CS 319-1 Group 8

Deliverable 2 - Final

Bilkent Tanıtım Ofisi Management System

Short-name: BILFO

12.11.2024

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1. Non-Functional Requirements

1.1 Usability

The project BILFO aims to enhance the current information office's (Bilkent Tanıtım Ofisi) process by offering a clear and intuitive system, particularly for Özhan Örge, coordinators, advisors, guides, and visitors. The system should ensure that BTO can complete its tasks effortlessly through a digital platform. To ensure the user interface is clear and straightforward:

- To increase the look & feel of the system and to make the users feel like a part of Bilkent society, Bilkent colors will be used (e.g., Pantone reflex blue (RGB: 0, 20, 137), red of flag (RGB: 227, 10, 23), black (RGB: 0, 0, 0) and white (RGB: 255, 255, 255)) for a user-friendly experience.
- After a problem has been encountered the outside user will get a clear message in 5 seconds if the application form has a piece of missing information.
- Guides and advisors will be able to arrange their schedules through their profiles.
- Communication will be done by the automated mail system.
- Tour assignments to guides will be done in two ways. An advisor will ask for guides or guides will volunteer. This will make the progress faster.
- Each assign event comes with a confirmation pop-up. So that users will have a second chance to consider their decision.

1.2 Security/Safety

Bilfo stores information about students, high schools, and councilors, all of which should be kept secure. To ensure this, we will use the following strategies.

- All of the information within Bilfo will be inaccessible to outside users like school counselors and individual tour applicants.
- Information about schools and councilors will only be visible to the coordinator, acting director, and admins.
- Users will be signed up only by trusted individuals in the system, like advisors, coordinator, acting director, and admins.
- Instead of storing passwords directly, their salted hash values will be stored.
- For more powerful actions that are done by admins, a password is required for every action.
- Log-in attempts can only be done up to 5 times an hour.

1.3 Performance

The aim of this project is to make things easier and faster for arranging tours and evaluating fair invitations Bilkent Information Office handles.

- After logged in, advisors will only need four clicks to assign a tour to a guide owing to schedule application.
- Outside user will be able to see the application form with only one click, and after filling it one more click is required to submit it to the system. So, a form will be submitted in two clicks.
- Login and logout process will take three seconds.

1.4 Robustness

In this project, we aim to create a user-friendly environment for the Bilkent Information Office, high schoolers and the counselors of the high schools who are interested in Bilkent. It is important to us that the users will use the site without encountering any bugs that can be caused by wrong inputs and receiving incorrect data.

- All of the inputs in the application forms will be checked by a type checker. For example, a visitor count cannot be a word, it can only be an integer.
- Some of the inputs in the application forms will be checked for their legitimacy. For example, the school name must be a school that actually exists.

1.5 Maintainability

Bilfo should be designed to be a maintainable software project. To ensure this, we will abide by these credentials.

- Bilfo's code will be written with easily understandable function and variable names.
- Bilfo will be created in a way that allows trusted users to change the information in the site without changing the code.
- Bilfo's code will feature documentation for every function.

2. State Diagrams

2.1 State Diagram for Forms

Figure 1: UML State Diagram of the Form Object in BILFO

In this state diagram, a TourApplication or FairApplication is filled and submitted to the system. When submitted, the form waits in the PendingList until it is evaluated by an advisor. The advisor may reject or accept the form. If it is accepted, an event is created with respect to it being a tour or a fair.

2.2 State Diagram for Guide

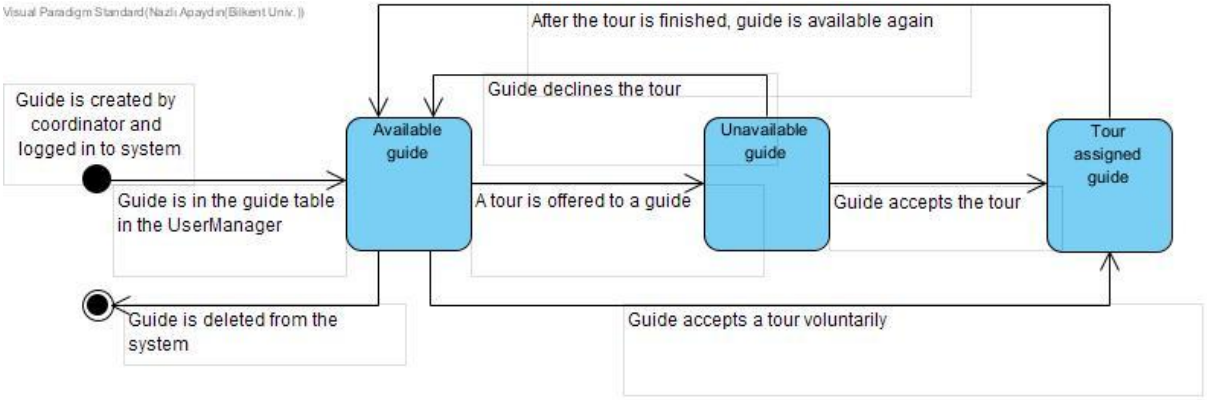

Figure 2: UML State Diagram of the Guide in BILFO

In this state diagram, a guide is added to the system by admin and appears in guideTable. A guide in guideTable may either be offered a tour or may accept it voluntarily or be removed from the system. If a tour is offered, a guide can accept or decline the tour. If the tour is accepted (voluntarily or by offer), it is assigned to a guide. After the tour takes place, the guide becomes available again.

2.3 State Diagram for Events

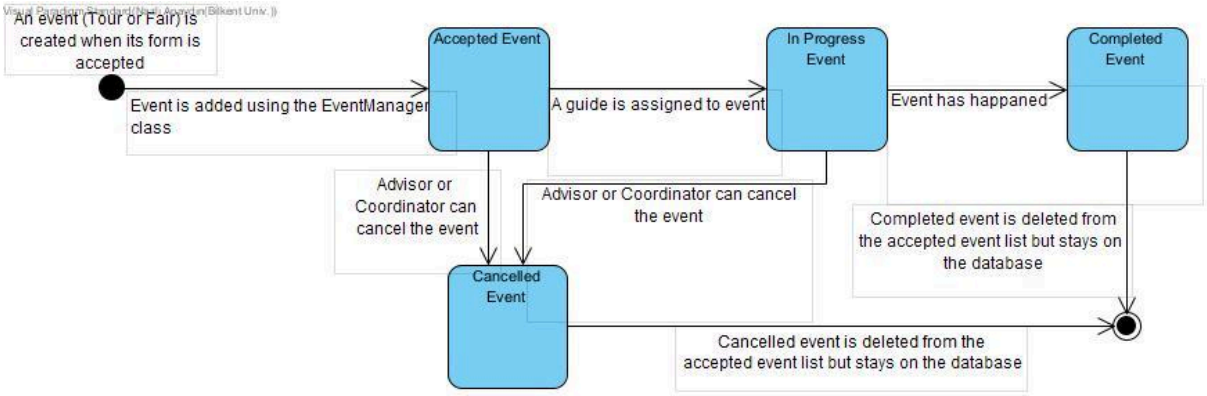

Figure 3: UML State Diagram of the Event Object in BILFO

In this state diagram, an event is created and added to Accepted. Event can be a tour or a fair, based on its form. After an event is assigned a guide, it is called ‘In Progress Event. After it finishes, it becomes a Completed Event and is deleted from the accepted events list.

3. Activity Diagrams

3.1 Activity Diagram for Application Process

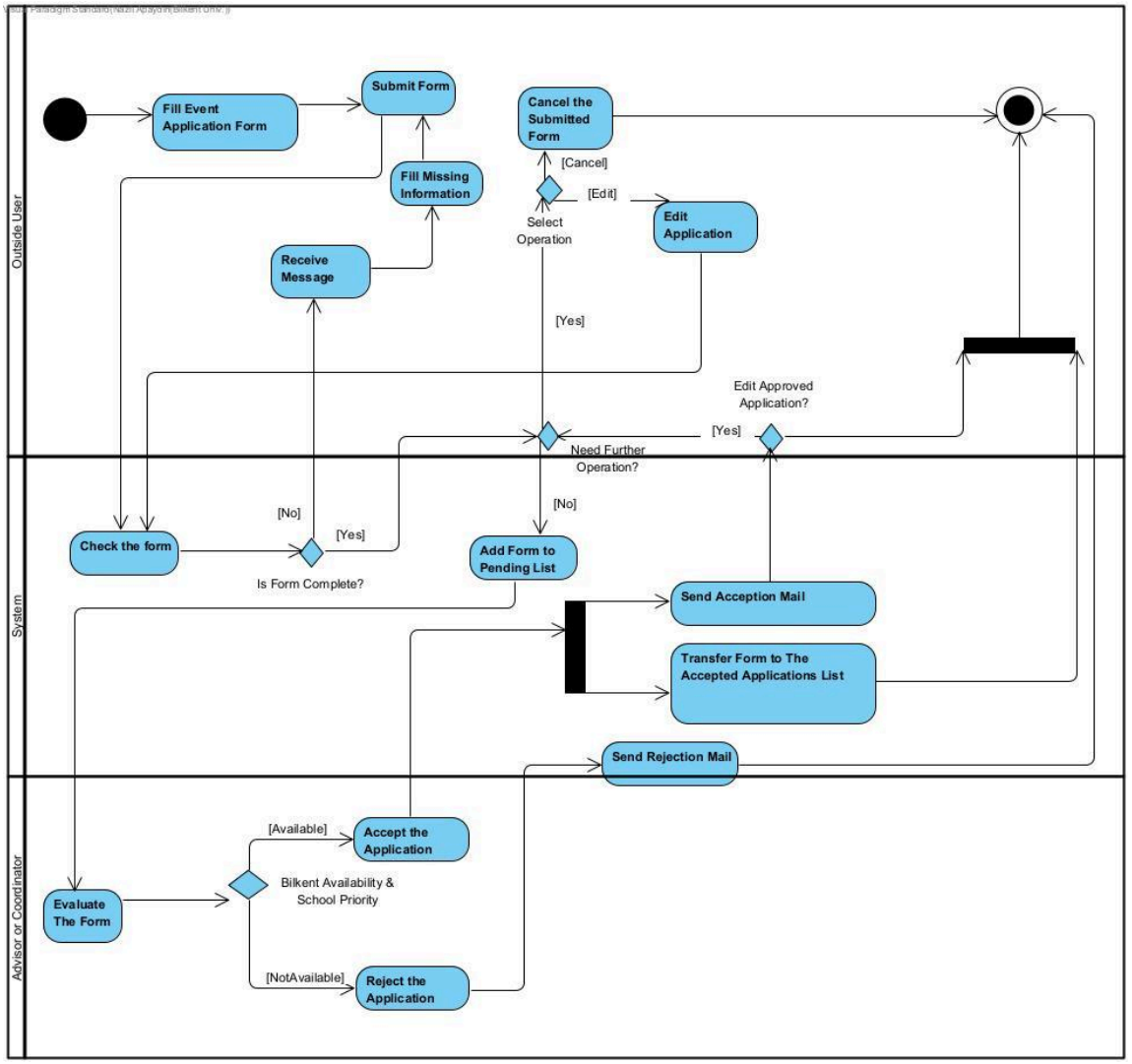

Figure 4: UML Activity Diagram of the Tour and Fair Application Process in BILFO

3.2 Activity Diagram for Accepted Tour Operations

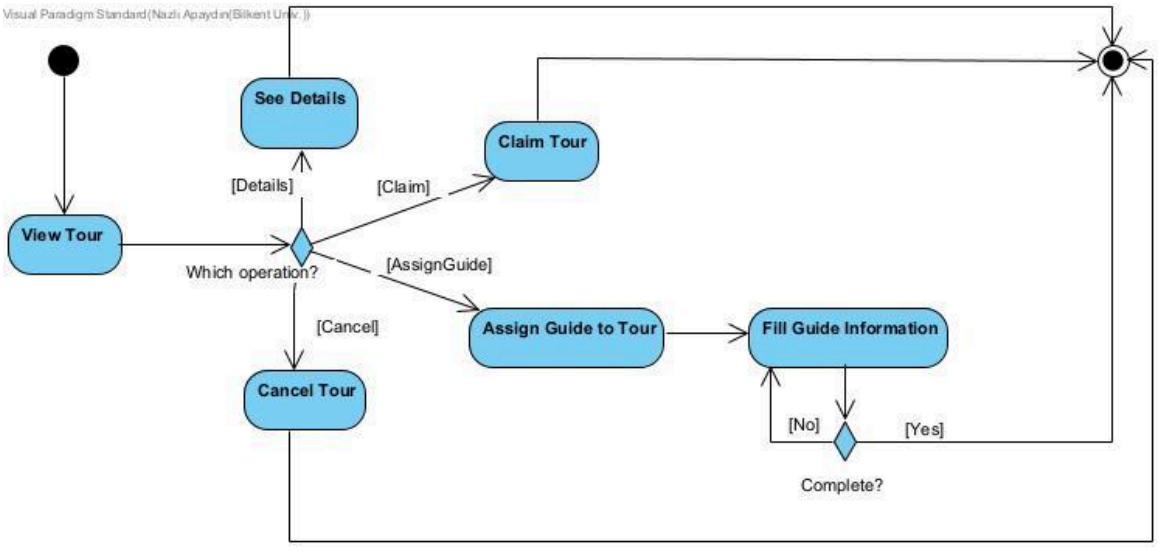

Figure 5: UML Activity Diagram of the Accepted Tour Operations in BILFO

3.3 Activity Diagram of the Guide List for Coordinators

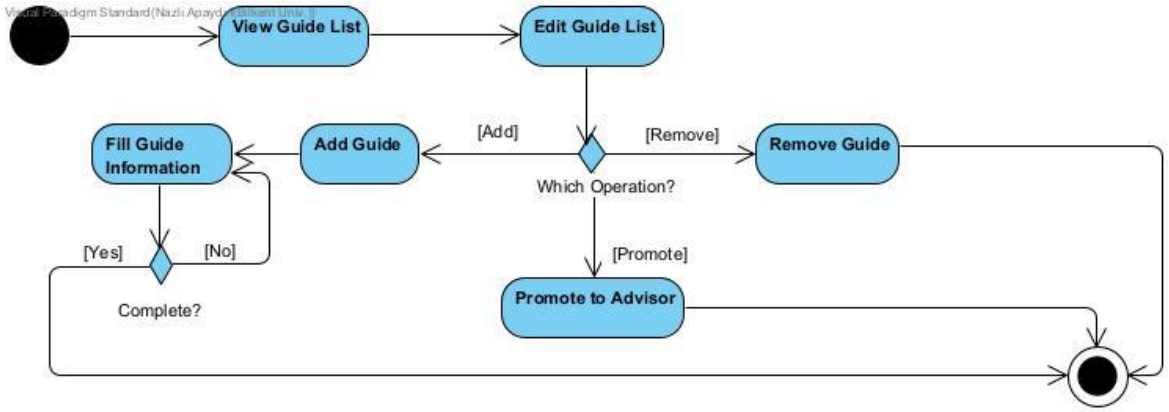

Figure 6: UML Activity Diagram of the Guide List Operations in BILFO

4. Sequence Diagrams

4.1 Forms and Events Sequence Diagram

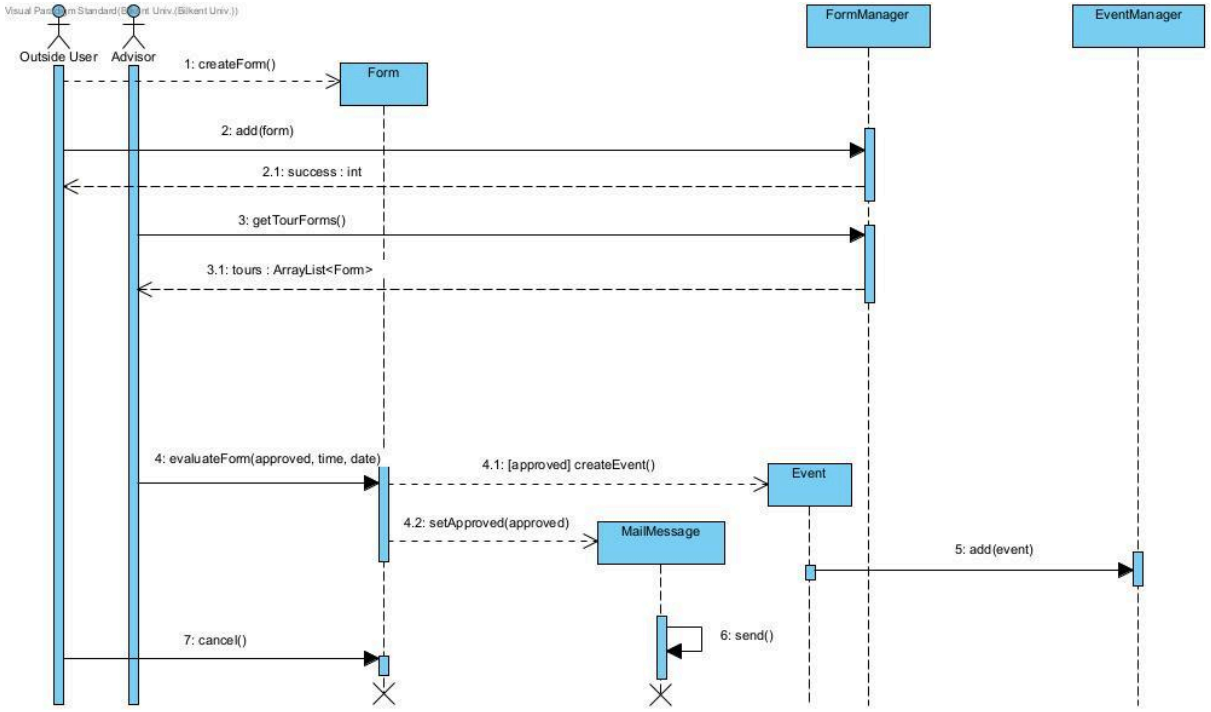

Figure 7: UML Sequence Diagram for Forms and Events

4.2 Tour Guide Assignment Sequence Diagram

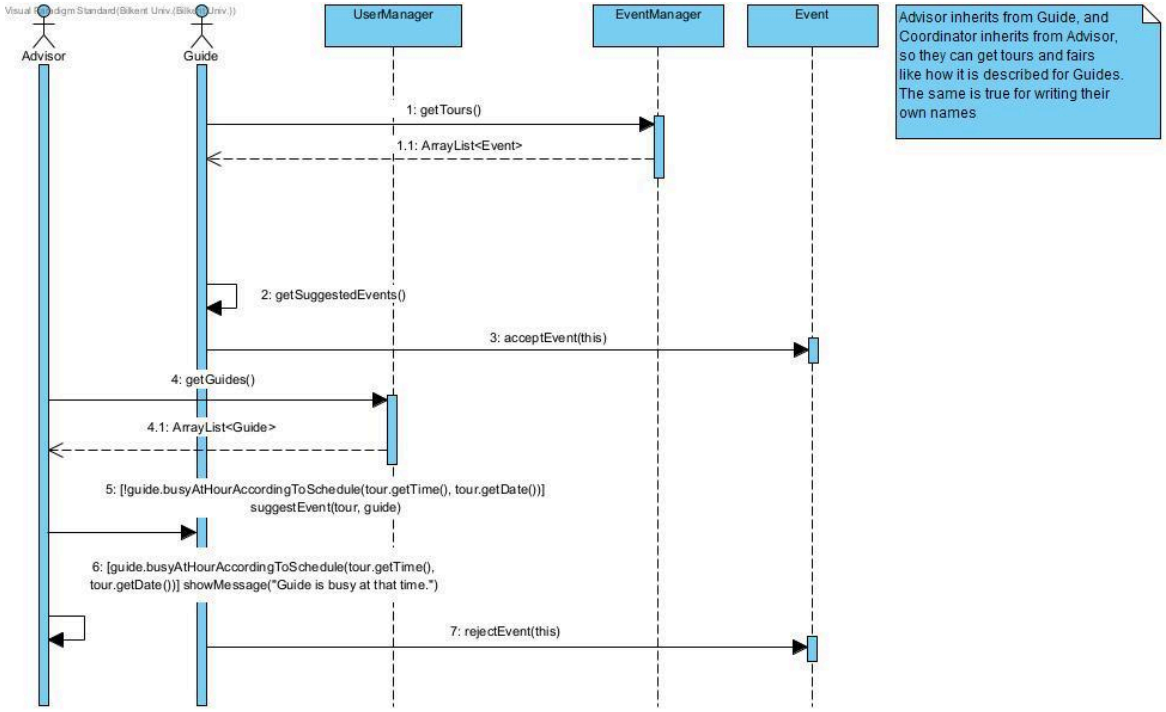

Figure 8: UML Sequence Diagram for Tour Guide Assignment

5. Class Diagram

5.1

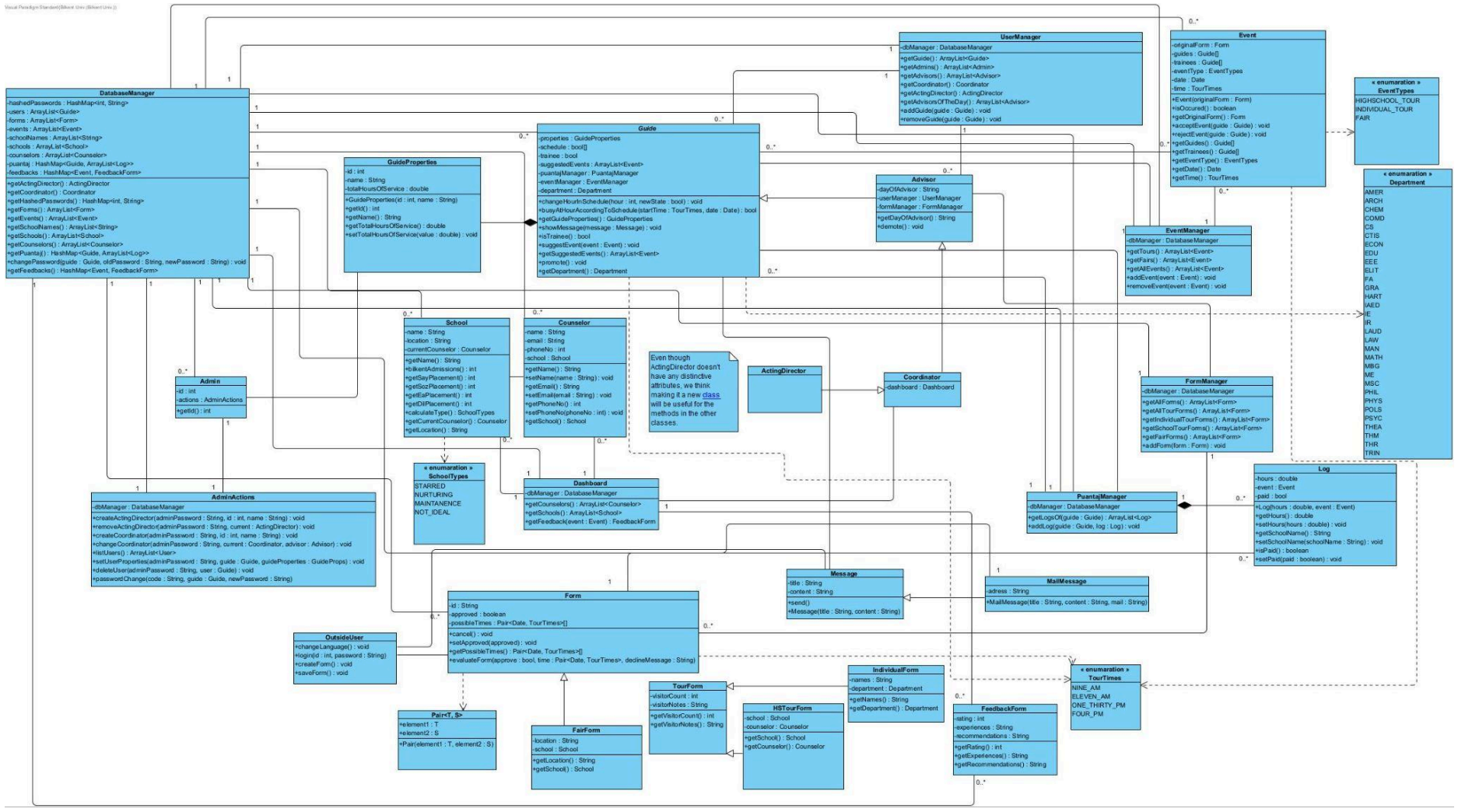

Figure 9: UML Class Diagram for BILFO

6. Mockups

6.1 Authentication and Home Page

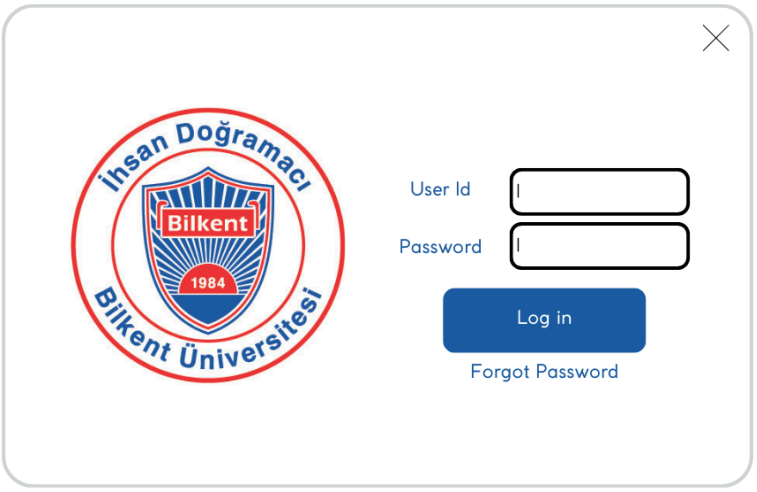

Figure 10: Log In Screen

Figure 11: Forgot Password Screen

Figure 12: Forgot Password- Setting New Password Screen

Figure 13: Home Page Screen for Outside Users.

6.2 Profile and Dashboard

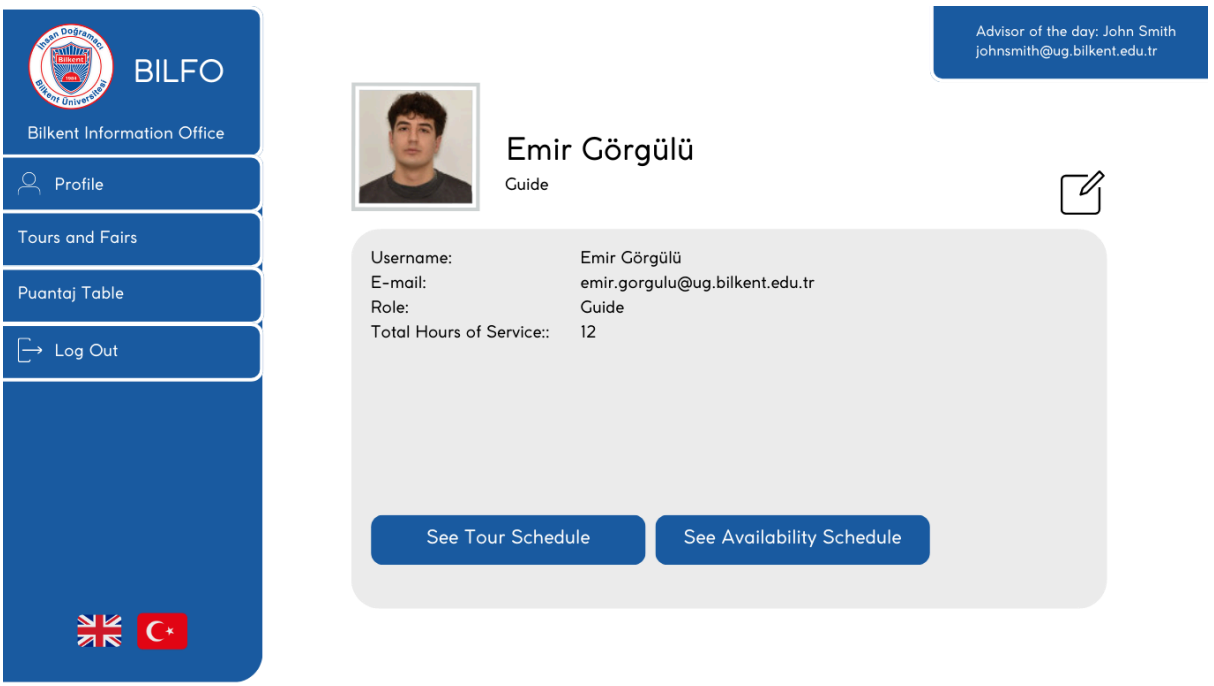

Figure 14: Screen for Seeing Own Profile. Advisor of the day is the advisor that is responsible from that day. It exists in every page, because they are the person to be connected during that day.

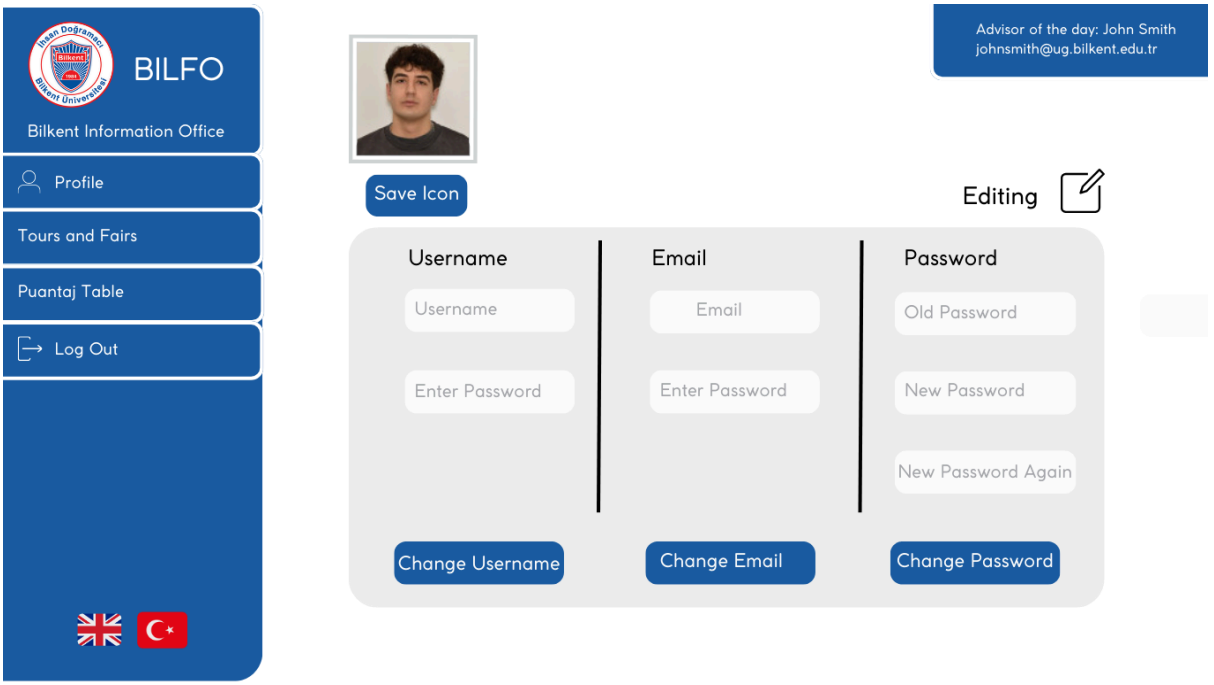

Figure 15: Screen for Editing Own Profile

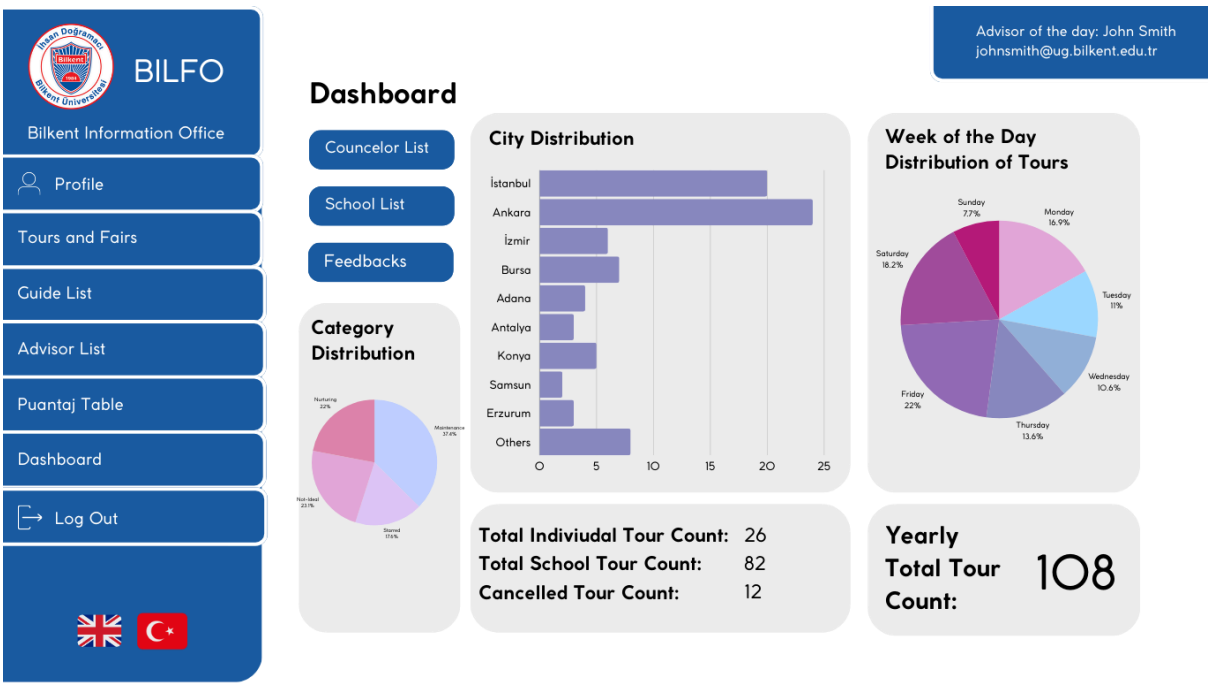

Figure 16: Coordinator and Acting Director's Dashboard Screen for stats

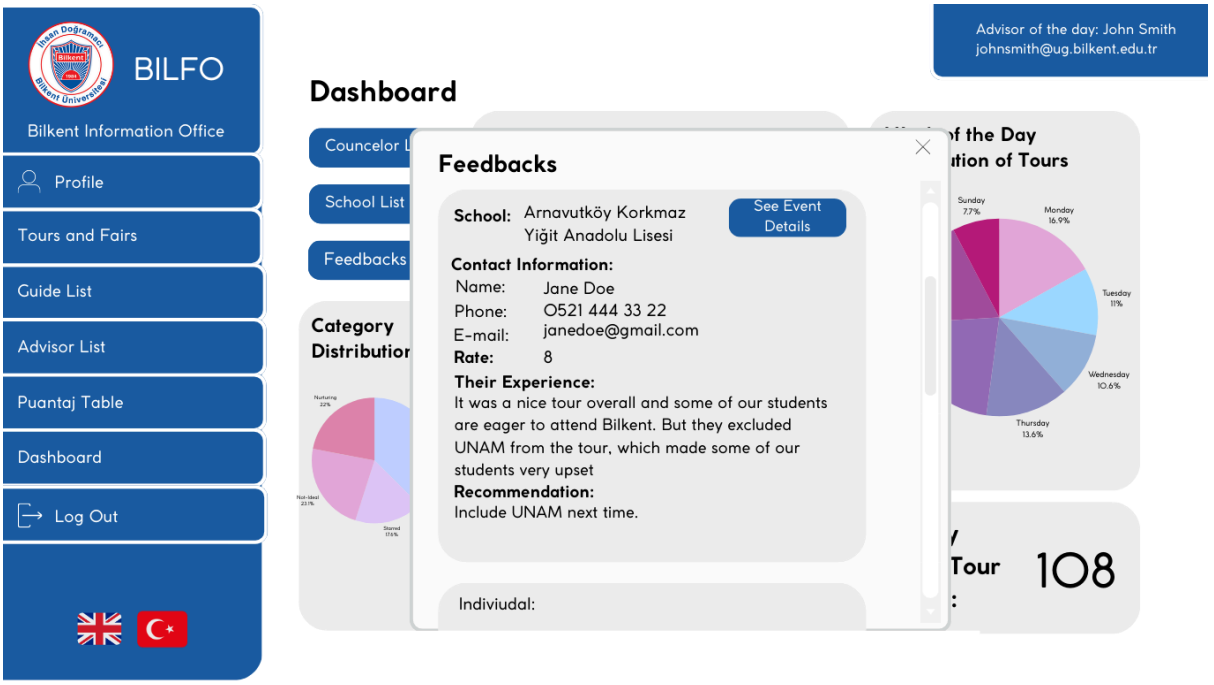

Figure 17: Coordinator and Acting Director's Dashboard Screen Feedback.

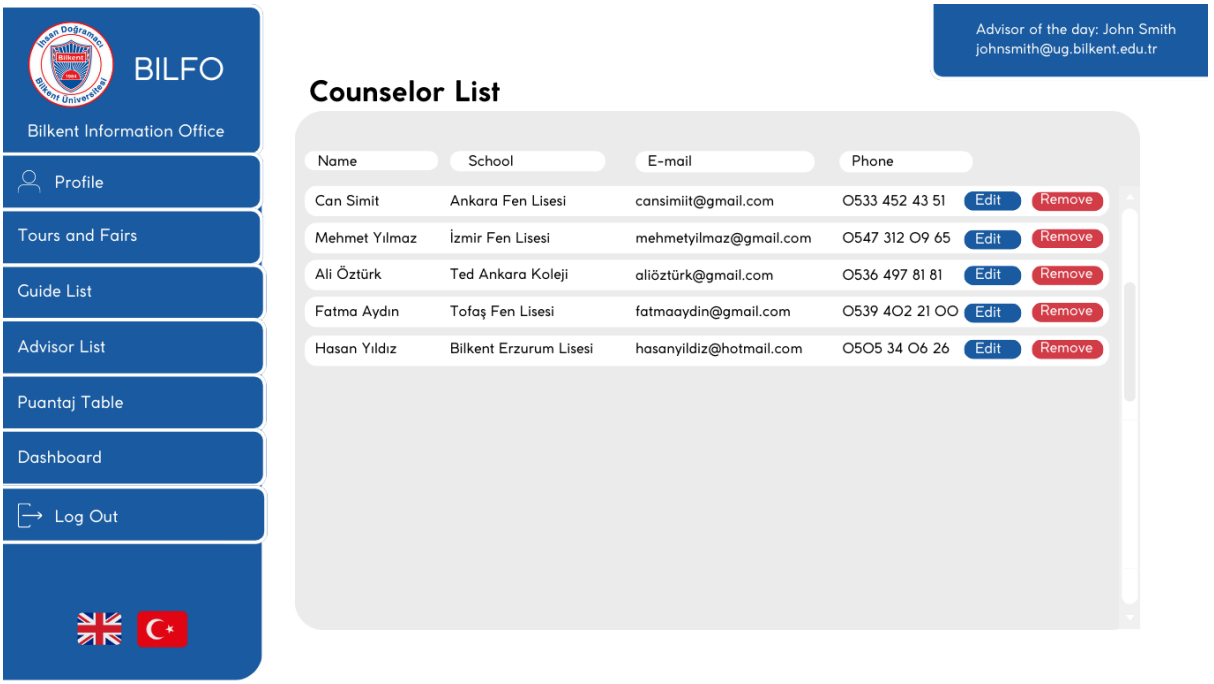

Figure 18: Seeing Counselor List

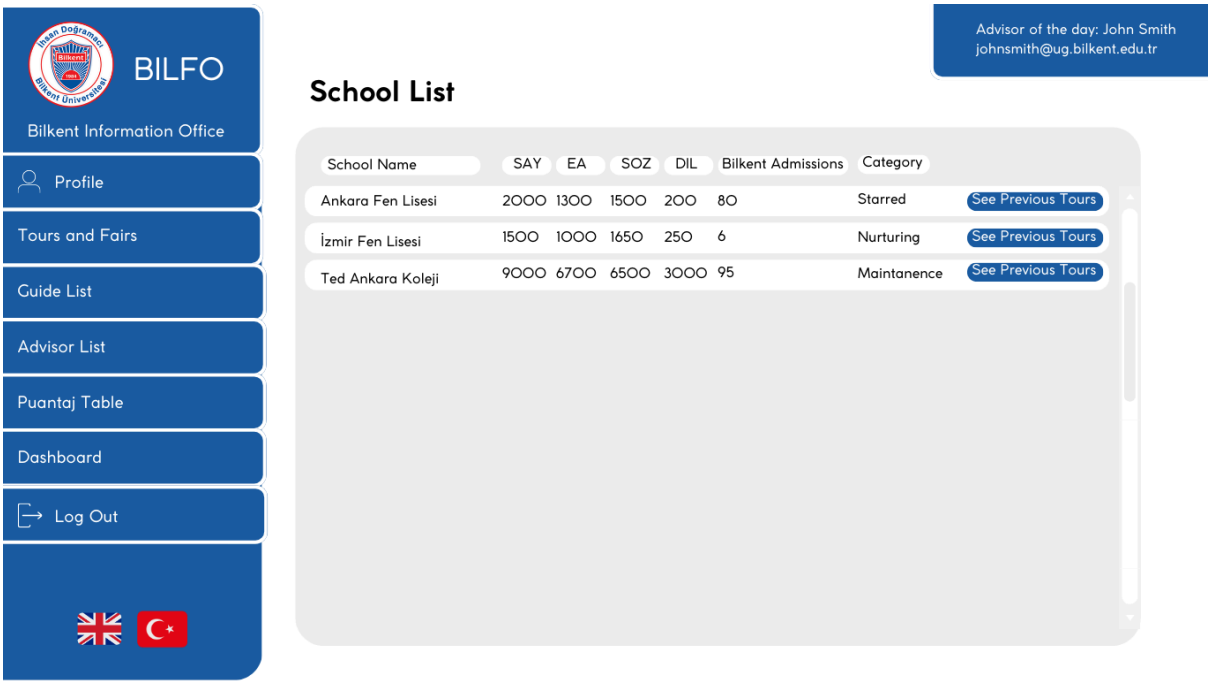

Figure 19: Seeing School List

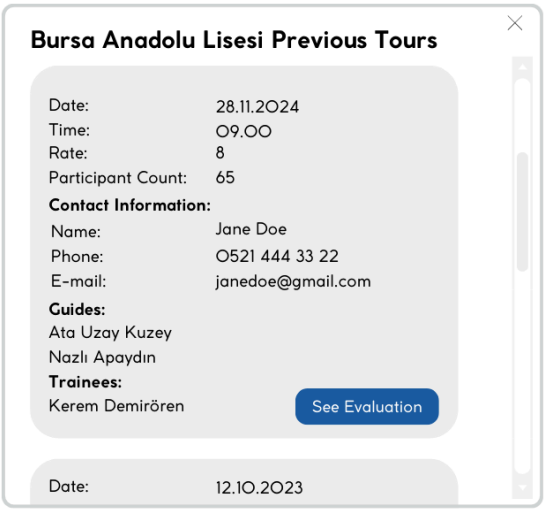

Figure 20: Seeing Previous Tours of a School

Figure 21: Seeing Own Tour Schedule

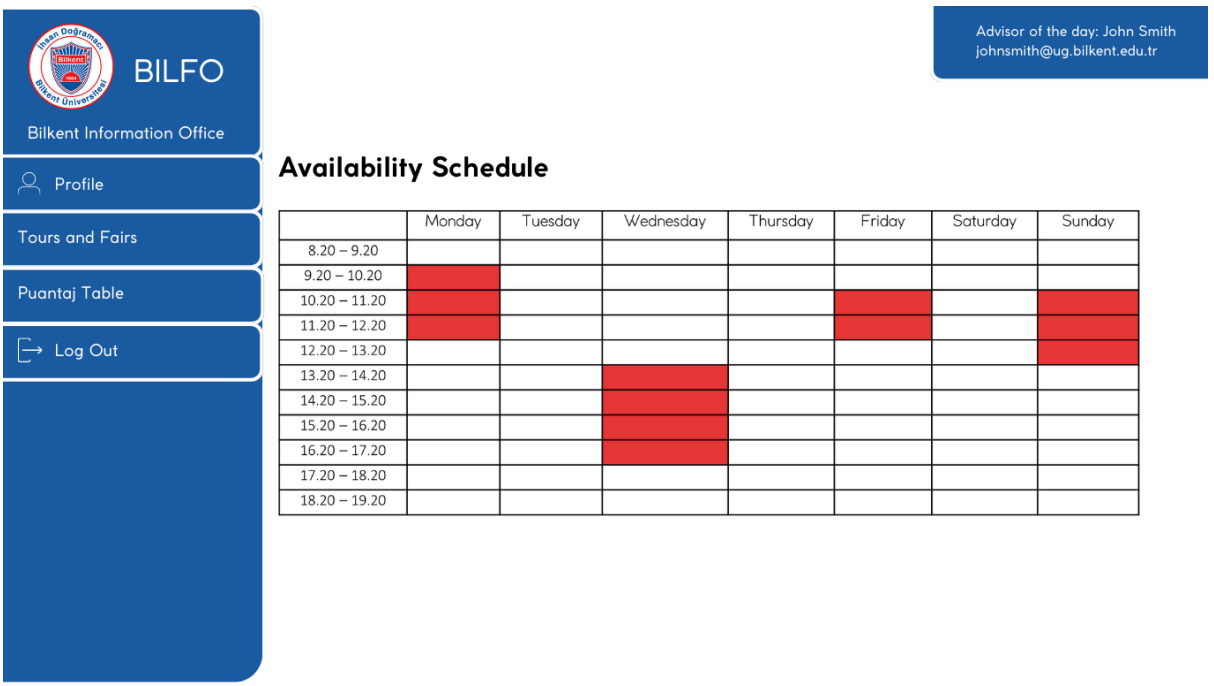

Figure 22: Availability Schedule Screen

6.3 Management

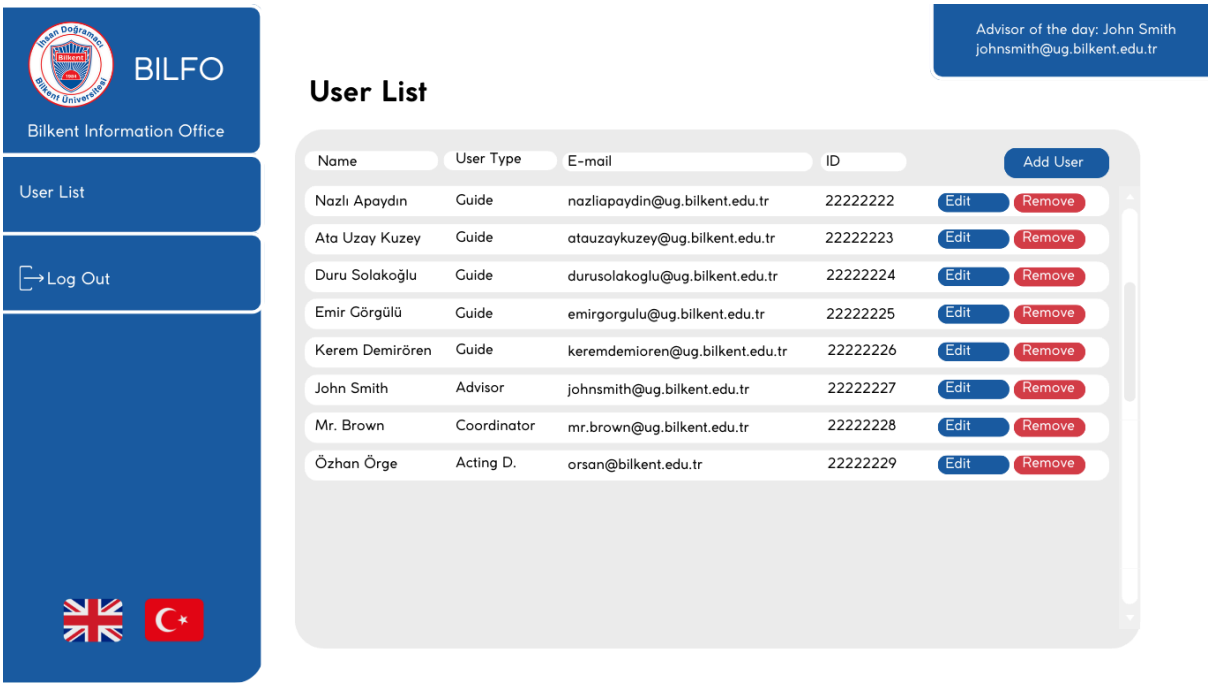

Figure 23: Seeing User List - Admin View

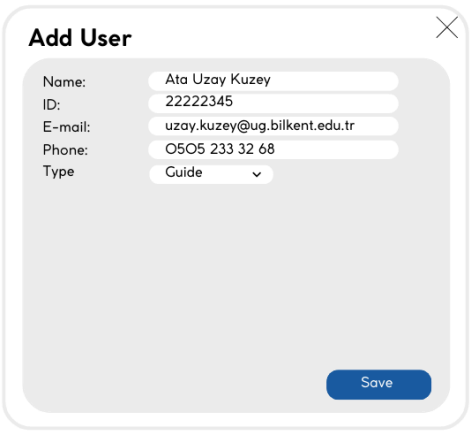

Figure 24: Adding New User - Admin View Screen

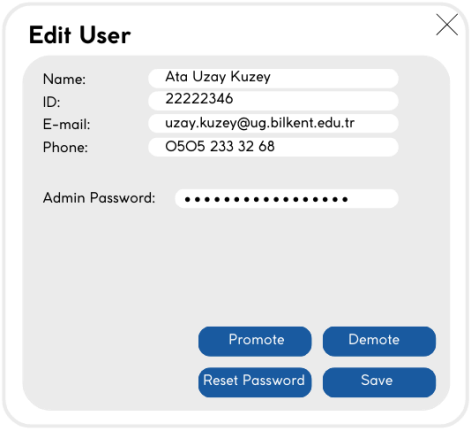

Figure 25: Editing Existing User - Admin View Screen. Admin password is required, because this is a powerful operation, and adding an extra security layer is required.

6.4 List and Tables

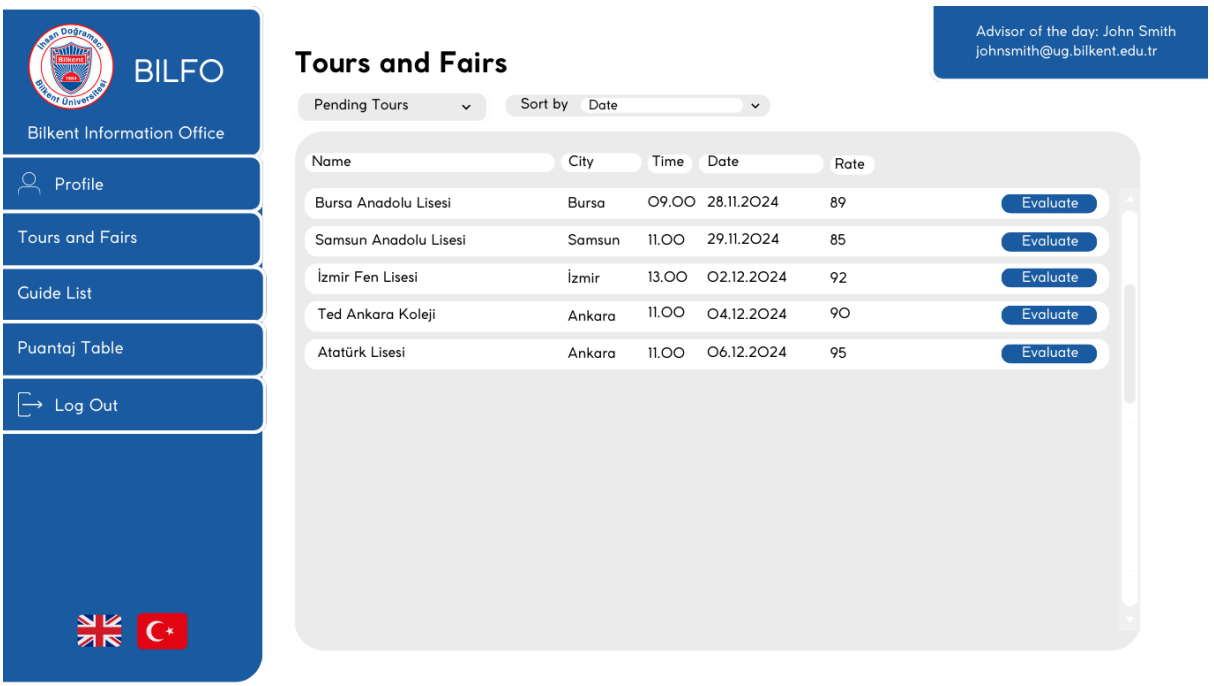

Figure 26: Pending Tours, Advisor or Coordinator Perspective Screen

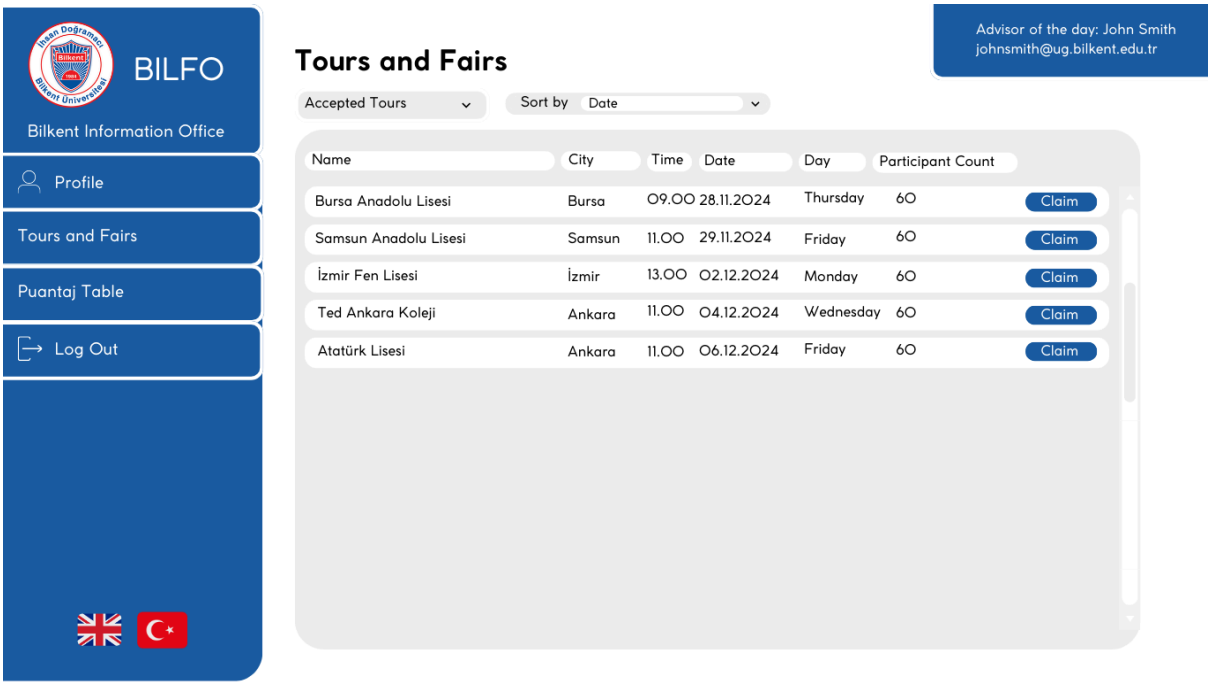

Figure 27: Accepted Tours, Guide Perspective Screen (Fairs will be listed similarly, just for coordinators). If an advisor suggests an event to a guide, they can choose to list the suggested events too.

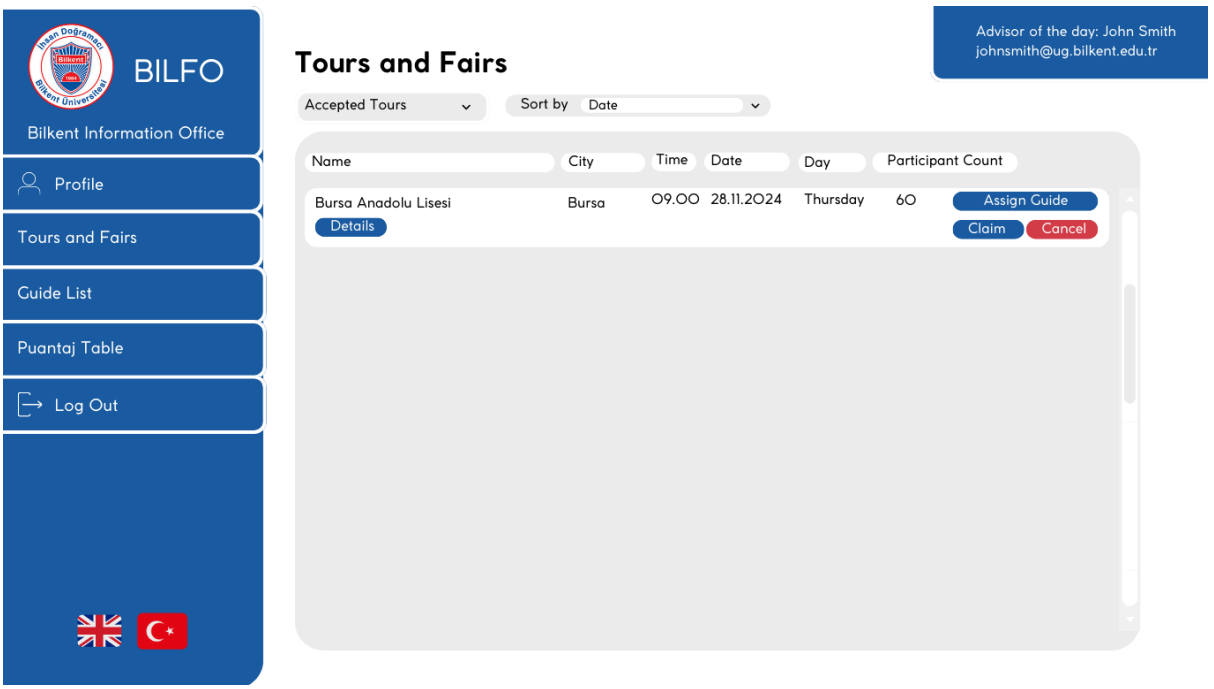

Figure 28: Accepted Tours, Advisor Perspective Screen

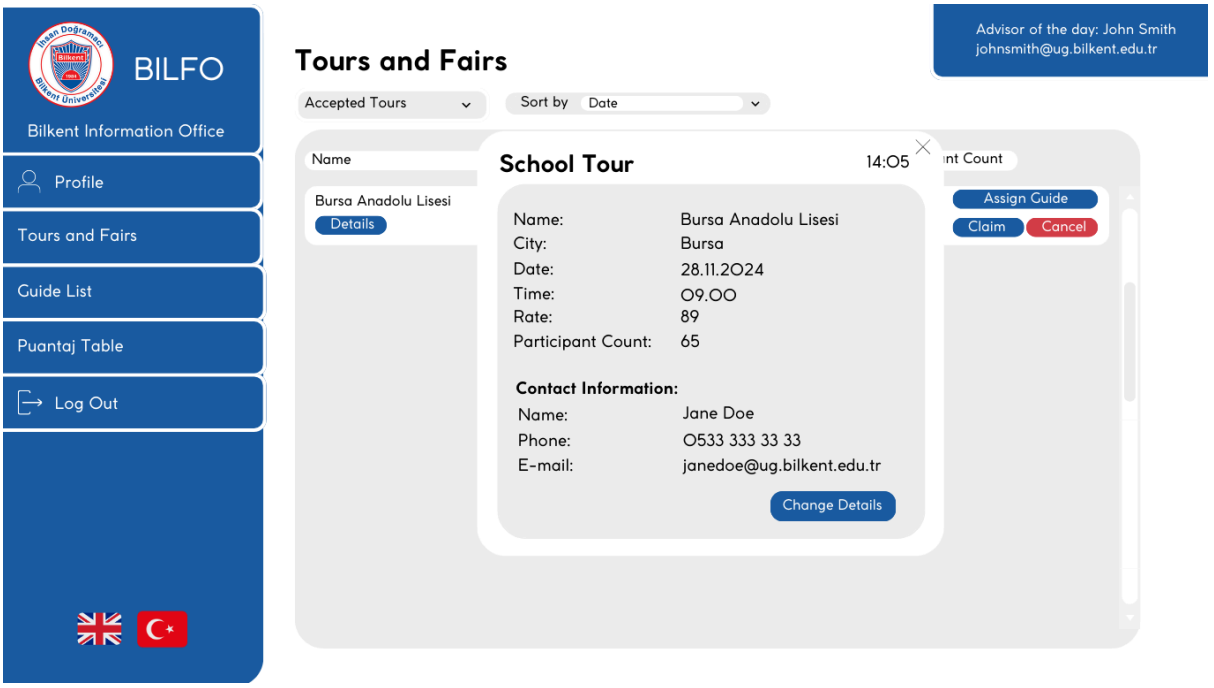

Figure 29: Details of Accepted Tours, Advisor Perspective Screen

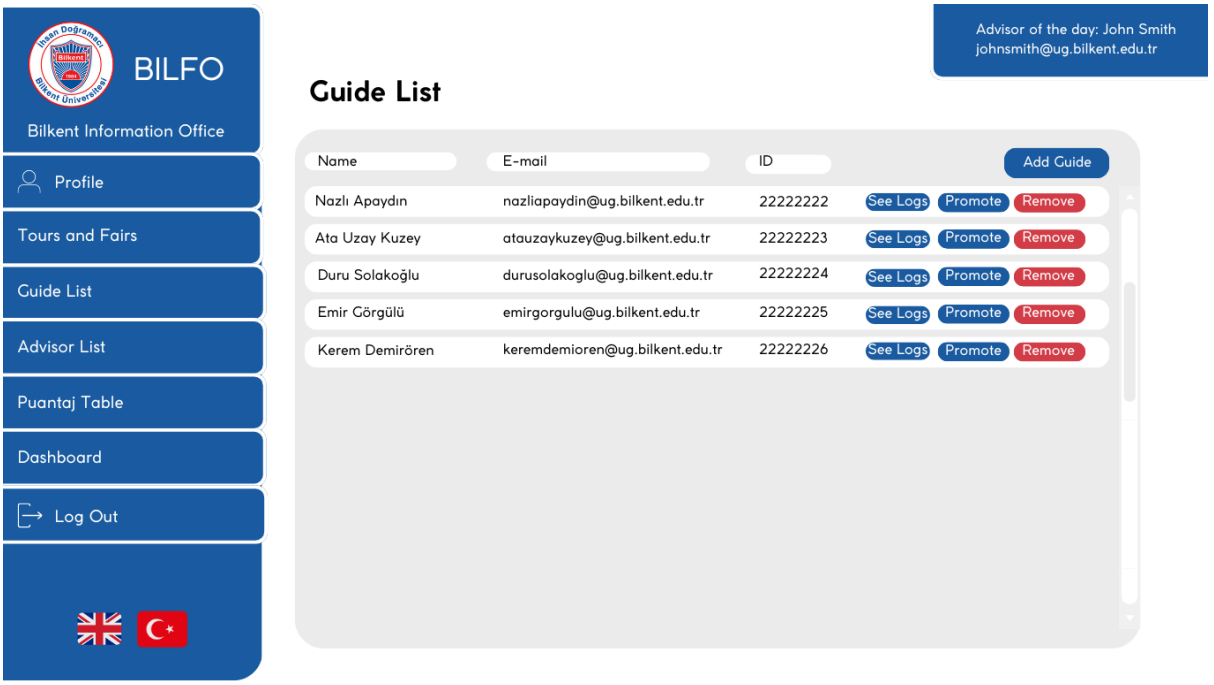

Figure 30: Guide List, Advisor Perspective Screen

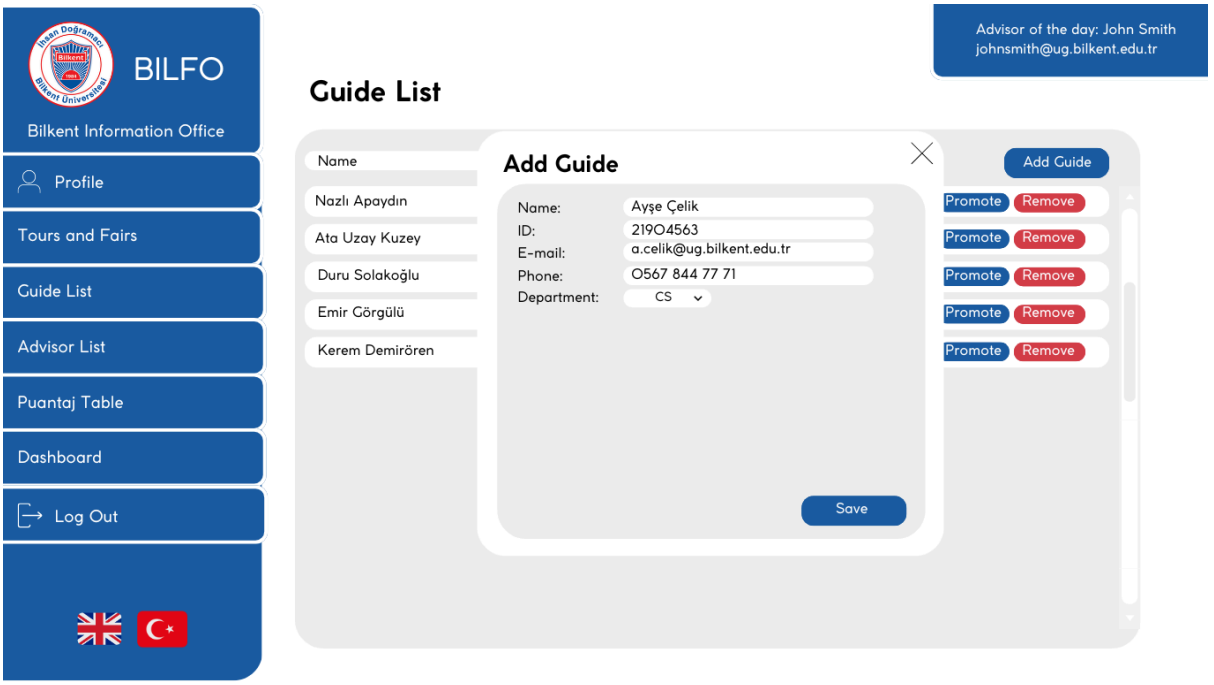

Figure 31: Add Guide to Guide List, Coordinator Perspective

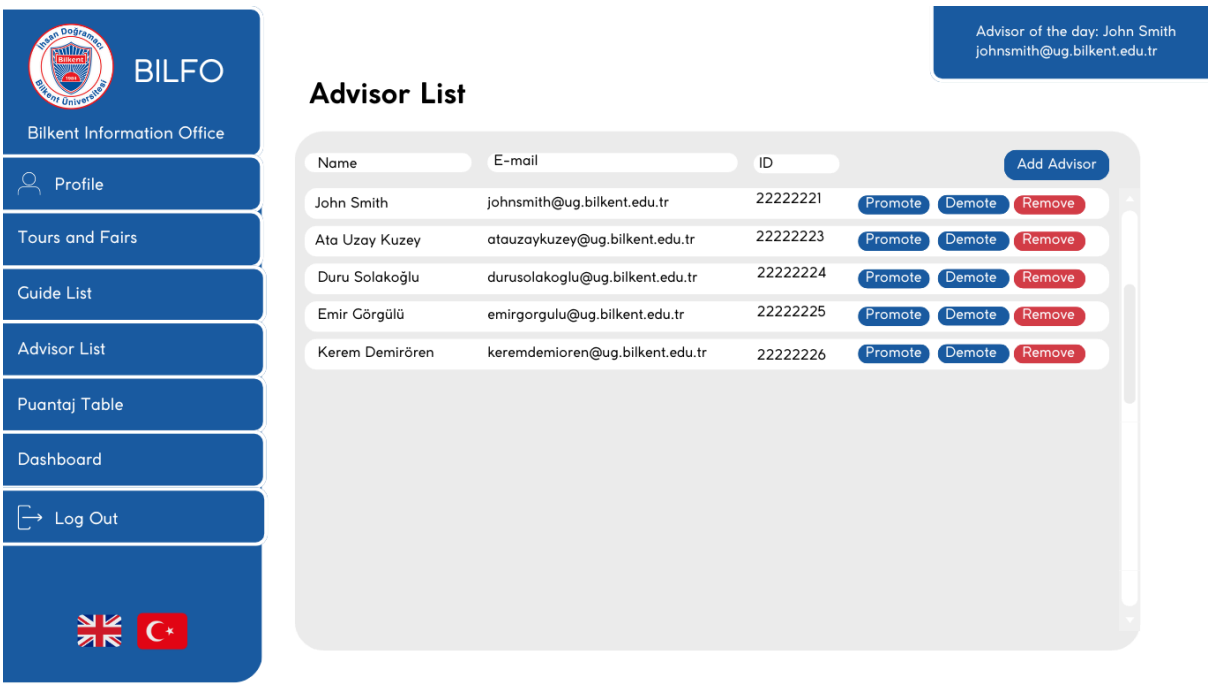

Figure 32: Advisor List, Coordinator Perspective

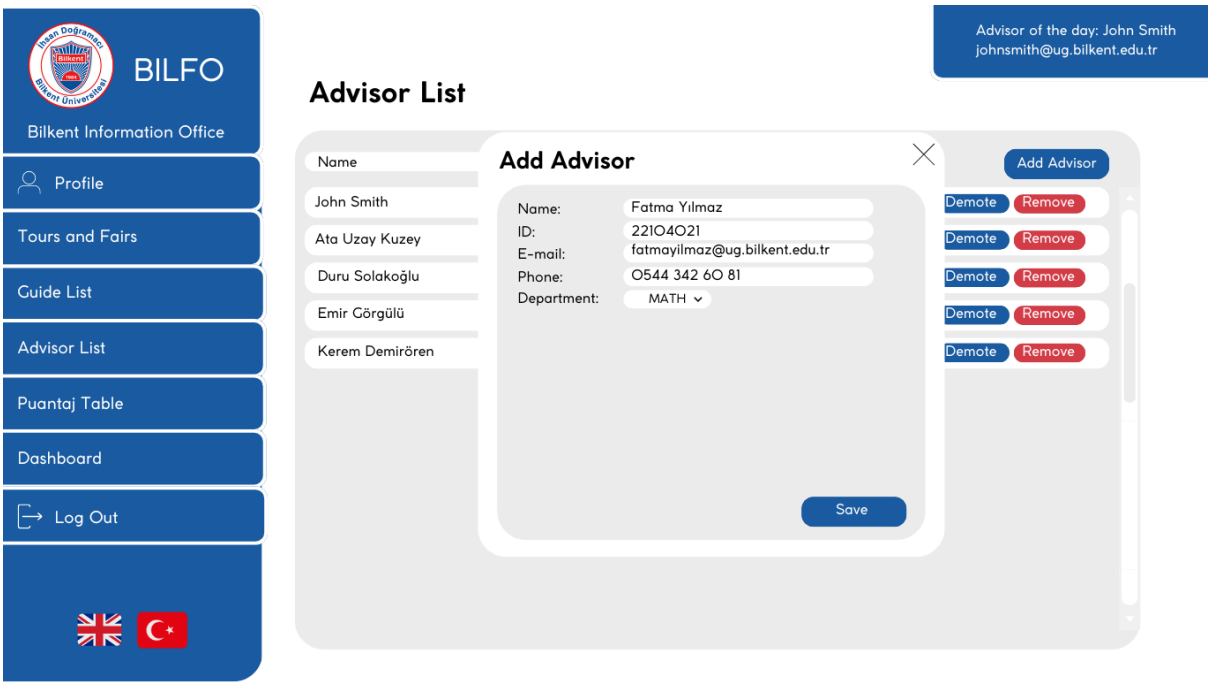

Figure 33: Add Advisor to Advisor List, Coordinator Perspective

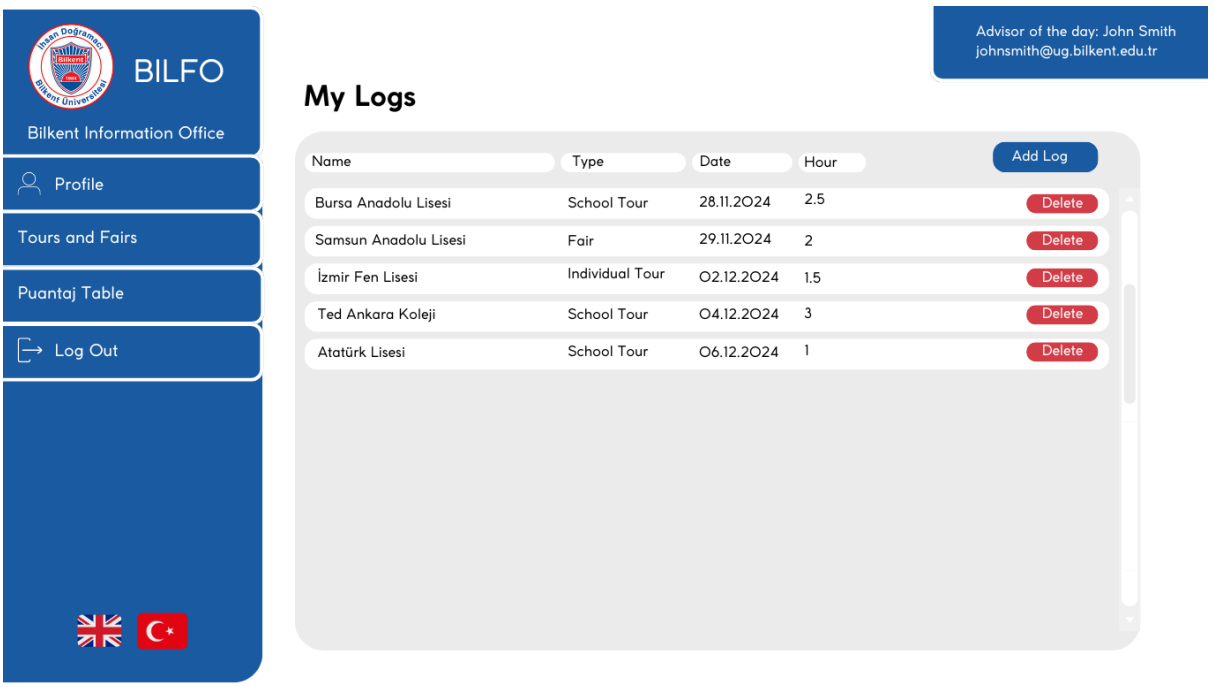

Figure 34: Seeing Own Logs, Guide & Advisor Perspective

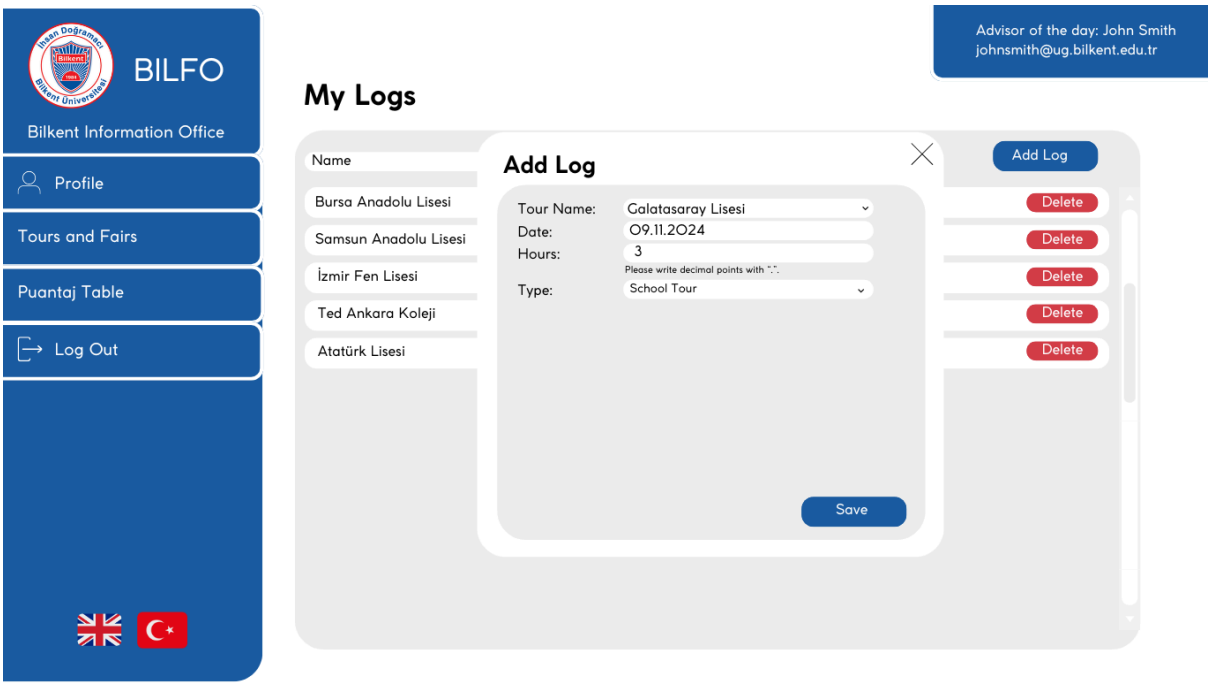

Figure 35: Adding a Log, Guide & Advisor Perspective

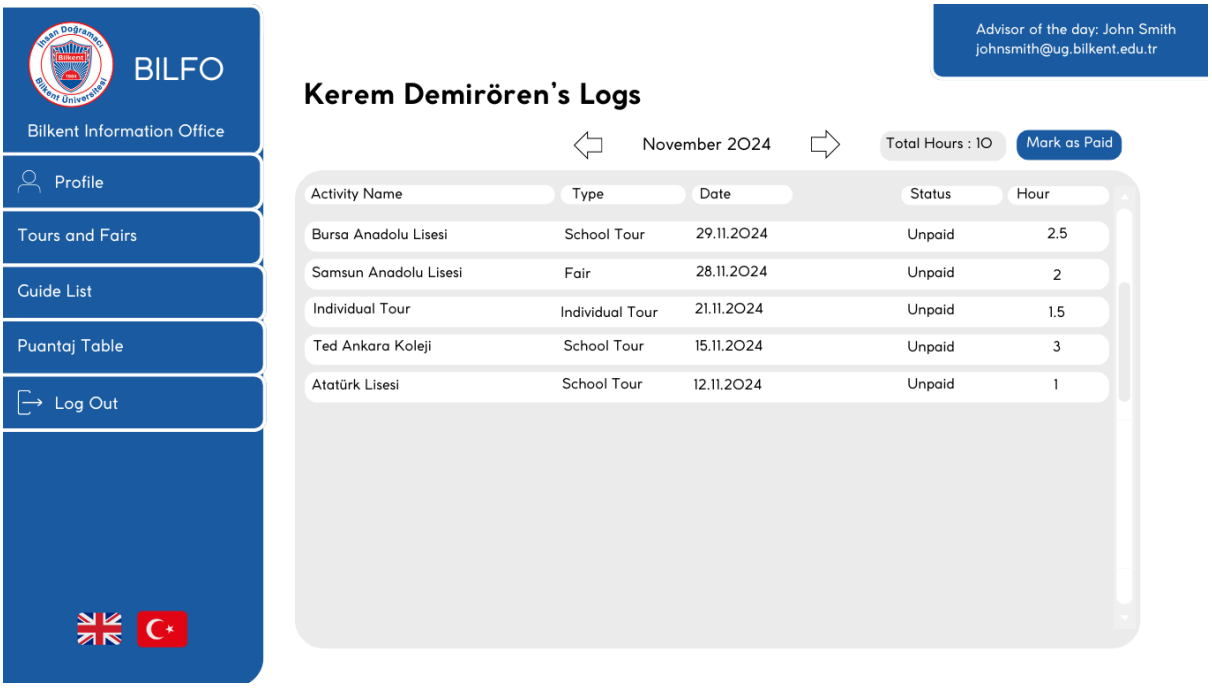

Figure 36: View of Guides' Logs, Coordinator & Advisor Perspective

6.5 Tour and Fair Applications

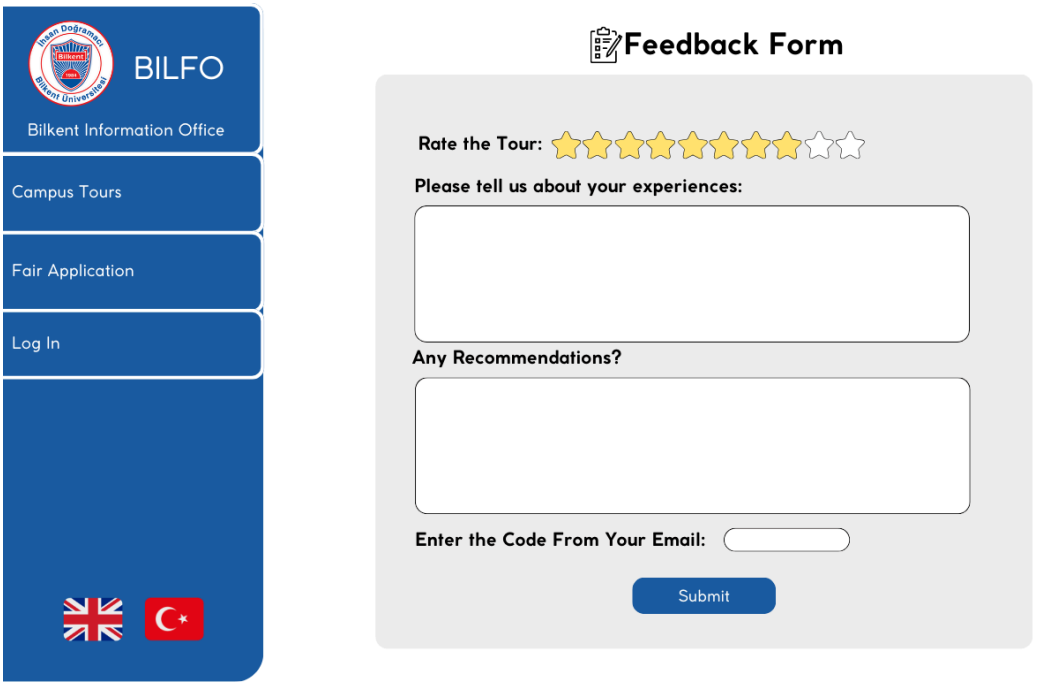

Figure 37: Feedback Form for Completed Tours (Accessed through e-mail)

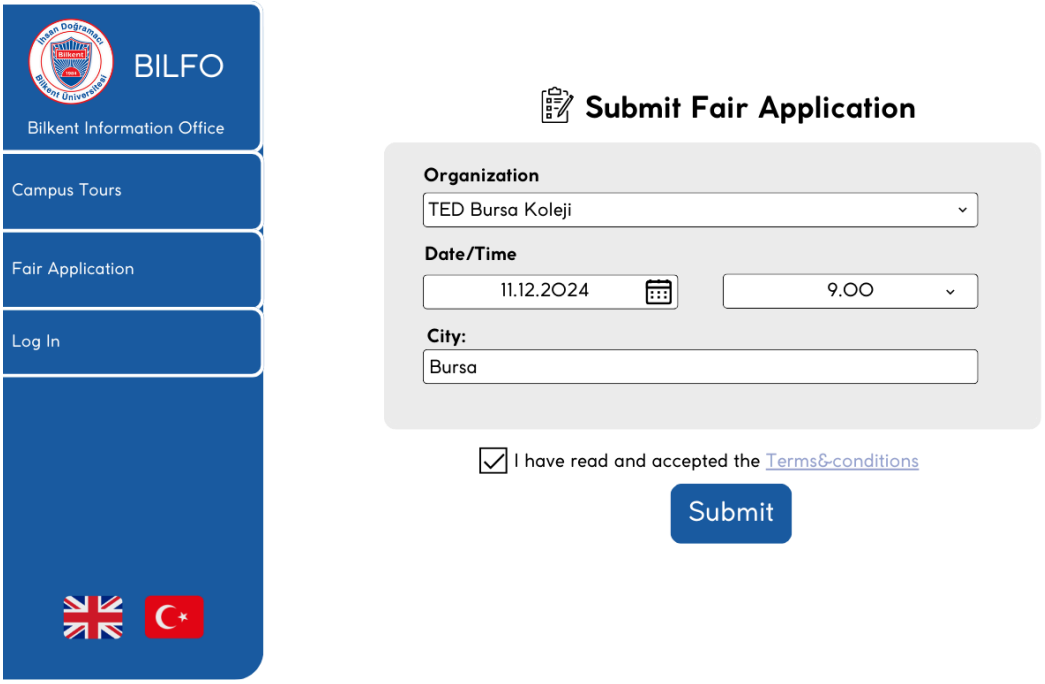

Figure 38: Submitting a Fair Application Form

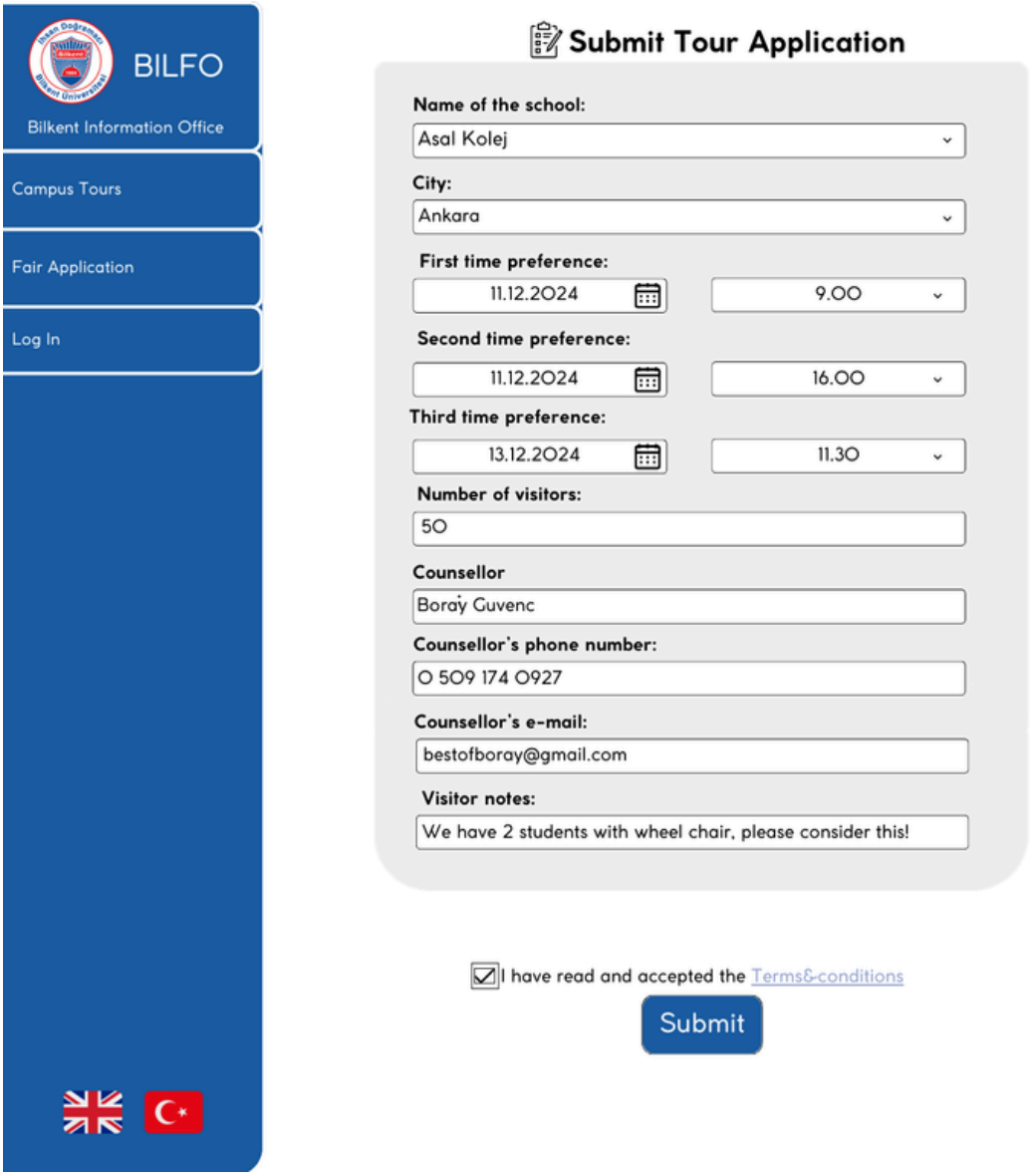

Figure 39: Submitting a Tour Application Form

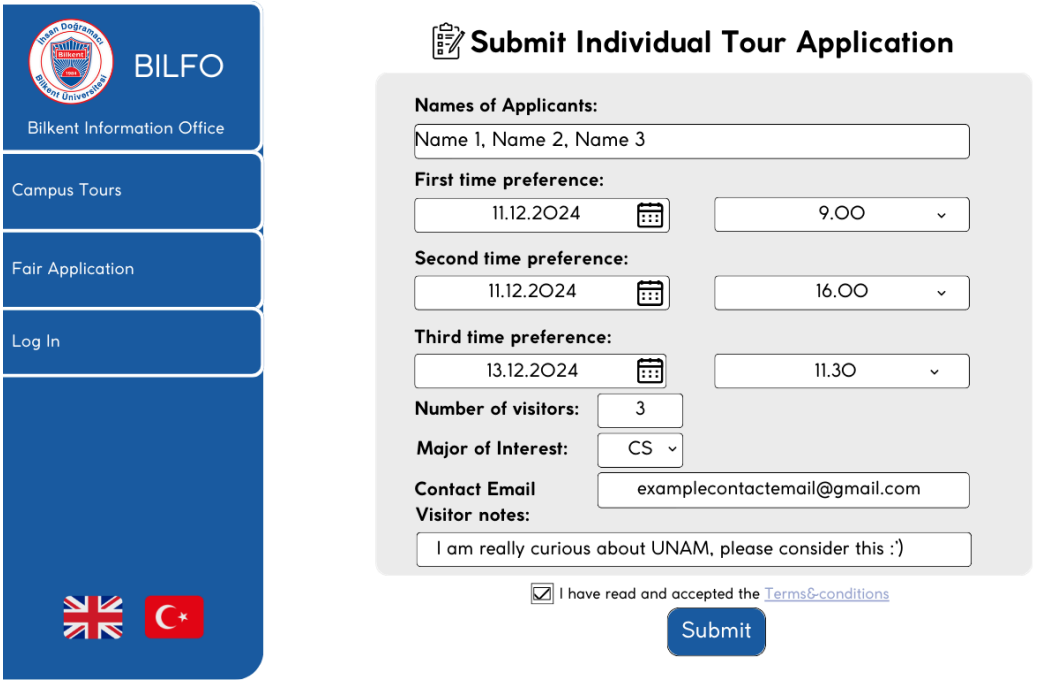

Figure 40: Submitting an Individual Tour Application Form

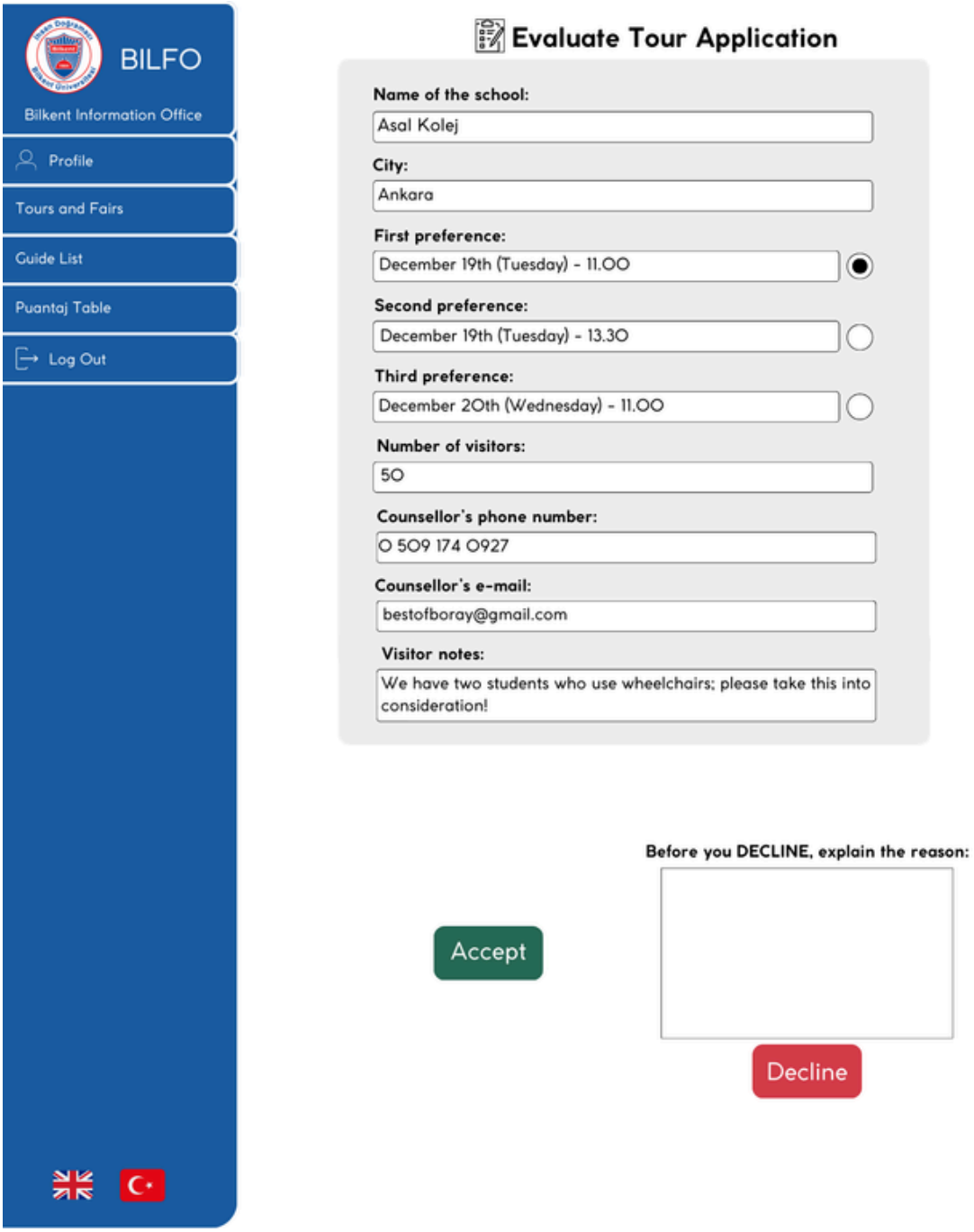

Figure 41: Director, Advisor or Coordinator Evaluating a Tour Application Form

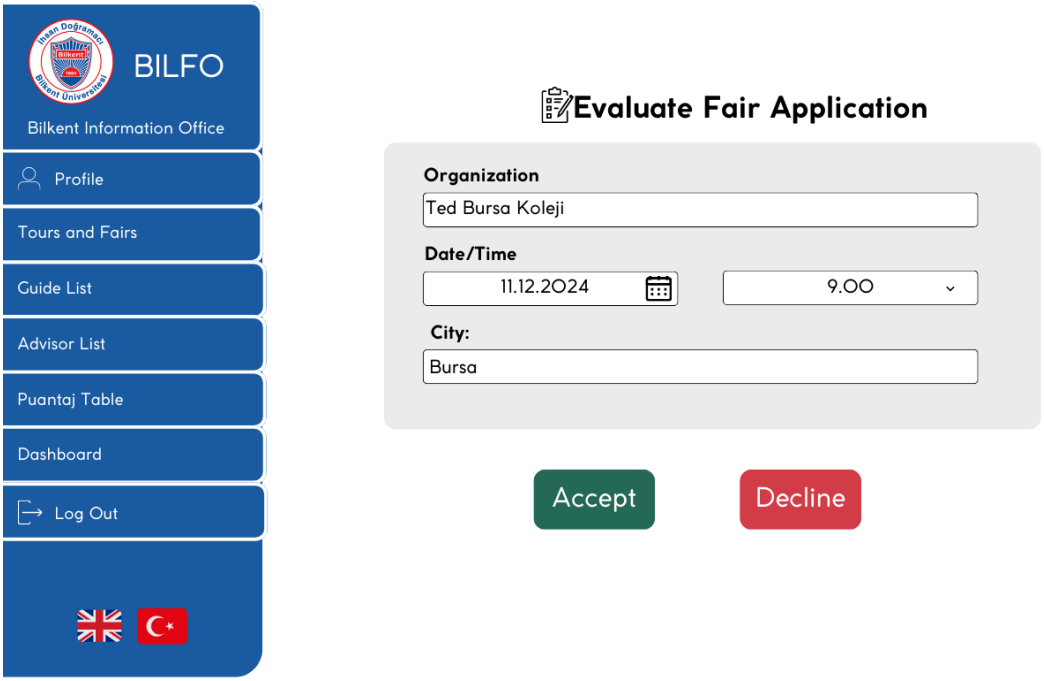

Figure 42: Evaluation of a Fair Application by Coordinator

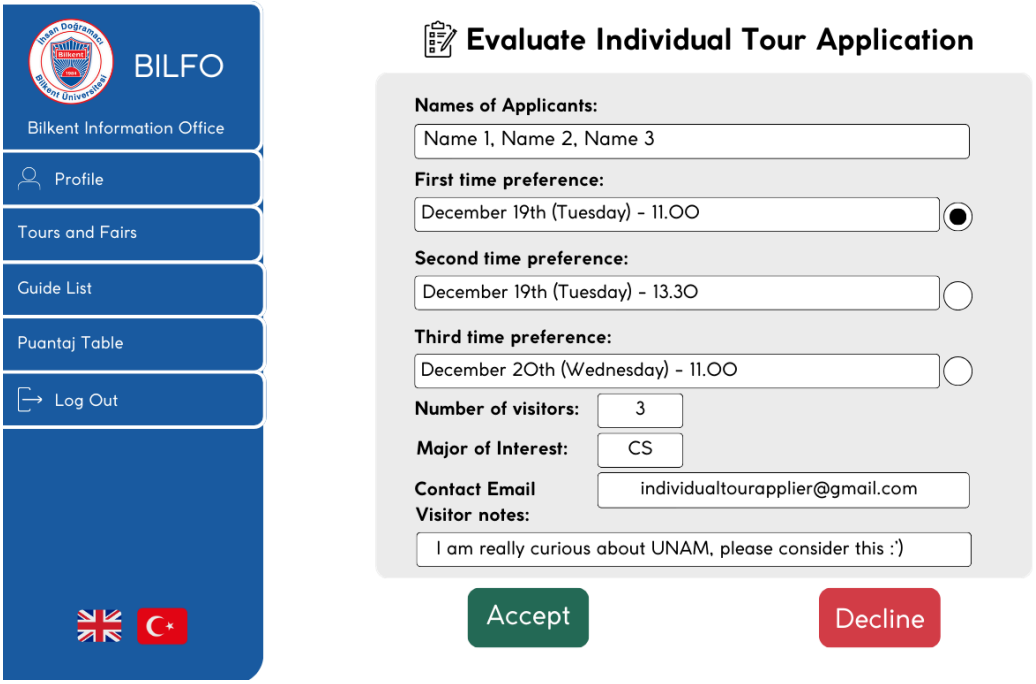

Figure 43: Evaluation of an Individual Tour Application by an Advisor

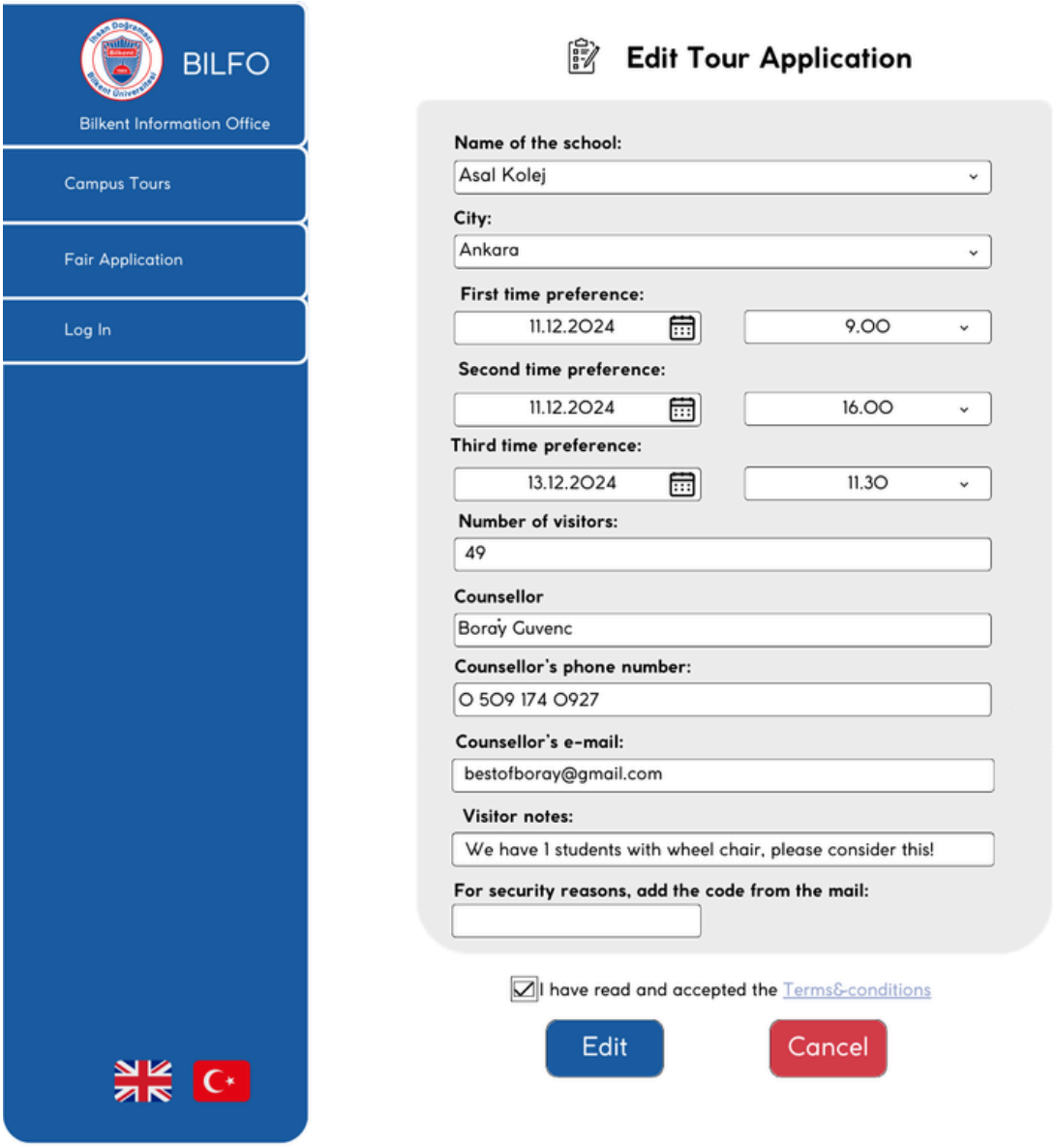

Figure 44: Counselor or Individual Editing a Tour Application Through E-mail Link

6.6 Pop-Ups

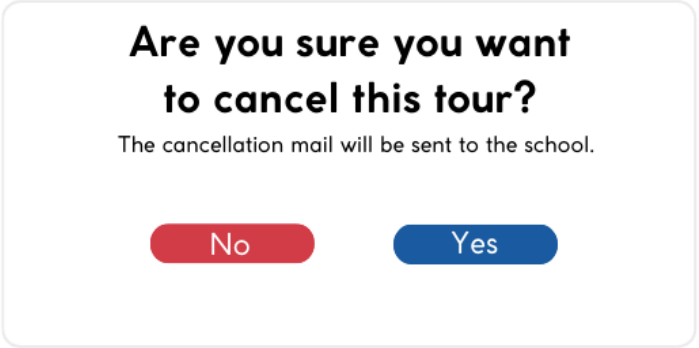

Figure 45: Cancel Tour Pop-up

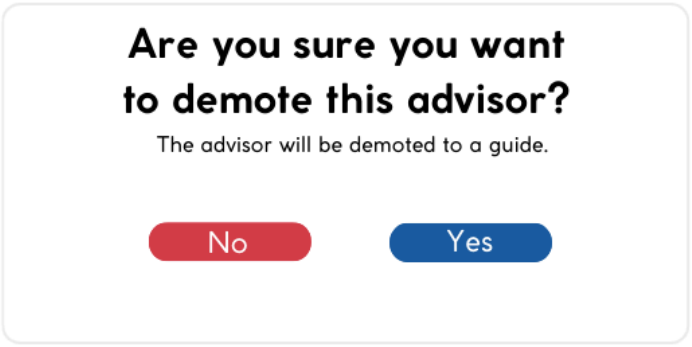

Figure 46: Demote Advisor Pop-up

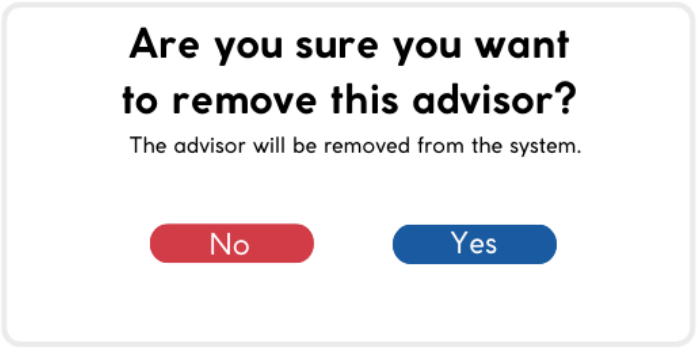

Figure 47: Remove Advisor Pop-up