
POZNAN UNIVERSITY OF TECHNOLOGY

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Chapter 1

Introduction

1.1 About system

Eunice is a comprehensive tool for creating and managing university websites. Users have the ability to add content, subpages, and resources such as files. The system, developed within the framework of the engineering work entitled "Development of the CMS system for scientific information", enables effective cooperation between scientific institutions. What's more, it allows users of the system to communicate with those responsible for content through the query module. The following manual describes the most important functionalities of the system.

1.2 License

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Chapter 2

User manual

The application has four levels of permissions: Anonymous User, University User, University Administrator, and System Administrator. Each of the listed roles has access to an increasing number of functionalities of the system. For example, a university administrator can perform all the actions of a university user, and can additionally manage the university. This chapter describes how to use the system, going through the permissions levels.

2.1 Anonymous User

2.1.1 Top application bar

On every application view, there is an application bar at the top of the screen. On this bar there are in turn:

- Application name – after clicking the application name, the user will be redirected to the home page;
- Content search text box – after entering the text, a list of found pages with the specified keyword(s) will be displayed. After clicking on the selected result, the user will be redirected to the page with its content;
- Change interface language menu – click the menu to display a list of available interface languages. Polish and English languages are available;
- Login button – after clicking the button, the user will be redirected to the login page.



Figure 2.1: Interface language selection menu.

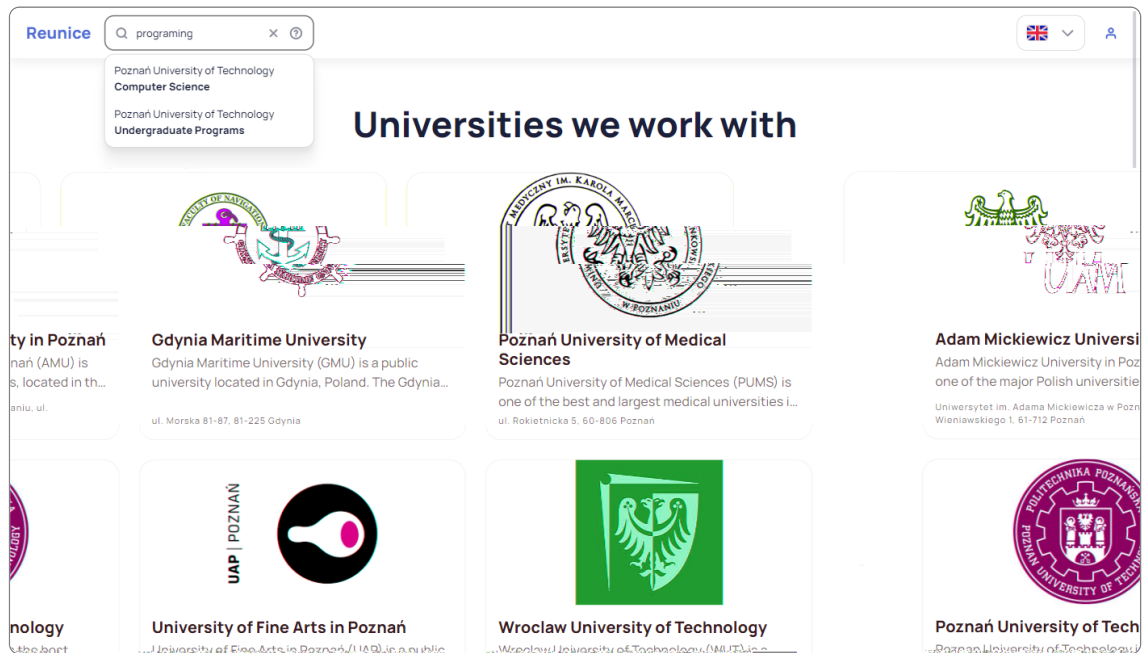


Figure 2.2: Application home page with search results.

2.1.2 Browsing the content of pages

In the system, it is possible to define global pages and pages belonging to a specific university. Visible global pages are only accessible with a corresponding link. By default, a home page is available, the content of which is editable by the main system administrator. Below the content of the homepage is a list of visible universities in the system. When you click on the selected

The screenshot displays the website of the Poznań University of Technology. At the top, there is a 'Reunice' logo and a search bar. A navigation menu on the left includes 'Education' with sub-items like 'Computer Science', 'Graduate Programs', 'Undergraduate Programs', 'Engineering in Electrical Engineering', 'Facilities', 'International Programs', 'Research', and 'Student Life'. The main content area features a header with the university's name and a brief description. Below this, there are sections titled 'About us' and 'Our offer', each with descriptive text. A 'Do you have any questions?' section contains a contact form with fields for 'Email', 'Subject', and 'Your question', followed by a 'Send' button. The footer includes the university's name, the author 'Wojciech Kowalski', and the publication date '29/01/2024, 15:19'.

Figure 2.3: The content of the university's website, containing resources and contact persons.

2.1.3 Use of resources

If any resource is added to a university page, a list of resources will be displayed below the content of the page. When you click on the selected asset, its preview will be displayed. Preview is only supported for image files. For the remaining files, you will see a message that the file cannot be previewed. In either case, the user will be able to download the file. If the resource is an external link type, then hovering over it will display the information that the file is on the external page. Clicking on such a resource will open a new browser tab with the specified URL.

2.1.4 Contact

If at least one contact person is added to a given university page, a contact form will be displayed below the content of the page.

After filling out the contact form correctly, the user will be taken to the page dedicated to this enquiry. In addition, an e-mail will be sent to the specified e-mail address with confirmation of sending the request and a link to the page dedicated to this request.



Figure 2.4: Page dedicated to contact request.

On the inquiry page, the user can reply to previously sent messages. If there is any new message in the contact request, the user will be informed by e-mail to the mailbox provided in the contact form.

2.1.5 Log in to the system

By clicking on the user icon in the top right corner of the screen, the user will be redirected to the login page. After filling out the form correctly, an admin page will be displayed with options depending on the user's role.

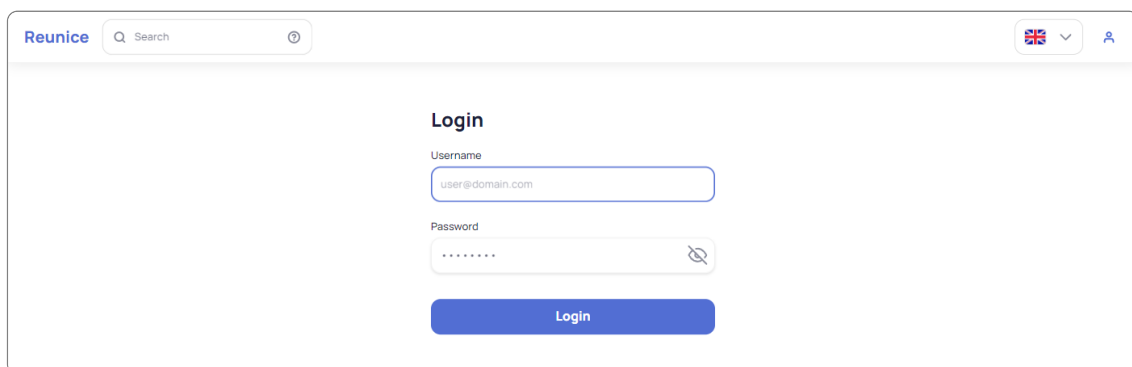


Figure 2.5: Login page

2.2 University user

2.2.1 Top application bar

After logging in to the system, there will be some changes in the top bar of the application:

- An additional ringtone icon will appear in front of the interface language change menu. When you click on this icon, a list of notifications with new contact requests will be displayed;
- The user icon will be replaced by an icon with the user's initials. After clicking on it, the user menu will be displayed, from which you will be able to choose the option to log out, the user profile and go to the administration panel.

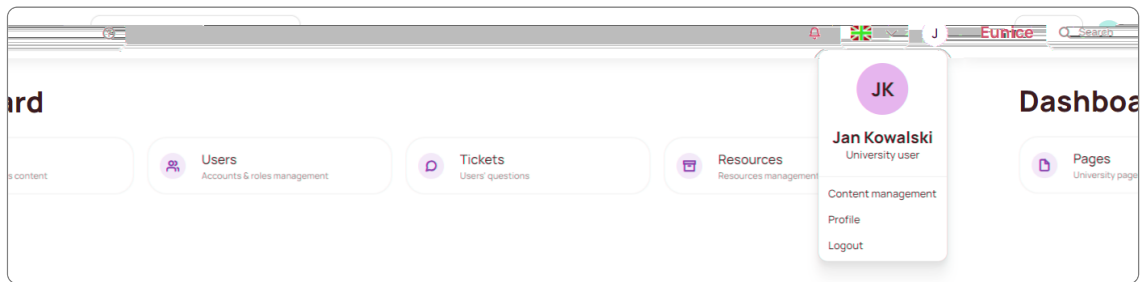


Figure 2.6: Menu of the logged in user.

2.2.2 Administration Panel

The following tiles are available in the administration panel of the university user:

- Websites – managing the content of the websites owned by the university to which you belong;
- Users – a list of users from the same university as you;
- Requests – manage reports that have been created to sites for which you are responsible;
- Resources – Manage the resources of the university to which you belong.

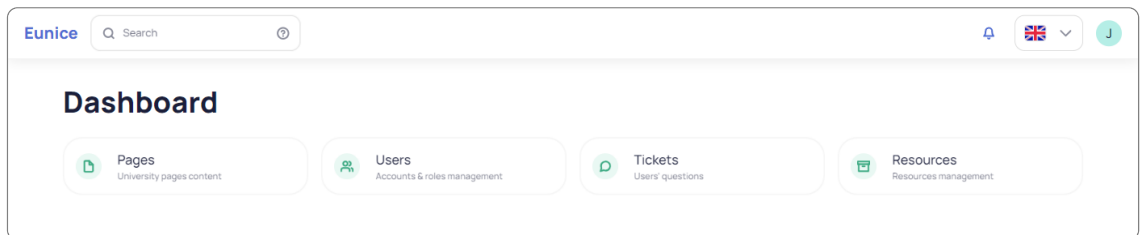


Figure 2.7: Panel administracyjny użytkownika uniwersytetu.

2.2.3 Manage the eel

Name	Description	Author	Last edited
New Resource 1	New Description	Jan Kowalski	29 Jan 2024, 16:03:28
New Resource 2	My attachment	Jan Kowalski	29 Jan 2024, 16:05:17

Figure 2.8: University resources list

When you click the *New Resource* button, the resource creation form will be displayed. In the form, you must provide the name and type of the resource, a description and, depending on the type selected, a link to the resource or a file. After filling out the form correctly, a new resource will be created and the user will be redirected to the resource's details page.

New resource

Name:

Resource type: File

Description: 0/255

File: Choose a file or drop it here

Cancel Save

Figure 2.9: Resource creation form.

When you click the *Edit* button in the resource list view or the resource details view, the resource edit form will be displayed. In the form, you can change the name, description and, depending on the selected type, the link to the resource or file.

The screenshot shows the 'Edit resource' form in the Eunice system. The breadcrumb trail is 'Dashboard > Resources > Resource details > Edit resource'. The form has the following fields:

- Name:** A text input field containing 'New Resource 1'.
- Resource type:** A dropdown menu currently showing 'File'.
- Description:** A large text area containing 'New Description' with a character count of '15/255'.
- File (Optional):** A dashed border box with the text 'Choose a file or drop it here'.
- Fill only in order to change resource file

At the bottom right, there are two buttons: 'Cancel' and 'Save'.

Figure 2.10: Resource update form.

When you click the *Delete* button in the details view, the resource will be deleted. If the delete option is disabled, the user can find out why by hovering over the *Remove* button.

The screenshot shows the 'Resource details' view in the Eunice system. The breadcrumb trail is 'Dashboard > Resources > Resource details'. The page has two tabs: 'Details' (active) and 'Referencing pages'. The 'Details' tab shows the following information:

Details	
Author	Creation date
Jan Kowalski	29 Jan 2024, 16:03:28
Name	Last edited
New Resource 1	29 Jan 2024, 16:03:28
Description	Resource type
New Description	Image

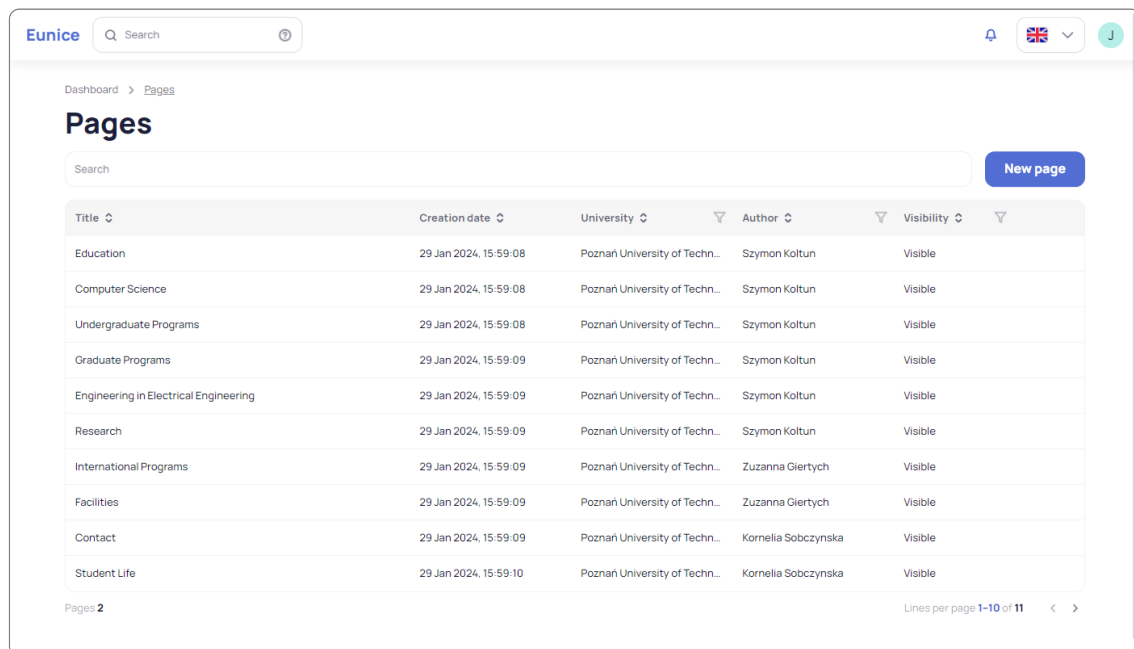
At the bottom right, there are three buttons: 'Download', 'Delete', and 'Edit'. The 'Delete' button is disabled (greyed out). A tooltip is visible over the 'Delete' button with the text: 'Cannot delete resource used in page'.

Figure 2.11: View the details of a resource with the delete option disabled.

In the resource details view, the user can see the author, creation and last edit date, name, resource type, and description. There is also a tab with a list of pages to which the resource is assigned. If the resource is a file, the *Download* button is available to download the file when clicked.

2.2.4 Manage pages

If you select *Pages* on the start page of the administration panel, a list of pages belonging to the university you belong to will be displayed. From this view, you can create a new page, edit or view details of existing pages.



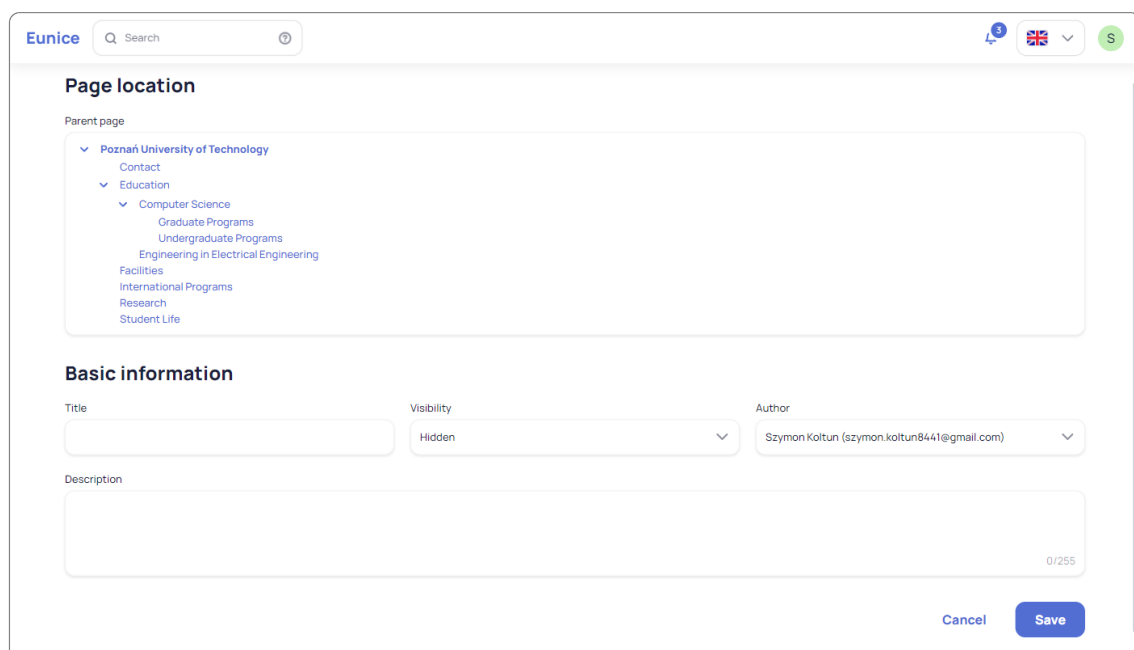
The screenshot shows the 'Eunice' dashboard with a 'Pages' section. A search bar and a 'New page' button are at the top. Below is a table listing various university pages.

Title	Creation date	University	Author	Visibility
Education	29 Jan 2024, 15:59:08	Poznań University of Techn...	Szymon Koltun	Visible
Computer Science	29 Jan 2024, 15:59:08	Poznań University of Techn...	Szymon Koltun	Visible
Undergraduate Programs	29 Jan 2024, 15:59:08	Poznań University of Techn...	Szymon Koltun	Visible
Graduate Programs	29 Jan 2024, 15:59:09	Poznań University of Techn...	Szymon Koltun	Visible
Engineering in Electrical Engineering	29 Jan 2024, 15:59:09	Poznań University of Techn...	Szymon Koltun	Visible
Research	29 Jan 2024, 15:59:09	Poznań University of Techn...	Szymon Koltun	Visible
International Programs	29 Jan 2024, 15:59:09	Poznań University of Techn...	Zuzanna Giertych	Visible
Facilities	29 Jan 2024, 15:59:09	Poznań University of Techn...	Zuzanna Giertych	Visible
Contact	29 Jan 2024, 15:59:09	Poznań University of Techn...	Kornelia Sobczynska	Visible
Student Life	29 Jan 2024, 15:59:10	Poznań University of Techn...	Kornelia Sobczynska	Visible

At the bottom, it indicates 'Pages 2' and 'Lines per page 1-10 of 11'.

Figure 2.12: List of university websites.

When you click the *New Page* button, the page creation form will be displayed. In the form, choose the location of the page in the tree structure of the university pages and provide basic information such as the title, page visibility and description. After saving the form, the user will be taken to the page edit page.



The screenshot shows the 'Page location' and 'Basic information' form in the Eunice system. The 'Page location' section shows a tree structure for 'Poznań University of Technology' with sub-items like 'Contact', 'Education', 'Computer Science', 'Graduate Programs', 'Undergraduate Programs', 'Engineering in Electrical Engineering', 'Facilities', 'International Programs', 'Research', and 'Student Life'. The 'Basic information' section includes fields for 'Title', 'Visibility' (set to 'Hidden'), 'Author' (Szymon Koltun), and 'Description' (0/255 characters). 'Cancel' and 'Save' buttons are at the bottom right.

Figure 2.13: Page creation form.

In the page edit view, the user can edit basic page information such as title, visibility, and description. In addition, the user can edit the content of the page in the WYSIWIG editor, add

resources and contact persons. After saving the form, the user will be redirected to the page with the page details.

The screenshot shows the 'Edit page' interface in the Eunice system. The top navigation bar includes the Eunice logo, a search bar, and user profile information. The breadcrumb trail is 'Dashboard > Pages > Page details > Edit page'. The main heading is 'Edit page'.

Basic information

Title: Research

Visibility: Visible

Author: Szymon Koltun

Description: At Poznań University of Technology, we're dedicated to cutting-edge research that drives innovation. (100/255 characters)

Page content

Content: A rich text editor toolbar is visible above an empty content area.

Page resources

Page resources: File (Jan Kowalski) x

Contact request handlers

Contact request handlers: Jan Kowalski (jan.kowalski@test.edu) x

Buttons: Cancel, Save

Figure 2.14: Interface of update pages.

Using the WYSIWIG editor when editing a page, the user can load a content template if it was created by the administrator. Templates are available in the template selection menu on the right side of the WYSIWIG editor toolbar. Next to the button with the list of templates, there is also a button to preview the created HTML code, which can be used to edit the content of the page.

The screenshot shows the 'Page content' editor. The toolbar includes a 'PUT Template' button. A dropdown menu is open, showing the following options:

- PUT Template
- UniversityTemplate
- Admin Template

The content area displays the following text:

Research Areas

- Artificial Intelligence
- Green Energy Technologies
- Advanced Materials

Figure 2.15: Template selection menu view when editing page content.

In the page details view, the user can see the title, visibility, name of the university, author, date of creation and last edit, description and location of the page. There are also tabs with the content of the page, a list of connected resources and a list of contact persons. In the page details view, there are buttons that allow you to create a subpage for this page, view the page in the application, and delete or edit it. If the delete option is disabled, the user can find out why by hovering over the *Remove* button.

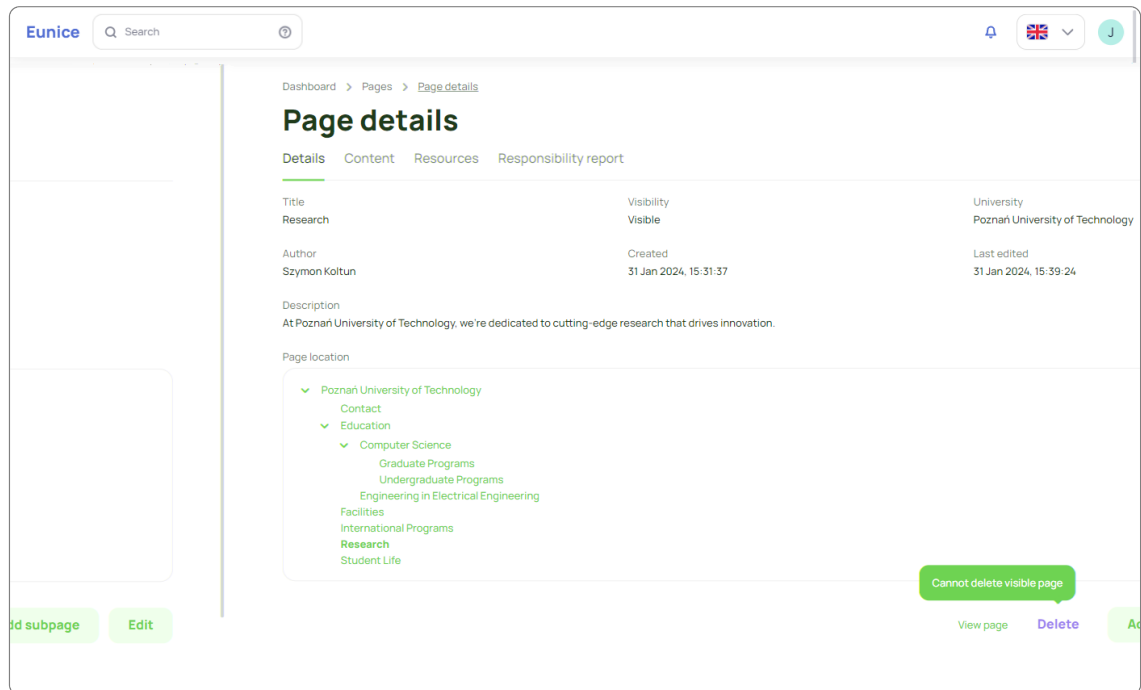


Figure 2.16: View details of the page with the deletion option disabled.

2.2.5 Management of requests

If you select *Submissions* on the start page of the administration panel, a list of queries will be displayed for the pages to which you are assigned as the contact person. The user can assign himself to the pages when editing it. From the view of the list of entries, you can go to the view of a specific entry.

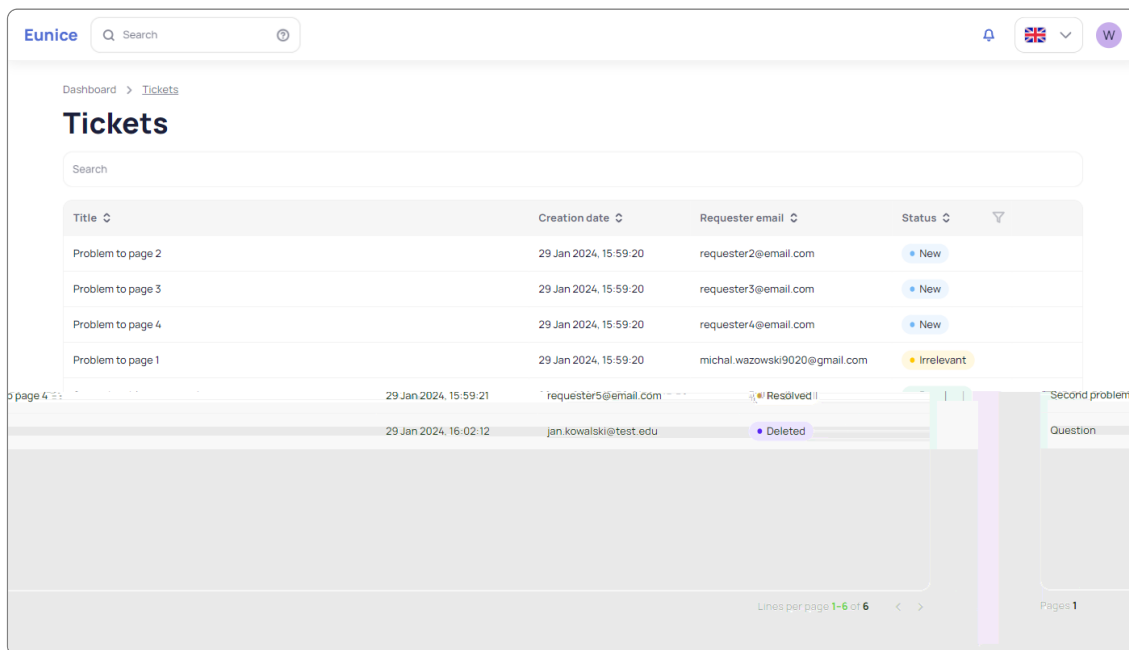


Figure 2.17: Requests list.

When you create a new query to the site, the contact person will be notified by e-mail to their mailbox. All unopened queries will appear in the notification list in the top bar of the application.

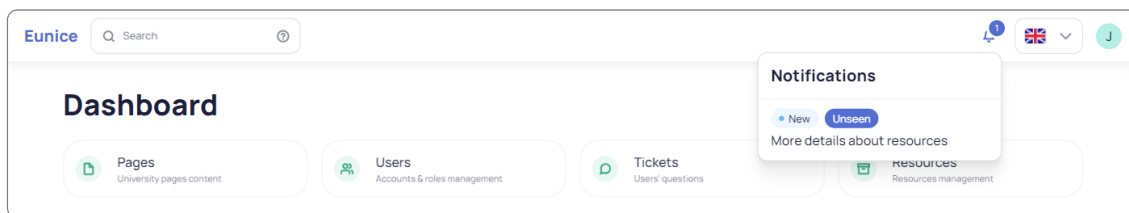


Figure 2.18: New request notification

After clicking on the details button of a given request in the list of requests or notifications, the user will be redirected to the page dedicated to that request.

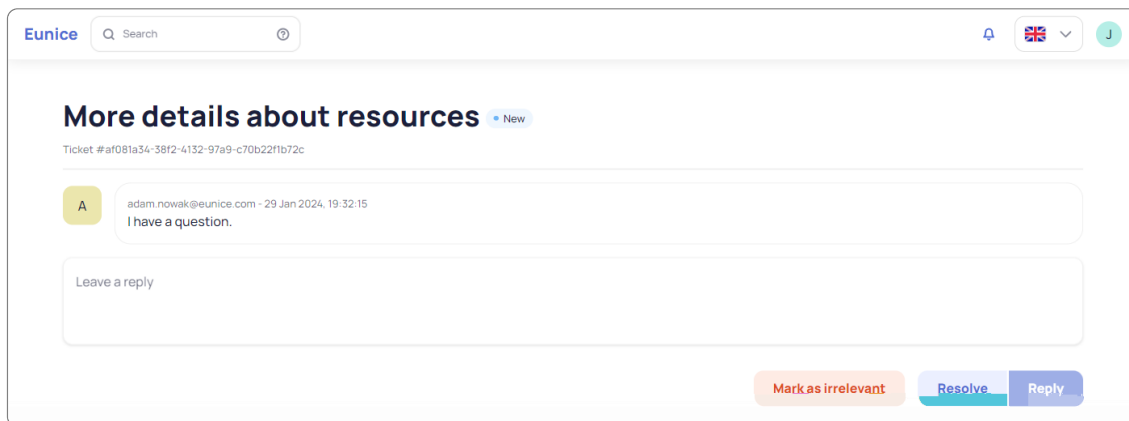


Figure 2.19: Page dedicated to contact request.

The person responsible for contacting a given page may respond to the request, as well as change its status. The current status of the request is displayed next to the request title.

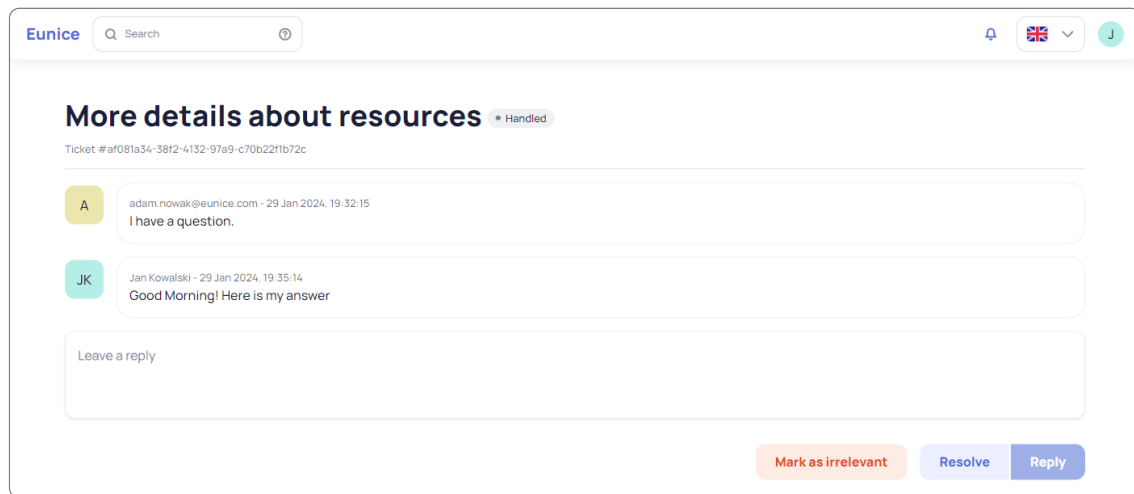


Figure 2.20: A page dedicated to a contact inquiry with an answer.

If a request is marked as resolved, irrelevant or deleted, you will no longer be able to respond to it.

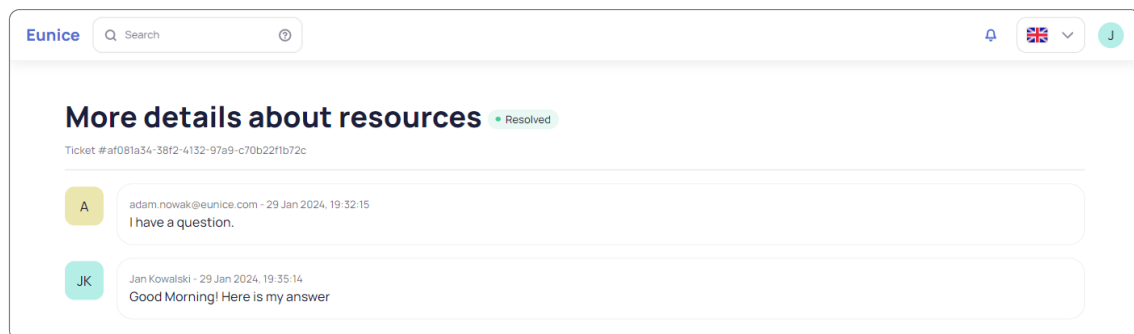


Figure 2.21: The page dedicated to the contact request is now resolved.

The order of transitions between the respective application states is shown in the figure below.

Every new message or a change in the status of a submission sends an email to the user who created the query and to all those responsible for contacting the page.

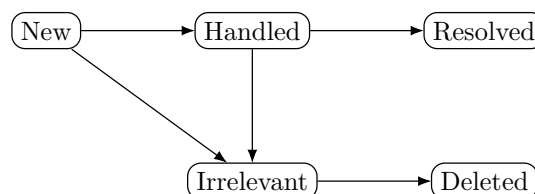


Figure 2.22: Diagram of transitions between contact request statuses

2.2.6 Edit profile

You can select *Profile* from the user menu, which will take you to the profile edit page. On this page you can change your name, surname, email address and phone number. In addition, there is a tab in this view where the user can change their password.

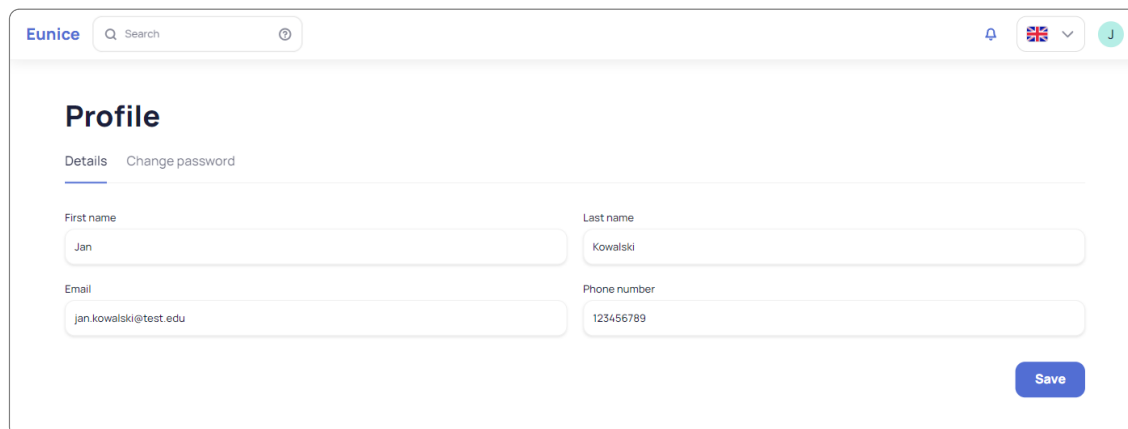
The screenshot shows the 'Profile' page in the Eunice system. At the top, there's a header with the 'Eunice' logo, a search bar, and user navigation icons (notifications, language, and a profile icon with the letter 'J'). Below the header, the 'Profile' title is followed by two tabs: 'Details' (which is active) and 'Change password'. The 'Details' tab contains four input fields: 'First name' with the value 'Jan', 'Last name' with 'Kowalski', 'Email' with 'jan.kowalski@test.edu', and 'Phone number' with '123456789'. A blue 'Save' button is located at the bottom right of the form.

Figure 2.23: User profile edit form.

2.3 University Administrator

2.3.1 Administration Panel

There is also a *Templates* tile on the university admin panel, where you can manage templates for pages.

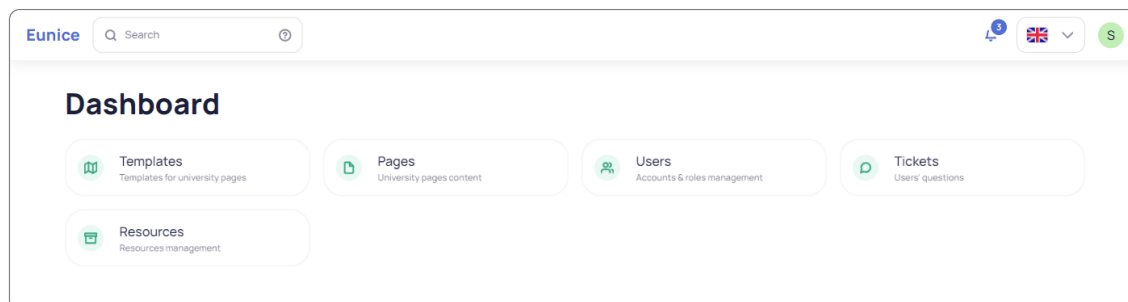


Figure 2.24: University administrator dashboard.

2.3.2 Template Management

When you select *Templates* on the start page of the administration panel, a list of templates available for your university will be displayed. From this view, you can create a new template, edit an existing one, or view details. Templates created by the root administrator can be displayed in this list. Editing public templates is not available to the university administrator.

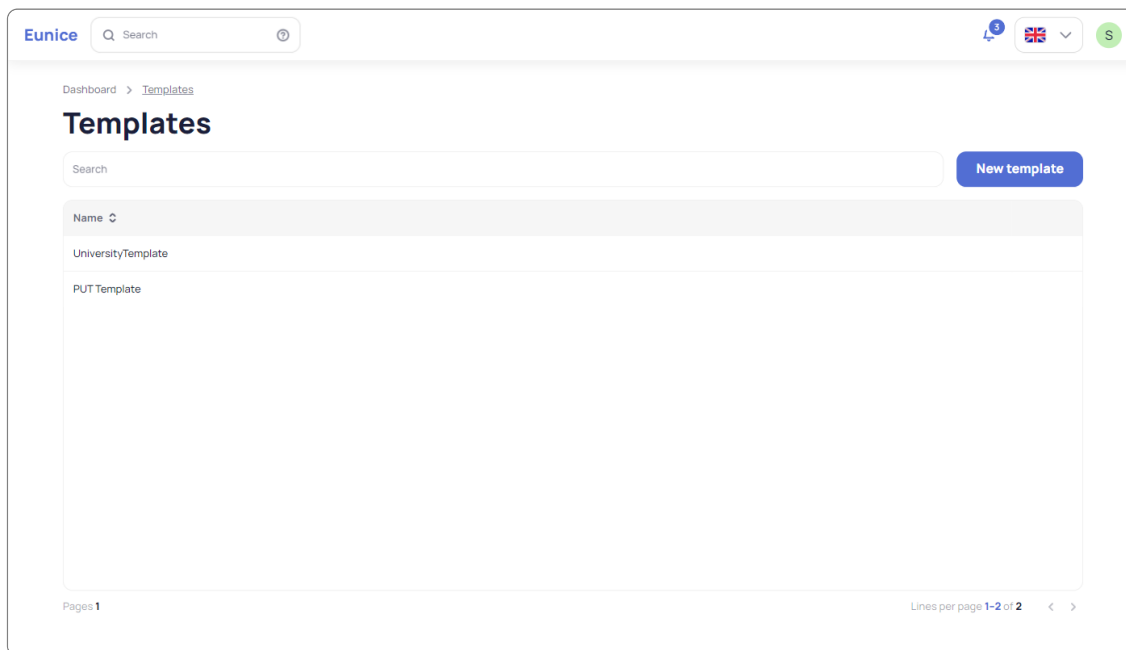


Figure 2.25: University templates list.

When you click *New Template*, the template creation form will be displayed. Enter the name and content of the form. After filling out the form correctly, a new template will be created and the user will be redirected to the template details page.

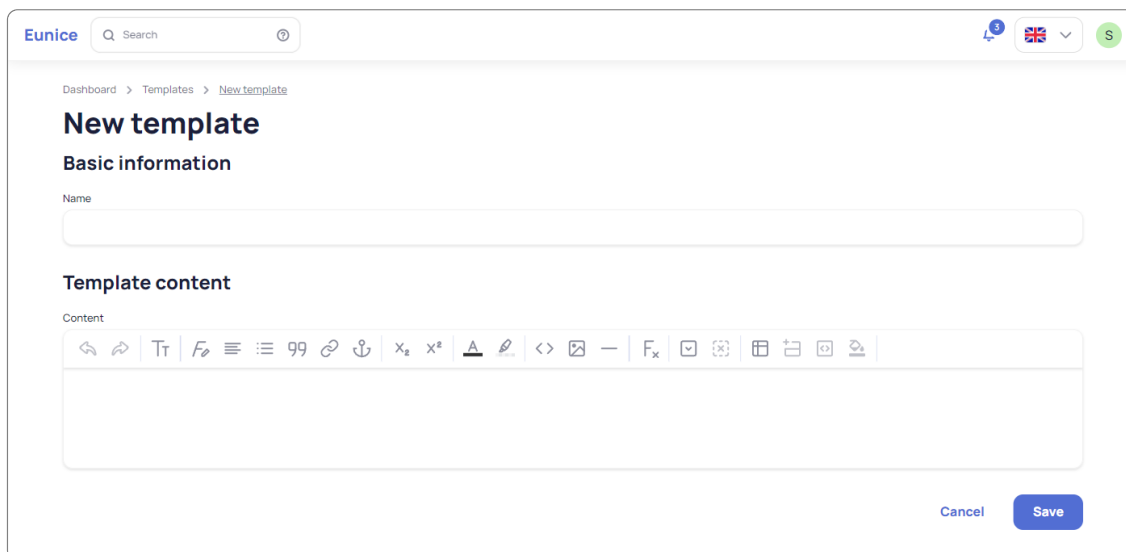


Figure 2.26: Template creation form.

When you click the *Edit* button in the template list view or in the template details view, the template edit form will be displayed. In the form, you can change the name and content of the template.

Figure 2.27: Template editing form.

In the template details view, you can see the name and content of the template. After clicking the *Delete* button, the template will be deleted.

Figure 2.28: Template details view.

The created template can be loaded while editing the page content using the text icon on the right side of the WYSIWIG editor toolbar, as shown in the picture 2.15.

2.3.3 Users Management

If you select *Users* on the start page of the administration panel, a list of users belonging to the same university as the user will be displayed. From this view, you can create a new user, edit existing ones, or view details.

Username	Name	Email	Role	Account status
moderator	Szymon Koltun	szymon.koltun8441@gmail.com	University administrator	Enabled
user	Zuzanna Giertych	zuzanna.giertych1196@gmail.com	University user	Enabled
user_sob	Kornelia Sobczynska	kornelia.sobczynska3202@gmail.c...	University user	Enabled
jan.kowalski	Jan Kowalski	jan.kowalski@test.edu	University user	Enabled

Figure 2.29: University users list.

When you click *New User*, the user creation form will be displayed. In the form, you must provide your user information such as your name, surname, email address and phone number, and account information such as your username, initial password, account status (active/deactivated), or role. After filling out the form correctly, a new user will be created and the user will be redirected to the user's details page. When creating a new account, an e-mail message will be sent to the specified e-mail address with a link to the login page and initial login details.

New user

Basic information

First name:

Last name:

Email:

Phone number:

Account information

Username:

Initial password:

Account state:

Role:

[Cancel](#) [Save](#)

Figure 2.30: User creation form.

When you click the *Edit* button in the user list view or in the user details view, the user edit form will be displayed. In the form, you can change your user data and account information. The

administrator can also change the user's password. After any change is made, an email will be sent informing you about the change and who made the change.

Eunice Search

Dashboard > Users > User details > Edit user

Edit user

Basic information

First name: Jan

Last name: Kowalski

Email: jan.kowalski@test.edu

Phone number: 123456789

Account information

Username: jan.kowalski

Account state: Enabled

Role: University user

Enrolled university: Poznań University of Technology

Change password

New password (Optional)

Fill only in order to change password

Cancel Save

Figure 2.31: User edit form.

In your details view, you can see your first name, last name, email address, phone number, username, account status, role, last login date, and the university you are assigned to. In the details view, there are also tabs with the pages and resources you have created and the pages you have assigned as a contact. After clicking the *Delete* button, the user will be deleted. If the delete option is disabled, the user can find out why by hovering over the *Remove* button.

Eunice Search

Dashboard > Users > User details

User details

Details Pages Resources Responsibility report

First name Jan	Last name Kowalski	Email jan.kowalski@test.edu	Phone number 123456789
Username jan.kowalski	Account state Enabled	Role University user	Last login date 29 Jan 2024, 15:59:55
Enrolled university Poznań University of Technology			

Delete Edit

You cannot delete enabled account

Figure 2.32: View the details of the user with the deletion option disabled.

2.3.4 University User Extensions

Due to higher permissions, some views and forms are different for the university user. An example of such a difference is the ability to change the author of the page while editing the page. All the differences:

- Page creation and editing form – the ability to choose the author of the page;
- Submissions List – The university administrator sees all submissions to pages owned by the university.

2.4 Administrator System

2.4.1 Administration Panel

On the system administrator panel additionally (relative to the university administrator) are available tiles:

- Universities – management of universities;
- Application pages – manage the pages available for the entire application, including the home page;
- Backups – Manage application backups.

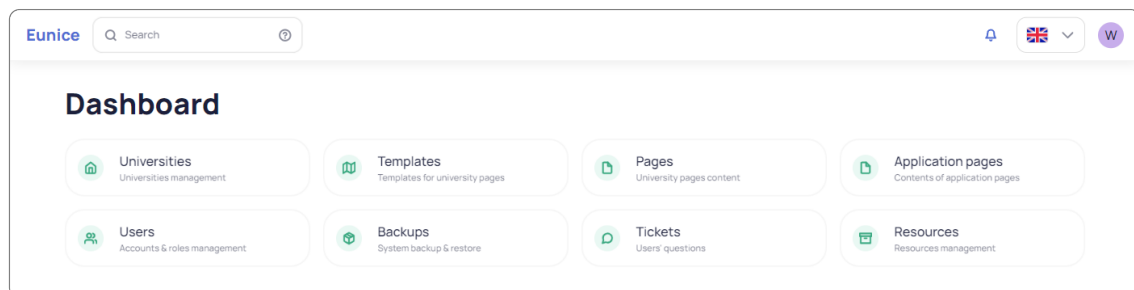


Figure 2.33: System Administrator's Home Panel.

2.4.2 University Management

If you select *Universities* on the start page of the administration panel, a list of universities will be displayed. From this view, you can create a new university, edit an existing one, or view details.

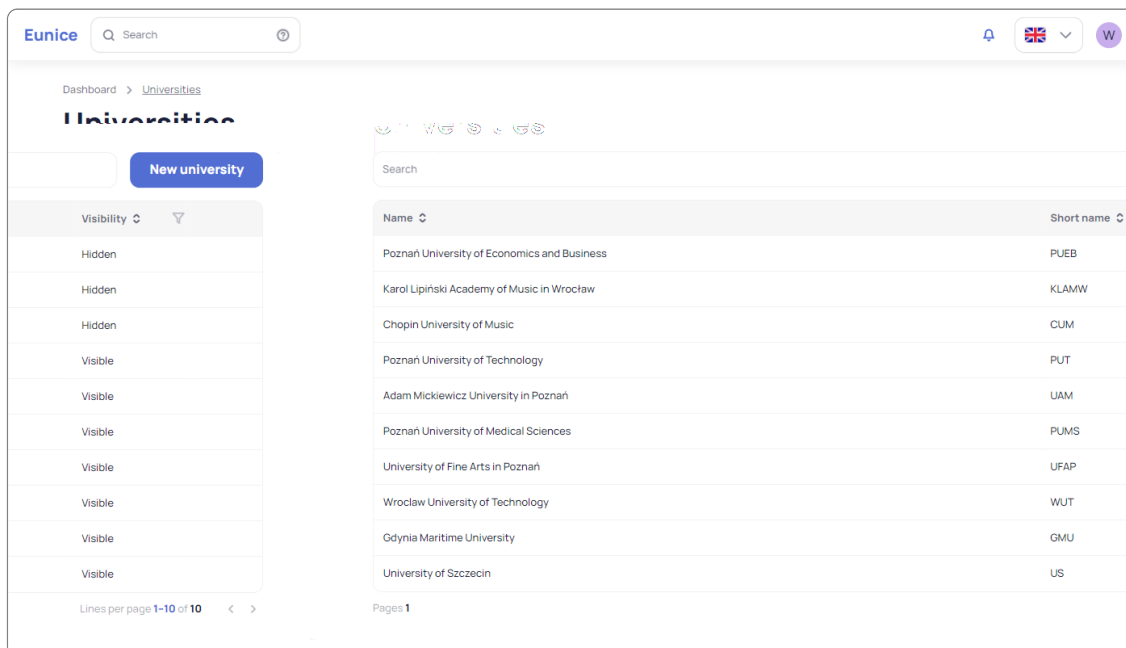


Figure 2.34: Universities list.

When you click the *New University* button, the form for creating a university will be displayed. The form should include the name of the university, its abbreviated name and a description. Optionally, you can also provide an address and a link to a separate university website. After completing the form correctly, a new university will be created in a hidden state along with the home page of that university. The university homepage can only be edited by the university administrator or the system administrator. The only way to remove such a page is to remove the entire university.

New university

Name:

Short name:

Address (Optional):

Website (Optional):

Description:

0/255

[Cancel](#) [Save](#)

Figure 2.35: Form for creating a university.

When you click the *Edit* button in the university list view or in the university details view, the university edit form will be displayed. The form allows you to change the name, short name, visibility, address, website, description, and photo of the university displayed in the list of all universities.

Eunice Search

Dashboard > Universities > University details > Edit university

Edit university

Name: Poznań University of Technology Short name: PUT Visibility: Visible

Address (Optional): Piotrowo 3, 60-965 Poznań Website (Optional): https://www.put.poznan.pl/

Description: blank

University image (Optional): Choose a file or drop it here

Fill only in order to change university image

Cancel Save

Figure 2.36: Form for editing a university.

In the university details view, the user can see the name, abbreviated name, visibility, address, website, description, preview content of the university home page. After clicking the *Delete* button, the university will be deleted. If the delete option is disabled, the user can find out why by hovering over the *Remove* button. In addition, from the university details page, you can go to the form to edit the university homepage and create a new user assigned to that university.

Eunice Search

Dashboard > Universities > University details

University details

Name: Poznań University of Technology Short name: PUT Visibility: Visible

Address: Piotrowo 3, 60-965 Poznań Website: https://www.put.poznan.pl/

Description: blank

Main page content

About us

PUT is the best technical university in the Wielkopolskie voivodeship in western Poland. PUT is the third most frequently chosen university in Poland, as up to six candidates competed for a place there. The university has been awarded the prestigious title of "Research University" by the Ministry of Science and Higher Education. It is also the only university in Poland to have been awarded the "HR Excellence in Research" logo by the European Commission.

Our offer

PUT offers 30 fields of study and 90 specializations in Polish and 15 fields of study in English. The university has 10 faculties, 2 colleges and 1 branch in Kutno. PUT has 21,000 students and 1,300 doctoral students. The university employs 2,500 people, including 1,300 academic teachers.

Edit Edit main page Enroll user Delete

Cannot delete visible university

Figure 2.37: View the details of the university with the deletion option disabled.

2.4.3 Management of application pages

After selecting *Application Pages* on the start page of the administration panel, a list of application pages will be displayed. From this view, you can create a new page, edit an existing page, or view details.

Editing application pages is similar to editing university pages. The difference is that the application pages are visible to all users, and only the system administrator can edit their content. The amount of data required for such a site is less than for the university site. The application pages do not belong to the university, so they do not have a location in the tree structure of the pages. Contact persons cannot be assigned to such sites. Application pages also lack resources.

If the administrator wants to give users the opportunity to go to a new page, they must include a link to it on one of the other pages. For example, the system administrator can create a "About Us" page and add a link to it on the home page of the application.

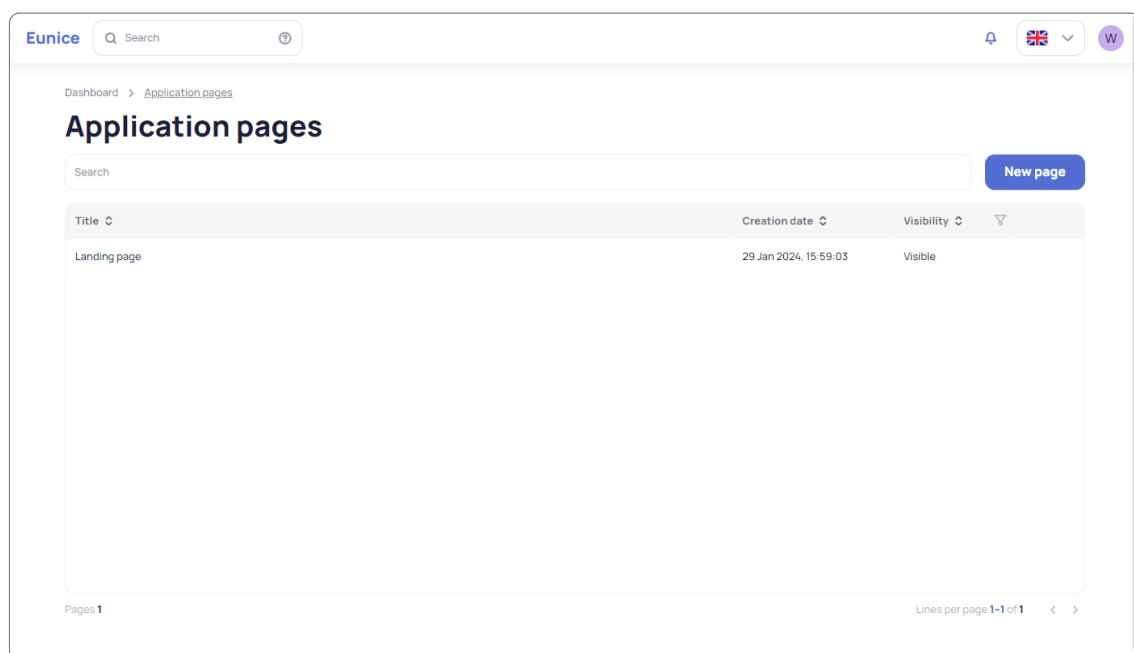


Figure 2.38: List app's pages

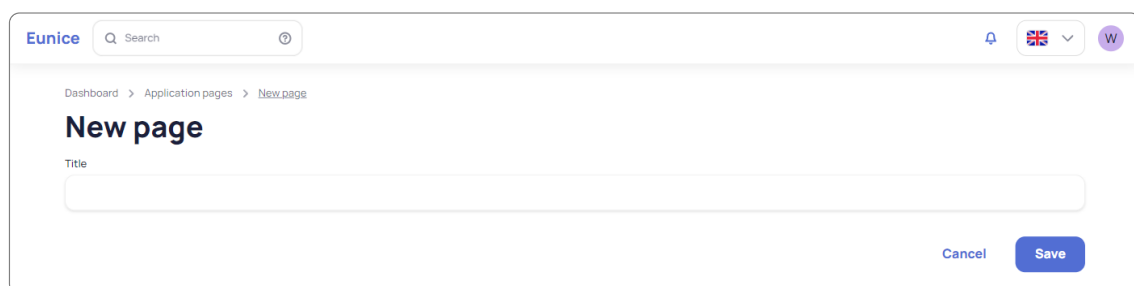
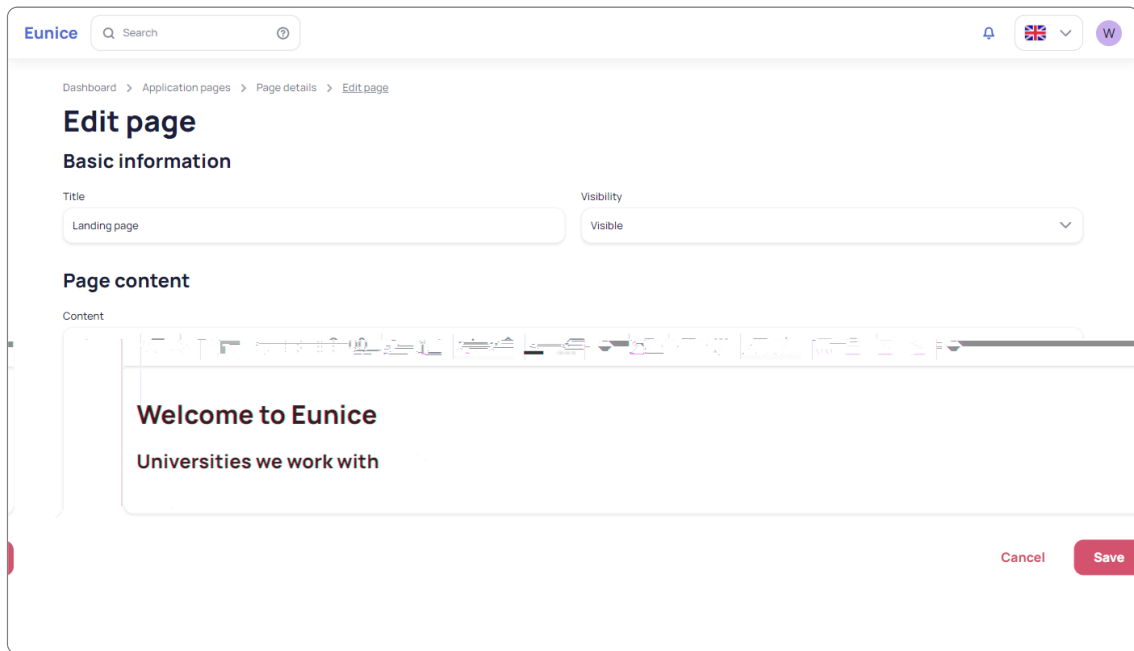


Figure 2.39: Application page creation form.



The screenshot shows the 'Edit page' form in the Eunice administration system. The form is divided into two main sections: 'Basic information' and 'Page content'. In the 'Basic information' section, there is a 'Title' field with the value 'Landing page' and a 'Visibility' dropdown menu set to 'Visible'. The 'Page content' section features a rich text editor with a toolbar and a preview area. The preview area displays the text 'Welcome to Eunice' and 'Universities we work with' with a list of university logos. At the bottom right of the form, there are 'Cancel' and 'Save' buttons.

Figure 2.40: Application page edition form.

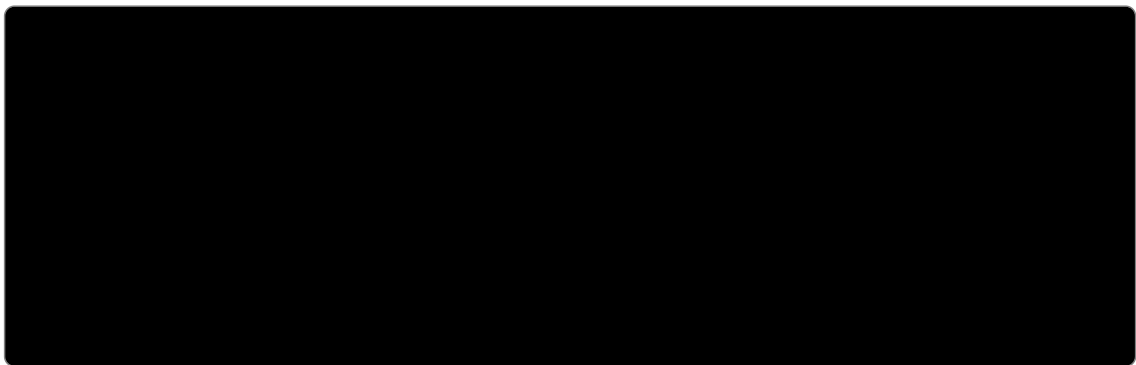


Figure 2.41: View the details of the application page.

2.4.4 Backup Management

When you select *Backups* on the start page of the administration panel, a list of backups will be displayed. From this view, you can create a new backup or download an existing one to your computer.

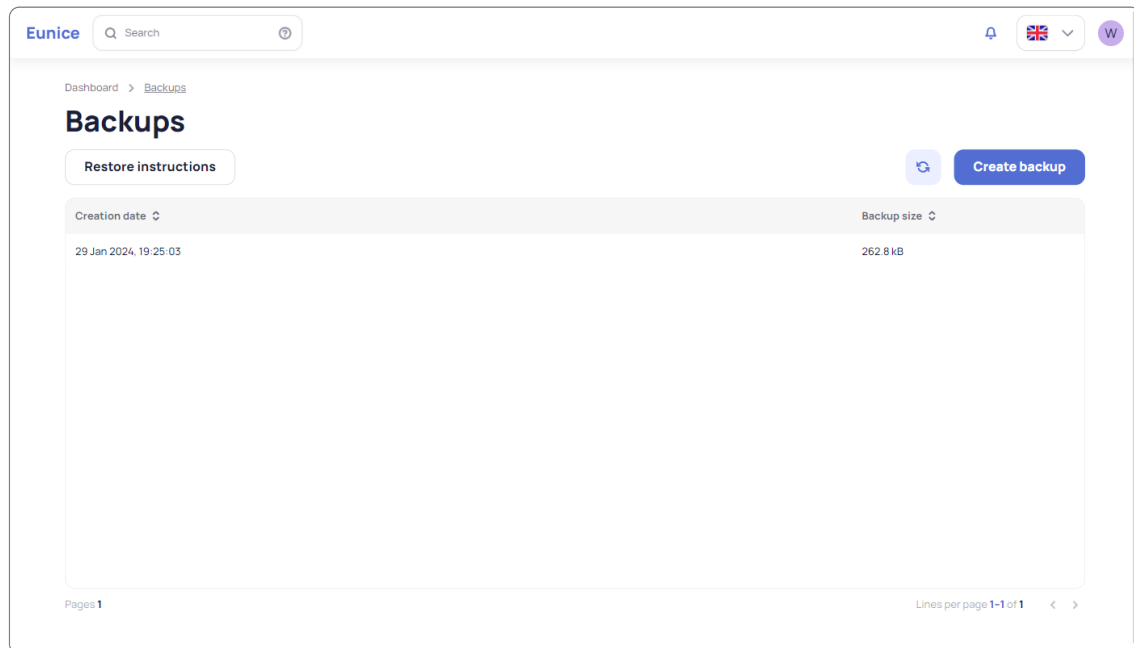


Figure 2.42: Backup list.

After clicking the *Backup* button, the user will be informed about the start of the backup process. When the process is finished, the backup will appear in the list. To see if the copy is ready, there is a refresh list button next to the copy button.

Detailed instructions for creating and restoring a backup are described in the next section 4.

2.4.5 View extensions to the university administrator

Since the system administrator does not belong to any university, some of the forms and views have additional options compared to the university administrator. An example of such an option is the ability to choose the university to which the user belongs. All the differences:

- User creation form – the ability to select the university to which the user belongs;
- Website creation form – the ability to choose the university to which the website belongs;
- Template creation and editing form – the ability to select the university to which the template belongs or to mark the template as available to all universities;
- User List – Ability to filter users by university.

In addition, on all list views, the root administrator can see all resources in the system, e.g. all pages of all universities.

Chapter 3

Instructions for launching the application

This chapter describes different ways to run an application. It is recommended to use Docker containers. Either way, copy the source code to the target machine.

3.1 Docker Compose

The recommended way to run the application is to use Docker Compose V2. To do this, you need to install Docker.

From the root directory of the source code, copy the file `.env.example` to `.env` and configure the application accordingly. When deploying the application to the server, it is especially important to remember about the appropriate configuration of the database and SMTP server.

Then use one of the defined launch profiles or launch named services individually. To do this, you can use one of the following commands.

Starting a container with an appropriate name, e.g. **frontend**

```
docker-compose up -d <service_name>
```

Start a container group with the appropriate profile

```
docker-compose --profile <profile_name> up -d
```

Launching all available containers is possible with the command:

```
docker-compose up -d
```

3.2 Docker

An alternative way to run the application is to build and run Docker containers manually. You can find Dockerfiles in the application source code, which define how Docker images are built.

Table 3.1: Files Dockerfile.

Path in the project	Description
frontend/Dockerfile	Container containing an nginx server serving Angular application files listening on the port 80
backend/Dockerfile	Container serving Java Spring Boot on the port 8080
Dockerfile	A container containing the Java Spring Boot application, which also contains Angular application files. Spring Boot simultaneously serves API and browser application on port 8080

When using Docker containers, be aware of the need to configure the application via `application.yml` before compiling or use environment variables when running containers.

It is also necessary to run PostgreSQL, Typesense and SMTP server.

3.3 Launch without containers

It is possible to run the application without using containers. For this you need to install Java 11, Maven and Node.js 18 with z NPM.

In the `frontend` directory, run the command:

```
npm install
npm run build
```

After the build process is completed, the compiled application will be available in the `dist/eunice` directory. The files can be copied to the `backend/src/main/resources/static` directory for serving by a Spring Boot Java application.

It is also possible to launch the Angular application directly using the command:

```
npm run start
```

Which will start the development server on port 4200. This is not recommended when running a production application.

In the `backend` directory, run the command:

```
mvn spring-boot:run
```

Or compile the application to a `.jar` file and run it:

```
mvn clean package
java -jar target/cms-1.0.jar
```

If you run an application without containers, you need to run the PostgreSQL database, Typesense, and SMTP server yourself and configure them using the `application.yml` file or environment variables.

Chapter 4

Backup

This chapter describes how to create a backup and then restore your data from the backup.

4.1 Create a backup

To create a backup, the primary system administrator should follow these steps:

1. Log in to the administration panel
2. Go to the tab *Backups*
3. Click the *Create Backup* button
4. Wait until the backup is completed

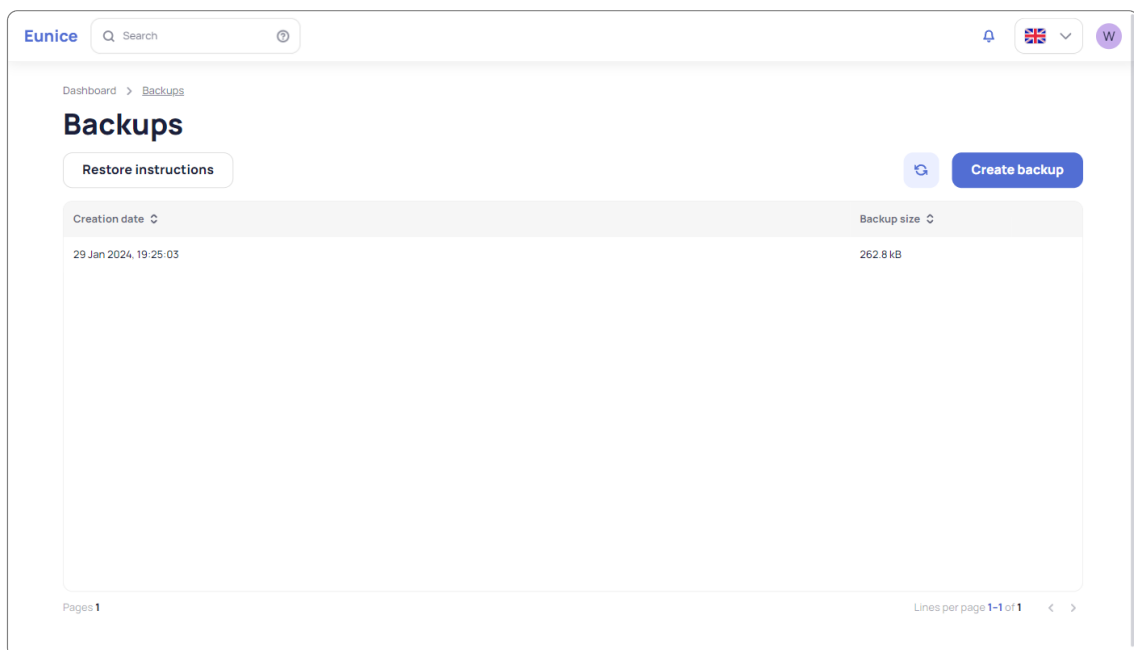


Figure 4.1: *Backups* tab.

This way, a new downloadable copy will appear in the backup list. The copy prepared in this way can be downloaded, for example, to an external hard drive.

Please note that the backup applies to data in the database, files uploaded to the application (`UPLOADS_DIRECTORY` directory), and email template files (`EMAIL_TEMPLATES_DIRECTORY` directory). The backup does not contain environment variables and application configuration files used when starting the application (e.g. database password).

4.2 Restoring a backup

To restore a backup, the primary system administrator should follow these steps:

1. Log in to the server with the application installed
2. Change to the directory configured as `BACKUPS_DIRECTORY`
3. In this directory create the directory `restore`
4. Copy to directory `restore` archive `zip` with backup
5. Restart the Java Spring Boot application (container `backend`)

This way, the application will automatically detect the backup and restore the data from the backup. Please remember that restoring a backup will overwrite all data in the database and the directories listed in the 4.1 subsection. Restoring a backup will not restore the application configuration files used when the application was launched (e.g. database password).

In case of errors, the application will display an appropriate message on the standard output (`backend` container). If successful, the application will launch with the restored data.



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