



Bilkent University

Department of Computer Engineering

CS319 Term Project

Section 1

Group 1A - "lobby"

Project short-name: Pandemica

Final Report

Group Members:

- Efe Beydoğan (21901548)
- Arda Önal (21903350)
- Mert Barkın Er (21901645)
- Emir Melih Erdem (21903100)
- Gökberk Beydemir (21902638)
- Eren Polat (21902615)

Table of Contents

Introduction	3
Project Experience	5
User's Guide	6
Logging in	6
Personal Information	8
Class Information	13
General Information	15
Report & Request	18
Social	21
Build Instructions	22
Build instructions for the frontend	22
Build instructions for the backend	22
Work Allocations	23

Introduction

The final form of the Pandemica software has different screens for students, academic personnel, health center employees and admins. We were able to implement a huge portion of our initial ideas for the features of the application. All users will have predefined accounts on the software and they will be sent their passwords by us to access Pandemica. There are 5 main pages in the application: Personal Information, Class Information, General Information, Social and Report & Request. Upon logging in, all the users have access to the notifications button on the topbar, where they can see all the notifications that they have received. Notifications are sent whenever a new announcement is posted by admins, a neighbor of a student is infected, or an admin manually selects to send a notification to users.

After logging in, the students have access to all 5 main pages in the application. In the Personal Information page, students can view their own information including name, Bilkent ID, age, date of birth, phone number, department and year. They can also view their COVID status and an error is shown if their status is risky, or negative or one of their neighbors is infected. They can also upload their vaccination cards, and their vaccination information is displayed. We couldn't implement the functionality for parsing vaccination files so vaccination information could be automatically filled in, so vaccination information is hard coded inside the code at the moment. They have access to the interface for making test appointments, however this feature is unimplemented right now, since we don't have any access to the actual Bilkent Health Center database and thus we are unable to actually let users make test appointments from Bilkent. In the personal information page there is also a section where every user, including students, can view their test results which are entered by the health center employees.

In the class information page, students can view all of their sections and select their seats in those sections, after which the system automatically determines their neighbors and starts keeping track of all the cases. Should a student become ill, a notification is sent to all of their neighbors to let them know that their status is risky now. The system automatically changes students' statuses to risky if one of their neighbors tests positive for COVID. In the General Information page, every user, including students, can view university wide stats regarding the pandemic, such as the total number of cases, then the number of cases amongst academic personnel, administrative staff, medical staff and students. The first and second dosage percentages are

also displayed. Users can also view the announcements, guidelines and weekly reports from this page. The announcements section is dynamic and the announcements sent by admins are displayed to all of the users. Guidelines and weekly reports pages are not implemented right now, and they don't display dynamic information.

Only the students have access to the Social page. We had originally planned for students to be able to add friends through the system so they could track their friends' statuses. However, we believe this feature wasn't very crucial for our system and chose not to implement it in order to be able to focus on other functionalities of the system.

Finally, students, and all users, can access the Report & Request, where they can fill in 3 kinds of forms: Violation Report, Request Form, Feedback Form. Violation Reports are for notifying the university on violations that the students observe in the university campus. Request Forms are for users to make requests to the university to improve things that they feel are lacking, and are dangerous for keeping the university members healthy. Finally, Feedback Forms are intended to be sent to the application developers (us), regarding the software. This way we can receive users' views on our app and possibly improve it.

Admin users have access to 3 pages: Personal Information, General Information and Report & Request. The Personal Information page includes every functionality mentioned previously for students. Additionally, admins can opt to send notifications from the topbar where they have access to the special screen for sending notifications to the users they select. Also from the Personal Info page, admins are able to go to the page for viewing every users' information. On this screen, admins can search for specific users and view their information such as their ID, role, COVID status, vaccination status etc. Also, next to every user there are "Edit" and "Remove" buttons. These buttons were intended for admins to edit a user's information or remove the user from the system, respectively. However, we didn't have time to properly implement these features and hence, the buttons are non-functional. The General Information page has all the same features explained above for students, but additionally for admins there is a "Make Announcement" button. With this button, admins can post announcements for every university member to see. When a new announcement is posted by an admin, a notification is sent to every user registered to the system. In the Report & Request page, admins can fill in and send all types of reports. Also, they can also view every report

filled in by every user registered to the system, so those reports can be evaluated.

Academic personnel have access to 4 pages: Personal Information, Class Information, General Information, Report & Request. The Personal Information page displays the same information as it does for students and admins, minus the information of department and year, which were displayed for students. In the Class Information page, instructors can see all of their sections and view the sections' seating plans, so they can track the statuses of the classrooms and see who is sitting where in the classroom. The General Information and Report & Request pages for academic personnel are the same as they are for students.

Medical employees have access to 3 pages: Personal Information, General Information and Report & Request. The General Information and Report & Request pages are the same for medical employees and academic personnel. Only addition for medical employees is in the Personal Information page, where they can view every users' information, like admins, and can also enter test results for individual users from this interface. Depending on the results of these tests, statuses of users are updated accordingly on the system.

Project Experience

During the project building process, we spent a lot of time on analysis and design of the project. At the implementation stage, the fact that we spent a lot of time on planning, analysis and design helped us significantly. All of us knew what we were going to build and how we were going to build it. This allowed us to add features and meet the requirements we analyzed very quickly. Before this project and taking this course, we did not pay enough attention to requirement elicitation and designing the project before. In our previous courses and projects, we would immediately jump to implementation and this was very problematic. Everytime we wanted to add a new feature or make changes on the current design, doing it would be very difficult and most of the time, we had to start from scratch. This course taught us how important analysis and design is.

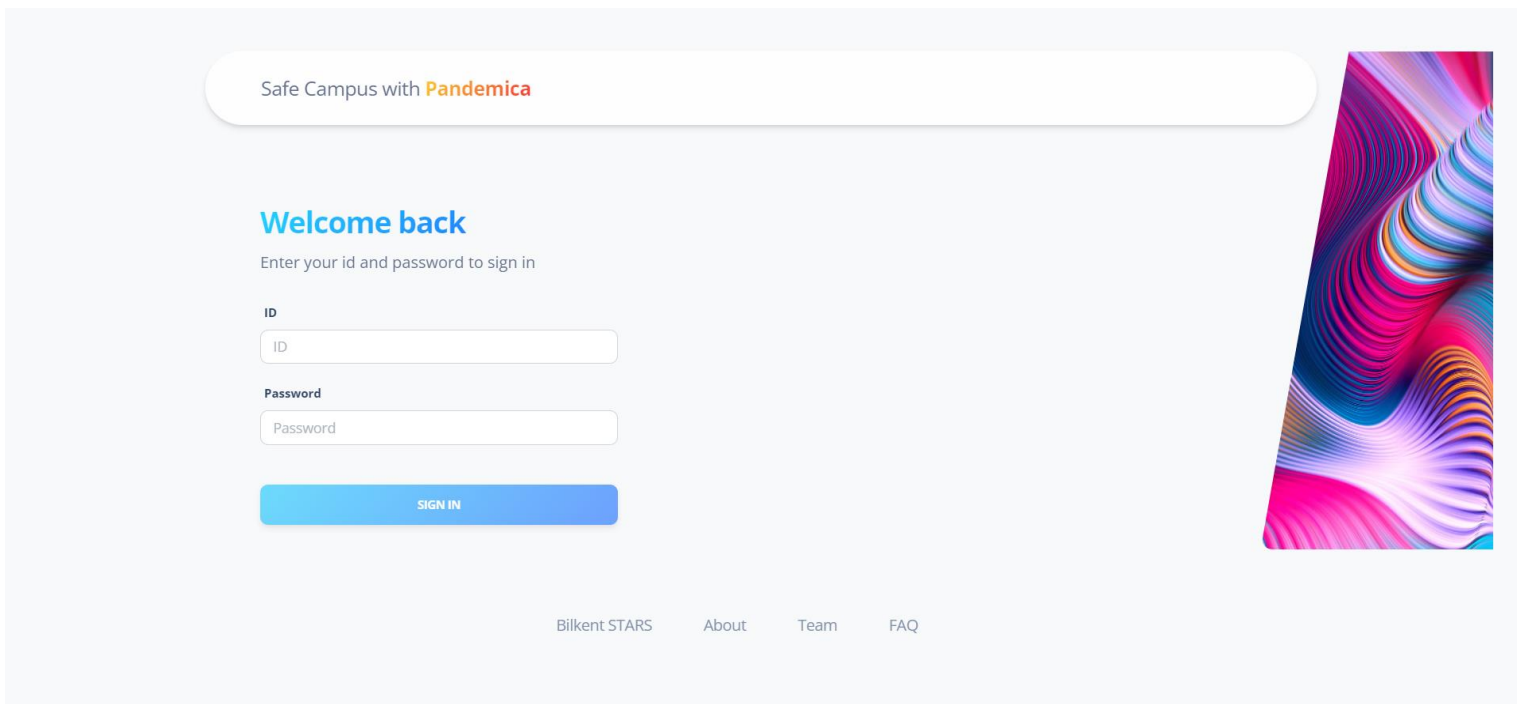
During the semester, since the deadlines of analysis and design reports were due in the second half of the semester, we wanted to start the implementation after finishing the analysis and design report and time was

more limited for the implementation. Implementing the project was difficult due to the time limitation, and it took a lot of effort. We should have started early because at the end, we were not able to implement some of the features that we could have implemented if we had more time. Everything was rushed hence, we may have missed some edge cases that did not appear in our tests. Considering all of this, a very important lesson that this project taught us was that we should not start working on projects at the last minute and try to build them in a better plan, allocating more time to produce a better outcome and make the implementation process more bearable.

User's Guide

Logging in

All users on Pandemica log in using their bilkent ID and their specific password. Successfully logging in directs the user to the "Personal Information" page. Failing while logging in directs the user to the login screen again. There is no "create user" option, as we intended to create the users ourselves and send everyone their own information.



Safe Campus with **Pandemica**

Welcome back

Enter your id and password to sign in

ID

ID

Password

Password

SIGN IN

[Bilkent STARS](#) [About](#) [Team](#) [FAQ](#)

Figure 1: Login page

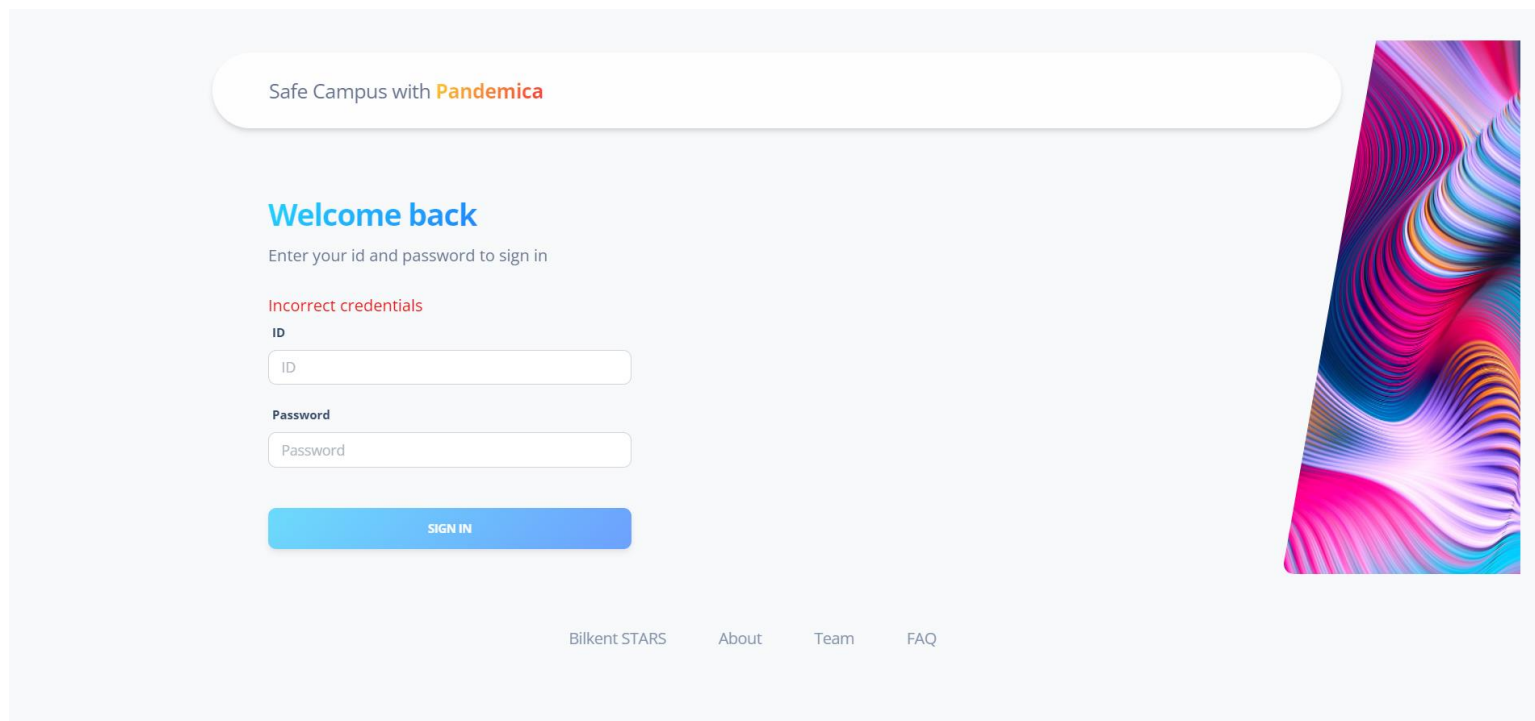


Figure 2: Login page error

Personal Information

After successfully logging in, the user is directed to the personal information page. In the personal information page, the personal information, vaccination information, test results and the covid status of a user is displayed no matter the role of the user. Additional components are also shown to the user based on the role of the user (e.g. A student sees their neighbors' covid status, if a neighbor is infected the user is warned.)

Pandemica Student

Search functionality Log off

Personal Information

Name	Mert Barkın Er
Bilkent ID	21900000
Age	20
Date of Birth	2001-09-02
Phone Number	53112312123
Department	CS
Year	3

COVID Status
POSITIVE
You are not allowed on campus.

Neighbors
✓ No infected/risky neighbors

[UPDATE SEATS](#)

Vaccination

[+ ADD VACCINATION FILE](#)

DATE	TYPE
2021-09-20	BIONTECH
2022-01-18	BIONTECH

Test Appointment

No appointment.

[MAKE APPOINTMENT](#)

Tests

✓ 0 tests done

DATE	TYPE	RESULT
------	------	--------

Figure 3: Personal Information page for student

Admins can press the view all button to view every users' information:

The screenshot shows the Admin interface for the Pandemica system. The left sidebar contains navigation links: Pandemica, Personal Information, General Information, and Report & Request. The main header includes the Admin role, a search bar, a 'SEND NOTIFICATION' button, and a 'Log off' link. The main content area is titled 'View and Modify User Information' and features a 'VIEW ALL' button. The user information is displayed in three sections: Personal Information, COVID Status, Vaccination, and Tests.

Personal Information

Name	Efe Beydoğan
Bilkent ID	21900001
Age	20
Date of Birth	2001-04-25
Phone Number	53112312123

COVID Status
RISKY
You are not allowed on campus.
Please get tested.

Vaccination

DATE	TYPE
2021-08-16	SINOVAC
2021-10-31	SINOVAC

Test Appointment
No appointment.

Tests
✓ 0 tests done

DATE	TYPE	RESULT
------	------	--------

Figure 4: Personal Information page for admins

The screenshot shows the Medical Employee interface for the Pandemica system. The left sidebar contains navigation links: Pandemica, Personal Information, General Information, and Report & Request. The main header includes the Medical Employee role, a search bar, and a 'Log off' link. The main content area is titled 'View and Modify User Information' and features a 'VIEW ALL' button. The user information is displayed in three sections: Personal Information, COVID Status, Vaccination, and Tests.

Personal Information

Name	Arda Onal
Bilkent ID	21900002
Age	20
Date of Birth	2001-01-12
Phone Number	53112312123

COVID Status
NEGATIVE

Vaccination

DATE	TYPE
2021-07-02	BIONTECH
2021-11-05	BIONTECH

Test Appointment
No appointment.

Tests
✓ 0 tests done

DATE	TYPE	RESULT
------	------	--------

Figure 5: Personal Information page for medical employees

Pandemica

Academic Personnel

Search functionality
Log off

Personal Information
Class Information
General Information
Report & Request

Personal Information

NameEray Tuzun
Bilkent ID21900004
Age44
Date of Birth1977-09-18
Phone Number53112312123

COVID Status
NEGATIVE

Vaccination
+ ADD VACCINATION FILE

DATE
TYPE

2021-03-21
BIONTECH

2021-05-20
BIONTECH

Test Appointment
No appointment.
MAKE APPOINTMENT

Tests
0 tests done

DATE
TYPE
RESULT

Figure 6: Personal Information page for academic personnel

Admins and Medical Employees can view all the users, and their statuses by clicking on the view all button on their respective Personal Info pages:

Pandemica

Admin

Search functionality
SEND NOTIFICATION
Log off

Personal Information
General Information
Report & Request

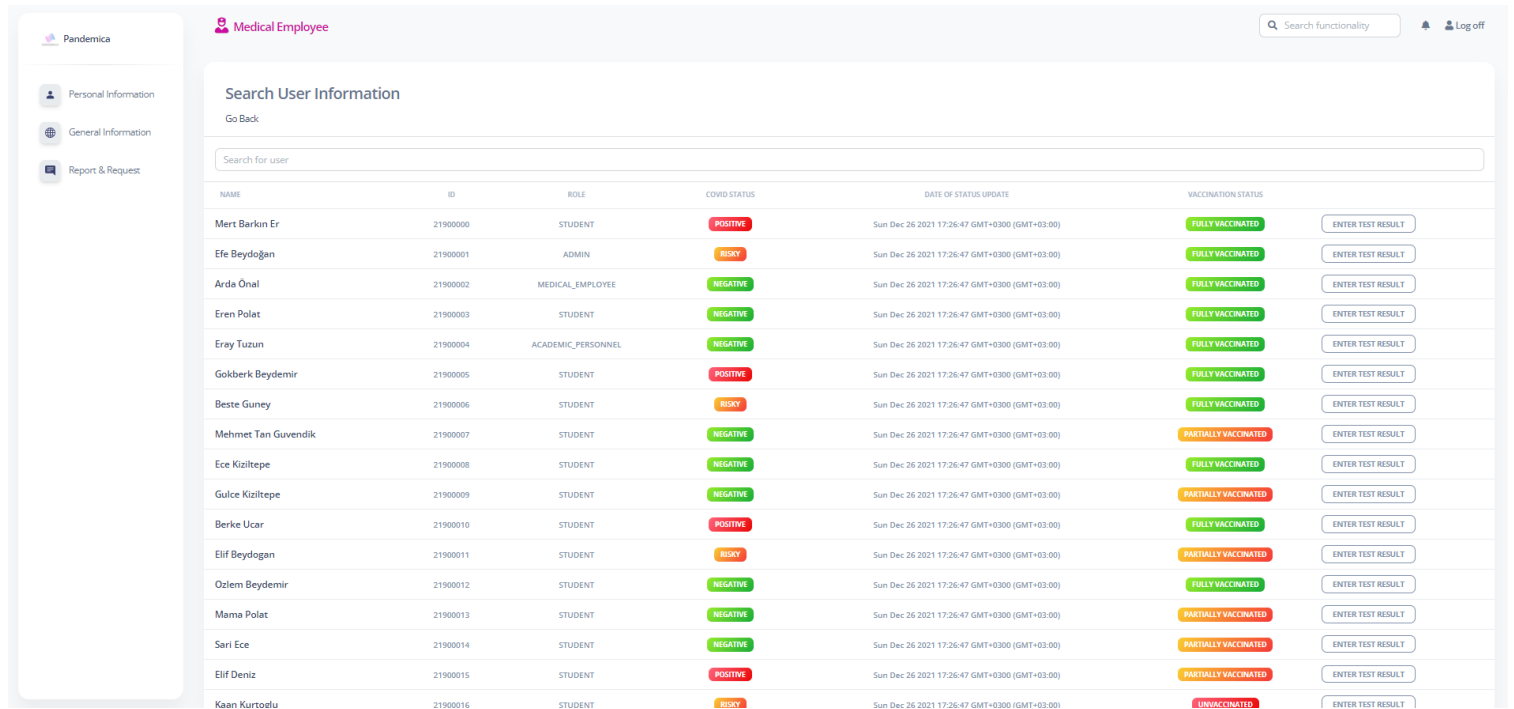
Search User Information
Go Back

Search for user

NAME	ID	ROLE	COVID STATUS	DATE OF STATUS UPDATE	VACCINATION STATUS		
Mert Barkın Er	21900000	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Efe Beydoğan	21900001	ADMIN	RISKY	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Arda Önal	21900002	MEDICAL_EMPLOYEE	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Eren Polat	21900003	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Eray Tuzun	21900004	ACADEMIC_PERSONNEL	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Gökberk Beydemir	21900005	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Beste Güney	21900006	STUDENT	RISKY	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Mehmet Tan Guvendik	21900007	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	EDIT	REMOVE
Ece Kızıltepe	21900008	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Gülce Kızıltepe	21900009	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	EDIT	REMOVE
Berke Uçar	21900010	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Elif Beydoğan	21900011	STUDENT	RISKY	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	EDIT	REMOVE
Özlem Beydemir	21900012	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	EDIT	REMOVE
Mama Polat	21900013	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	EDIT	REMOVE
Sarı Ece	21900014	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	EDIT	REMOVE
Elif Deniz	21900015	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:19 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	EDIT	REMOVE

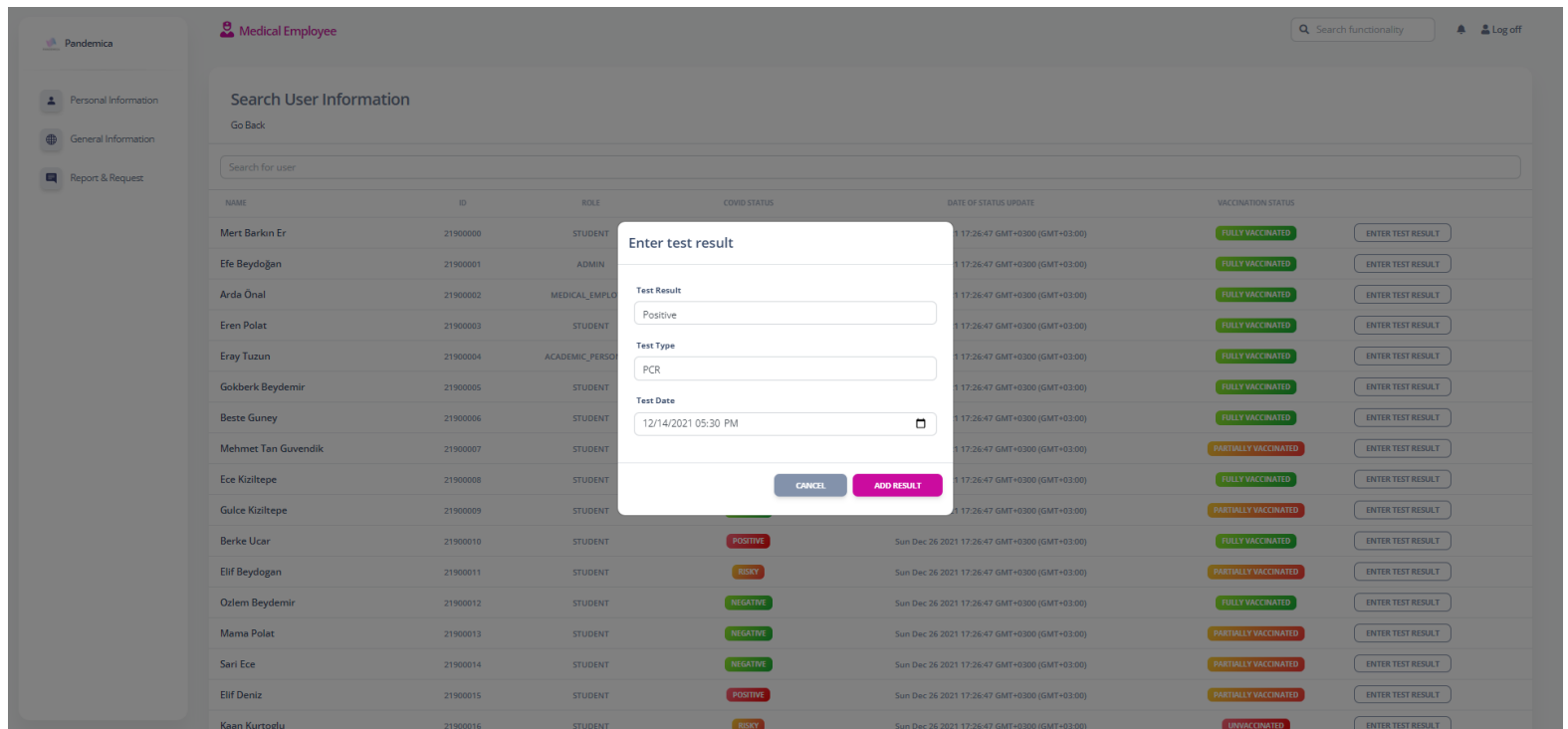
Figure 7: User list for admins

Medical Employees can enter test results by “Enter Test Result” button.



NAME	ID	ROLE	COVID STATUS	DATE OF STATUS UPDATE	VACCINATION STATUS	
Mert Barkın Er	21900000	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Efe Beydoğan	21900001	ADMIN	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Arda Önal	21900002	MEDICAL_EMPLOYEE	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Eren Polat	21900003	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Eray Tuzun	21900004	ACADEMIC_PERSONNEL	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Gökberk Beydemir	21900005	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Beste Güney	21900006	STUDENT	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Mehmet Tan Guvendik	21900007	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Ece Kızıltepe	21900008	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Gülce Kızıltepe	21900009	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Berke Uçar	21900010	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Elif Beydoğan	21900011	STUDENT	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Özlem Beydemir	21900012	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Mama Polat	21900013	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Sari Ece	21900014	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Elif Deniz	21900015	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Kaan Kurtuluş	21900016	STUDENT	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	UNVACCINATED	ENTER TEST RESULT

Figure 8: User list for health center employees



NAME	ID	ROLE	COVID STATUS	DATE OF STATUS UPDATE	VACCINATION STATUS	
Mert Barkın Er	21900000	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Efe Beydoğan	21900001	ADMIN	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Arda Önal	21900002	MEDICAL_EMPLOYEE	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Eren Polat	21900003	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Eray Tuzun	21900004	ACADEMIC_PERSONNEL	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Gökberk Beydemir	21900005	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Beste Güney	21900006	STUDENT	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Mehmet Tan Guvendik	21900007	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Ece Kızıltepe	21900008	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Gülce Kızıltepe	21900009	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Berke Uçar	21900010	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Elif Beydoğan	21900011	STUDENT	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Özlem Beydemir	21900012	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	FULLY VACCINATED	ENTER TEST RESULT
Mama Polat	21900013	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Sari Ece	21900014	STUDENT	NEGATIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Elif Deniz	21900015	STUDENT	POSITIVE	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	PARTIALLY VACCINATED	ENTER TEST RESULT
Kaan Kurtuluş	21900016	STUDENT	RISKY	Sun Dec 26 2021 17:26:47 GMT+03:00 (GMT+03:00)	UNVACCINATED	ENTER TEST RESULT

Enter test result

Test Result
Positive

Test Type
PCR

Test Date
12/14/2021 05:30 PM

CANCEL ADD RESULT

Figure 9: Entering test result interface for medical employees

Admins can create notifications for users to view. “Send notification” button can be found on the top bar, if the user is an admin.

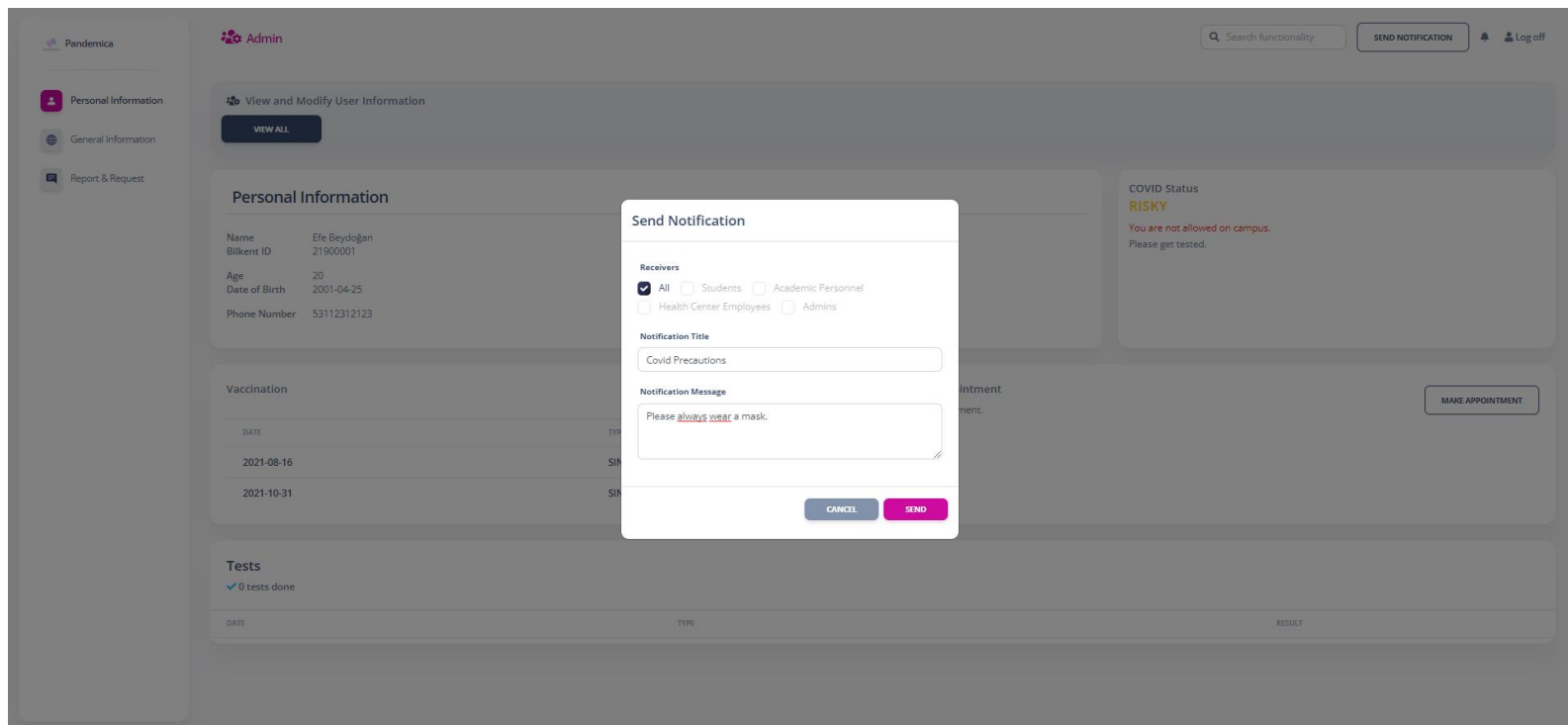


Figure 10: Send notification interface for admins

Class Information

Students and Instructors can access Class Information. Students can view their sections and edit their seats by clicking the “Update Seat” button. Instructors can view their sections and see the seating plan.

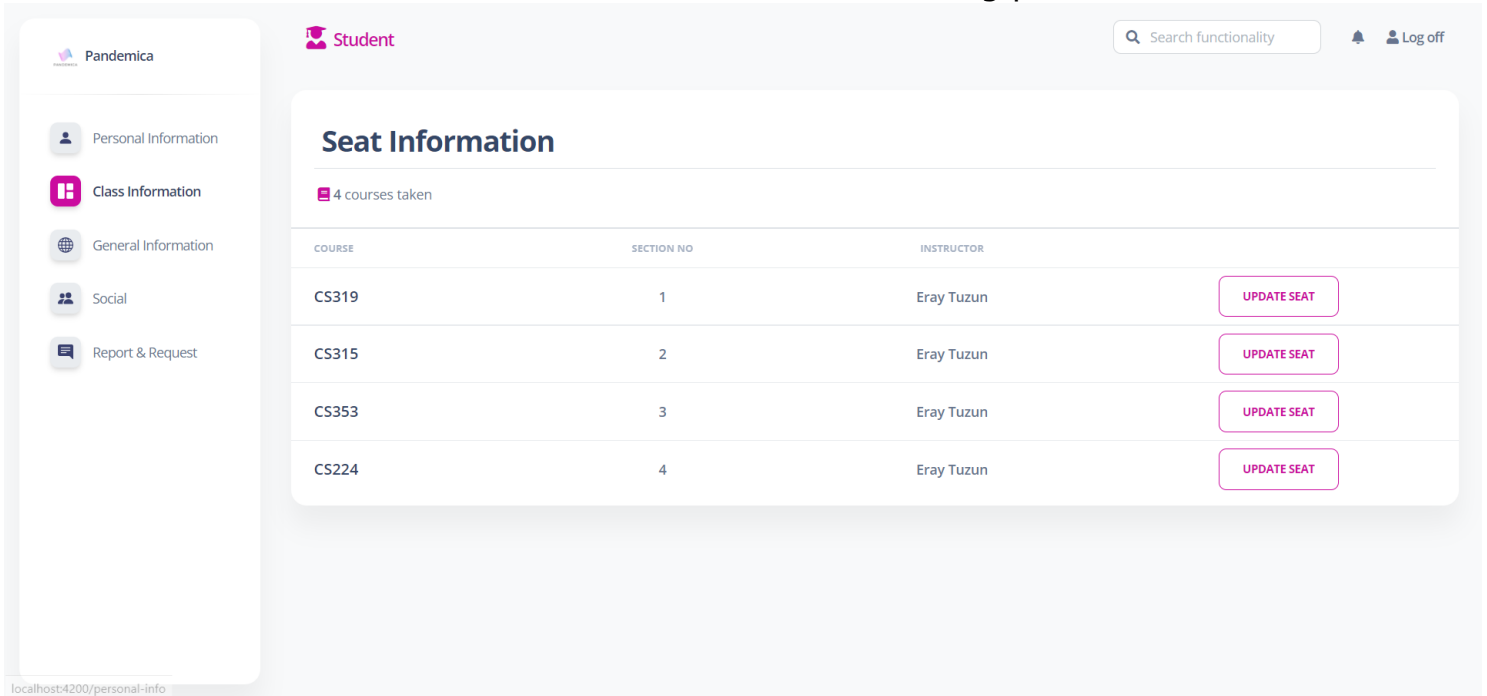


Figure 11: Class Information page for students

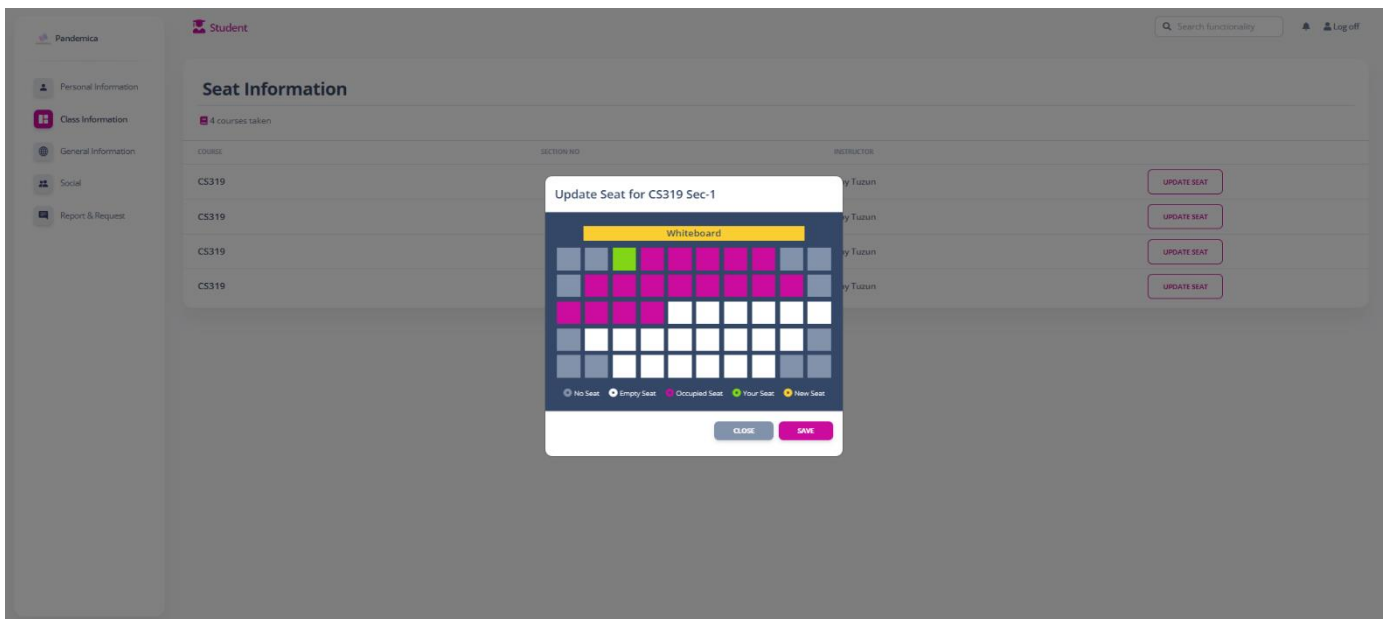


Figure 12: Seat selection interface for students

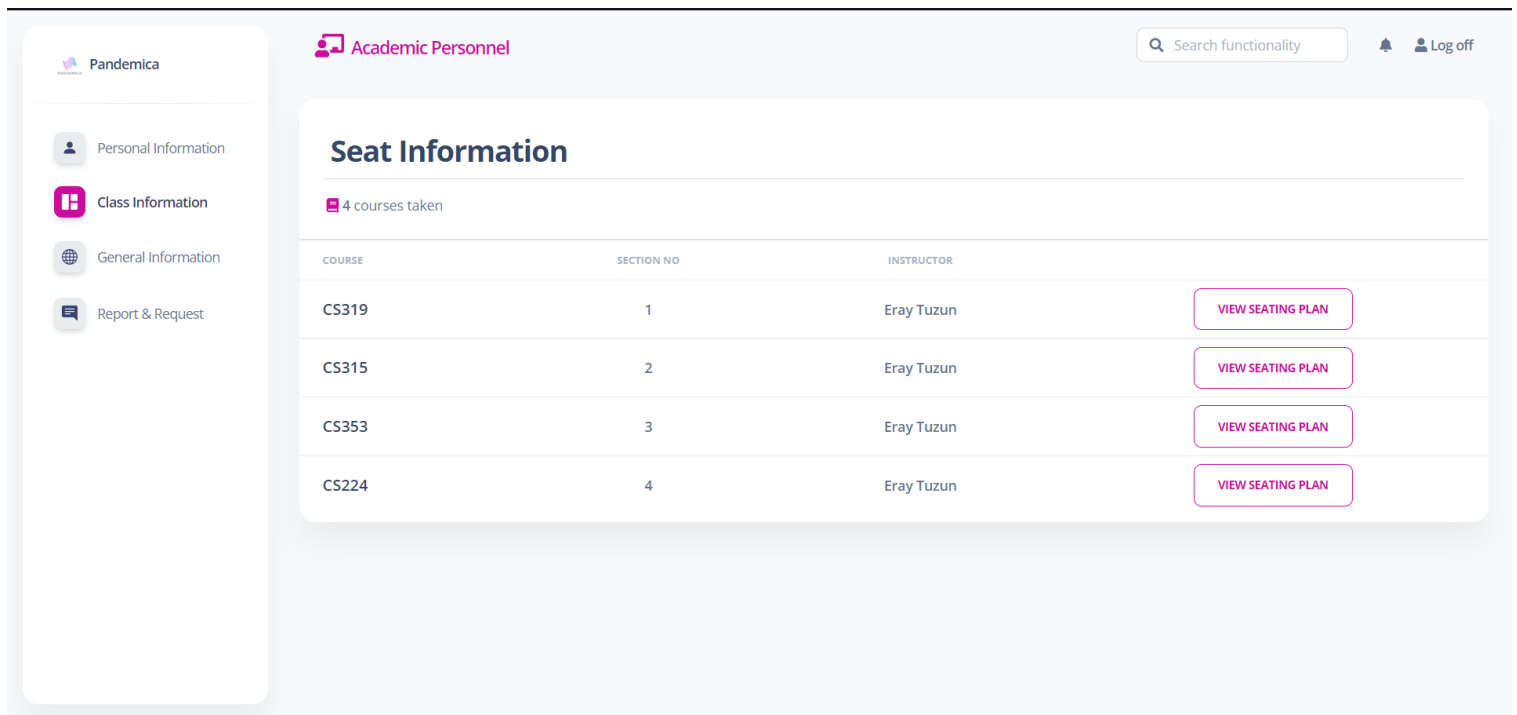


Figure 13: Class Information page for academic personnel

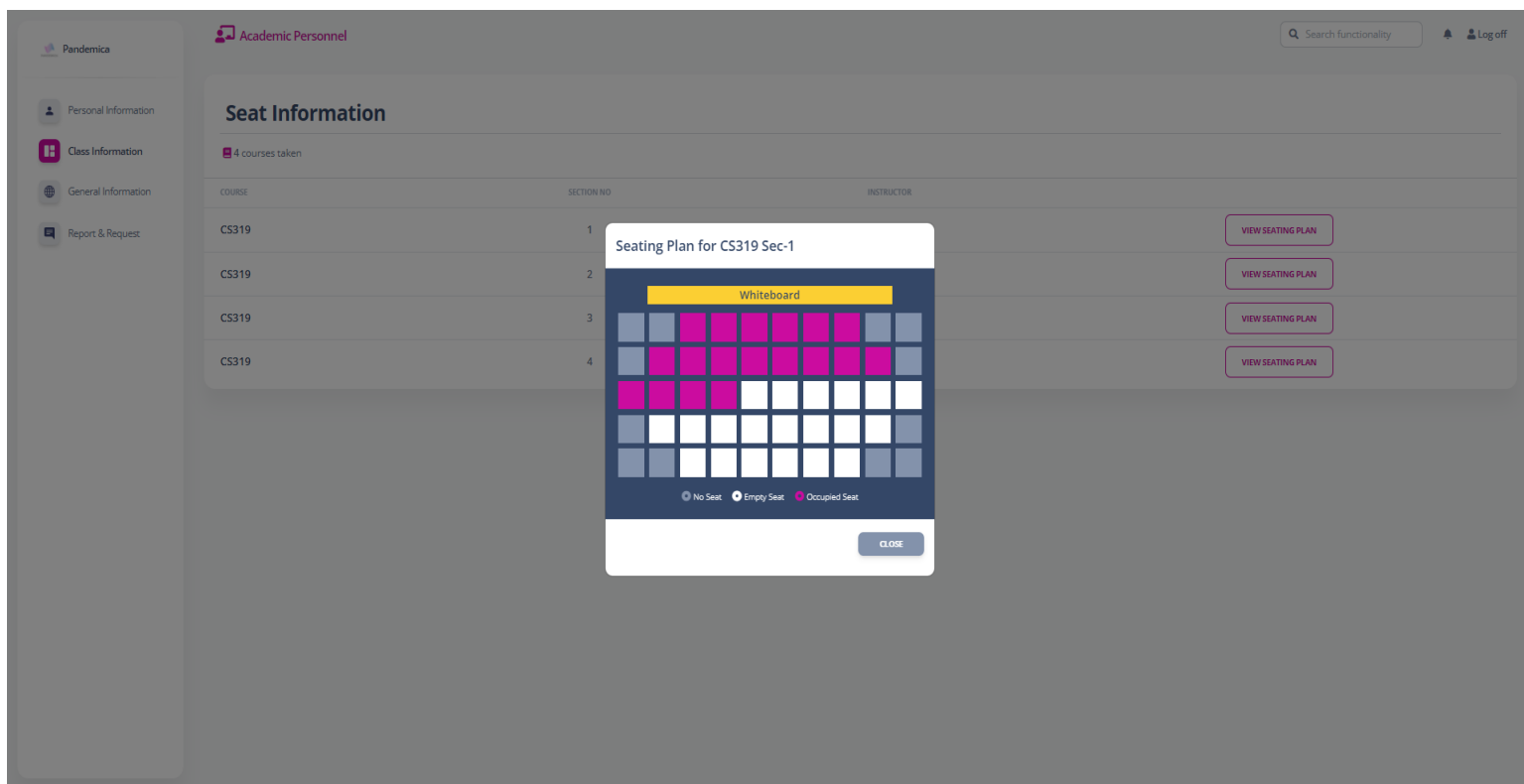


Figure 14: Seating plan interface for academic personnel

General Information

In the General Information page, the university-wide statistics are shown to the user regardless of the user's role. Admins can create announcements for the users to view.

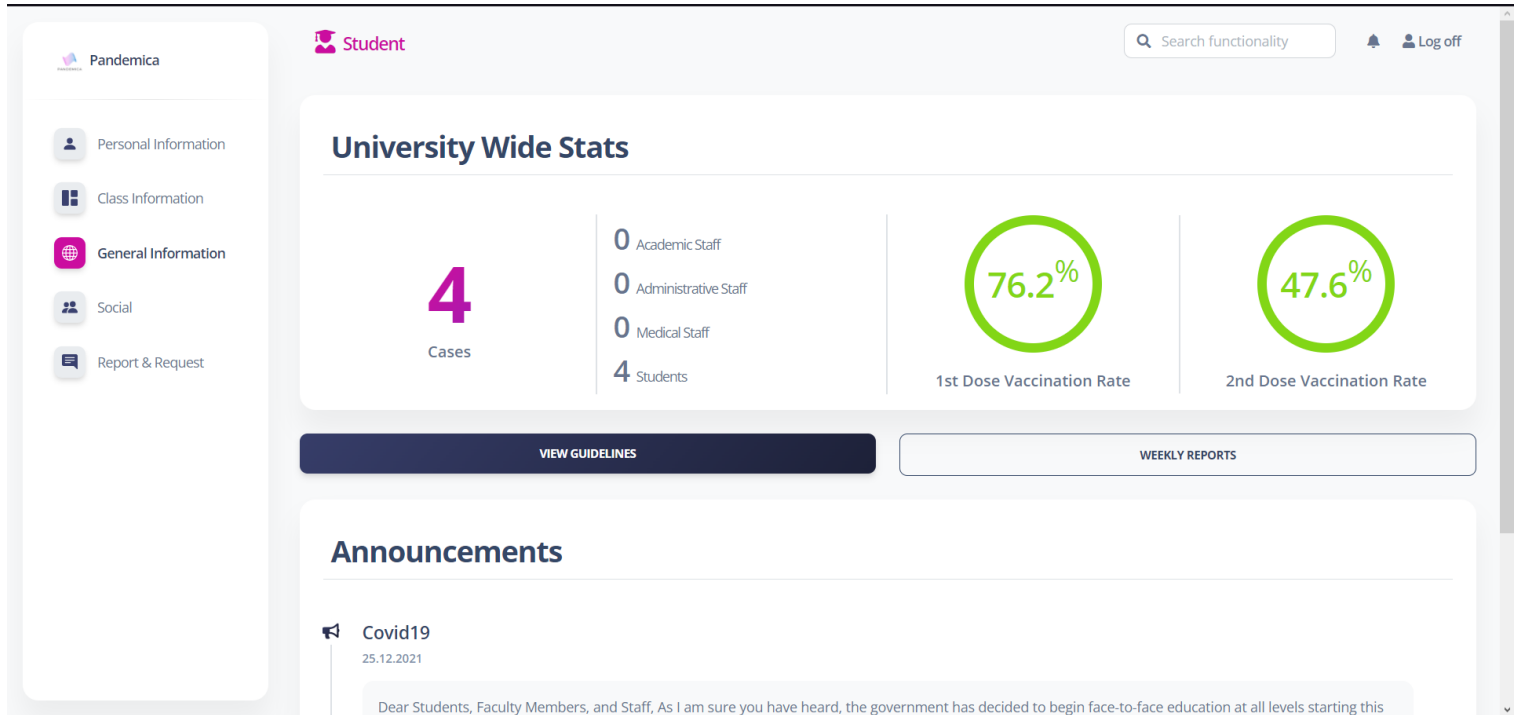


Figure 15: General Information page for students

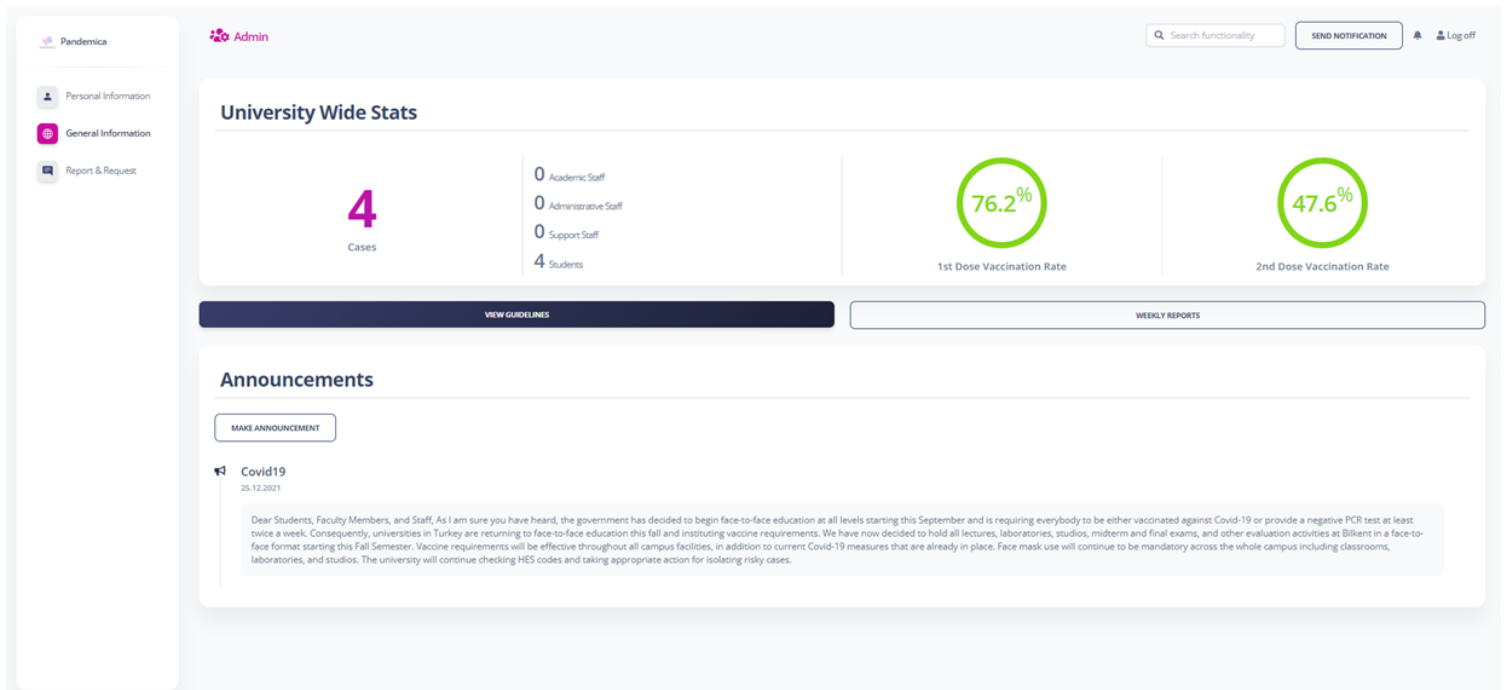


Figure 16: General Information page for admins

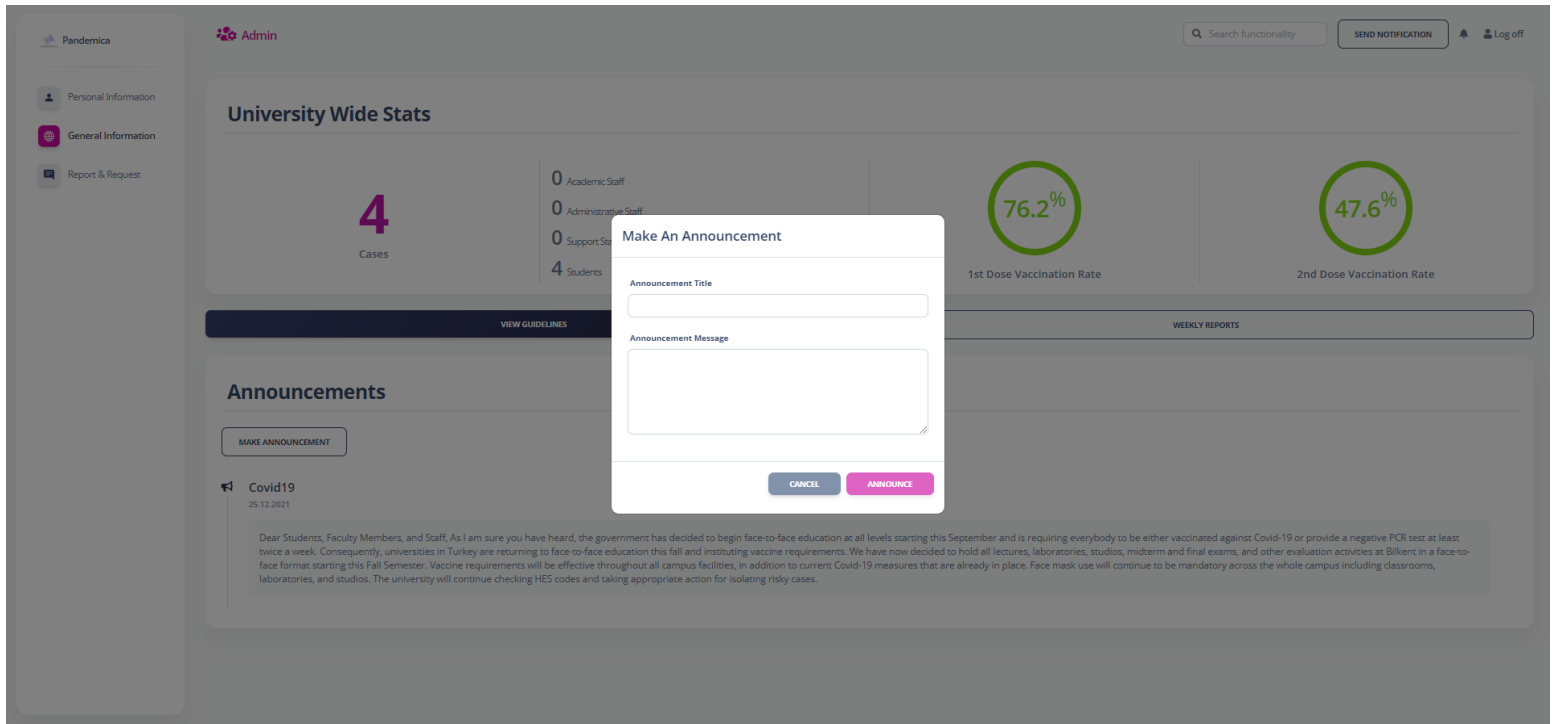


Figure 17: "Make an Announcement" interface for admins

Every user can access the guidelines and weekly reports pages by pressing the buttons on the General Information page:

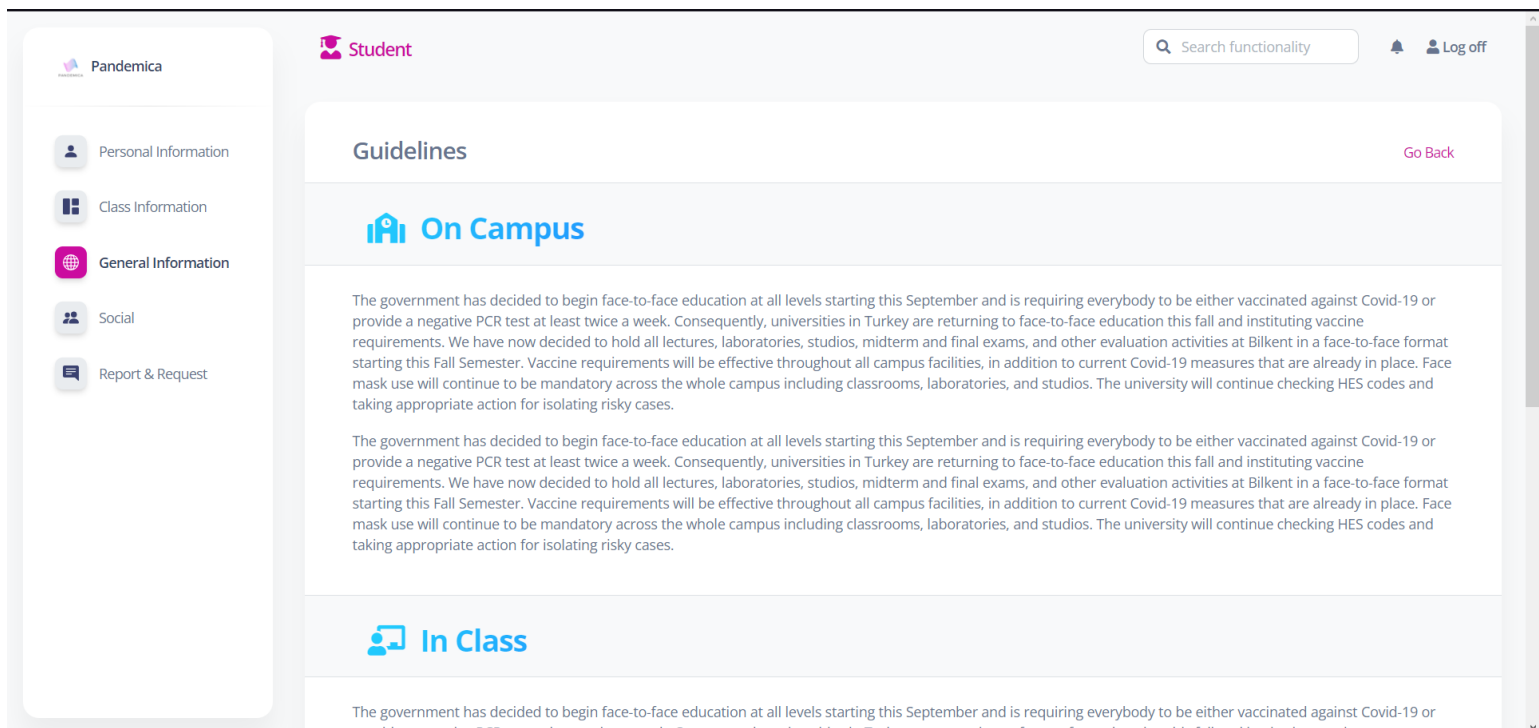


Figure 18: Guidelines page

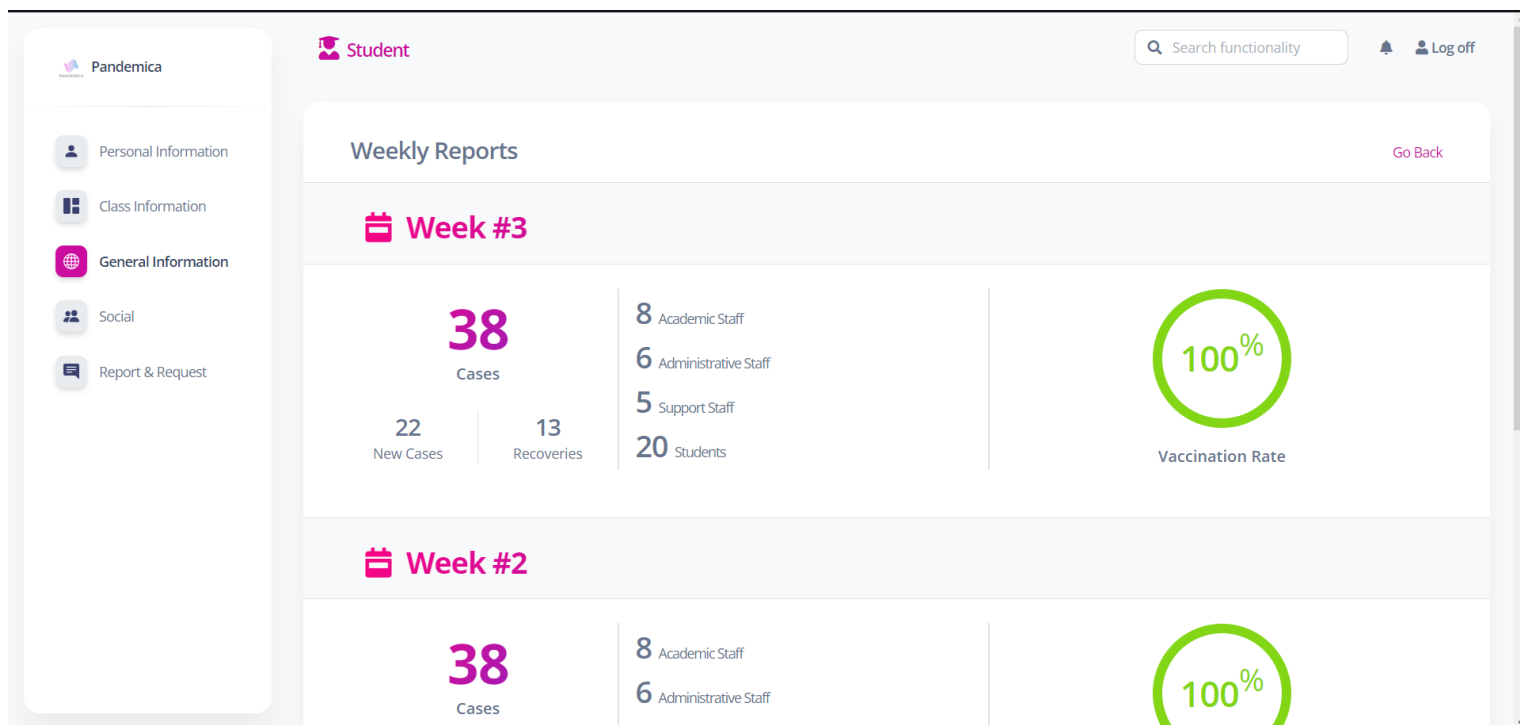


Figure 19: Weekly reports page

Report & Request

In this page, users can create violation reports, request forms and feedback forms. The user can also view any previous reports and forms they created by clicking the buttons underneath the forms, called “View Previous ...”.

The screenshot displays the 'Report & Request' interface for a student. On the left, a sidebar lists navigation options: Personal Information, Class Information, General Information, Social, and Report & Request. The main area, under a 'Student' header, contains three distinct form panels. The 'Violation Report' panel prompts the user to 'Anonymously report any violations you encounter to the university' and includes fields for 'Violation Message' and 'Violation Place'. The 'Request Form' panel asks the user to 'Let the university know about any pandemic-related request you have!' and features fields for 'Title' and 'Request'. The 'Feedback Form' panel states 'We are looking forward to hear your feedback about the site!' and includes a star rating, 'Title', and 'Feedback' fields. Each form panel has a 'SUBMIT' button and a 'View Previous' link below it. The top right corner of the page includes a search bar and a 'Log off' button.

Figure 20: Reports & Request page

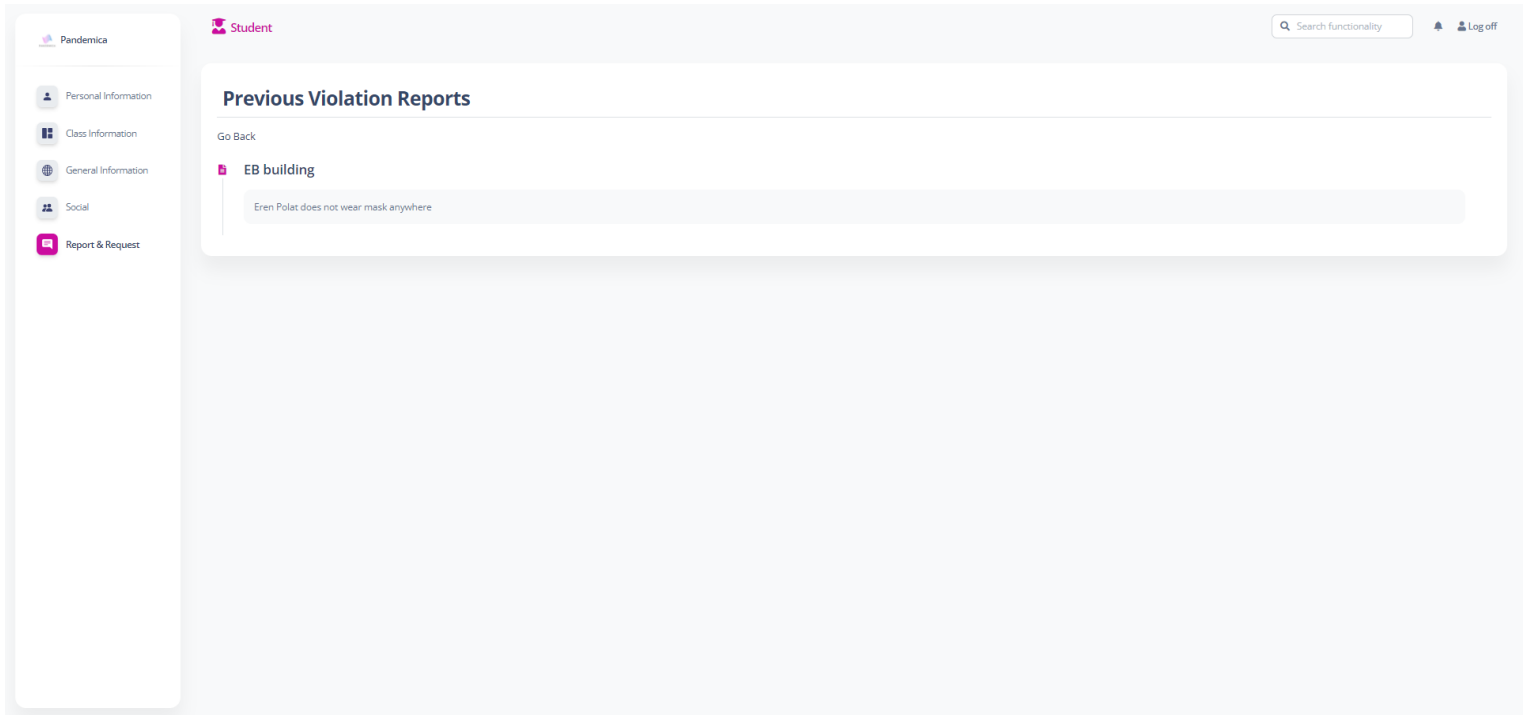


Figure 21: Previous violation reports page of user

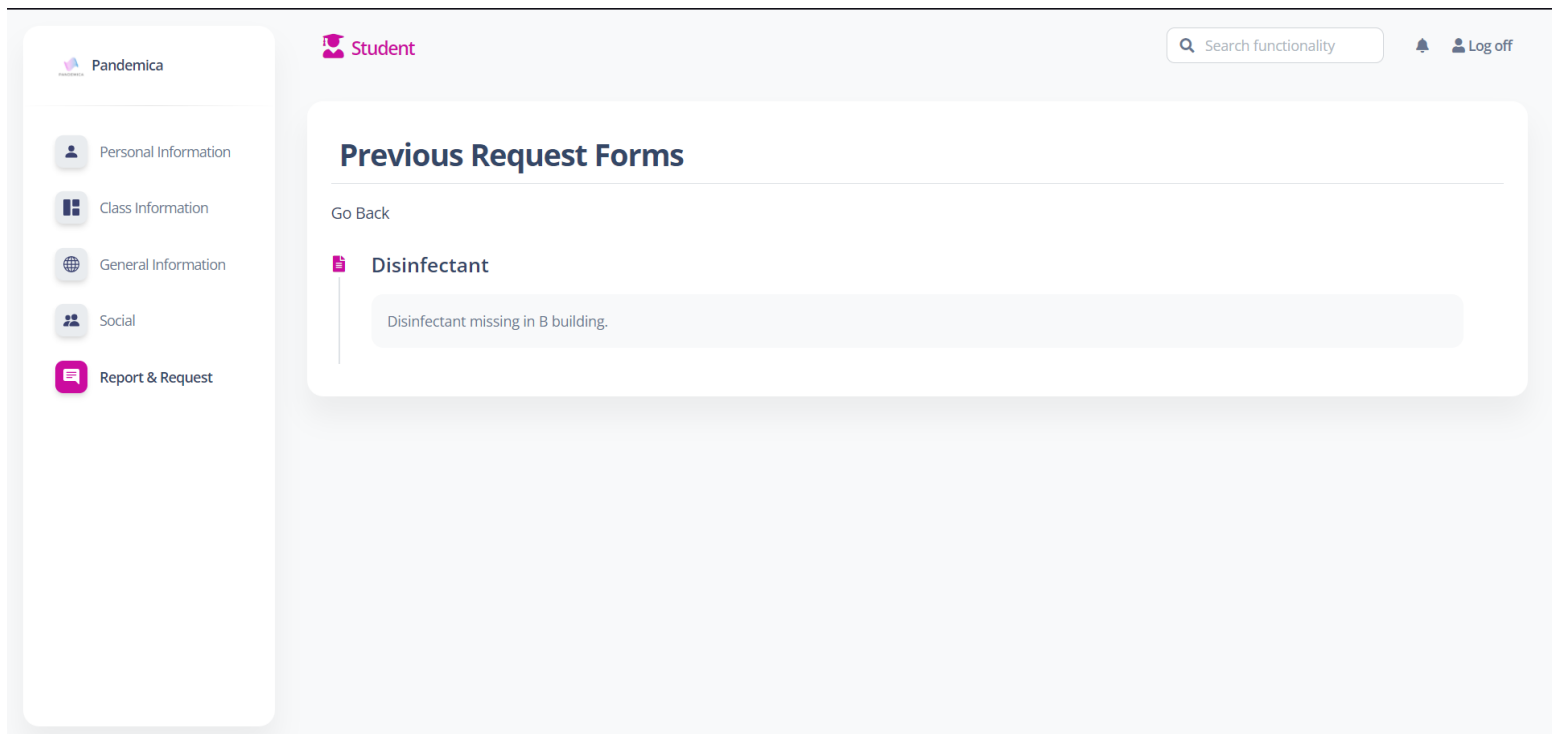


Figure 22: Previous request forms page of user

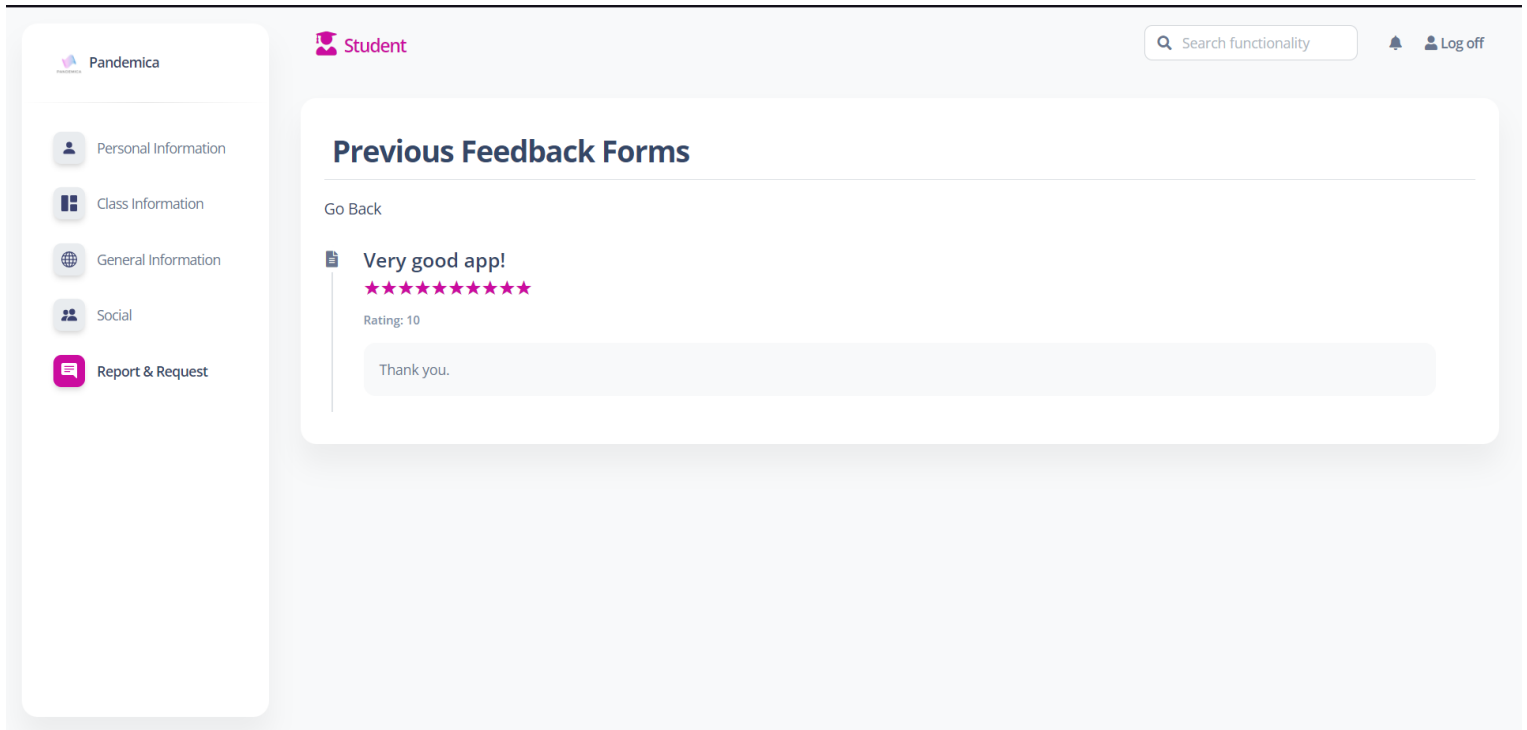


Figure 23: Previous feedback forms page of user

Admins can view all of the reports and forms created by clicking the “View Previous ...” buttons under the forms:

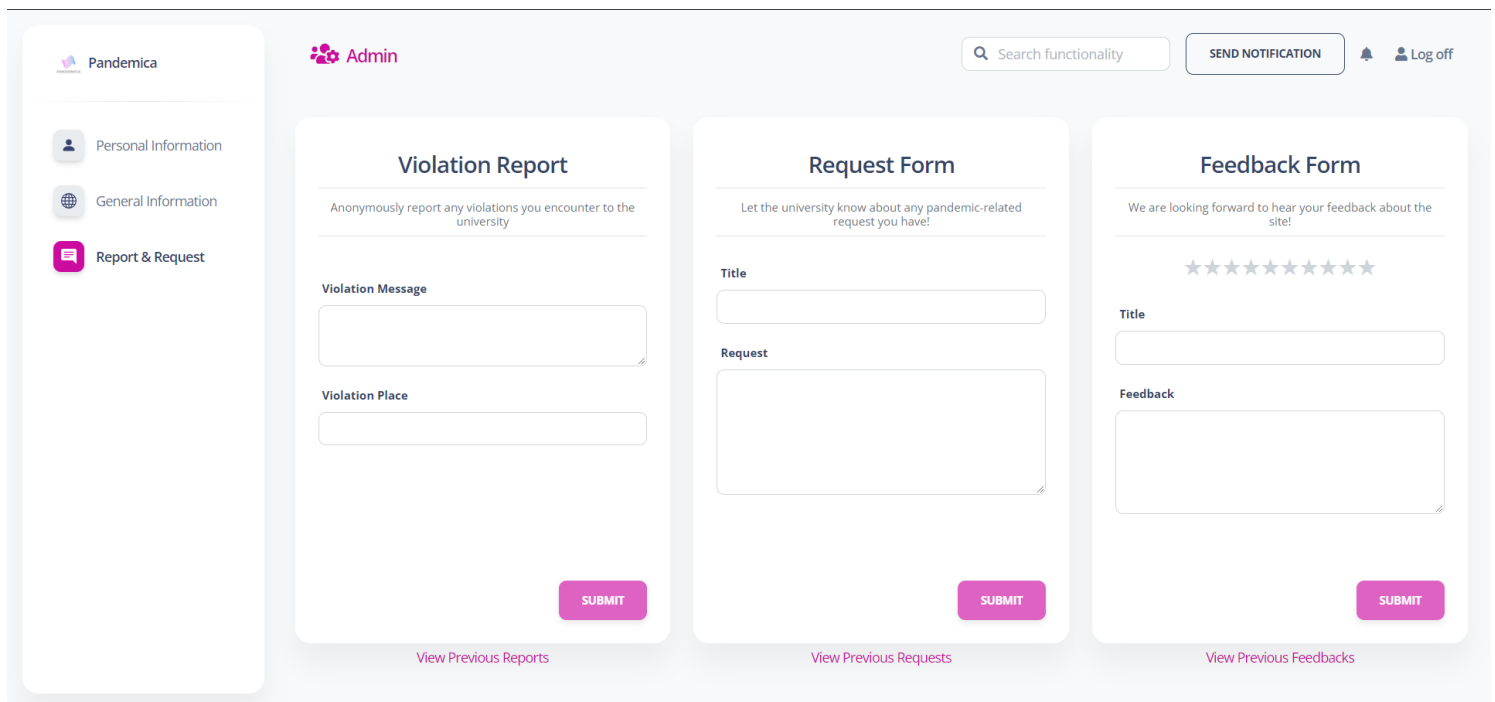


Figure 24: Report & Request page for admin

Social

Only students can access the Social page. We intended for students to be able to add their friends and track each other's statuses through this page, however currently this feature is unimplemented.

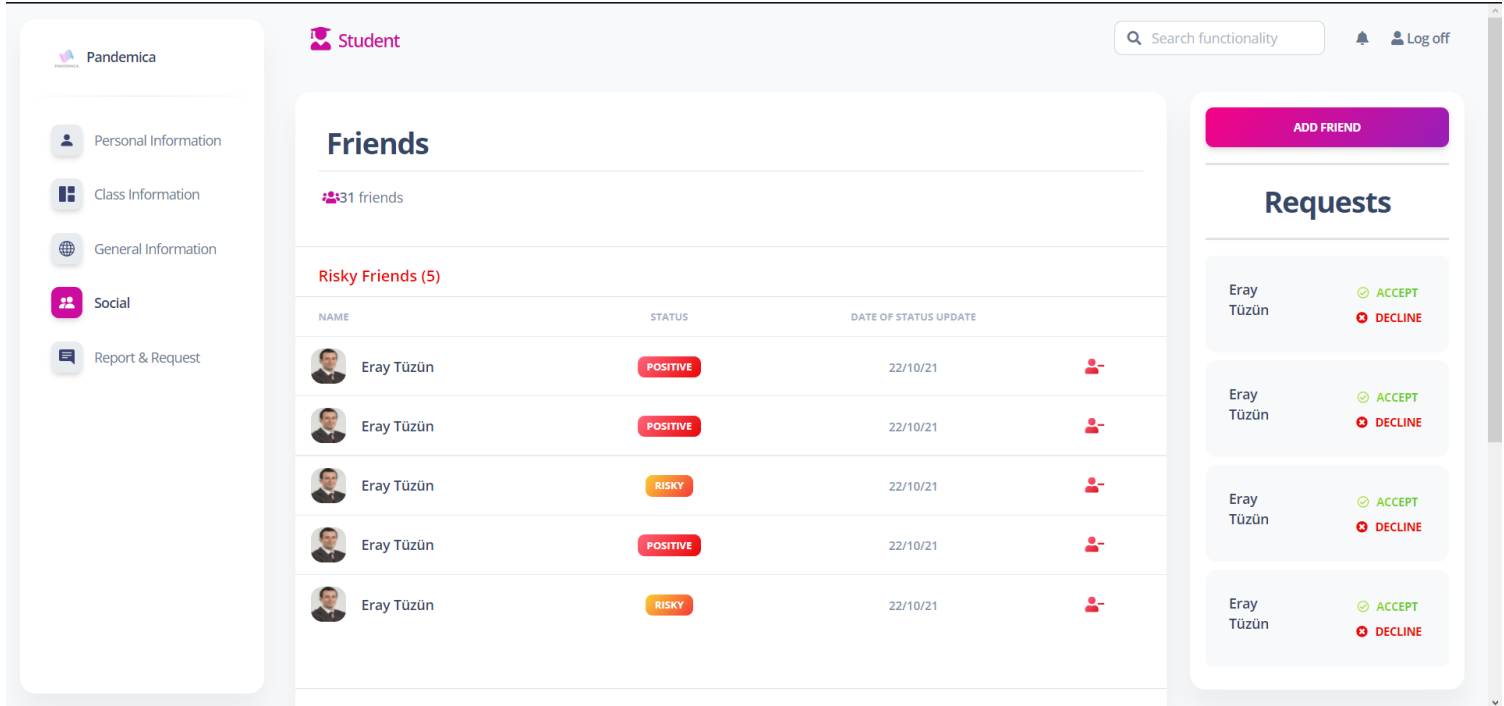


Figure 25: Social page for students

Users can view their notifications by clicking the bell on the top bar:

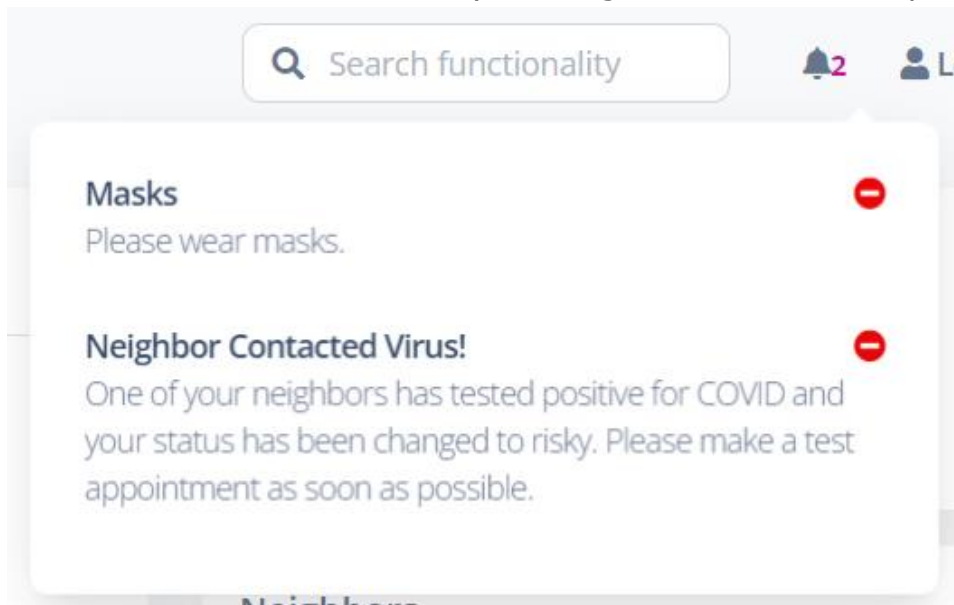


Figure 26: Notifications view

Build Instructions

Build instructions for the frontend

The frontend of the Pandemica app is built with the Angular framework. To serve an Angular app on your device, you can follow the instructions at this link: <https://angular.io/guide/setup-local>. Also, the steps are listed below:

- You should have an active LTS or maintenance LTS version of Node.js. Node.js can be downloaded through this link: <https://nodejs.org/en/download/>.
- Angular depends on npm packages, which are installed with Node.js by default. After having downloaded Node.js, you may check that you have installed npm by running the "npm -v" command in a terminal window.
- After downloading Node.js, to install the Angular CLI you should run this command from a terminal window: "npm install -g @angular/cli"
- Following this, you should clone [the GitHub repository of our group project](#). After having cloned the project, we suggest you to open the frontend folder inside the repo with IntelliJ IDEA Ultimate or IntelliJ WebStorm IDE.
- You may either open a terminal window and navigate to the directory of the frontend folder, or use the terminal included with IntelliJ to run the command "ng serve". This should be enough to get the frontend of our project running. After the project starts running, you can go to "localhost:4200" on any browser to view the project.

Note: If you run into the error "running scripts is disabled on your system" while trying to run "ng serve" on IntelliJ terminal, you must run Powershell as administrator and enter the command "Set-ExecutionPolicy RemoteSigned".

Note 2: Before running "ng serve" on the terminal, you might need to run "npm install" first and then run "ng serve" again.

Build instructions for the backend

Pandemica is a Spring Boot app that people can run locally, for now. To run the backend of Pandemica, start by cloning [the GitHub repository of our group project](#). Download [PostgreSQL version](#) 14.1 or 13.5. While installing PostgreSQL, set the default user's password as "password". Download jdk version 1.8 from the [Oracle website](#). After downloading these, open the /backend/pandemica folder using IntelliJ IDEA Ultimate, which is our choice

of IDE so it is the IDE that we suggest. Since Pandemica is a Gradle project, Gradle will download and install any other dependencies after opening the backend with IntelliJ. After Gradle installs everything, you are good to go and start the backend through IntelliJ. When IntelliJ starts the program, Spring Boot automatically connects to the port 8080.

Login Credentials for Using the Site:

After carrying out the instructions described above, you can open the link "localhost:4200" on your browser to access the Pandemica site. You may use the login credentials "21900000" for ID and "password" for password to enter as a student. Additionally, "21900001" and "password" will give you access to an admin account. "21900002" and "password" is a health center employee account and "21900004" and "password" will get you into an academic personnel account. You may view the list of all users registered in the system on the user list and view their ids, from an admin or a medical employee account. Every user's password is set to "password" by default.

Work Allocations

Efe Beydoğan:

Analysis Report:

- Wrote the introduction
- Drew the use case diagrams and wrote the explanations with Arda Önal
- Prepared the class diagram and wrote the explanations with Arda Önal

Design Report:

- Wrote the "Purpose of the System" part
- Drew the Subsystem Decomposition diagram with Arda Önal and wrote the explanations for the subsystems
- Drew the Deployment Diagram with Arda Önal and wrote the explanation for this diagram
- Wrote the Hardware/Software Mapping part
- Helped with preparing the Access Control Matrix
- Drew the "User Interface Layer" class diagram with Emir Erdem
- Helped coming up with Design Patterns to be applied in the project
- Wrote the "Packages and Frameworks" part

Implementation:

- Frontend of the system
- Implemented the login functionality, user authentication and route protection
- Worked on the implementations of the Personal Information, General Information and Report & Request pages

Final:

- Wrote the "Introduction" part in the Final report
- Helped with preparing the final demo presentation

Eren Polat:

Analysis Report:

- Drew activity diagrams with Gökberk Beydemir
- Drew sequence diagrams of make appointment and send notification use cases
- Wrote explanations for dynamic models

Design Report:

- Drew web server layer class diagram
- Wrote explanations for Controllers with their methods and attributes with Gökberk Beydemir
- Prepared the Access Matrix
- Helped with Entity-Controller class diagram
- Designed and helped to draw Decorator design patterns
- Wrote explanations for Authentication Decorator design pattern

Implementation:

- Worked on the backend of the system
- Wrote Entity/Dto/Repo classes, templates of some Service and ServiceImpl classes
- Worked on ServiceImpl methods (especially in Neighbor/Seat related operations, General Info) wrote the Controller, Service, ServiceImpl and Entities of file uploading system.

Final:

- Prepared the final presentation

Emir Melih Erdem:

Analysis Report:

- Reorganized the use case diagram.
- Designed and prepared the user interface screen mockups.

Design Report:

- Drew the "User Interface Layer" class diagram.
- Wrote the class explanations for User Interface Layer classes.
- Came up with the idea of applying the Strategy Pattern for the creation of forms.
- Wrote the "Create Form Strategy Pattern" part.

Implementation:

- Frontend of the system
- Created the base pages and common components including sidebar, topbar, and dialogs.
- Implemented routing.
- Worked mainly on the implementation of the Class Information and the seating plans.
- Worked on the layout and styling of the pages.

Final:

- Prepared the demo video.

Gökberk Beydemir:

Analysis Report:

- Drew activity diagrams with Eren Polat
- Drew sequence diagrams of update risk status and send friend request use cases
- Wrote explanations for dynamic models

Design Report:

- Drew web server layer class diagram
- Wrote explanations for Controllers with their methods and attributes with Eren Polat
- Connected the controllers and entities with Arda Önal
- Designed and helped to draw Decorator design patterns

- Helped coming up with Design Patterns to be applied in the project

Implementation:

- Backend of the system.
- Created classes for Controllers, Service Implementations, Services, Repositories, Data Objects and Entities.
- Worked on the implementations of the Personal Information, General Information, and Class Information, Academic Personnel specific, Medical Employee specific pages.

Final:

- Prepared the final presentation.
- Took the screenshots for the final presentation

Arda Önal:

Analysis Report:

- Wrote the non-functional requirements.
- Drew the use case diagrams and wrote the explanations with Efe Beydoğan
- Prepared the class diagram and wrote the explanations with Efe Beydoğan

Design Report:

- Drew the Subsystem Decomposition diagram with Efe Beydoğan and wrote the explanations for the subsystems
- Drew the Deployment Diagram with Efe Beydoğan and wrote the explanation for this diagram
- Wrote the Persistent Data Management part
- Helped with preparing the Access Control Matrix
- Drew the "Entity Layer" class diagram with Mert Barkın Er
- Connected the controllers and entities with Gökberk Beydemir
- Helped coming up with Design Patterns to be applied in the project

Implementation:

- Worked on the frontend of the system
- Worked on the html components of the user interface
- Worked on the implementations of the Personal Information, General Information and Report & Request pages
- Specifically built the vaccination information displays, announcements, university wide stats, test result addition/displays, view all functionality for admins and medical employees, previous report and request pages.

Final:

- Wrote the “Project Experience” part in the Final report
- Took the screenshots for the final demo presentation

Mert Barkin Er:

Analysis Report:

- Wrote the overview.
- Wrote the functional requirements.
- Drew and explained the state diagrams of the system.

Design Report:

- Wrote the Hardware/Software Mapping part.
- Wrote the Boundary Conditions.
- Wrote the Object Design Trade-Offs.
- Drew the Entity Class Diagram.
- Wrote the Entity Class Explanations.
- Wrote the Packages and Frameworks.

Implementation:

- Backend of the system.
- Created the base classes for Controllers, Service Implementations, Services, Repositories and Entities.
- Worked on the implementations of the Personal Information, General Information and Report & Request pages.

Final:

- Wrote User’s Guide.
- Wrote Build Instructions for backend.
- Helped with preparing the final demo presentation