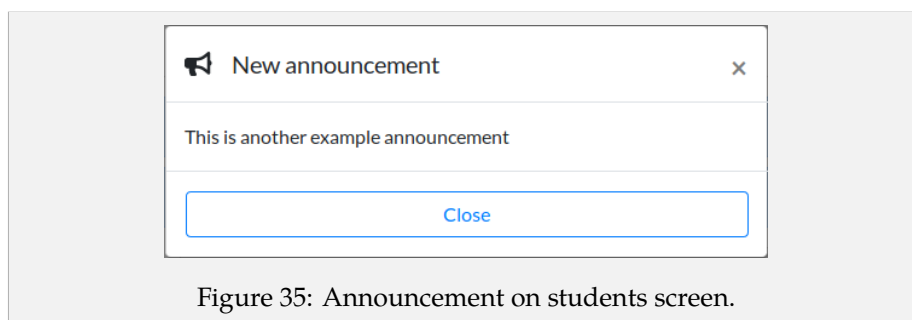


Figure 35: Announcement on students screen.

## 10 Troubleshooting

Problem	Suggestion
I do not see all functionality discussed in this manual	You might not have the right permissions, contact your system administrator to give you the right permissions
I do not see an option to add group sets to my course	Horus is heavily integrated with Canvas. If you are using this system without Canvas, then contact your system administrator to set up group sets for you. If you are using Canvas, refer to subsection 4.7.5
I just saw a red error notification show up	Check your network connection and refresh the page. If the problem still occurs after refreshing the page then please contact the Horus team.
Some of my students cannot add themselves to the sign-off queue	Make sure these students are in a group that is in a group set that is associated with the assignment set of that sign-off queue.
I cannot sign-off a student	Make sure you are on the sign-off screen (Figure 22) and not on the overview screen (Figure 18). Double click on a field to sign-off a student.
My task fails with the error: InvalidOAuthTokenException occurred: null	The Canvas token used to import this course is invalid! If you have imported the course, go to <a href="https://horusapp.nl/canvas/token">https://horusapp.nl/canvas/token</a> to import a new token. Else, ask the person who imported the course to import a new token.

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