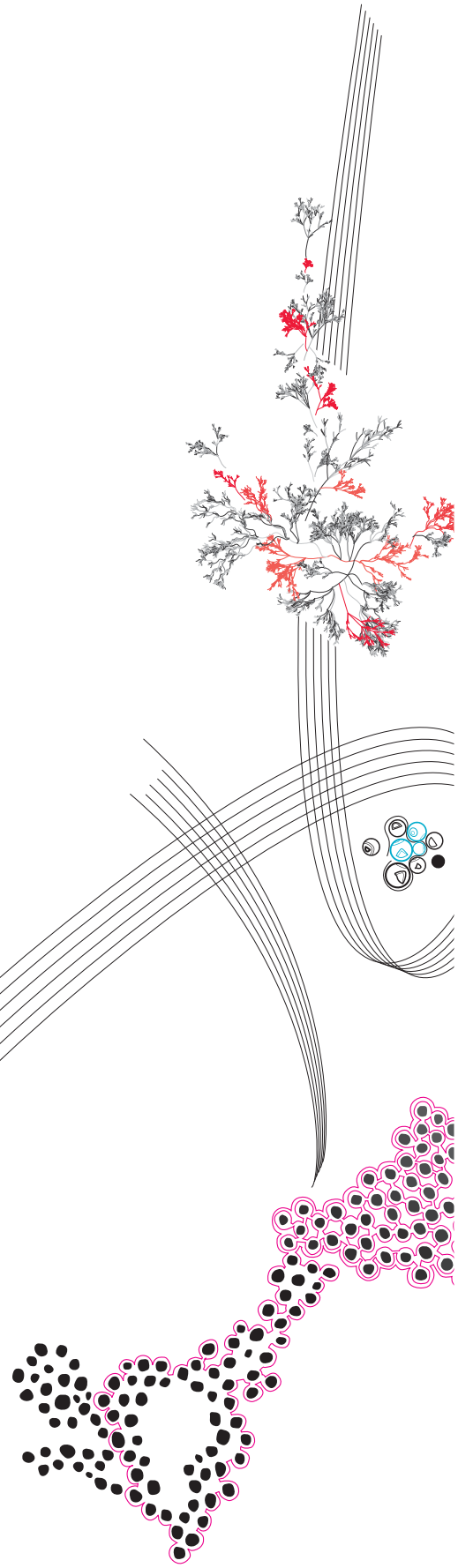

BSc Computer Science
Design Report

PaperSpace

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UNIVERSITY OF TWENTE.

Contents

Chapter 1

Introduction

At the University of Twente, many courses offer students countless opportunities to gain hands-on experience with the field that they are specialising in. One such experience is the ability to explore a research topic and write their own research paper after spending many weeks to extensively flesh out their understanding of a specific area in their field. Within Computer Science, there are multiple tracks with numerous topics under them for each student to choose from. When the student is done writing their research, they need to upload their paper on EasyChair – an application for their peers and supervisors to review the papers they upload. This application provides the students with a conference where they can upload their papers.

The problem with the current implementation of this system is the various steps that all stakeholders involved must go through. To confirm their supervisors, students must fill out forms on MobilityOnline – a platform meant solely for such administrative matters – which are also signed by track chairs and supervisors. Furthermore, the supervisor struggles with having to use an external evaluation form provided to them (a Word document) when this could very well have been included in EasyChair as well. These are just some of the issues that our group plans to address in our upgraded system - PaperSpace - where we shall centralise all the stages of the process for the research module. This would make the entire process a lot more convenient and efficient for all users of the system.

Chapter 2

System Proposal

The concept of developing PaperSpace envisioned the development of a centralised application that handles the processes from proposal acceptance to evaluation of the final paper. While the system still has the functionalities of EasyChair such as conference creation and management, or peer reviewing, PaperSpace also consists of automatically assigning students to their tracks and supervisors, an email system to send reminders, and even the automatic creation of PDFs of review/evaluation forms. A complete list of all the requirements is listed in the following section.

Chapter 3

Requirement Analysis

After conducting a few meetings with our supervisor, we decided decide upon the list of requirements. We use the MoSCoW approach to prioritise these requirements to ensure that there is a clear understanding of requirements between clients and developers. Below is a comprehensive list of all the requirements taken into consideration:

3.1 Must Have:

- The system must allow a student to pair with their supervisors
- The system must allow a student to upload their paper
- The system must allow a student to update their paper
- The system must allow a student to post a review of a fellow student
- The system must allow a supervisor to post a review of their student
- The system must allow automatic email notifications when a paper is uploaded
- The system must allow automatic email notifications when a student updates their paper
- The system must allow automatic email notifications when a person submits a review
- The system must allow students and supervisors to add the schedule to their agenda
- The system must allow users to log in with their UT account
- The system must allow users to see their profile page
- The system must have a review form for student peers, supervisors, and track chairs to add comments about the paper.
- The system must have an evaluation form for supervisors to fill in grades for scientific quality, paper writing, oral presentation and process.
- The system must allow supervisors to add comments in the evaluation form
- The system should calculate the final grade based on the weights of the different grading criteria.(Scientific Quality: 50%, Paper Writing: 20%, Oral Presentation: 10%, Process: 20%)

- The system must automatically send reminders to students and supervisors for approaching deadlines
- The system must allow track chairs and supervisors to send emails to individual students/specific groups.
- The system must allow track chairs to have an overview of their track including the review/grading status
- The system must allow messages to be sent to specific reviewers when needed.

3.2 Should Have:

- The system should allow supervisors to monitor all the students they are supervising.
- The system should show a list of all papers when completed.
- The system should show the schedule for the conference.

3.3 Could Have:

- The system could allow students to find a supervisor more easily
- The system could allow students to add their research topics to their profile

Chapter 4

Architectural Design

4.1 Tooling

PaperSpace is designed as multi-page web application, there are three major components working together:

- The core web application, written in TypeScript using Next.js
- A relational database, specifically PostgreSQL.
- An SMTP server for going mail. In the live version of the app, we decided to use Postfix and during development we used Mailpit.

Next.js was chosen as the application framework because it allows the frontend and backend to be written in the same language, in our case TypeScript. The frontend and backend exist in the same codebase, this allows code editors to provide rich code suggestions and autocomplete and increases productivity during development massively.

Alongside Next.js, the component library shadcn/ui was very helpful during the development process. This library provides templates for many common components in web applications like buttons, forms, input fields, dialogs and the like. This let us focus on the actual business logic of the application, and meant we could avoid worrying about accessibility, theming and icons.

For long term data storage, we chose PostgreSQL as our database engine. PostgreSQL is a modern, reliable relational database. We went for a relational database as our tables have many references to each other, this will be further explored in 5.1. A relational database allows for very fast joining of different tables, and would allow PaperSpace to scale to the large amount of users that would be required for a UT module.

Finally, one of our requirements was to inform users of paper updates. To that end, we need an SMTP server to allow our application to send emails. PaperSpace can be configured to connect to any SMTP server, however, we chose Mailpit and Postfix. During development, Mailpit collects all emails the application tries to send and allows for easy testing of email features. In production, the server already had Postfix setup and as such, it was simple to reconfigure the SMTP server and allow sending real emails.

4.2 Authentication

Users can log in to PaperSpace using their University of Twente account, this works through an OpenID Connect (OIDC) integration. In the current version of PaperSpace, the application is configured to use OIDC credentials for the UT test tenant (emails under utwente.net)

and as such, standard UT accounts will not work. If PaperSpace were to eventually fully release, we would migrate to production OIDC credentials that allow the use of utwente.nl accounts.

Furthermore, PaperSpace can support other authentication providers too if configured to do so, however, this version is not. This is useful in cases where a supervisor is external to the UT and an account has to be created for them, an alternative authentication provider could be used instead, or PaperSpace could be a login provider itself (by storing login details for certain users).

Chapter 5

Detailed Design

5.1 Database Design

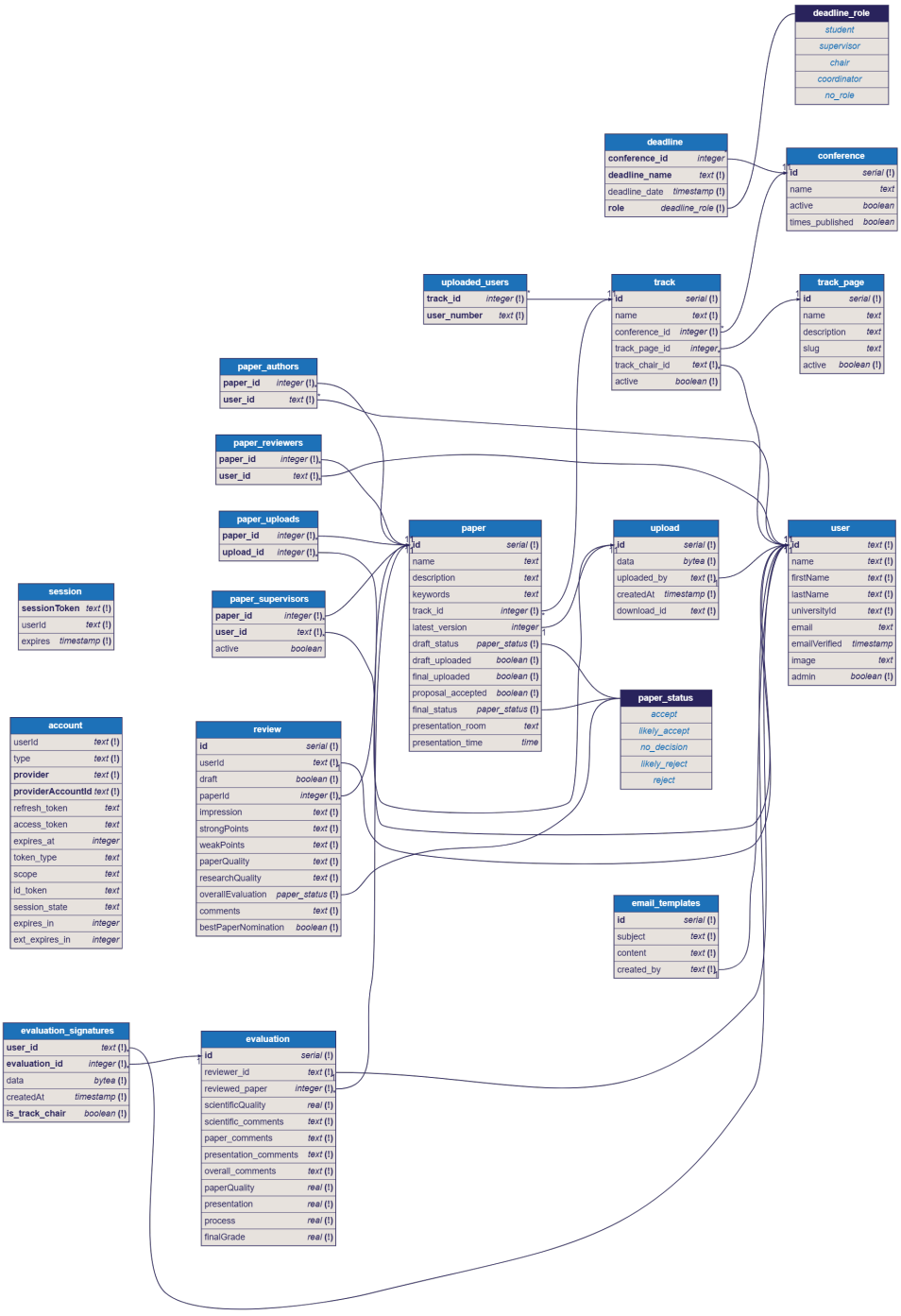


FIGURE 5.1: Entity Relationship Diagram for the PaperSpace database

5.1.1 Conference and Deadlines Table

The "conference" and "deadline" table are the end point of all the other tables, as almost every other table is eventually connected to the "conference" table. The table consists out of 4 different attributes, those being: "id", "name", "active", "time_published". The "name" referring to the name of the conference, the "active" attribute indicates whether or not the conference is currently active or not, or still in the progress of being created. Lastly the "time_published" attribute refers to when the conference has been published.

The "deadline" table is connected to the "conference" tables attribute of "id", and contains the information of various deadlines of the conference, containing the name of the deadline, and the date of the deadline. There is also the "role" attribute which is connected to the "deadline_role" table, in order to distinguish who the deadline is for.

5.1.2 Track Page and Track Table

Tracks in PaperSpace are conceptually split across two different tables. Track Pages represent a template for a track and contain metadata used for displaying a web page describing the track. Tracks themselves are based on a track page, and can be seen as an instance of a track page bound to a conference. The name, description and URL (described by the "slug" field) for a track's website are stored in the track page and generalized across all tracks belonging to it, whereas tracks themselves contain papers, have a chair and belong to a conference. Tracks and track pages are both uniquely identified with ID numbers to allow duplicate names. Additionally, two track pages may not have the same slug to prevent URL clashes.

5.1.3 Account and Session

The account table is used to store information about users' login methods. The "provider" field references the login method used (in the case of UT login, "azure-ad", however, more could be added in the future). The "providerAccountId" contains an identifier used internally with the provider. They uniquely identify a user for a specific provider. As such, the primary key was chosen to be a combination of provider and providerAccountId. The account table also contains the "userId" field which references an id in the "user" table. Remaining fields are used based on the specific provider, and can vary.

The session table can contain user session tokens, useful for a "stay signed in" feature. However, the table is not in use anymore as PaperSpace now uses JSON Web Tokens for authentication, a more modern approach allowing for some authentication data to be stored clientside reducing the amount of requests needed per page. The table remains in case the functionality needs to be added back in the future.

5.1.4 Paper Tables

The information about a paper uploaded to PaperSpace is stored within around 5 different tables, those being, "paper_authors", "paper_reviewers", "paper_uploads", "paper_supervisors", and the "paper" table. The "paper" table contains the bulk of the information used by the system. It contains, the name, the description, the keywords, and all the relevant information on whether or not a paper has been accepted or not by the supervisor. May that be the final version of the paper or the draft version of it. The times and location of the presentation of the paper are also recorded in this table within the attributes, "presentation_room" and "presentation_time".

Outside of the general information that is stored in the "paper" table, there are 4 associated joint tables connected to it. First of those being the "paper_authors", where there is a connection made between the "id" in the "paper" table and an "id" in the "user" table, in order to be able to distinguish which authors wrote the paper. The "paper_uploads" table works in a similar manner except that instead of connecting the user id with the paper id, it connects the user id to a upload id, where the actual paper is stored (pdf) and other relevant information. The "paper_supervisors" works only slightly different to the "paper_authors" table, in that it also contains the attribute of "active", which is there to indicate whether or not the supervisor is active.

The last joint table that is there, is the "paper_review" table, which is there to connect the paper with a particular user id, and is later also used within the review table in order to distinguish the each review for a paper.

5.1.5 Review and Reviewer Table

For the review process, the relevant information is stored both in the "review" table and the "paper_reviewers" table. The latter of which is mainly used to ensure the person reviewing the paper, has actually been assigned to do so. Either by being assigned the paper as a peer review or if they are a supervisor for the paper. The information here mainly consists of the user id in the system and the paper id of the relevant paper.

The bulk of the information about a review is stored within the review table. The table consists of unique review "id" on creation of a review to distinguish it from the others. The "userId" attribute contains the user who has reviewed the paper, in order to help distinguish it from other reviews on the same paper. The function of the "draft" boolean function is there mainly to help assist in distinguishing between the supervisors final and draft review in the system, being set to true if the review is for the draft and false for the final. The "paperId" is in short the paper in question that is being reviewed. The remaining attributes of "impression", "strongPoints", "weakPoints", "paperQuality", "researchQuality", "overallEvaluation", "comments", and "bestPaperNomination", store the various components a user is required to fill in in order to complete the review. There is also a custom variable type used for "overall_evaluation" of "paper_status", in order to ensure that the value of this remains one of 5 values, being "accept", "likely_accept", "no_decision", "likely_reject", and "reject".

5.1.6 Evaluation and Evaluation Signature Table

The evaluation system is mainly contained within two tables, the "evaluation" table and the "evaluation_signatures". The "evaluation_signatures" table is used in order to store and connected the supervisor and track chair signatures for the final evaluation of the paper, and as such is connected to both the user id, and the evaluation table. It also contains the time at which the signature was created/uploaded to the system.

The "evaluation" table itself contains the bulk of the information stored by the database about each papers evaluation. Each evaluation created, gains a "id", and is connected to the latest reviewed paper id, and which paper was reviewed. The rest of the variables stored within the evaluation table are the various different categories required to be filled in with the evaluation form.

5.1.7 User and Email template table

The final major tables within the database are the "user" table and the "email_template" table. The "user" table is used to store the various users in the system, it contains the various required information we need to run PaperSpace. The attributes consists of the users name, first and last name. Their universityId, the relevant email in order to send reminder to the user, and the emailVerfied, in order to check whether or not the email actually works and exists. There is also the attributes of "image", which contains the profile image of the user if there exists one, and the attribute "admin", which is there to distinguish whether or not the user is admin or not.

The last table is the "email_templates" table, which contains a unique "id" attribute when created, and contains a name stored in the "subject", and the contents of the email template in the "content" attribute. There is also a attribute in order see who exactly created the email template, which is stored in the "create_by" attribute, which also connects the "email_templates" table to the "user" table.

5.2 Activity Diagram Paper Lifecycle

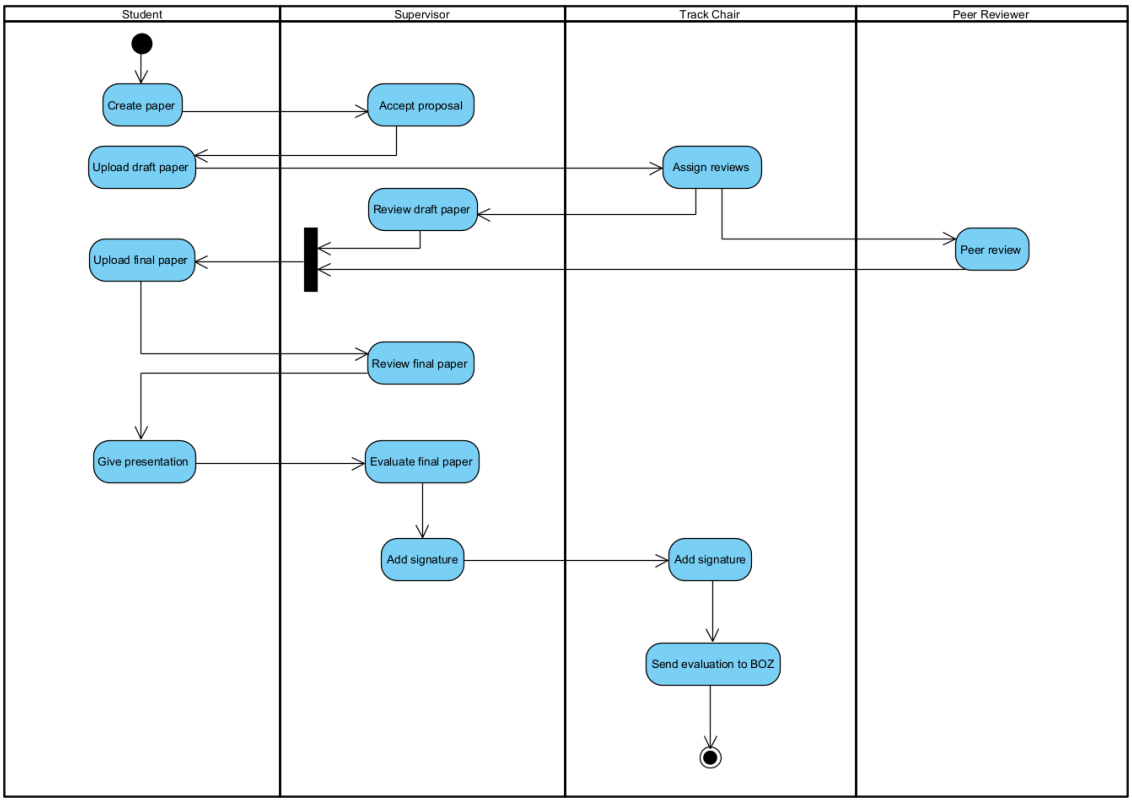


FIGURE 5.2: Activity Diagram of Paper Lifecycle

Figure 5.2 shows the activity flow for a paper in our system. The flow starts with a student creating a paper, and ends with the track chair sending the evaluation form to BOZ. Other tasks, such as refining the research proposal, and uploading the paper to the UTwente database, are not handled in our system, and are therefore not shown in the diagram.

The initial created paper only has a title, abstract, and keywords. This information

can be changed later. Once the supervisor has accepted the proposal, the student is able to upload a draft paper. Next, the track chair will assign a review to both the supervisor and a different student. When the results of the reviews are available, the student can use these results to update his paper and upload the final paper. The supervisor will once again review the paper, and give final feedback. After the conference, the supervisor will evaluate the paper, considering both the research and the presentation. Then, the supervisor will add their signature, and send the evaluation to the track chair. The process ends with the track chair adding their signature and sending the evaluation to BOZ.

5.3 Activity Diagram Conference Creation

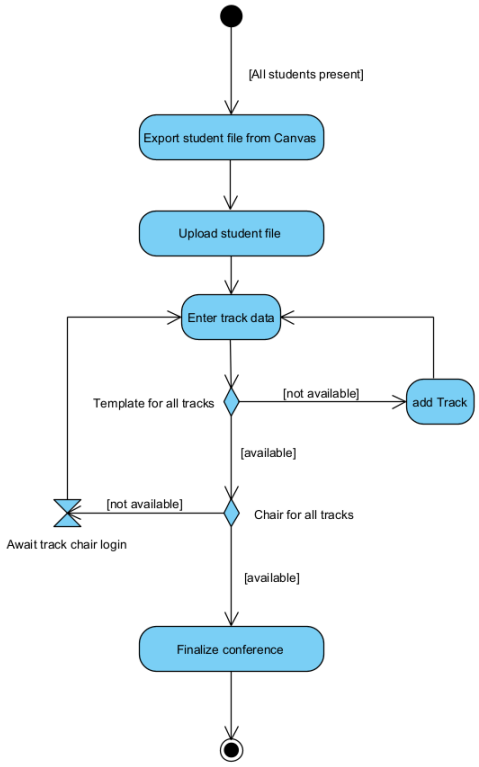


FIGURE 5.3: Activity diagram for conference creation

Figure 5.3 shows the steps taken in order to create a new conference in PaperSpace. This is done by a module coordinator. The process starts with the module coordinator exporting the student file from canvas, instruction on the format is found in B.1. For each track in this file, a track format and a track chair must be chosen. If there is not a track format available for a track, the module coordinator must first create this track format, in cooperation with the designated track chair.

A track chair must have logged in once to be registered in PaperSpace, and to be selected as a track chair in the conference creation. If not all track chairs are in the system, the module coordinator must notify them outside of the system, and continue the process once every track chair has logged in once. When all track templates and track chairs have been filled in, the conference can be finalized.

Chapter 6

Testing

PaperSpace is a system providing the various stakeholders with numerous features to go through the Research Project smoothly. What used to be achieved with the help of three or four different systems is now provided by PaperSpace alone. The ease of accessibility for users comes with greater complexity behind the scenes. Thus, a necessity for a thorough testing strategy arises to ensure that everything in the system is in order and as per user expectations.

To get the most out of our tests, we conducted a series of manual user tests which allowed us to inspect the finer details of our application and thoroughly make sure that all of our functionalities work properly. In this section we will go over the various tests conducted to bring about PaperSpace as we know it today.

6.1 Landing Page

Description:

As soon as a user visits our page for the first time, they are taken to the landing page which welcomes them and instructs them to log in. At this stage, this is the only functionality that can be tested.

Testing Instructions:

1. Click the log in button in the navigation bar.
2. Log in using your University account.

Expected Results:

Upon logging in, the user should be redirected to the profile page which welcomes them.

Actual Results: PASS

6.2 Profile/Home Page

Description:

Once the user logs in, this is the first page they see. There are already numerous features to test here.

Testing Instructions:

1. Click on the **Event** tab and click **Download** to download your schedule of events.
2. Try to access the admin page; look for the admin button on the top right, next to your profile.

Expected Results:

- For step 1, a .ics file should be downloaded onto the user's device with the schedule of events that they are part of. If there are none, it would be an empty calendar.
- For step 2, as a student, such a button should not be visible. As a teacher, the button should lead you to the Admin page 6.10.

Actual Results: PASS

6.3 Admin Page - Conference Creation and Deactivation

Description:

As a supervisor/track chair, the user gets access to the Admin page, which allows them to carry out all the administrative procedures required for the module. The following steps test all the features in the admin page.

Testing Instructions:

1. First, let us test conference creation. Click on **Create Conference**.
2. Give the conference a name.
3. PaperSpace requires the csv file from Canvas that consists of the students and their details like the track they are part of, student number etc. Refer to B.1 to see the format. Attach this file in the "Canvas export" field.
4. Click **Submit**.
5. Back on the admin page, the conference should be inactive at the moment. Click **Activate Conference** to activate the conference.

Expected Results:

- For step 1, the user should be redirected to the conference creation page.
- For step 4, the user should be redirected back to the Admin page, now with the new conference created. Within the conference, there should be various tracks as per the csv file.
- For step 5, the conference should initially be inactive. While the effects of this are not fully evident yet, an inactive conference means users should be unable to upload papers to the conference, or more specifically, unable to upload papers to any track within the conference. Furthermore, the tracks of this conference should not be visible in the drop-down list when hovering over **Tracks** in the navigation bar at the top. Once the conference is activated, the tracks should be visible and papers should be possible to upload onto this conference.

Actual Results: PASS

6.4 Admin Page - Conference Publishing

Description:

At the end of a conference, once all papers are published and the module is over, the track chair can also publish the conference onto the website.

Testing Instructions:

1. Ensure that you are on the admin page and able to see the list of conferences.
2. Click the **publish** button to publish the conference.

Expected Results:

The conference should now be published and visible in the **Programmes and Proceedings** tab in the navigation bar. Before publishing verify from a student account that the conference is not visible. After publishing, once again verify through the student account that the conference is now visible.

Actual Results: PASS

6.5 Admin Page - Conference Deletion

Description:

A track chair can choose to delete a conference.

Testing Instructions:

1. Ensure that you are on the admin page and able to see the list of conferences.
2. Click the red trash can button for one of the conferences.

Expected Results:

The conference should now no longer exist in the database and all records of it are wiped.

Actual Results: PASS

6.6 Admin Page - Track Management: Activation Status

Description:

Once a conference is created, the user can conduct various administrative actions, one of which would be track management. The following tests pertain to the activation status of a track. All operations in track management can only be conducted as a track chair.

Testing Instructions:

1. Once the conference is created, you should be able to see it in the list of conferences. Click on the **Manage Tracks** button.
2. Toggle the **Deactivate Track** button to deactivate it.
3. Reactivate the track again to continue testing.

Expected Results:

- For step 2, similar to conference deactivation, the button would reflect that the track is inactive. In this case, only the deactivated track does not show up on the drop-down list of tracks. Also, while students can upload their papers to other tracks within the conference, they should be unable to upload their papers to that specific track.
- for step 3, the track should be visible and usable again.

Actual Results: PASS

6.7 Admin Page - Track Management: Reviews

Description:

Next, we will test the auto-assignment of peer and supervisor reviews in the system.

Testing Instructions:

1. For the following parts, we assume that papers are already in the system. If this is not the case, proceed to the Paper Creation tests to make at least 2 before proceeding. On the track management page, click on **Reviews** for one of the tracks.
2. Click on **Assign Student Reviews**.
3. Click on **Assign Supervisor Reviews**.

Expected Results:

- For step 1, we expect to be redirected to the page that gives an overview of all the tracks.
- for step 2, the papers in the track are now assigned to other students for peer reviewing. As a student, you should be able to see the peer reviews assigned to you on the home page under the **Reviews** tab. The pairing will also be visible on the current page to the track chair right after they click the button.
- for step 3, the papers in the track are assigned for review to their respective supervisors. If a paper has multiple supervisors, all supervisors involved should be able to see the paper for review on the home page under the **Reviews** tab. Once again, the pairing will also be visible on the current page to the track chair right after they click the button.

Actual Results: PASS

6.8 Admin Page - Track Management: Evaluations

Description:

Evaluations must be signed by a supervisor and track chair before the forms are sent to BOZ. Track chairs can use this feature to view all the evaluations they need to sign.

Testing Instructions:

1. This test assumes that there already exist evaluation forms for papers in the system. To add evaluations to the system, go through the tests for that first (See 6.17). Go back to the track management page.
2. Click on **Evaluations** for one of the tracks in the conference
3. For each paper in the track, the user should be able to see a rightward arrow button. Click that.
4. Click on the add signature button.
5. attach an image of the signature and submit the form.

Expected Results:

- For step 2, the user should be redirected to a list of **Assign Evaluations**. Each paper would have a rightward arrow button.
- For step 3, the user should be redirected to the evaluation form. There they get an option to add their signature at the bottom of the form.
- For step 4, the user is prompted to attach an image of their signature. if the image size is too big, the user is told to retry.
- For step 5, upon submission, the evaluation is now considered signed. In the list **Assigned Evaluations**, a green tick shows that the form was signed by the track chair. Before signature, this would be a red cross.

Actual Results: PASS

6.9 Admin Page - Track Management: Conference

Description:

Each paper must get a timeslot and location for the conference presentation. Track chairs can use this feature to generate timeslot distributions for (a subsection of) papers in their track.

Testing Instructions:

1. This test assumes that there exists at least one paper in a track. This test also assumes that the selected room exists within the university.
2. Click on **Conference** for one of the tracks in the conference.

3. For each paper in the track, the user should be able to see a table containing the paper ID, author, (empty) presentation time, and (empty) presentation room. The user should also be able to see a form containing the start- and end time of the conference day, the presentation room, a custom order, and optional break periods.
4. Change start and end time of the conference day if desired.
5. Enter presentation room
6. Enter custom order (optional)
7. Click on the Add a Break button to add a break (optional)
8. Click on the Distribute Time button

Expected Results:

- For step 2, the user should be redirected to a list of **Track Papers**. Each paper should have an ID, a title, and an author. Each paper could have a presentation time and a presentation room.
- For step 4, the user should open an input field with the option to choose the hour (0-23) and minutes (0-59). Upon changing these times, the generated time slots should change.
- For step 5, the user is prompted to enter the presentation room.
- For step 6, the user is prompted to enter a custom order, using the paper ID's.
- For step 7, the user is prompted to add breaks. If a new break is created, the user should be able to select a start and end time. Upon changing these times, the generated time slots should change.
- For step 8, upon submission, the user is presented with a toast on the bottom right of the screen. This shows either the assigned paper ID's and the time slots in the right order, or the reason why the time slots could not be assigned. Upon refreshing, the user can see the assigned timeslots and locations in the **Track Papers** table.

Actual Results: PASS

6.10 Admin Page - Track Management: Evaluation Form ZIP File

Description:

The evaluations page in track management also has a feature to automatically obtain a zip file of PDFs of all the evaluation forms filled in the system to send to BOZ. This is a simple unit test to check if this feature is functional.

Testing Instructions:

1. Below the list of **Assigned Evaluations** click the **Convert all Forms to PDFs** button.

Expected Results:

A zip file should automatically be downloaded which consists of the evaluation forms. For each form, the first pages are the reviews made by the various supervisors and the final page is the final evaluation made by the supervisor, signed by them and the track chair.

Actual Results: PASS

6.11 Admin Page - View Submissions

Description:

This section of the admin page allows the supervisors and track chairs to view all the submissions present at the conference. Apart from seeing all papers, a supervisor can choose to see only papers they supervise and a track chair can choose to see only papers they are chairing.

Testing Instructions:

1. On the admin page, as a supervisor, go to **View Submissions** for one of the tracks.
2. By default, you see all papers as seen in the tab selected at the top of the page. Click on the "Supervised Papers" tab and observe the papers that pop up.
3. Click the "Chaired Papers" tab and observe the papers that pop up.
4. Repeat this process as a Track Chair.

Expected Results:

- For step 2, a supervisor should be able to see all papers that they are supervising and nothing more.
- For step 3, a supervisor should not be able to see any papers unless they are also a track chair, in which case they see a combination of papers they are supervising and chairing.
- The converse of the previous results occur in the case of step 4.

Actual Results: PASS

6.12 Admin Page - Send Group Emails

Description:

This section of the admin page allows the admin to send emails out to groups or individuals part of the module. This need not be just students, but could also include track chairs, supervisors or a mix of all.

Testing Instructions:

1. On the admin page, click the **Send Group Emails** button for some track.
2. Add some email(s) to the field expecting emails to be entered. Since this site is used for the purpose of the university, university emails can be used.
3. Write any message. You could try using one of the template messages that exist already or make your template after filling this one in by clicking the **Save Template** button.
4. Click **Send** once you are done.

Expected Results:

Upon clicking send, a notification at the bottom right of the screen shows how many users the email was sent to. This can also be verified by checking the inboxes of the emails that were used in the recipient field and checking if the email reached them.

Actual Results: PASS

6.13 Admin Page - Deadlines

Description:

The admin page also allows for the creation of deadlines. This can be done either manually or by uploading csv file.

Testing Instructions:

1. On the admin page, click the **Set Deadlines** button for some track.
2. Let us first try creating a deadline manually. Click **Add Deadline**
3. On the **Manual** tab fill in the Conference ID, Name of Deadline, Date and Time, and the role for which the deadline is meant.
4. Click **Submit**.
5. In **Add Deadline** again, switch to the **csv-file** tab. A template for how this csv file should look can be found here B.2. Upload this file and click **Upload**.

Expected Results:

After step 4 or 5, the deadline should be created. A user with the specified role in the deadline would be able to see the deadline under the **Event** tab on their profile page.

Actual Results: PASS

6.14 Paper Creation

Description:

Obviously for a web application revolving around research paper submission and management, we must have a place to upload the papers. This test addresses exactly that.

Testing Instructions:

1. Go to the home page and click on the **Paper Submission** tab.
2. Click on **Create New Paper**
3. Fill in the conference you would like to publish to, the track, supervisors, paper title, description and keywords.
4. Click **Submit**. The paper should now be visible on the **Paper Submission** tab on the profile page.
5. Click on the paper title here to go to the paper page.
6. On this page you have the option to upload your paper using the **Upload New Version** button.
7. Upon clicking, you should see the option to upload your paper and select whether it is a draft or a final submission. Select the necessary details.
8. Click **Upload**.

Expected Results:

- For step 2, the user should be redirected to the page where they can create their paper.
- For Step 4, the paper should now be visible under the **Paper Submission** tab on the profile page.
- For step 8, the paper should now be uploaded to the system and stored in the database. Depending on if a draft or a final paper was uploaded, the symbol on the paper's page changes from a red cross to a green tick. The same upload button can be used for an initial draft as well as a final proposal.

Actual Results: PASS

6.15 Proposal Acceptance

Description:

On the paper page for a paper, the supervisor can also mark if they have accepted their proposal for the research.

Testing Instructions:

1. As a supervisor for a paper, go to its paper page.
2. Try clicking the **Accept Proposal** button

Expected Results:

The symbol under **Proposal** should change from a red cross to a green tick to show that the supervisor has accepted the proposal.

Actual Results: PASS

6.16 Edit Paper Information

Description:

If at any point a user wishes to edit the information about a paper, they are free to do so through the paper page of their paper.

Testing Instructions:

1. Go to the paper page of the paper.
2. Click the **Edit Information** button and make the changes you need to.
3. Click on **Confirm changes**.

Expected Results:

The details for the paper should be updated and reflected on the paper page of the paper.

Actual Results: PASS

6.17 Review and Evaluation of Papers

Description:

This final test is meant to check if the reviews and evaluation system is functioning correctly. We conduct the test for review and evaluation together as the processes go hand in hand.

Testing Instructions:

1. Lets first start with the review of a paper. Once a user is assigned their respective reviews (See 6.7), They can see the reviews they are responsible for under the **Reviews** tab on their profile page, under **Peer Reviews**. Here, click on **Create Review**.
2. Fill in all the necessary fields for the review and click **Submit**.
3. Next, to fill in the evaluation form of the paper, head to the paper page for that paper.
4. Here, select **Evaluate Paper**.
5. Fill in the necessary fields again and submit the evaluation.

Expected Results:

- For step 1, the user should be redirected to the review page for the paper.
- For step 2, if the user does not fill all fields, the system notifies them to fill up something and does not save anything until the fields are filled.

- For step 4, the evaluation form should calculate the grades based on the weights already. This can be verified by mathematically verifying that the grade is calculated correctly. Furthermore, if the user is a supervisor and not a chair, it only allows them to upload a signature to the supervisor field. A similar mechanism takes place for a track chair.

Actual Results: PASS

Chapter 7

User Manual

Below we will display the various functionalities our application has to offer, as well as give a step-by-step description on how to achieve desired results. The user manual is split into three parts, one for module coordinators and track chairs 7.1, one for students 7.2, and one for supervisors 7.3.

7.1 Module Coordinators & Track Chairs

7.1.1 Logging in

Logging in happens through the "Log in" button on the top right of the screen. Once logged in with a UTwente account, you can visit your profile page by clicking on the icon in the top right of the screen.

7.1.2 Creating a track page

Creating a new track page is needed when you want to create a track that has not been used before, or when you want to improve information of an existing track. The created track page can be used for creating new conferences, where the new track page is used as a template for a track in the canvas student file. A new track can be created by going to the admin page, and clicking on the "Add Track" button. This brings you to a new screen, where you can add a track name, description, and slug. The track description is shown on the track information page, accessed through the navigation bar. The slug is the link that points to the track information page.

7.1.3 Creating a conference

To create a new conference, click on the "Create conference" button on the admin page. This opens a menu where you can add a conference name, and the canvas student CSV-file. See 7.1.

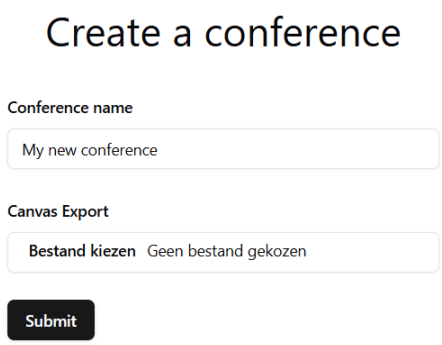


FIGURE 7.1: Form to create a conference

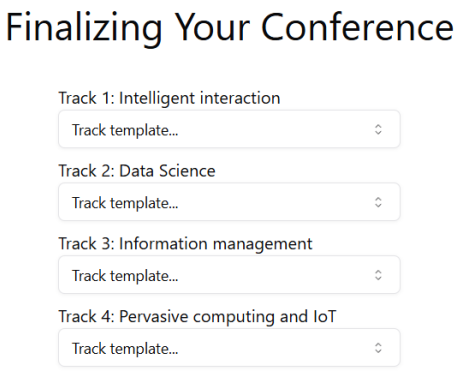


FIGURE 7.2: Track selection

Canvas student CSV-file

The canvas student file is used to create a conference. This file can be downloaded from canvas directly. The file contains a list of all the students, as well as the tracks they have selected themselves. This file is used for the creation of tracks, and the assignment of the students to the tracks. Students are only allowed to create a paper in the track that is assigned in this canvas student file. See an example of the file layout in B.1.

Track template selection

To make it easier to use the same track templates for multiple years, we differentiate between Tracks and Track pages. After creating a new conference, we need to link the tracks to a track template. This is done by selecting from all the track pages in the system. Once every track is linked, we can finalize the conference creation. See C.1.

7.1.4 Administrate conferences

The following actions are all accessible on the admin/conference page, where your new conference is displayed. See 7.3.

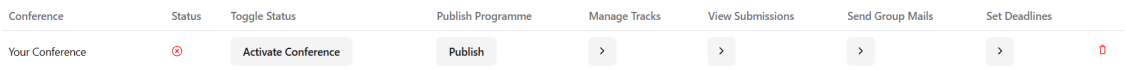


FIGURE 7.3: Your new conference

7.1.5 Activate conference

Once your conference is finalized, you have the ability to activate it. This is done by clicking the "Activate Conference" button. This opens a popup to ensure that you are certain of your choice. Activating a conference will make all contained tracks active, allowing students to upload their papers. Activating a conference is a necessity before the module officially starts.

7.1.6 Publish programme

The conference programme is the list of all presentation timeslots and rooms. Publishing this list will allow ALL visitors of the website to see the papers, times, rooms and names

of students partaking in the conference with an accepted final paper. The conference programme can also be unpublished. Note: Admins can always see the conference programme in "Programme and Proceedings", even if the programme is not published.

7.1.7 Manage track

The following actions can be done by clicking the "Manage Tracks" button on the admin/conference page.

Manage track reviews

To access track reviews, click on the arrow button under your desired track. This opens a page with two tables: all papers of the track, and all assigned reviews of the track. In order for a review to be assigned, the respective track chair must both assign reviews to supervisors, and assign reviews to students. By clicking "Assign Supervisor Reviews", all papers will create a review assignment for the supervisor(s). Supervisor will get notified about this through e-mail. By clicking "Assign Student Reviews", every student will get assigned one peer review. The requirements for applying student reviews is that there are at least two papers without an assigned review, and that there are at least two students without an assigned review.

Manage track evaluations

To access track evaluations, click on the arrow button under your desired track. Once all the final papers have been published, this page gives an overview of all evaluations that have been done by supervisors. See 7.4. By clicking the arrow button on the right of an evaluation, the evaluation form is accessed 7.5. Once agreed with the fields, you can add a signature by uploading a PNG-file using the "Upload file" button.

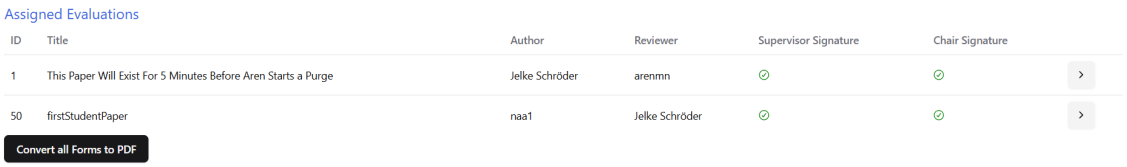


FIGURE 7.4: Track evaluations

When all evaluations are present, along with the signatures from both track chairs and supervisors, we can export all evaluations forms to a zip-file containing a PDF-file for each paper by clicking the "Convert all Forms to PDF" button. This will get all the supervisor reviews of a paper, and combine this with the evaluation data and signatures to a PDF-file that can be delivered to BOZ. See C.1 for an example of such a PDF-file.

Manage track conference

To access track conference, click on the arrow button under your desired track. This opens a page with an overview of all track papers, and when their presentation is assigned on conference day. This information will be empty if no information is available. The page allows for assigning a time-slot for all papers in the track. For this, we will have to select the start and end of a conference day, and enter the break periods, as well as the room the papers will be presented. At the bottom of the page, the generated time slots are shown.

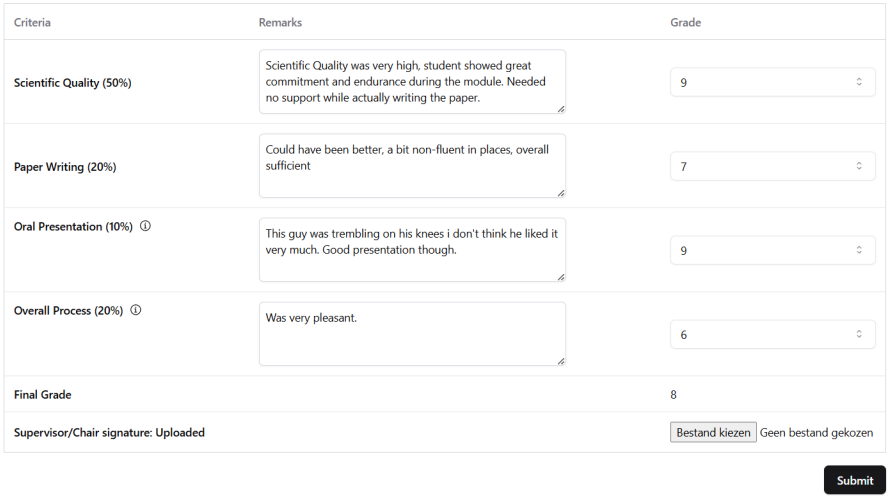


FIGURE 7.5: Evaluation form

Once there are enough time slots available, click the "Distribute Time" button to assign a slot to each paper. If there are not enough slots available for the papers that do not have conference information yet, you will not be able to click this button.

You can also select a custom order for papers, this has two purposes. By filling in the paper id"s, seperated by a comma, you can assign the papers in that specific order. Also, this can be used to assign a subset of papers to a room.

If successful, an user alert will be sent to notify you of the changes. If mistakes are made in the process, there are two options to change data. Firstly, we can press the "Delete all Conference Info" button, to remove all time and room data for the track. Secondly, we can access 7.1.9 to change data.

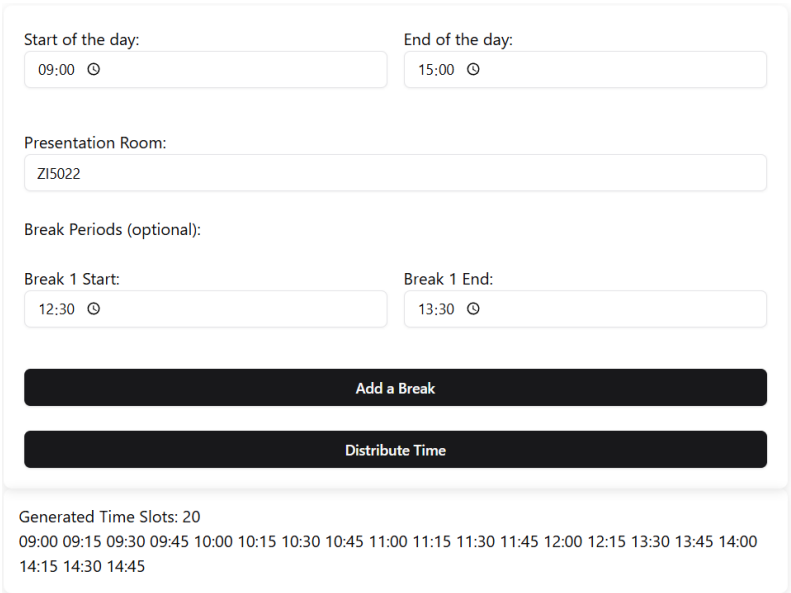


FIGURE 7.6: Distribute Timeslots for papers of a track

7.1.8 Set deadlines

To access conference deadlines page, click on the arrow under "Set Deadlines" on the admin/conference page 7.3. This page contains a button to add deadlines, as well as to clear all the deadlines of the conference. It is also possible to delete specific deadlines here (this will NOT trigger a pop-over to confirm changes).

To create a deadline, fill in a name for the deadline, in the "Name" field. Next, choose the date and time of the deadline by clicking on the small calender icon. Last, choose the role for whom the deadline is relevant. NOTE: If the same deadline is relevant for multiple roles, we will need to add the same deadline multiple times.

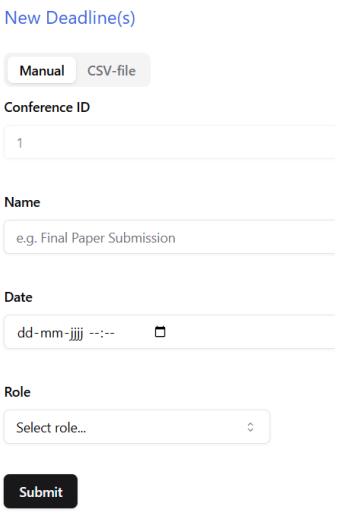


FIGURE 7.7: Create a new deadline

Deadline CSV-file

The deadline file is used to upload multiple deadlines at the same time to a conference. This file needs a deadline name, deadline date, and deadline role. The roles can either be "coordinator", "chair", "supervisor", or "student". If a deadline is for multiple roles, the same deadline must be added twice to the deadline file. See an example of a deadline line in appendix B.2.

7.1.9 View submissions

To access the submissions, click on the arrow button under "View Submissions" on the admin/conference page. This will open a table where all the information about all papers of the conference can be accessed. More paper information can be accessed by clicking the three dots on the right side of the table, and selecting "View paper details". There is also a "Filter author" option available to search for a specific student.

The submissions table has multiple options. At the top of the page, an admin can choose between "All Papers", "Supervised Papers", and "Chaired Papers". Each option will load only papers that are relevant to the selection.

Just above the table, there are three options: "Paper", "Progress", and "Conference". Each of these buttons will load a subset of table columns, designed to either access paper information 7.8, paper progress information 7.9, or paper conference information 7.10.

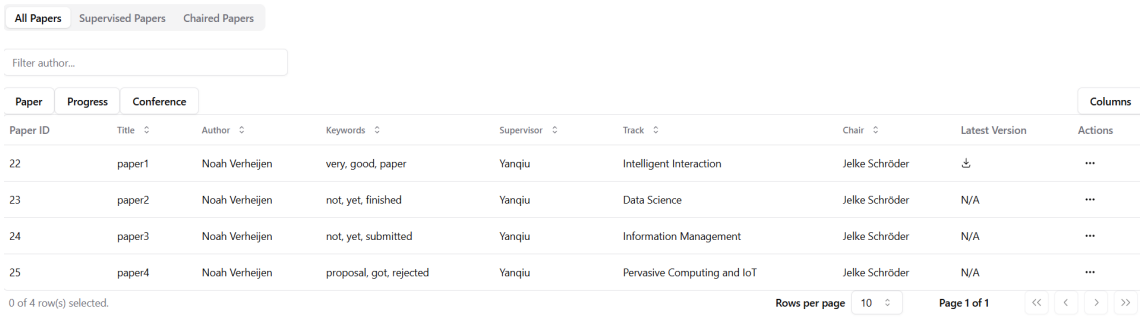


FIGURE 7.8: Overview of all submitted paper information

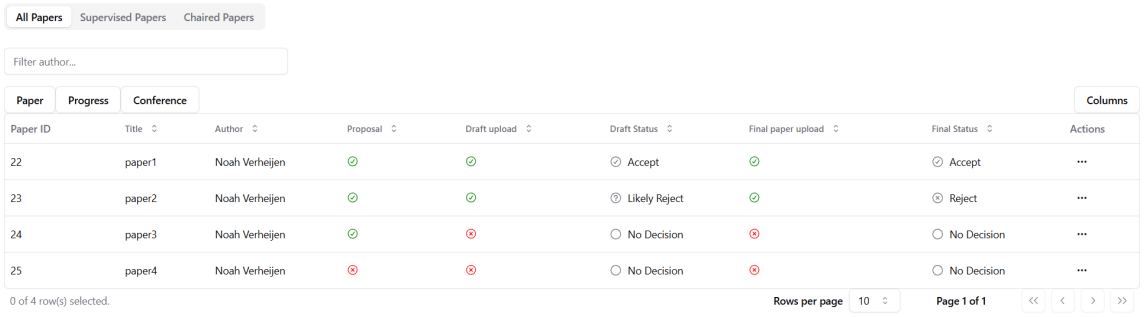


FIGURE 7.9: Overview of all submitted paper progress

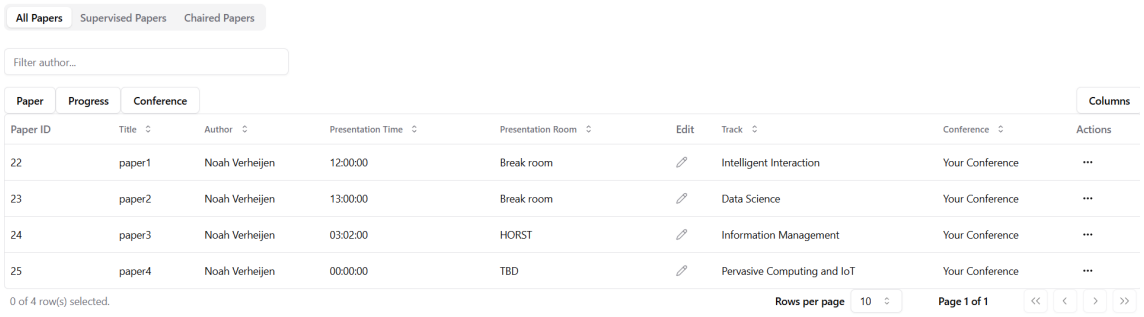


FIGURE 7.10: Overview of all submitted paper conference information

7.1.10 Send group emails

Application admins have the options to send an email to multiple users of the same time. This is done on the MassMail page, by clicking on the arrow button below "Send Group Mails". On this page, it is possible to choose between user groups "Supervisors", "Students", "Track Chairs", "Students Missing Review", "Supervisors Missing Review", and the student groups of different tracks. Selecting one or multiple options will send a mail too all users fitted for the category, using the provided subject and message. Once your mail is sent, you will receive an alert to how many users the mail is sent.

It is also possible to use mail templates. To do this, select "Load a preset..." on the top right of the page. Here you can choose a mail template to load into the mail section. At the bottom of the page, it is possible to save a template to the database. This is done by

clicking the "Save Template" button. This makes your template available for all admins of PaperSpace.

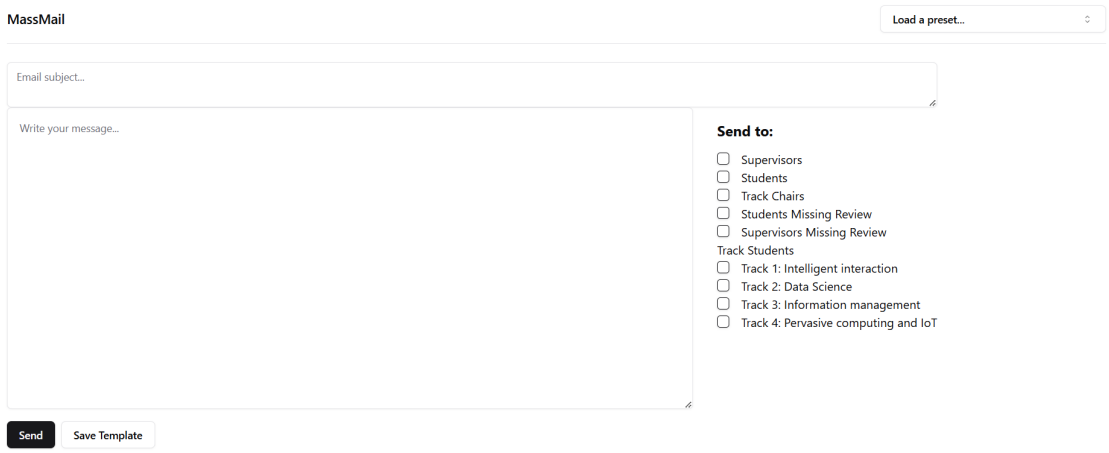


FIGURE 7.11: Mass mail page

7.1.11 Delete conference

WARNING: Deleting a conference can not be undone, and this action will delete all information about the conference. Including: papers, tracks, all paper information, deadlines, evaluations and reviews. This should only be done if the conference creation is not successful, and in most cases deactivating a conference is preferred.

To delete a conference, click on the trash icon on the right side of a conference on admin/conference. This will open a pop-over with a timer of ten seconds, after which you can delete the conference.

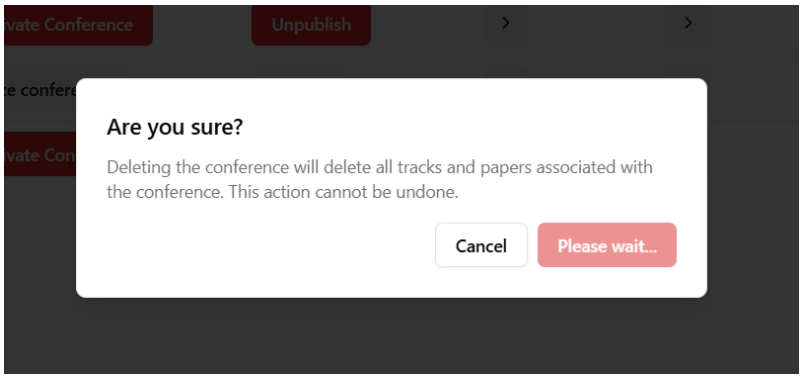


FIGURE 7.12: Pop-over before conference deletion

7.2 Student Manual

7.2.1 Logging in

Students will be directed to log in by clicking the "Log in" button at the top right of the page.

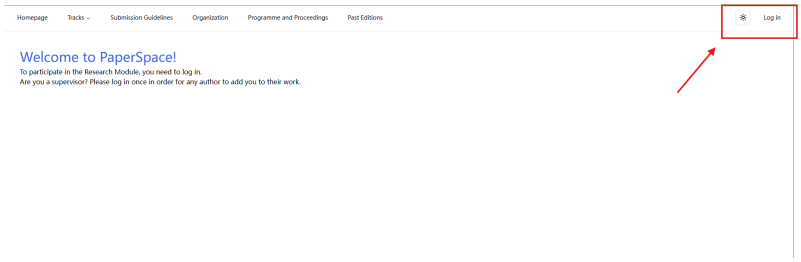


FIGURE 7.13: Login Button

Once logged in with a UTwente account, a profile page will be set up for them. The student can then visit their profile page by clicking the icon at the top right corner again.

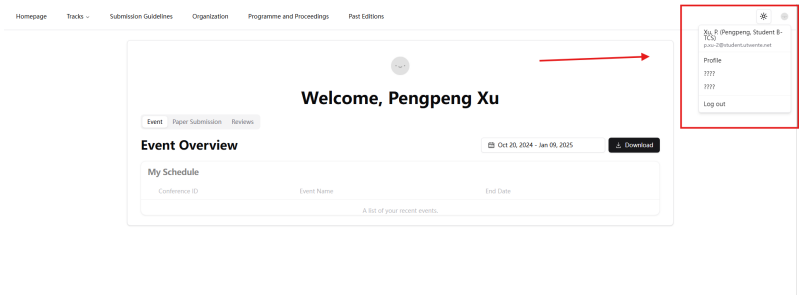


FIGURE 7.14: Profile Button

7.2.2 Creating new paper

To create a new paper, a student must first navigate to the "Paper Submission" Tab.

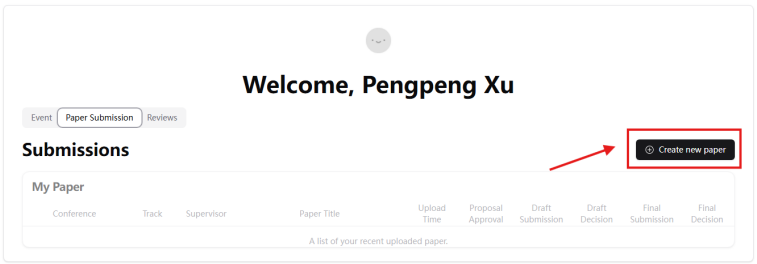


FIGURE 7.15: Create a paper

By clicking on the "Create new paper" button, then they can enter a separate page displaying details of the paper which they can fill in.

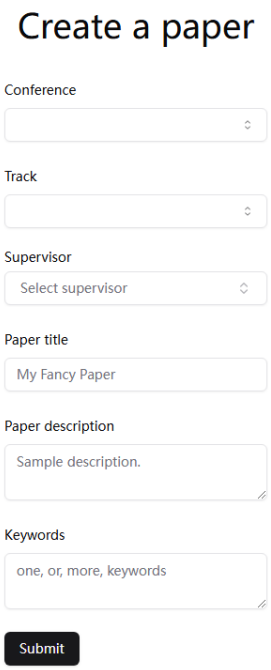


FIGURE 7.16: Enter paper details

Selecting conference and track

In the showcased page above, the students are required to select the conference and track which their papers belong to. As a student, you can simply click on the corresponding slot, and a drop menu will appear filled with the conference/track which you joined. Click on the conference/track name to select your desired conference/track.

Selecting supervisor

In the showcased page above, the students are required to select one or multiple supervisors in the current paper creation. As a student, to select one or multiple supervisors for your paper, simply click on the "Supervisor" slot to select the name of the supervisor.

7.2.3 Viewing deadlines

As a student, you can also view all your related events/deadlines. To be able to do so, the student needs to first navigate to the "Event" tab.

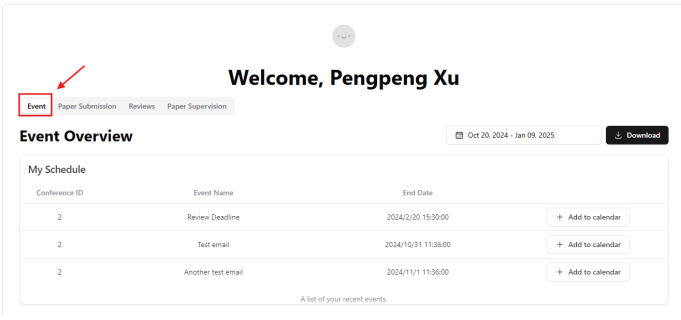


FIGURE 7.17: Events Deadline

As a student, the below-seen table named "Event Overview" will display all of your related schedules such as the final submission deadline. These deadlines are directly uploaded and controlled by your track chairs, you will only see related deadlines once they are uploaded and finalized by your track chairs.

Add events to outlook calendar

As a student, the system also allows you to add each of the individual events to your calendar. To do so, simply choose the agenda that you want to add to your calendar, and click the "Add to calendar button" to the right.

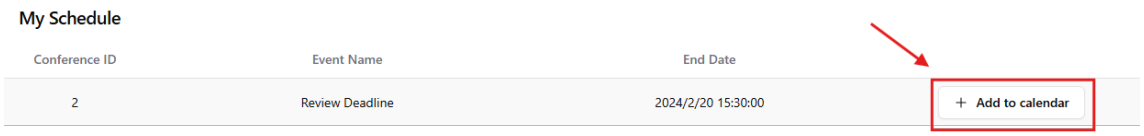


FIGURE 7.18: Add agenda to your personal calendar

By performing this action, a pop-up with three types of services will be shown. Currently, the system supports "Google", "Outlook Office" and "Yahoo".

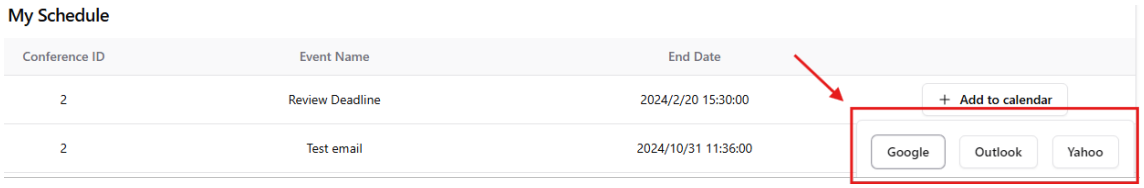


FIGURE 7.19: Choosing your preferred calendar

Exporting all deadlines

Sometimes, a lot of agendas may appear in your event overview, and adding them one by one does not seem like a good idea. Therefore, the system also allows students to download all their agendas and manually add them to their personal calendars. To do so, a student can simply click on the "Export all events" button, this will download an ICS file named as "events", which you can load on your personal calendar application.

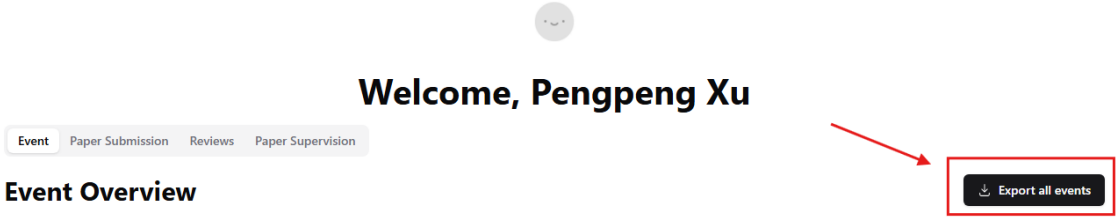


FIGURE 7.20: Exporting all your events

7.2.4 Proposal

As a student, to continue with your further research, you must receive positive feedback from your supervisor regarding your paper proposals. Once you have created your paper following the steps in 7.15, please send your paper proposal to your supervisor through other means of communication. To see whether or not your paper proposal is approved,

you can navigate to the "Paper Submission" tab, where it will be shown in the "Your paper" table.

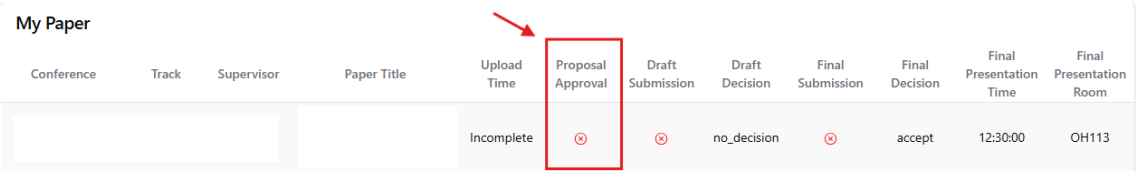


FIGURE 7.21: View your proposal status

Specifically, the red cross means not accepted, the green cross means accepted.

7.2.5 Edit paper information

Similarly, as a student, you can also edit the paper information of papers you created. To do so, navigate to the "Paper Submission" tab, in the below table, you shall see the list of papers you have created. To edit the information of any paper, simply click on the paper title.

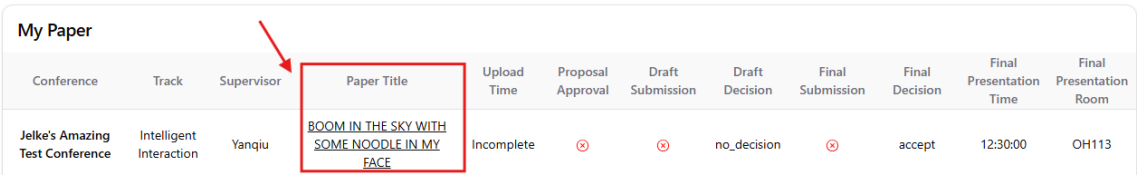


FIGURE 7.22: Editing your paper information, Step 1

Such action will redirect you to a new page - the information page for the specific paper you chose. To edit the information of this paper, simply click on the "Edit Information" button.

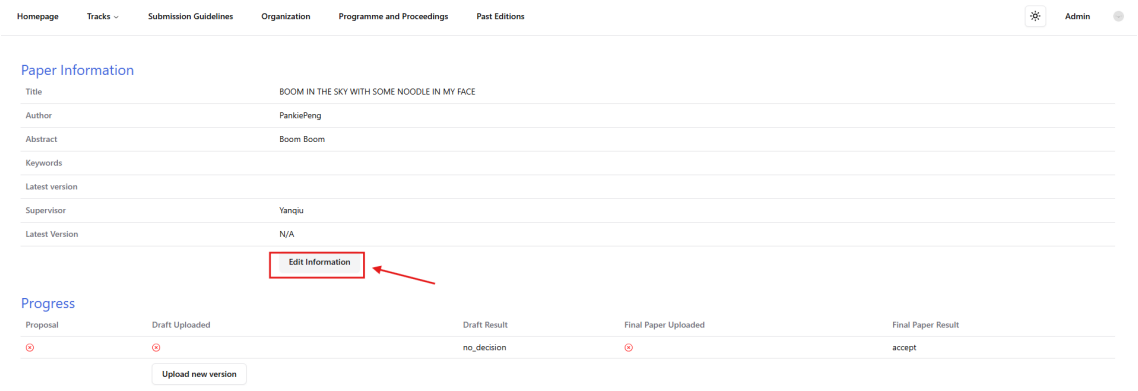


FIGURE 7.23: Editing your paper information, Step 2

7.2.6 Uploading paper

After creating your paper follow the steps in 7.15. To upload the draft paper for the created paper, simply go to the "Paper Submission" tab, then click on the paper title of your desired paper. This will redirect you to the information page of the paper, within the

information page of that paper, you can upload a new version of the paper by clicking on the "Upload new version" button.

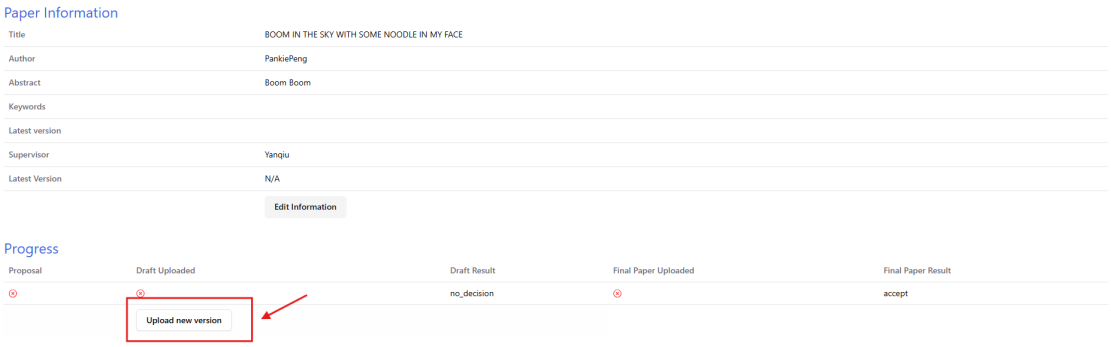


FIGURE 7.24: Uploading your paper

Following the above step, the "Upload new version" button will redirect you to a new page where you can upload PDF documents.

Uploading draft paper

In order to upload your draft paper, please tick the "Draft Submission" checkbox, choose a PDF document, and then click "Upload".

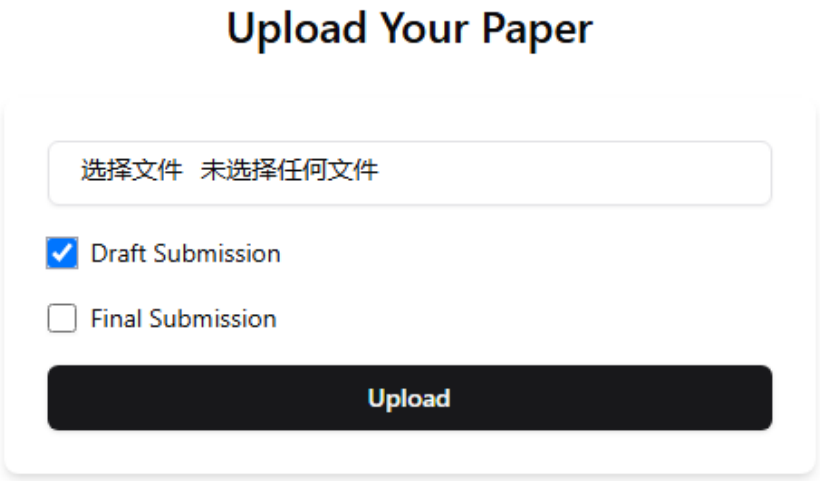


FIGURE 7.25: Uploading your draft paper

Uploading final paper

In order to upload your final paper, please tick the "Final Submission" checkbox, choose a PDF document, and then click "Upload".

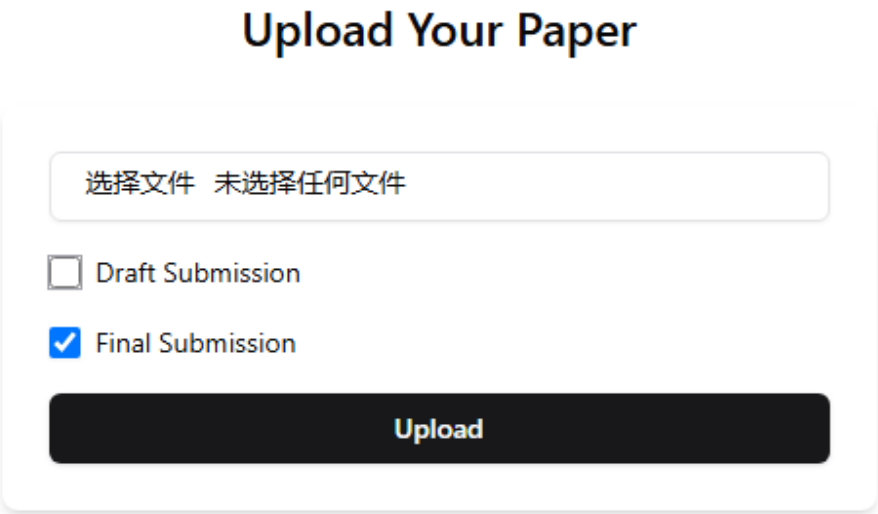


FIGURE 7.26: Uploading your final paper

7.2.7 Peer review

A standard procedure students must experience is completing peer reviews on other students' papers. When peer review tasks are assigned to you, they will appear under the review tab.

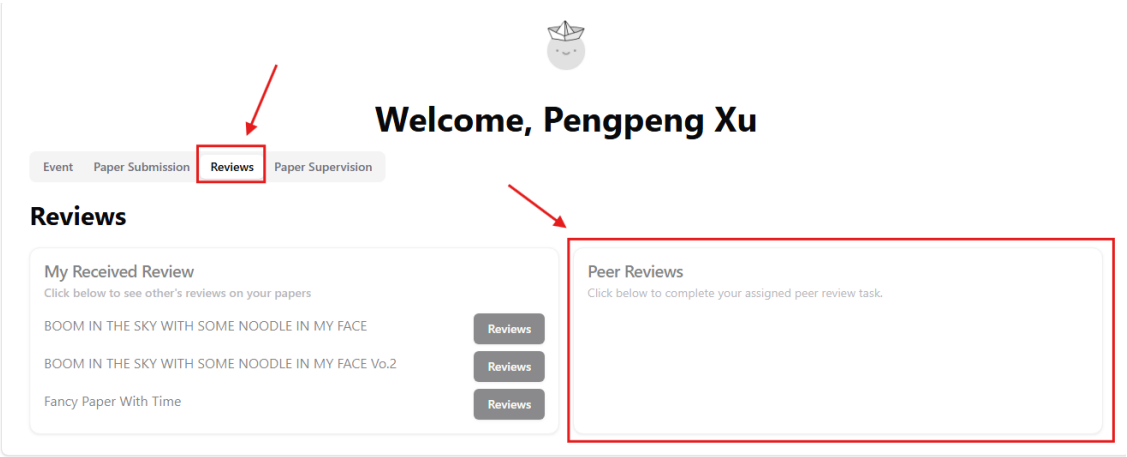


FIGURE 7.27: Peer review

To complete a peer review task, please click on the button to the right of the paper title within the Peer Review tabs.

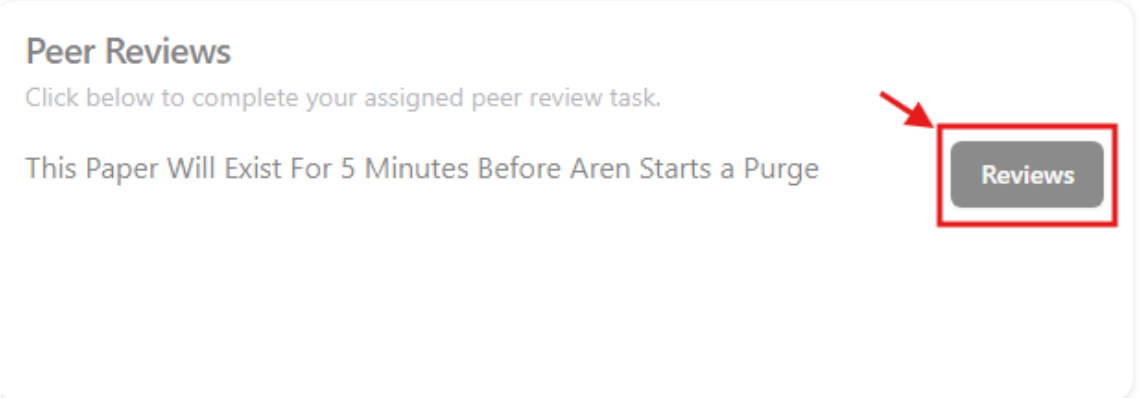


FIGURE 7.28: Peer review example

7.2.8 Received reviews

While being able to review others' research, your research will also be reviewed by your peer. To locate your received review, you can just navigate to the review tabs in your profile. Your received reviews will concentrate on the left side of the tab.

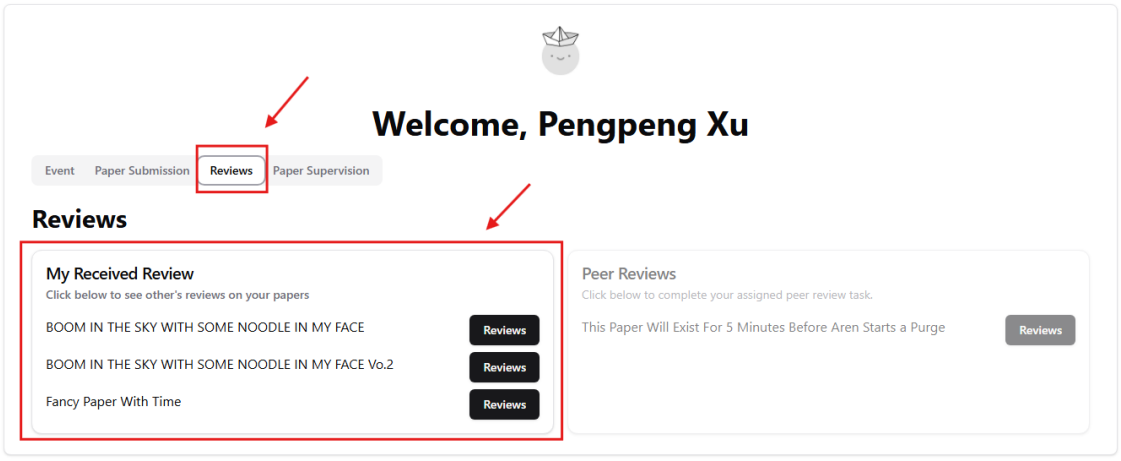


FIGURE 7.29: Your received reviews

To access the review you received on your papers, you can then click on the "Review" button

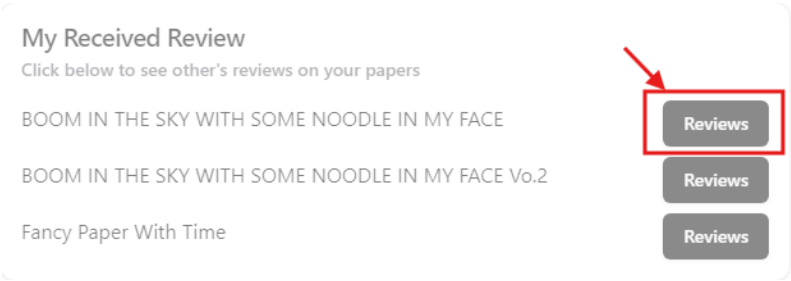


FIGURE 7.30: How to check on received reviews

7.2.9 Conference

Students will also receive a location and presentation time for the final presentation. You can directly view related information on the "Programme and Proceedings" page. To navigate to this page, click on the "Programme and Proceedings" tab in the navigation bar.

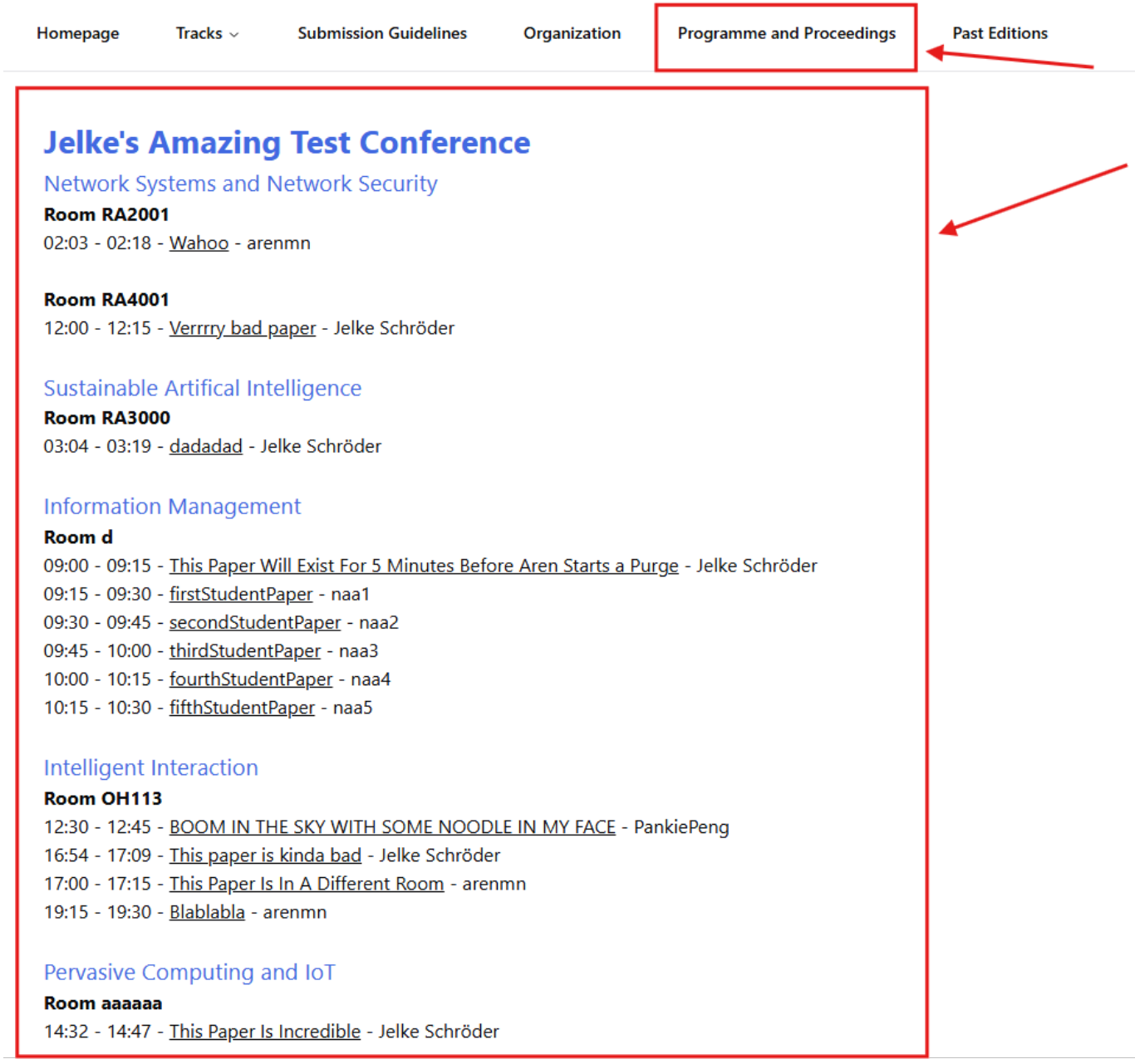


FIGURE 7.31: How to check on your assigned time slot and location for final presentation

7.3 Supervisor Manual

7.3.1 Logging in

Supervisors will be directed to log in by clicking the "Log in" button at the top right of the page.

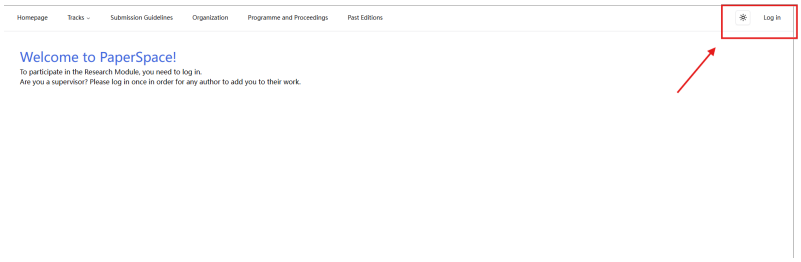


FIGURE 7.32: Login Button

For students to select a supervisor for their paper, the supervisor must be a user in the system. To become a user in the system, a supervisor must log in once with their UTwente account.

7.3.2 Overview supervising papers

An overview of all supervised papers is found under the "Paper Supervision" tab. This shows the progress for each paper, as well as the conference information. To get more information about these papers, you are able to click the "Paper Title" link, to go to the information page of the paper.

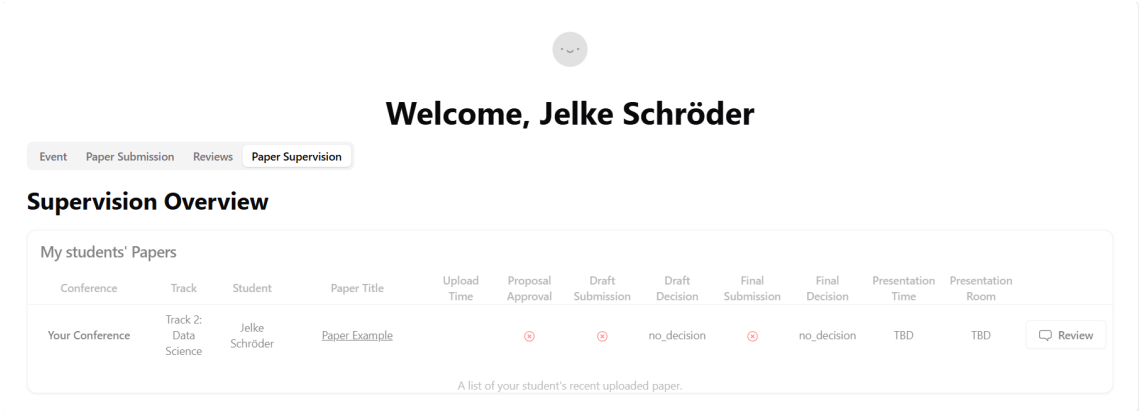


FIGURE 7.33: Overview of supervised papers

7.3.3 Viewing and exporting deadlines

To view the conference deadlines applicable to you, navigate to the "Event" tab on your profile page. You can export each event individually by clicking the "Add to calendar" button. Sometimes, a lot of agendas may appear in your event overview. Therefore, the system also allows downloading all agendas. To do so, you can simply click on the "Export all events" button, this will download an ICS-file named as "events", which you can load in your personal calendar application.

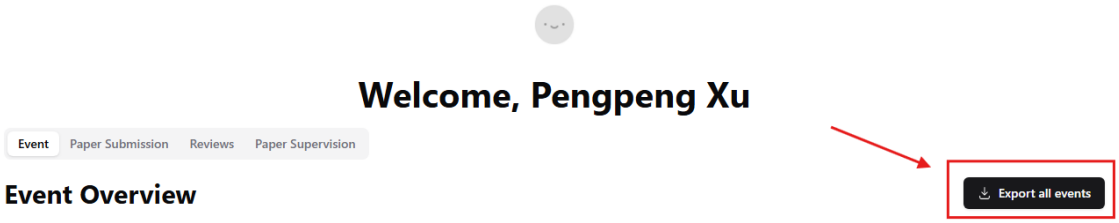


FIGURE 7.34: Export all your events

7.3.4 Accepting proposal

On the paper page (as seen in **??**) you are able to see more information about papers you are supervising. To accept the proposal received via email from the student, click the "Accept Proposal" button.

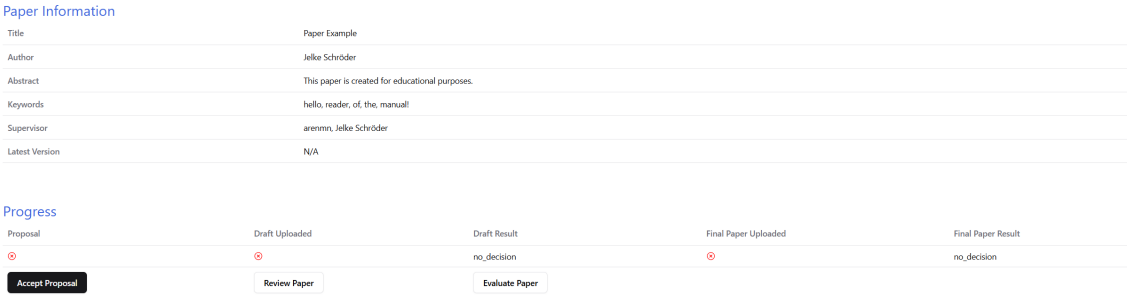


FIGURE 7.35: Information page of paper

7.3.5 Review draft version

Once the track chair has assigned reviews to supervisors and students, you are able to review the paper by clicking on the "Review Paper" button. The finished review will get shown on the paper page as well. You can view your assigned reviews on your profile page, under the "Reviews" tab.

7.3.6 Review final version

Once the student has uploaded their final paper, you are able to review the paper by clicking on the "Review Paper" button. The finished review will get shown on the paper page as well. You can view your assigned reviews on your profile page, under the "Reviews" tab.

7.3.7 Evaluate paper

Once the student has finalized their paper, and has given the presentation, you are able to evaluate the paper by clicking the "Evaluate Paper" button. This takes you to the evaluation page.

On this form you can grade the four categories, and give a grade for each.

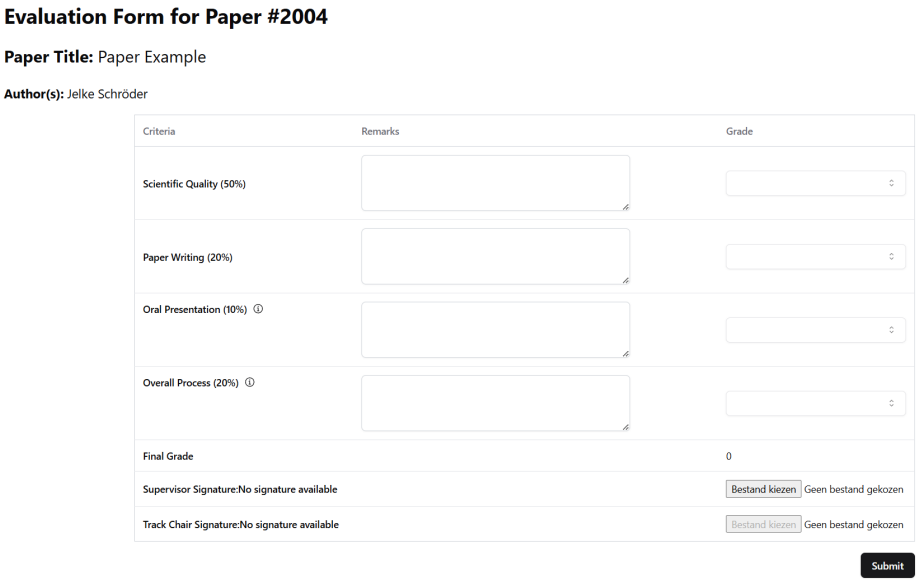


FIGURE 7.36: Evaluation form

Add signature

To finalize the evaluation, you will need to add a signature to the form. This is done by uploading an image from your computer. The maximum size for this image is 1MB. Both PNG and JPEG images are supported.

7.3.8 View presentation times

To view presentation times of supervised papers, you can either go to your profile page, and navigate to the tab "Paper Supervision", or you can go to 7.3.9. If any times are colliding with each other, please contact the track chairs.

7.3.9 View submissions

To access the submissions, go to the Admin page, and click on the arrow button under "View Submissions". This will open a table where all the information about all papers of the conference can be accessed. More paper information can be accessed by clicking the three dots on the right side of the table, and selecting "View paper details". There is also a "Filter author" option available to search for a specific student.

The submissions table has multiple options. At the top of the page, an admin can choose between "All Papers", "Supervised Papers", and "Chaired Papers". Each option will load only papers that are relevant to the selection.

Just above the table, there are three options: "Paper", "Progress", and "Conference". Each of these buttons will load a subset of table columns, designed to either access paper information 7.8, paper progress information 7.9, or paper conference information 7.10.

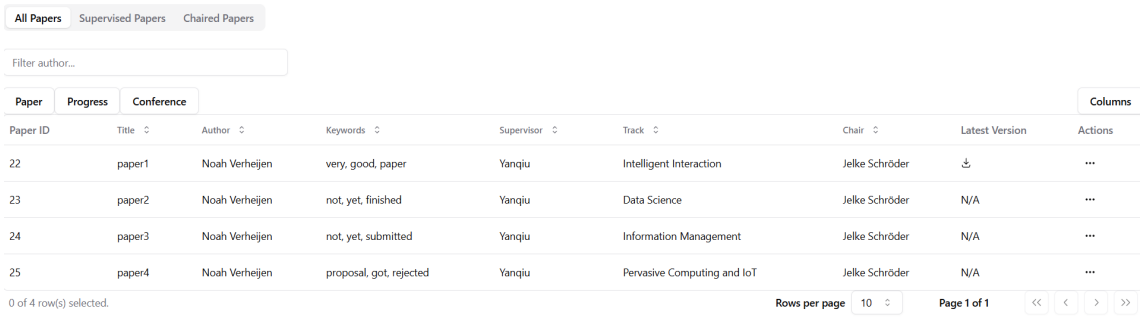


FIGURE 7.37: Overview of all submitted paper information

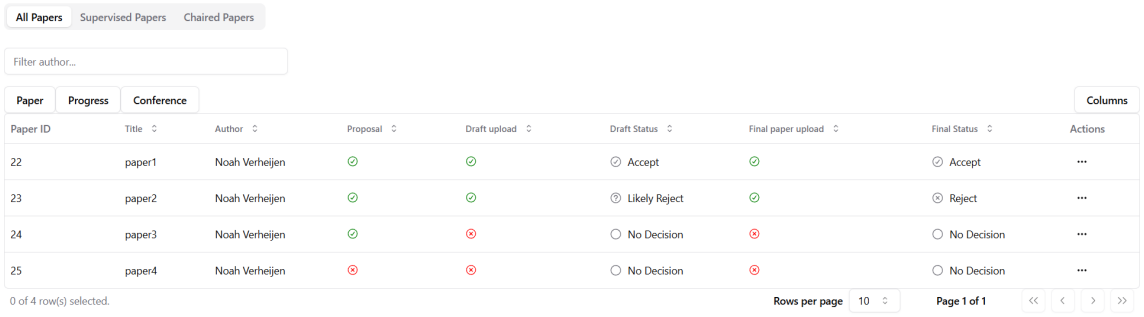


FIGURE 7.38: Overview of all submitted paper progress

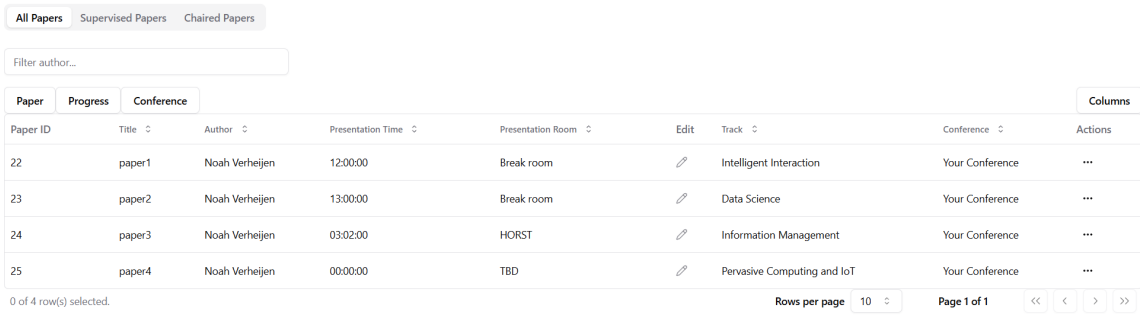


FIGURE 7.39: Overview of all submitted paper conference information

7.3.10 Send group mails

Application admins have the options to send an email to multiple users of the same time. This is done on the MassMail page, by clicking on the arrow button below "Send Group Mails" on the Admin page. On this page, it is possible to choose between user groups "Supervisors", "Students", "Track Chairs", "Students Missing Review", "Supervisors Missing Review", and the student groups of different tracks. Selecting one or multiple options will send a mail too all users fitted for the category, using the provided subject and message. Once your mail is sent, you will receive an alert to how many users the mail is sent.

It is also possible to use mail templates. To do this, select "Load a preset..." on the top right of the page. Here you can choose a mail template to load into the mail section. At the bottom of the page, it is possible to save a template to the database. This is done

by clicking the "Save Template" button. These templates are only visible to you, and are not accessible by other users of PaperSpace.

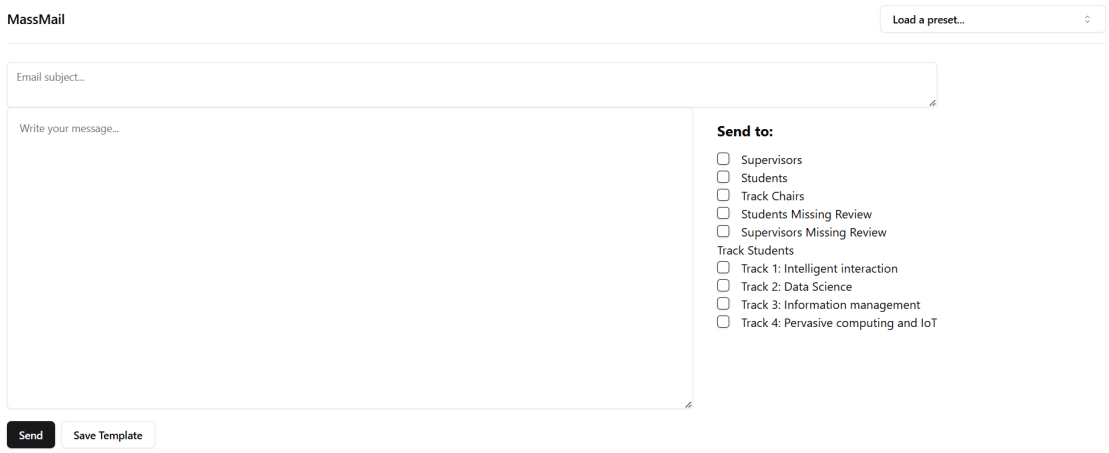


FIGURE 7.40: Mass mail page

7.3.11 Delete conference

WARNING: Deleting a conference can not be undone, and this action will delete all information about the conference. Including: papers, tracks, all paper information, deadlines, evaluations and reviews. This should only be done if the conference creation is not successful, and in most cases deactivating a conference is preferred.

To delete a conference, click on the trash icon on the right side of a conference on admin/conference. This will open a pop-over with a timer of ten seconds, after which you can delete the conference.

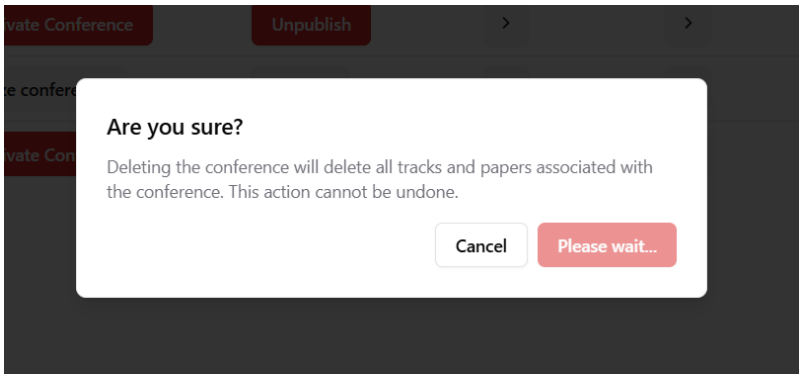


FIGURE 7.41: Pop-over before conference deletion

Chapter 8

Evaluation

Below is a general evaluation regarding the project planning, the responsibilities of team members, evaluation on the teams performance, and notes on the final result.

8.1 Planning

Each sprint, we had a team meeting to update a SCRUM board on GitHub. In these meetings, we discussed what tasks needed to be done, who would be responsible for these tasks, and decided a soft deadline for these tasks. These deadlines were upheld due to a healthy amount of peer pressure. Even though the start of the project was a bit slow, we managed to catch up in later sprints. More details are available in Appendix A.

Every week, a meeting with the client was scheduled. Three of these meetings were cancelled, two due to unavailability of the client, and one due to setbacks in development. Our team decided on soft deadlines for the final deliverables of the project, in advance of the hard deadlines. These deadlines were achieved, resulting in the final result not being rushed.

8.2 Responsibilities

Our team consists of members with a broad variance of interests and qualities. This meant different roles were divided by these interests. Many responsibilities were shared, due to the project needs having a high percentage of web development. In this, we divided the parts of the website according to member preference. These are the assigned responsibilities for each team member:

- **Pengpeng:** Interface Designer & Developer, Manual Editor, Poster Design, Head of User System
- **Aren:** Head of Database Design, Head of System Initiation and Deployment, Interface Developer, Head of Programming Support
- **Noah:** Interface Designer & Developer, Note Taker, Head of Review System
- **Vivan:** Requirement Analysis, Presentation Slides, Head of Testing, Interface Designer & Developer, Head of Evaluation System
- **Jelke:** Project Manager, Communication Manager, Interface Designer & Developer, Manual Editor, Head of Administration System

Group deliverables were written by all group members.

8.3 Result

The project resulted in a web application suitable for the intended purpose. All functionalities that were requested by the client were implemented. Key to this success was the easy communication with the client, as well as the received feedback from the client. We had conflicts of opinion about the general setup of certain implementations with the client, but managed to always achieve a solution.

8.4 Conclusion

Precise and punctual work was important this project, due to the late start and the many things that had to be done. This was a difficult project due to the large amount of requirements, and the average effort that had to be put into achieving these requirements. We discovered the difficulties that can occur with working for a client, an learned how to manage these difficulties.

The regular team meetings, as well as the regular client meetings, helped to bring the project to a success. Four of our team members have done module 12 already, and experienced the problems with it. This helped us gain extra motivation to complete the project. This feeling was enhanced by the possibility of hosting the project on the UT servers.

Chapter 9

Future Work

Our application shows great promise regarding the management of module 12. However, some key changes still need to be implemented before the application is fully viable.

Firstly, our application depends on users having an account in the system of the University of Twente. External supervisors will not be able to log in. To resolve this, the account system needs to be transformed to password-based authorization, or guest accounts need to be supported. It was not possible for us to achieve this in the allocated amount of time for the project.

Secondly, our application lacks support for mobile users. All testing has been done on desktop screens, and little effort has been put into getting it to render correctly on small screens. It is still functional, however hard to use. In order for the application to be fully used in module 12, the web application must be able to be easy to use on mobile phones.

Thirdly, the application must be tested on a large number of users. During implementation, we only had access to five accounts in the University of Twente. This resulted in a user having multiple roles during testing. It is possible that undiscovered bugs will occur during testing with a large amount of students and supervisors.

A final important notice, is that many more things can be improved in our web application. Due to time limitations, these improvements were not implemented. Examples of small improvements are: More customisation in review assignment, more clarity on evaluation status for supervisors, or a clear user overview. These improvements can be made in future work.

Appendix A

Sprint Reports

To aid the project, we had a weekly client meeting, to discuss recent updates and possible implementations. Also, we had a sprint meeting with other project groups every two weeks, to give an update report about the project, and get peer feedback. Below is a report for each sprint.

A.1 Sprint 1 (week 1-2)

The first week of the project was designed to form a project group bond, as well as to contact the client. Due to scheduling difficulties with our first client, we had to switch projects at the start of the second week. Meeting with our new client was further delayed until the end of the second week. This meant we were set back a week of progress, and did not get much done in the first sprint. However, at the end of the second week, we had a good idea about the steps that needed to be taken in Sprint 2.

A.2 Sprint 2 (week 3-4)

At the beginning of week 3, we had a group meeting to talk about our general project design, and created a GitHub backlog with tasks that needed to be done. This backlog was highly influenced by the meeting with our client at the end of the previous week. The main focus of this sprint was getting familiar with the Next.js development environment, since few of us had used that before. At the end of the sprint, we had a working framework for the web application and had a general layout for the different pages on the website.

A.3 Sprint 3 (week 5-6)

The third sprint was all about implementing features out of our backlog. To do this, we divided the functionalities in different parts, and discussed how these parts should work together: Profile, Review, Evaluation, Administration and the general information pages. By parallel implementation of these features, we managed to achieve many of the desired backlog entries in our web application. Next to implementation, we contacted the LISA portal, to get our project authenticated for login with UT accounts. During this sprint, our client was out of office for two weeks, resulting in no client meetings in week 5, 6, and 7.

A.4 Sprint 4 (week 7-8)

At the end of week 7, we thought we implemented all features needed for a successful project. Upon meeting with our client, we filled our backlog again. In sprint 4, we had a bit less time for the project, due to assigned reflection components. This resulted in not finishing the planned items in time, an we had to delay this into sprint 5.

A.5 Sprint 5 (week 9-10)

At the start of the final spring, we had a client meeting to talk about the final adjustments. This resulted in small tweaks, as well as small functionalities that had to be implemented. This was done quickly, giving us time to work on code clean-up, bug-fixes and testing. In week 9, we also went over the entire web application in a group meeting, and pointed out all the small tweaks that were necessary for a refined finished product. In week 10, we mainly finished writing this beautiful report. After finalizing the final web application changes, we created and performed a presentation for the client, including a demonstration of the product.

Appendix B

CSV-Files

B.1 Conference

GroupSet Name	Group Name	Student Number	Login Id	Full Name	Sortable Name	Email
Conference track	Track 1: Intelligent interaction	2728214	s2728214	Aren Merzoian	Merzoian, Aren	a.merzoian@student.utwente.nl
Conference track	Track 2: Data Science	2608782	s2608782	Jelke Schröder	Schröder, Jelke	j.schroder@student.utwente.nl
Conference track	Track 3: Information management	2765128	s2765128	Vivan Biju	Biju, Vivan	v.biju@student.utwente.nl
Conference track	Track 1: Intelligent interaction	2664763	s2664763	Penpeng Xu	Xu, Pengpeng	p.xu-2@student.utwente.nl
Conference track	Track 4: Pervasive computing and IoT	2844397	s2844397	Noah Verheijen	Verheijen, Noah	n.n.d.p.verheijen@student.utwente.nl

FIGURE B.1: Example of a students.csv file

B.2 Deadlines

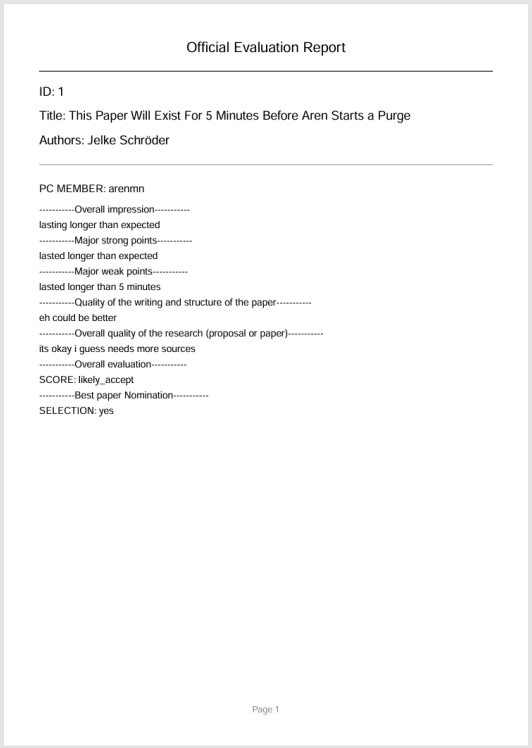
Deadline Name	Deadline Date	Role
Submission Deadline	"2024-01-15T10:00:00"	"chair"
Review Deadline	"2024-02-20T15:30:00"	"supervisor"
Review Deadline	"2024-02-20T15:30:00"	"student"

FIGURE B.2: Example of a deadline.csv file

Appendix C

Export Formats

C.1 Evalutation PDF-file



Official Evaluation Report

ID: 1

Title: This Paper Will Exist For 5 Minutes Before Aren Starts a Purge

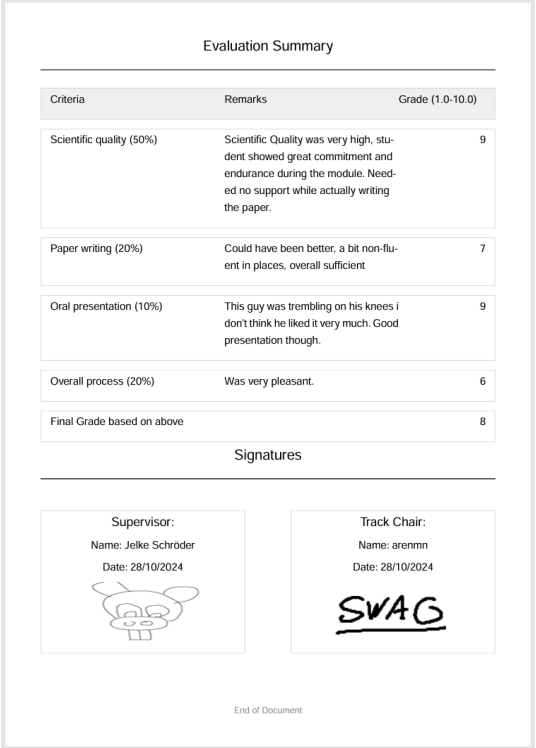
Authors: Jelke Schröder

PC MEMBER: arenmn

----------Overall impression----------
lasting longer than expected
----------Major strong points----------
lasted longer than expected
----------Major weak points----------
lasted longer than 5 minutes
----------Quality of the writing and structure of the paper----------
eh could be better
----------Overall quality of the research (proposal or paper)----------
its okay i guess needs more sources
----------Overall evaluation----------
SCORE: likely_accept
----------Best paper Nomination----------
SELECTION: yes

Page 1

FIGURE C.1: Example of PDF review page



Evaluation Summary

Criteria	Remarks	Grade (1.0-10.0)
Scientific quality (50%)	Scientific Quality was very high, student showed great commitment and endurance during the module. Needed no support while actually writing the paper.	9
Paper writing (20%)	Could have been better, a bit non-fluent in places, overall sufficient	7
Oral presentation (10%)	This guy was trembling on his knees i don't think he liked it very much. Good presentation though.	9
Overall process (20%)	Was very pleasant.	6
Final Grade based on above		8

Signatures

Supervisor:
Name: Jelke Schröder
Date: 28/10/2024

Track Chair:
Name: arenmn
Date: 28/10/2024
SWAG

End of Document

FIGURE C.2: Example of PDF evaluation page