

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 Örsan Örgü, 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 assigned 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

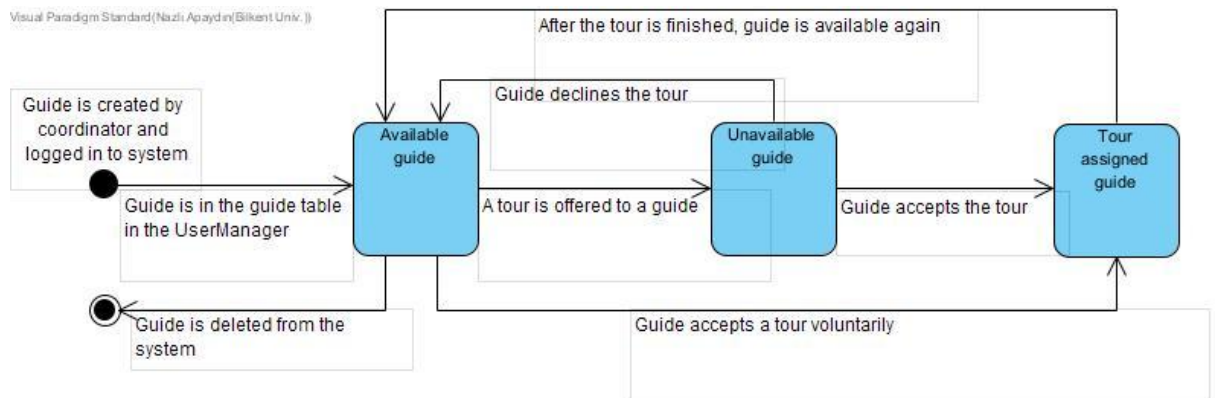


Figure 2: UML State Diagram of the Guide in BILFO

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

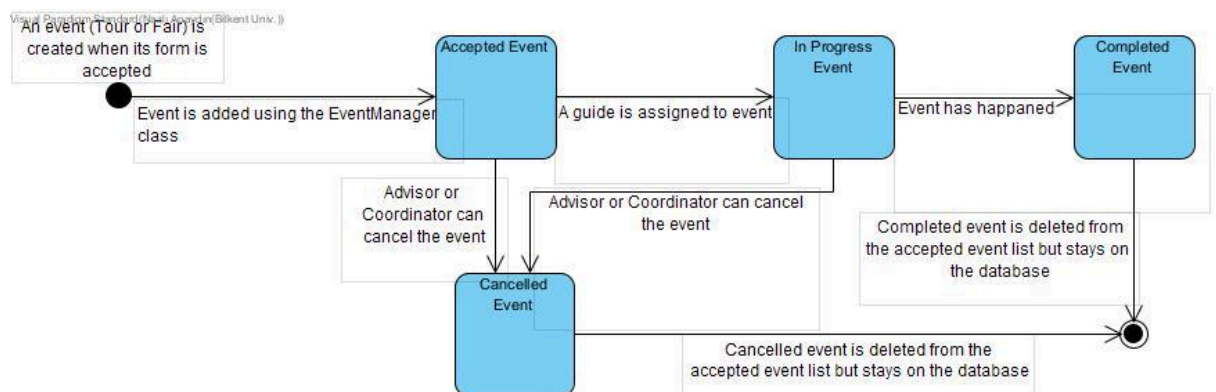


Figure 3: UML State Diagram of the Event Object in BILFO

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

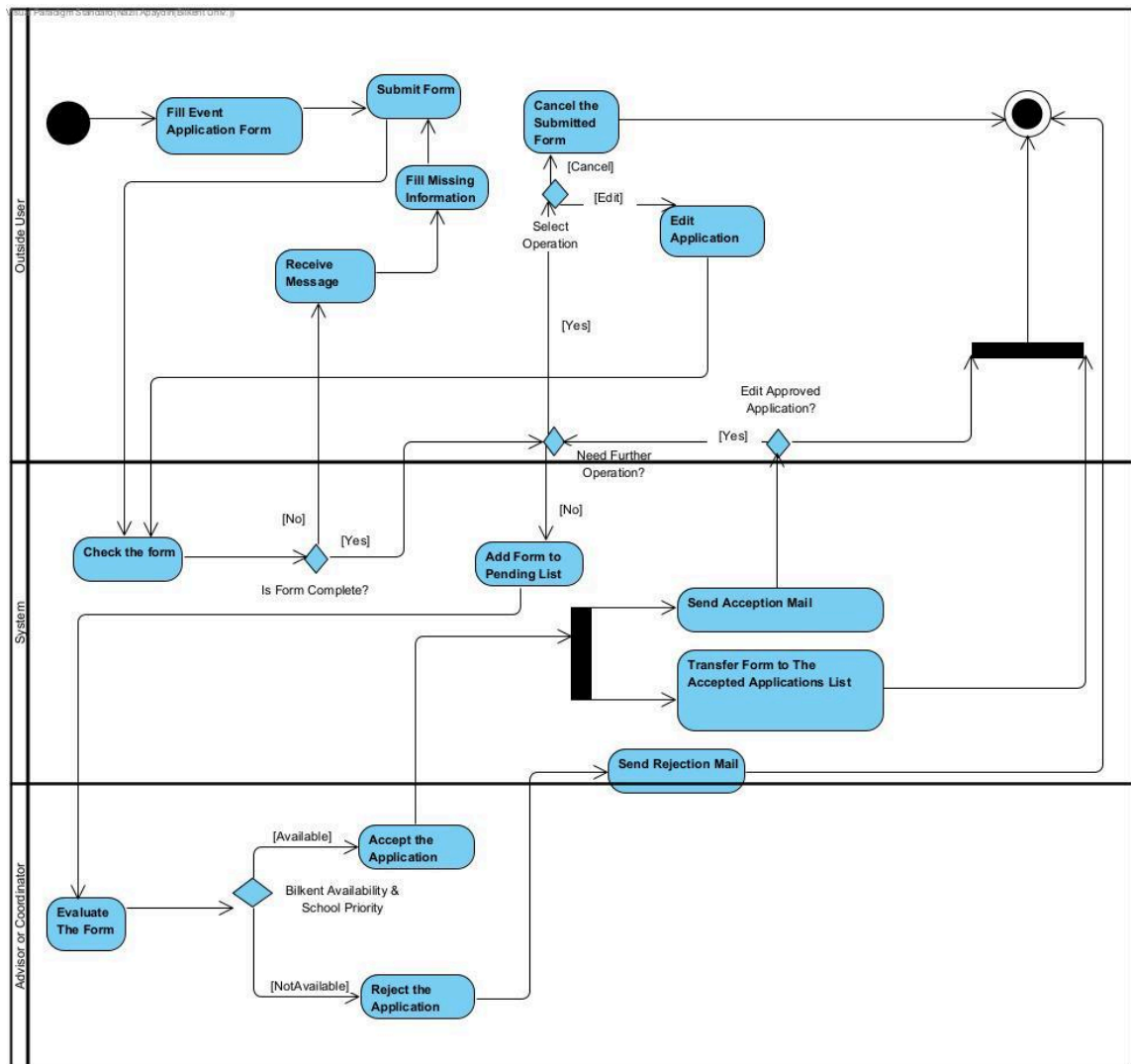


Figure 4: UML Activity Diagram of the Tour and Fair Application Process in BILFO

3.2 Activity Diagram for Accepted Tour Operations

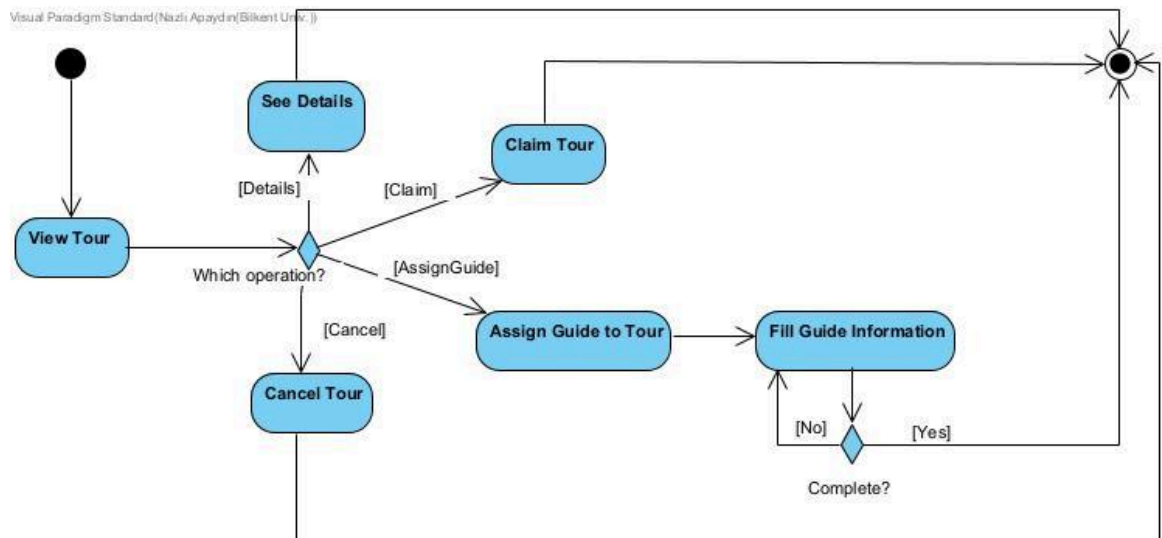


Figure 5: UML Activity Diagram of the Accepted Tour Operations in BILFO

3.3 Activity Diagram of the Guide List for Coordinators

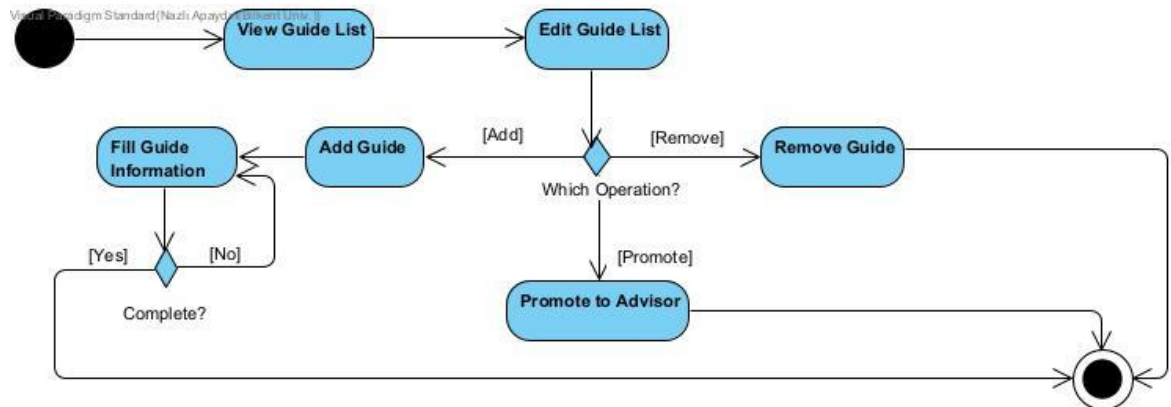


Figure 6: UML Activity Diagram of the Guide List Operations in BILFO

4. Sequence Diagrams

4.1 Forms and Events Sequence Diagram

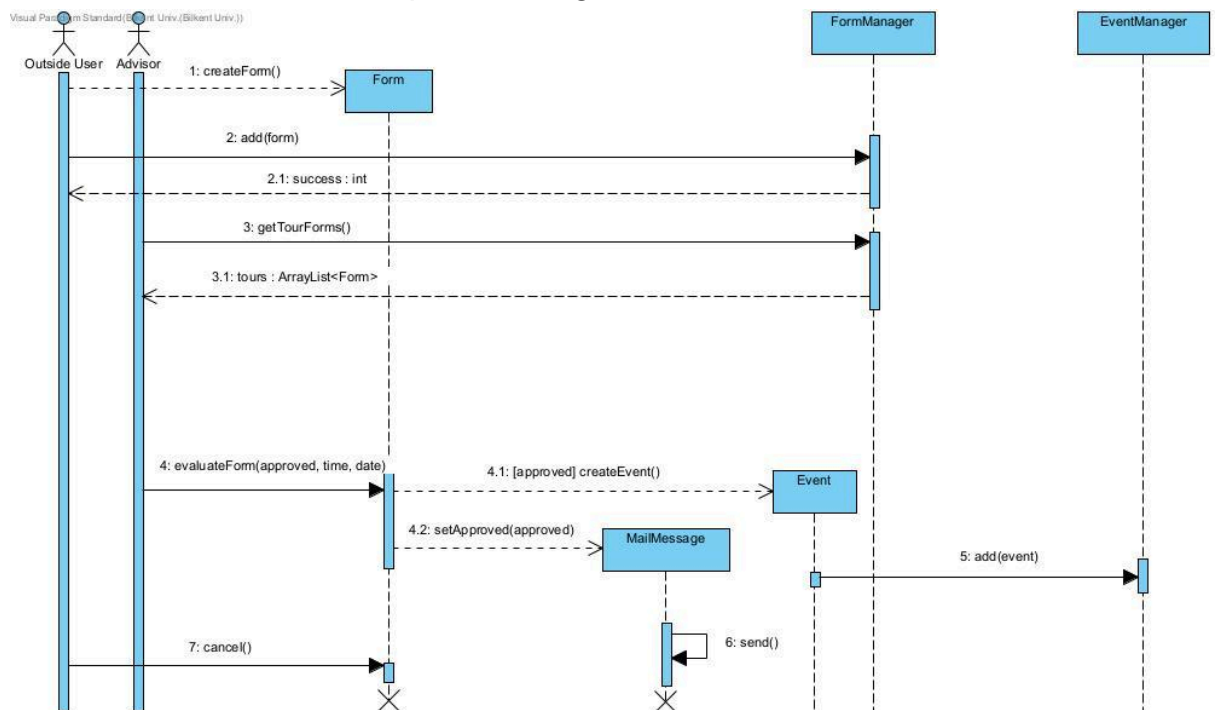


Figure 7: UML Sequence Diagram for Forms and Events

4.2 Tour Guide Assignment Sequence Diagram

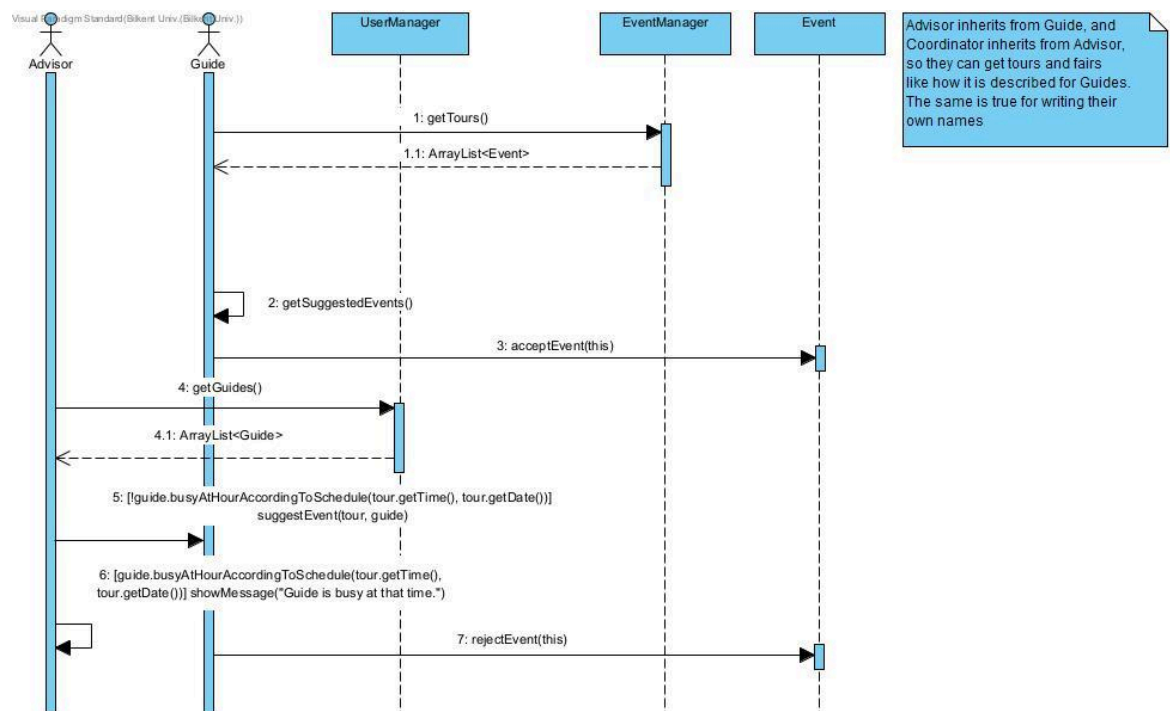


Figure 8: UML Sequence Diagram for Tour Guide Assignment

5.1

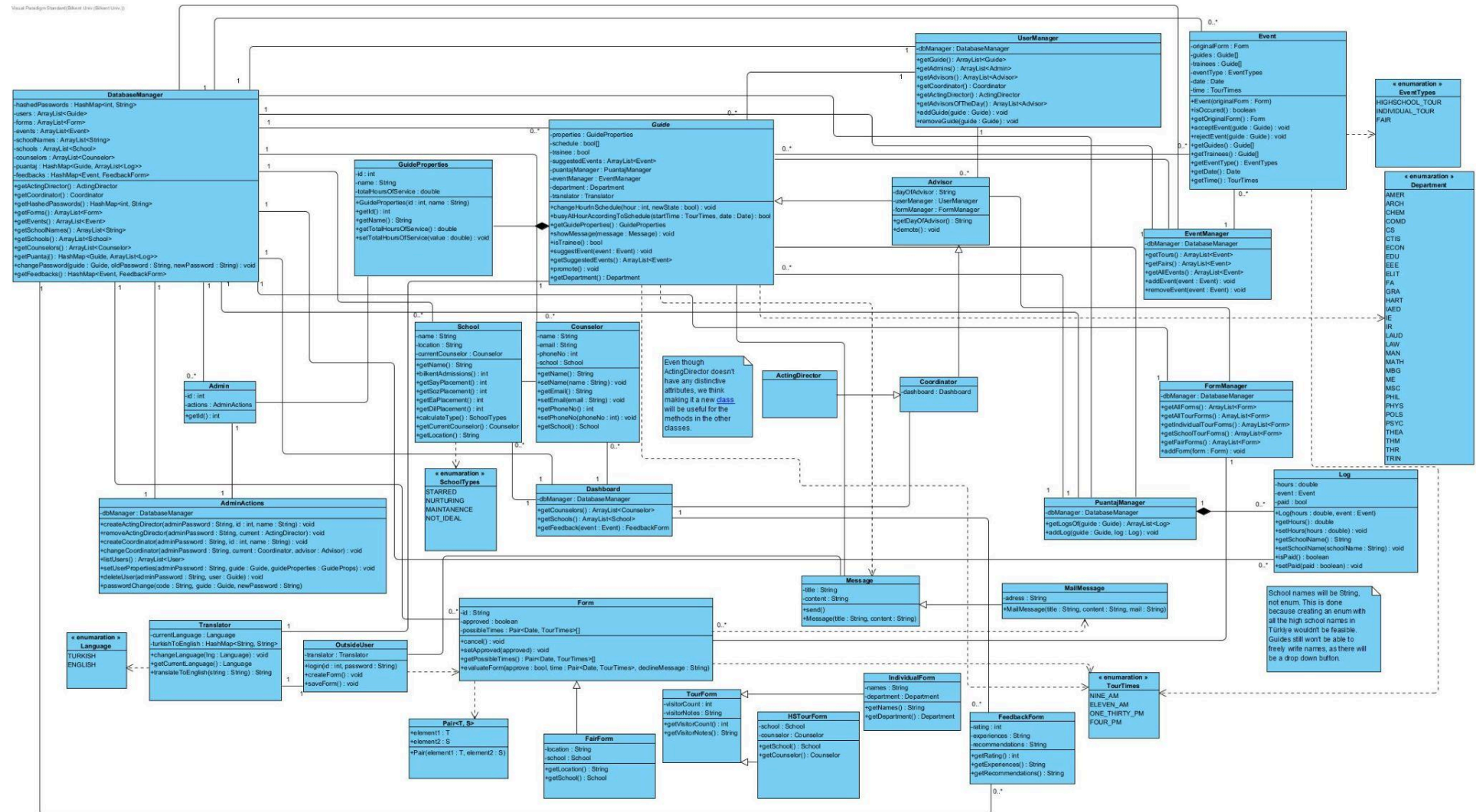
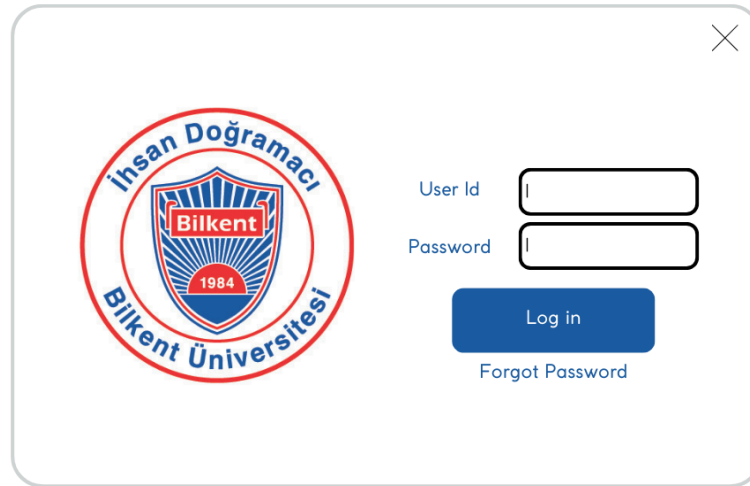


Figure 9: UML Class Diagram for BILFO

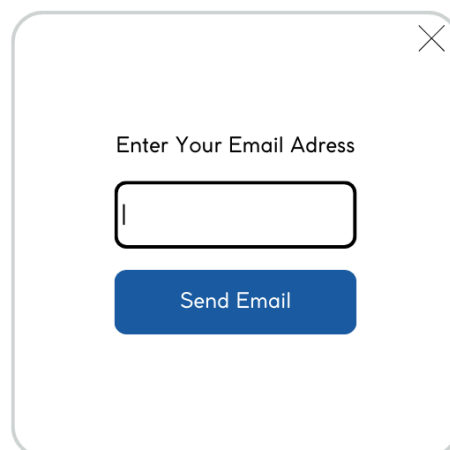
6. Mockups

6.1 Authentication and Home Page



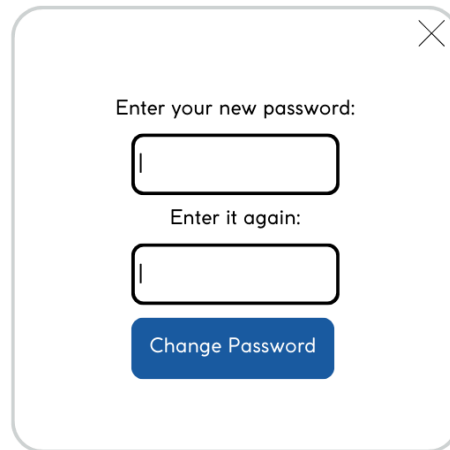
The mockup shows a login interface within a rounded rectangle with a close button (X) in the top right corner. On the left is the Bilkent University logo, which is a circular emblem with 'İhsan Doğramacı' at the top, 'Bilkent' in the center, and 'Bilkent Üniversitesi' at the bottom, with the year '1984' below the center. To the right of the logo are two input fields: 'User Id' and 'Password'. Below these fields is a blue 'Log in' button. Underneath the button is a link labeled 'Forgot Password'.

Figure 10: Log In Screen



The mockup shows a forgot password interface within a rounded rectangle with a close button (X) in the top right corner. It features a text prompt 'Enter Your Email Adress' above a single input field. Below the input field is a blue 'Send Email' button.

Figure 11: Forgot Password Screen

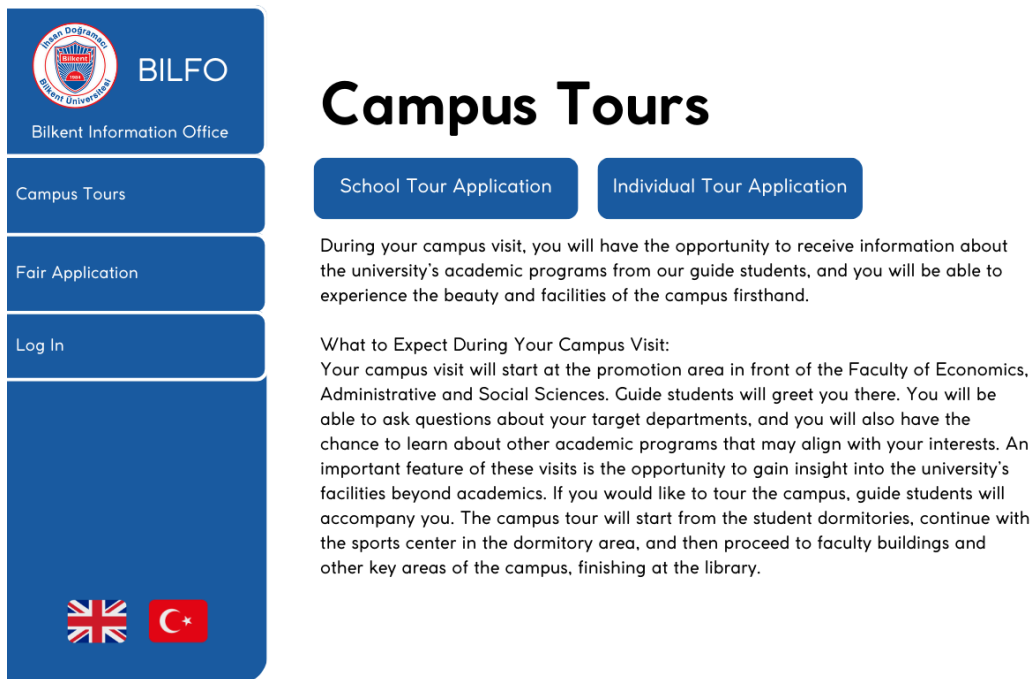



Enter your new password:

Enter it again:

Change Password

Figure 12: Forgot Password- Setting New Password Screen







BILFO
Bilkent Information Office

Campus Tours

Fair Application

Log In

Campus Tours

School Tour Application

Individual Tour Application

During your campus visit, you will have the opportunity to receive information about the university's academic programs from our guide students, and you will be able to experience the beauty and facilities of the campus firsthand.

What to Expect During Your Campus Visit:
Your campus visit will start at the promotion area in front of the Faculty of Economics, Administrative and Social Sciences. Guide students will greet you there. You will be able to ask questions about your target departments, and you will also have the chance to learn about other academic programs that may align with your interests. An important feature of these visits is the opportunity to gain insight into the university's facilities beyond academics. If you would like to tour the campus, guide students will accompany you. The campus tour will start from the student dormitories, continue with the sports center in the dormitory area, and then proceed to faculty buildings and other key areas of the campus, finishing at the library.

Figure 13: Home Page Screen for Outside Users.

6.2 Profile and Dashboard

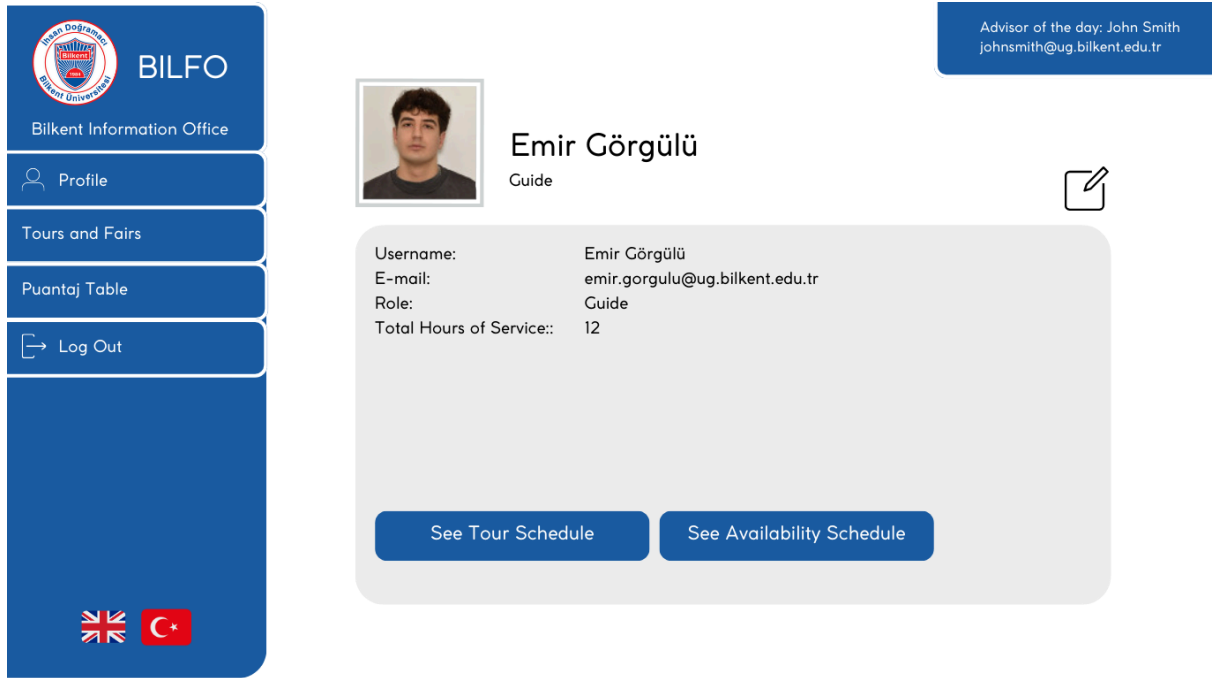


Figure 14: Screen for Seeing Own Profile. Advisor of the day is the advisor that is responsible from that day. It exists in every page, because they are the person to be connected during that day.

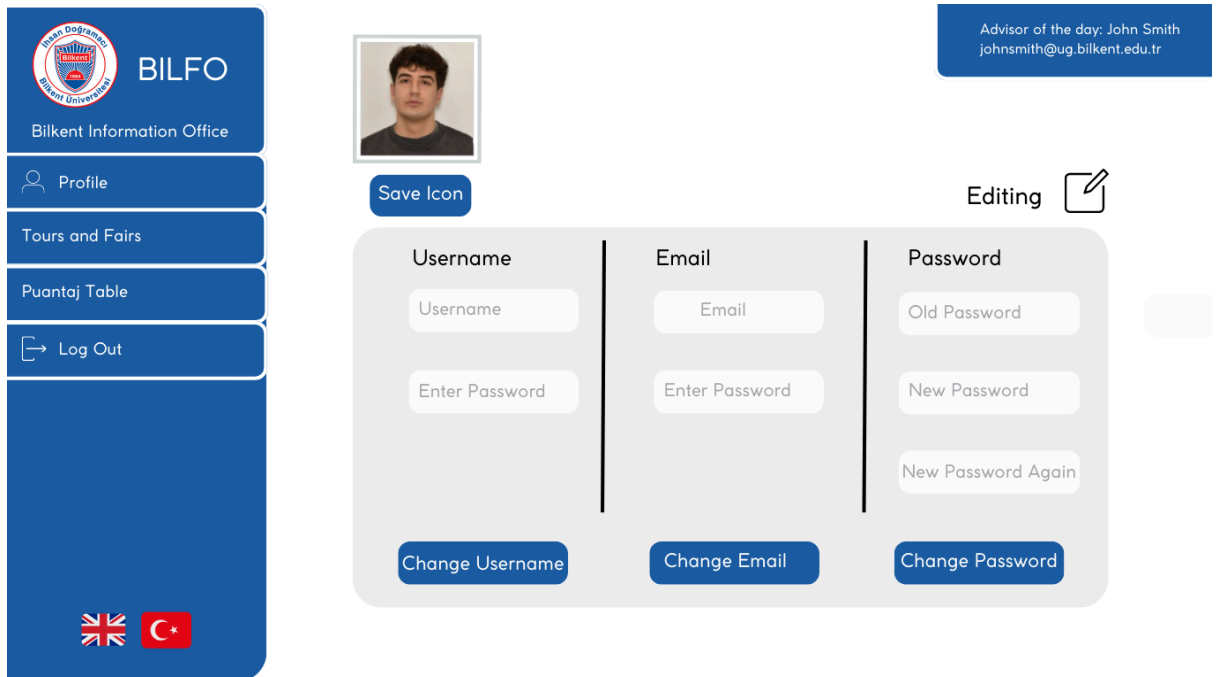


Figure 15: Screen for Editing Own Profile

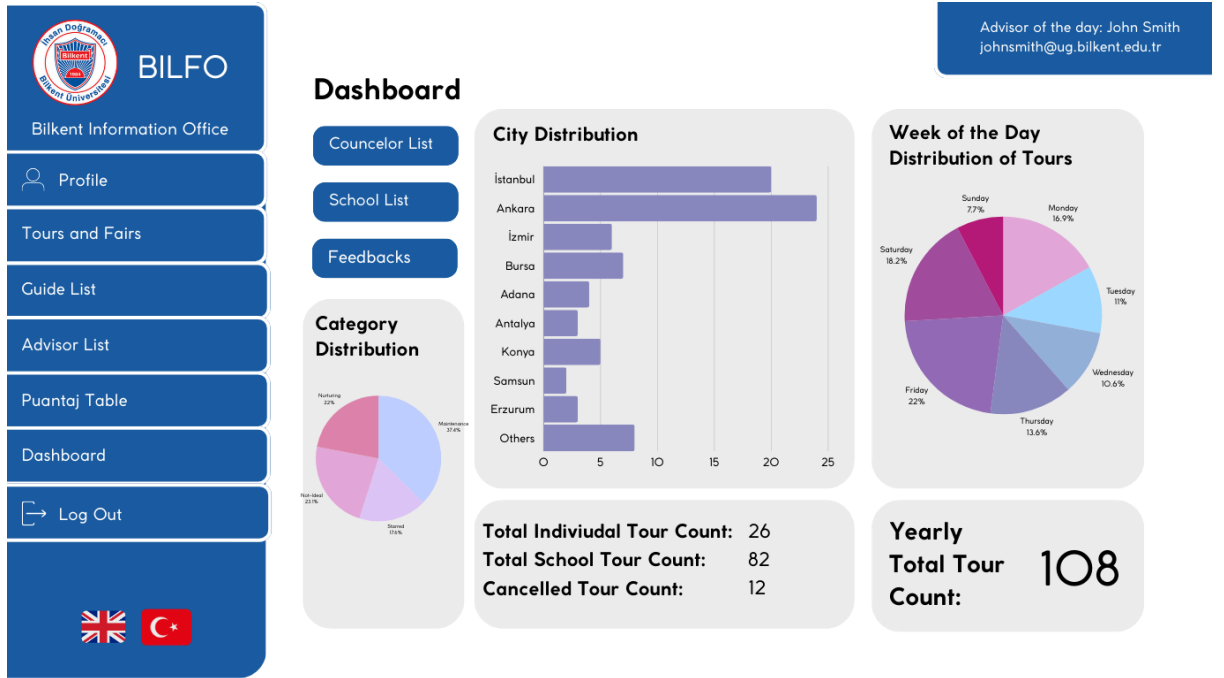


Figure 16: Coordinator and Acting Director's Dashboard Screen for stats

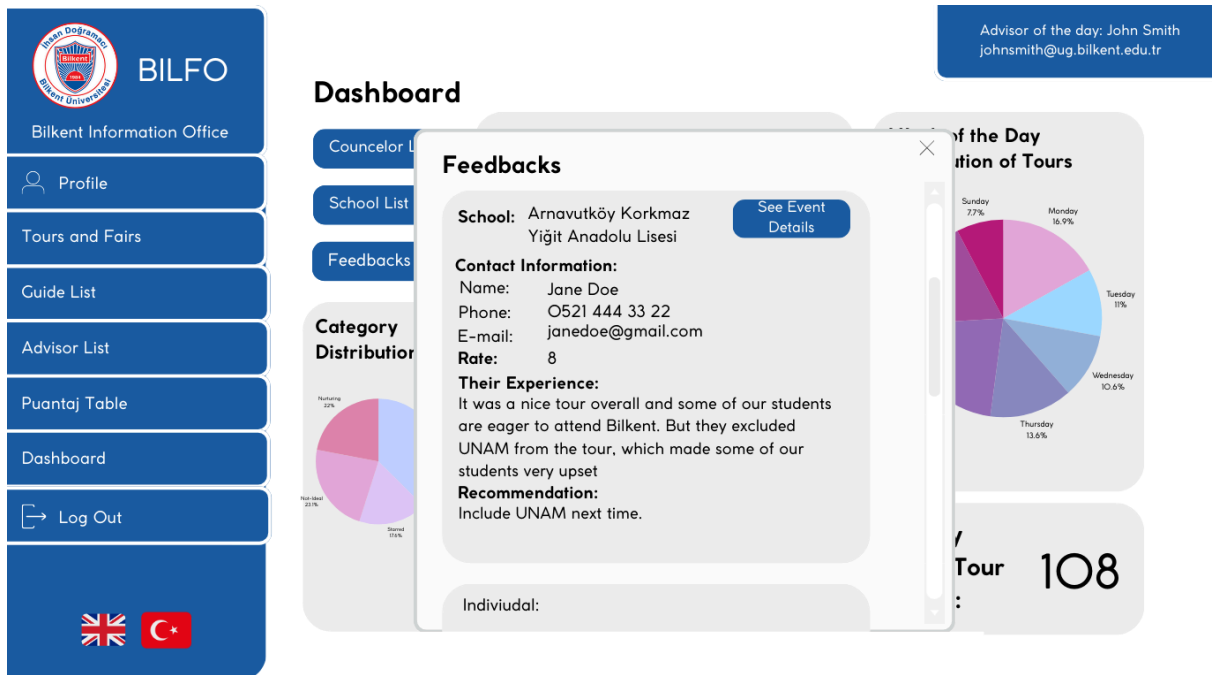





Figure 17: Coordinator and Acting Director's Dashboard Screen Feedback.



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Advisor List
- Puantaj Table
- Dashboard
- Log Out





Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

Counselor List



Name	School	E-mail	Phone		
Can Simit	Ankara Fen Lisesi	cansimit@gmail.com	0533 452 43 51	Edit	Remove
Mehmet Yılmaz	İzmir Fen Lisesi	mehmetyilmaz@gmail.com	0547 312 09 65	Edit	Remove
Ali Öztürk	Ted Ankara Koleji	aliöztürk@gmail.com	0536 497 81 81	Edit	Remove
Fatma Aydın	Tofaş Fen Lisesi	fatmaaydin@gmail.com	0539 402 21 00	Edit	Remove
Hasan Yıldız	Bilkent Erzurum Lisesi	hasanyildiz@hotmail.com	0505 34 06 26	Edit	Remove

Figure 18: Seeing Counselor List



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Advisor List
- Puantaj Table
- Dashboard
- Log Out

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

School List

School Name	SAY	EA	SOZ	DIL	Bilkent Admissions	Category	
Ankara Fen Lisesi	2000	1300	1500	200	80	Starred	See Previous Tours
İzmir Fen Lisesi	1500	1000	1650	250	6	Nurturing	See Previous Tours
Ted Ankara Koleji	9000	6700	6500	3000	95	Maintenance	See Previous Tours

Figure 19: Seeing School List

Bursa Anadolu Lisesi Previous Tours

X

Date:

28.11.2024

Time:

09.00

Rate:

8

Participant Count:

65

Contact Information:

Name:

Jane Doe

Phone:

0521 444 33 22

E-mail:

janedoe@gmail.com

Guides:

Ata Uzay Kuzey

Nazlı Apaydın


Trainees:

Kerem Demirören

See Evaluation

Date:

12.10.2023



BILFO

Bilkent Information Office


Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

[Profile](#)

Tour Schedule

← 22 - 27 October 2024 →

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8.20 – 9.20							
9.20 – 10.20		Izmir Fen					
10.20 – 11.20		Izmir Fen					
11.20 – 12.20		Izmir Fen					
12.20 – 13.20							
13.20 – 14.20							
14.20 – 15.20							
15.20 – 16.20							
16.20 – 17.20				Ankara TED			
17.20 – 18.20				Ankara TED			
18.20 – 19.20							



BILFO
Bilkent Information Office

Profile

Tours and Fairs

Puantaj Table

Log Out


Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

Availability Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8.20 – 9.20							
9.20 – 10.20							
10.20 – 11.20							
11.20 – 12.20							
12.20 – 13.20							
13.20 – 14.20							
14.20 – 15.20							
15.20 – 16.20							
16.20 – 17.20							
17.20 – 18.20							
18.20 – 19.20							

Figure 22: Availability Schedule Screen

6.3 Management



BILFO
Bilkent Information Office

User List

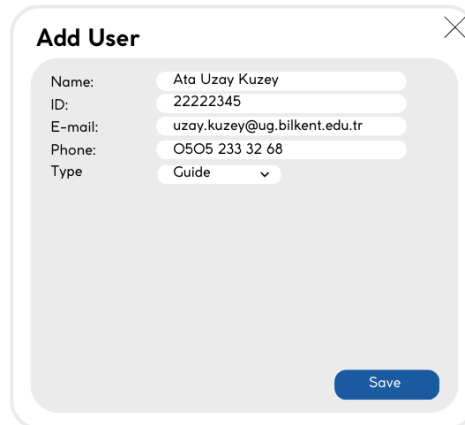
Log Out

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

User List

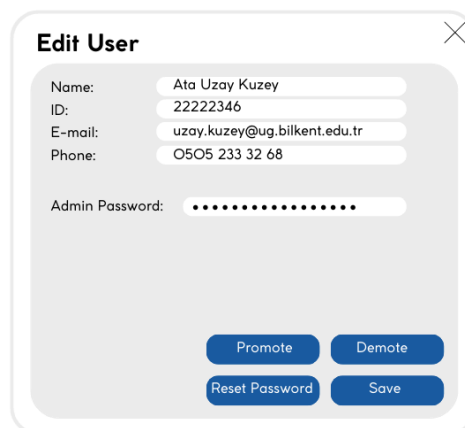
Name	User Type	E-mail	ID	
Nazlı Apaydın	Guide	nazliapaydin@ug.bilkent.edu.tr	22222222	Edit Remove
Ata Uzay Kuzey	Guide	atauzaykuzey@ug.bilkent.edu.tr	22222223	Edit Remove
Duru Solakoğlu	Guide	durusolakoglu@ug.bilkent.edu.tr	22222224	Edit Remove
Emir Görgülü	Guide	emirgorgulu@ug.bilkent.edu.tr	22222225	Edit Remove
Kerem Demirören	Guide	keremdemiroren@ug.bilkent.edu.tr	22222226	Edit Remove
John Smith	Advisor	johnsmith@ug.bilkent.edu.tr	22222227	Edit Remove
Mr. Brown	Coordinator	mr.brown@ug.bilkent.edu.tr	22222228	Edit Remove
Özhan Örgü	Acting D.	orsan@bilkent.edu.tr	22222229	Edit Remove

Figure 23: Seeing User List - Admin View



The 'Add User' dialog box features a title bar with a close button (X) in the top right corner. The main content area contains a form with the following fields: 'Name' (Ata Uzay Kuzey), 'ID' (22222345), 'E-mail' (uzay.kuzey@ug.bilkent.edu.tr), 'Phone' (0505 233 32 68), and 'Type' (a dropdown menu currently showing 'Guide'). A blue 'Save' button is positioned at the bottom right of the form area.


Figure 24: Adding New User - Admin View Screen




The 'Edit User' dialog box has a title bar with a close button (X) in the top right corner. The form contains the same user information as Figure 24: 'Name' (Ata Uzay Kuzey), 'ID' (22222346), 'E-mail' (uzay.kuzey@ug.bilkent.edu.tr), and 'Phone' (0505 233 32 68). Below these fields is an 'Admin Password' field represented by a series of dots. At the bottom of the dialog, there are four blue buttons: 'Promote', 'Demote', 'Reset Password', and 'Save'.

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




BILFO
Bilkent Information Office



 Profile

Tours and Fairs

Guide List

Puantaj Table

 Log Out




Tours and Fairs

Pending Tours ▼ Sort by Date ▼


Name	City	Time	Date	Rate	
Bursa Anadolu Lisesi	Bursa	09.00	28.11.2024	89	<button>Evaluate</button>
Samsun Anadolu Lisesi	Samsun	11.00	29.11.2024	85	<button>Evaluate</button>
İzmir Fen Lisesi	İzmir	13.00	02.12.2024	92	<button>Evaluate</button>
Ted Ankara Koleji	Ankara	11.00	04.12.2024	90	<button>Evaluate</button>
Atatürk Lisesi	Ankara	11.00	06.12.2024	95	<button>Evaluate</button>

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

Figure 26: Pending Tours, Advisor or Coordinator Perspective Screen






BILFO
Bilkent Information Office

 Profile

Tours and Fairs

Puantaj Table

 Log Out



Tours and Fairs

Accepted Tours ▼ Sort by Date ▼

Name	City	Time	Date	Day	Participant Count	
Bursa Anadolu Lisesi	Bursa	09.00	28.11.2024	Thursday	60	<button>Claim</button>
Samsun Anadolu Lisesi	Samsun	11.00	29.11.2024	Friday	60	<button>Claim</button>
İzmir Fen Lisesi	İzmir	13.00	02.12.2024	Monday	60	<button>Claim</button>
Ted Ankara Koleji	Ankara	11.00	04.12.2024	Wednesday	60	<button>Claim</button>
Atatürk Lisesi	Ankara	11.00	06.12.2024	Friday	60	<button>Claim</button>

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

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.

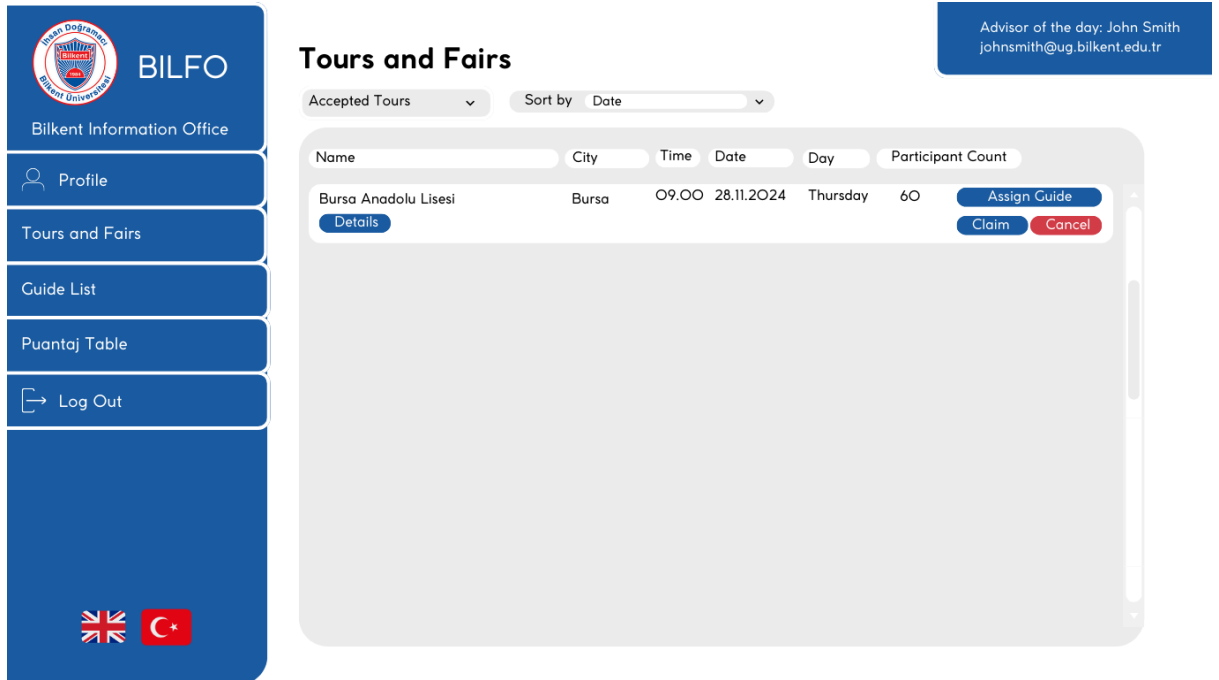


Figure 28: Accepted Tours, Advisor Perspective Screen

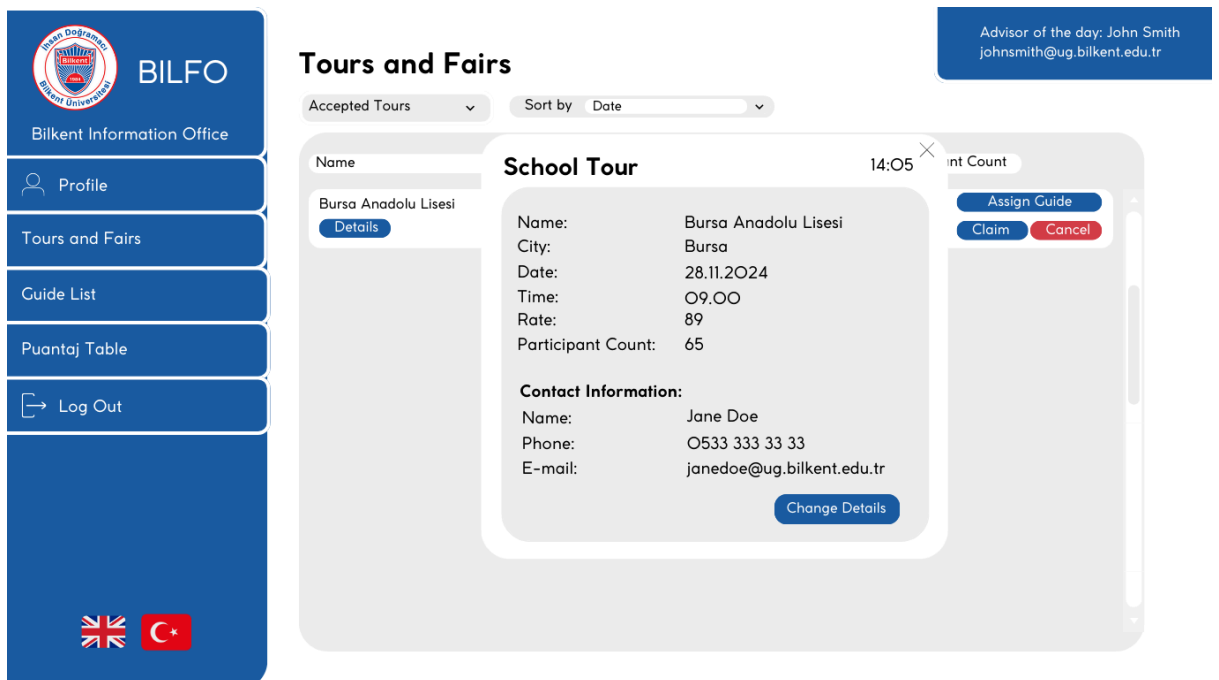





Figure 29: Details of Accepted Tours, Advisor Perspective Screen



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Advisor List
- Puantaj Table
- Dashboard
- Log Out





Guide List

Name	E-mail	ID	
Nazlı Apaydın	nazliapaydin@ug.bilkent.edu.tr	22222222	See Logs Promote Remove
Ata Uzay Kuzey	atauzaykuzey@ug.bilkent.edu.tr	22222223	See Logs Promote Remove
Duru Solakoğlu	durusolakoglu@ug.bilkent.edu.tr	22222224	See Logs Promote Remove
Emir Görgülü	emirgorgulu@ug.bilkent.edu.tr	22222225	See Logs Promote Remove
Kerem Demirören	keremdemiroren@ug.bilkent.edu.tr	22222226	See Logs Promote Remove



Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

Figure 30: Guide List, Advisor Perspective Screen



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Advisor List
- Puantaj Table
- Dashboard
- Log Out

Guide List

Name	E-mail	ID	
Nazlı Apaydın	nazliapaydin@ug.bilkent.edu.tr	22222222	See Logs Promote Remove
Ata Uzay Kuzey	atauzaykuzey@ug.bilkent.edu.tr	22222223	See Logs Promote Remove
Duru Solakoğlu	durusolakoglu@ug.bilkent.edu.tr	22222224	See Logs Promote Remove
Emir Görgülü	emirgorgulu@ug.bilkent.edu.tr	22222225	See Logs Promote Remove
Kerem Demirören	keremdemiroren@ug.bilkent.edu.tr	22222226	See Logs Promote Remove

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

Add Guide

Name: Ayşe Çelik

ID: 21904563


E-mail: a.celik@ug.bilkent.edu.tr

Phone: 0567 844 77 71

Department: CS



Save

Figure 31: Add Guide to Guide List, Coordinator Perspective



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Advisor List
- Puantaj Table
- Dashboard
- Log Out





Advisor List

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr



Name	E-mail	ID	
John Smith	johnsmith@ug.bilkent.edu.tr	22222221	Promote Demote Remove
Ata Uzay Kuzey	atauzaykuzey@ug.bilkent.edu.tr	22222223	Promote Demote Remove
Duru Solakoğlu	durusolakoglu@ug.bilkent.edu.tr	22222224	Promote Demote Remove
Emir Görgülü	emirgorgulu@ug.bilkent.edu.tr	22222225	Promote Demote Remove
Kerem Demirören	keremdemiroren@ug.bilkent.edu.tr	22222226	Promote Demote Remove

Figure 32: Advisor List, Coordinator Perspective



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Advisor List
- Puantaj Table
- Dashboard
- Log Out

Advisor List

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

Name
John Smith
Ata Uzay Kuzey
Duru Solakoğlu
Emir Görgülü
Kerem Demirören

Add Advisor

Name: Fatma Yılmaz

ID: 22104021

E-mail: fatmayilmaz@ug.bilkent.edu.tr

Phone: 0544 342 60 81

Department: MATH

Save

Demote Remove

Demote Remove

Demote Remove


Demote Remove

Demote Remove

Add Advisor



Figure 33: Add Advisor to Advisor List, Coordinator Perspective

20



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Puantaj Table
- Log Out





Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

My Logs



Name	Type	Date	Hour	
Bursa Anadolu Lisesi	School Tour	28.11.2024	2.5	Delete
Samsun Anadolu Lisesi	Fair	29.11.2024	2	Delete
İzmir Fen Lisesi	Individual Tour	02.12.2024	1.5	Delete
Ted Ankara Koleji	School Tour	04.12.2024	3	Delete
Atatürk Lisesi	School Tour	06.12.2024	1	Delete

Figure 34: Seeing Own Logs, Guide & Advisor Perspective



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Puantaj Table
- Log Out

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr

My Logs

- Bursa Anadolu Lisesi
- Samsun Anadolu Lisesi
- İzmir Fen Lisesi
- Ted Ankara Koleji
- Atatürk Lisesi

Add Log

Tour Name:

Date:

Hours:

Type:

Please write decimal points with ".".

Save

Add Log

Delete


Delete

Delete

Delete

Delete

Figure 35: Adding a Log, Guide & Advisor Perspective



BILFO
Bilkent Information Office

- Profile
- Tours and Fairs
- Guide List
- Puantaj Table
- Log Out

Advisor of the day: John Smith
johnsmith@ug.bilkent.edu.tr


Kerem Demirören's Logs

November 2024
Total Hours : 10
Mark as Paid

Activity Name	Type	Date	Status	Hour
Bursa Anadolu Lisesi	School Tour	29.11.2024	Unpaid	2.5
Samsun Anadolu Lisesi	Fair	28.11.2024	Unpaid	2
Individual Tour	Individual Tour	21.11.2024	Unpaid	1.5
Ted Ankara Koleji	School Tour	15.11.2024	Unpaid	3
Atatürk Lisesi	School Tour	12.11.2024	Unpaid	1

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

6.5 Tour and Fair Applications



BILFO
Bilkent Information Office

- Campus Tours
- Fair Application
- Log In

Feedback Form

Rate the Tour: ★★★★★★☆☆

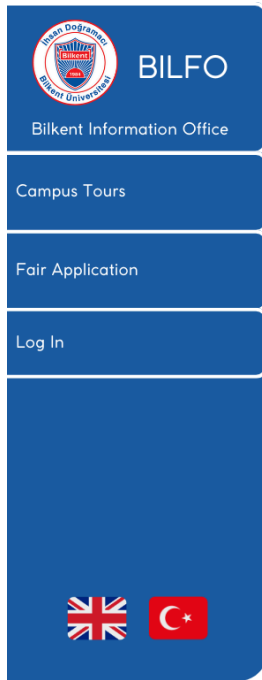
Please tell us about your experiences:


Any Recommendations?

Enter the Code From Your Email:

Submit

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



 **Submit Fair Application**

Organization
TED Bursa Koleji

Date/Time
11.12.2024 9.00

City:
Bursa

☒ I have read and accepted the [Terms&conditions](#)

Submit


Figure 38: Submitting a Fair Application Form





Submit Tour Application

Name of the school:

City:

First time preference:
 

Second time preference:
 

Third time preference:
 

Number of visitors:

Counsellor

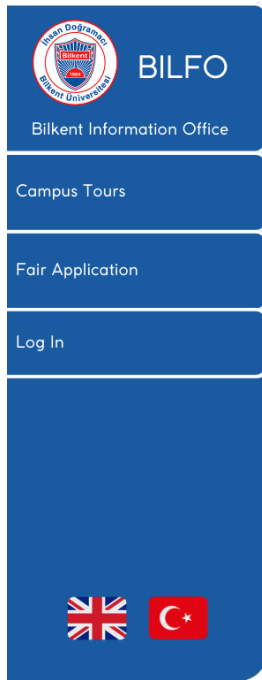
Counsellor's phone number:

Counsellor's e-mail:

Visitor notes:



☒ I have read and accepted the [Terms&conditions](#)



Figure 39: Submitting a Tour Application Form





Submit Individual Tour Application


Names of Applicants:

First time preference:
  

Second time preference:
  

Third time preference:
  

Number of visitors:

Major of Interest: 

Contact Email

Visitor notes:

☒ I have read and accepted the [Terms&-conditions](#)

Figure 40: Submitting an Individual Tour Application Form


BILFO
 Bilkent Information Office

 Profile

Tours and Fairs

Guide List

Puantaj Table

 Log Out





Evaluate Tour Application

Name of the school:

City:

First preference:
 ☒

Second preference:
 ☐

Third preference:
 ☐

Number of visitors:

Counsellor:

Counsellor's phone number:

Counsellor's e-mail:

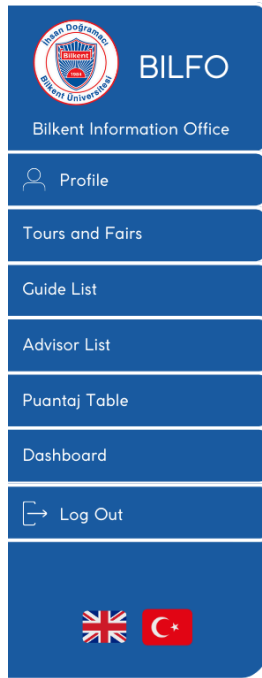
Visitor notes:

Before you **DECLINE**, explain the reason:

Accept



Decline

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



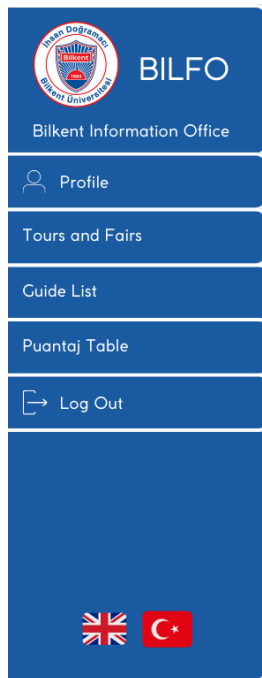
Evaluate Fair Application

Organization

Date/Time
  

City:

Figure 42: Evaluation of a Fair Application by Coordinator



Evaluate Individual Tour Application

Names of Applicants:

First time preference:
 ☒

Second time preference:
 ☐

Third time preference:
 ☐

Number of visitors:


Major of Interest:

Contact Email

Visitor notes:


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





 **Edit Tour Application**

Name of the school:

City:

First time preference:
 

Second time preference:
 

Third time preference:
 

Number of visitors:

Counsellor

Counsellor's phone number:

Counsellor's e-mail:

Visitor notes:

For security reasons, add the code from the mail:

☒ I have read and accepted the [Terms&conditions](#)

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

6.6 Pop-Ups

Are you sure you want to cancel this tour?

The cancellation mail will be sent to the school.

Figure 45: Cancel Tour Pop-up

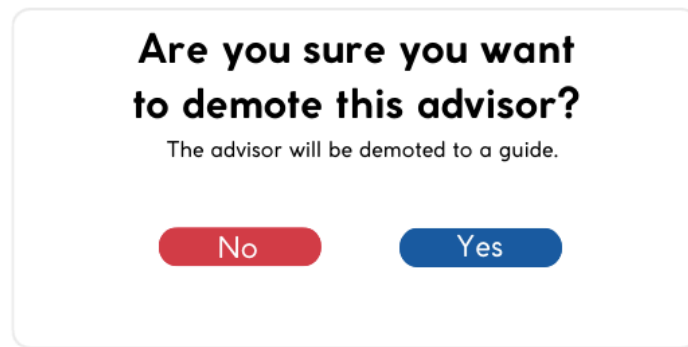


Figure 46: Demote Advisor Pop-up

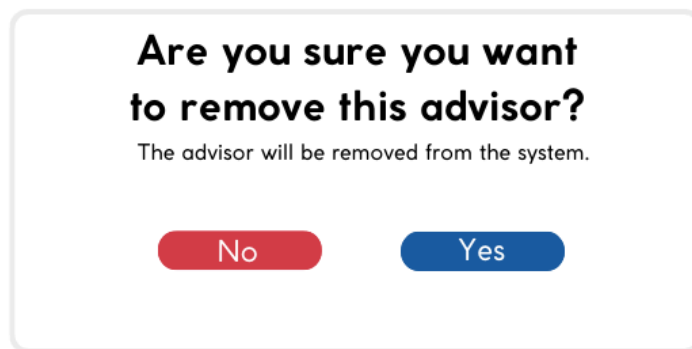


Figure 47: Remove Advisor Pop-up