

CS 682

# UMB OATS User Documentation



UMASS ONLINE  
APPLICATION FOR  
TUTOR SCHEDULING  
(OATS)

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# OATS

## **Project Overview:**

UMB-OATS is a scheduling application built with Django, HTML and bootstrap. It allows students to book tutoring sessions and manage their schedules.

## **Setting up:**

To set up the project, follow these steps:

1. Clone the repository to your local machine.
2. Navigate to the directory where the manage.py file is located.
3. (Optional) Create a virtual environment for the project (recommended).
4. Activate the virtual environment.
5. Install the required packages by running the following command:
  - o pip install -r requirements.txt
6. Start the application locally by running the following command:
  - o python manage.py runserver.

Make sure to replace python with the appropriate command for your Python environment.

## **Project Structure:**

The project consists of the following main files:

- settings.py: Contains the configuration settings for the Django project.
- urls.py: Defines the URL patterns and corresponding views for the application.
- views.py: Contains the view functions that handle requests and generate responses.
- models.py: Contains the models to represent the structure in the database

## **Features:**

1. User registration and authentication:
  - o Users can sign up for an account and log in to the application.
2. User roles and permissions:
  - o Different roles such as student and tutor can be assigned to users, granting them specific permissions.

3. Tutor availability management:
  - o Tutors can set their availability for tutoring sessions, specifying the dates and time slots they are available.
4. Session booking:
  - o Students can browse available tutoring sessions and book sessions with tutors based on their availability.
5. Session cancellation:
  - o Both students and tutors can cancel booked sessions, triggering notifications to the affected parties.
6. Semester management:
  - o Administrators can add and manage academic semesters, defining start and end dates for each semester.
7. Password management:
  - o Users can change their passwords through a secure password change form.
8. Session history:
  - o Users can view their session history, including past sessions they have participated in.
9. Email notifications:
  - o Automated email notifications are sent to users for various actions such as session booking, cancellation, and password reset.
10. Error handling:
  - o Custom error pages and handling for 404 (Page Not Found) errors to enhance user experience.

## **Roles**

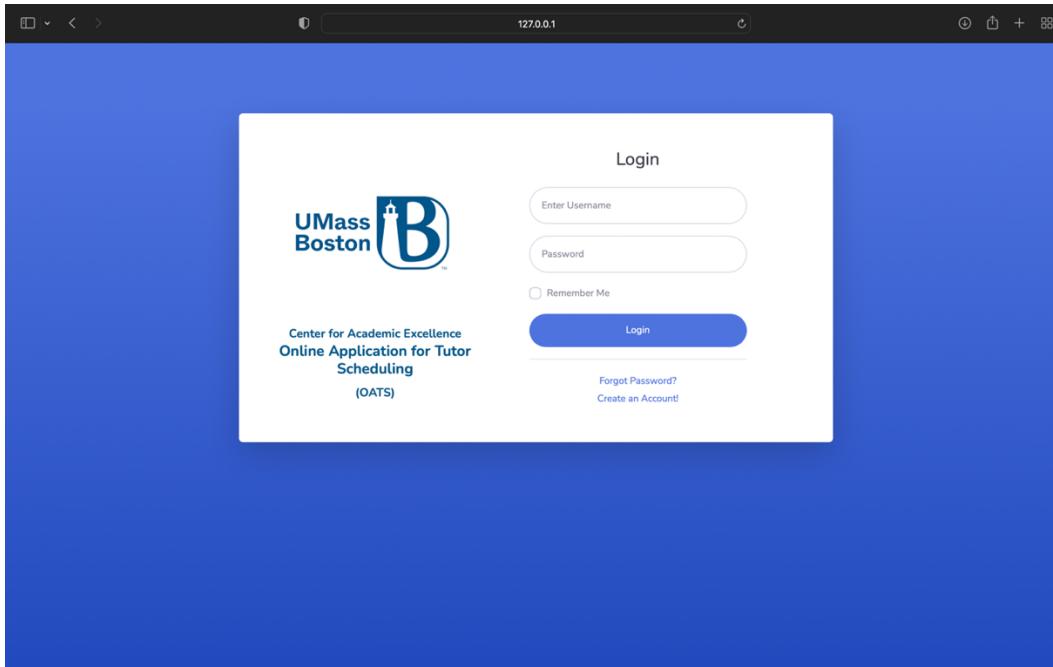
There are 3 roles in UMASS OATS Application: -

1. Student
2. Admin
3. Tutor

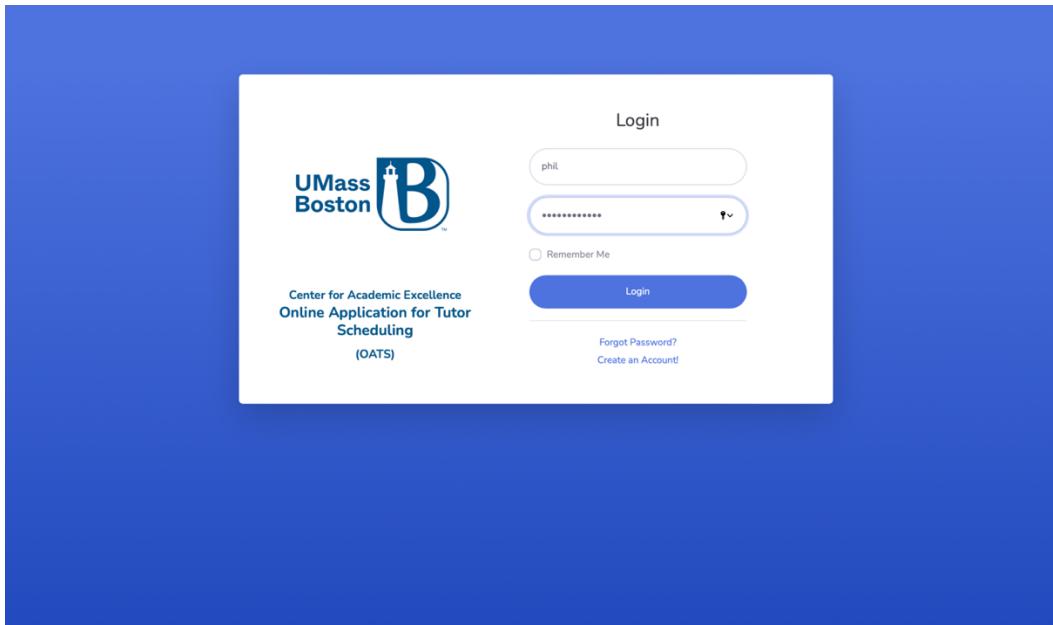
## Roles Description

### 1. Student

This is Login Page that shows up when the student visits UMASS OATS application.



The student has to fill in “Login Details” to log into the OATS application.



On successfully logging in, the student will see the Dashboard Page of OATS application. The Dashboard displays many student details like Completed Sessions, Upcoming Sessions, Today's Session and No Shows.

The screenshot shows the OATS Dashboard. On the left is a sidebar with the UMass Boston logo and navigation links: Dashboard, ACTIVITY (Session), SETTINGS (Profile, Change Password, Logout), and a bottom link to Open #127.0.0.1:8000/home/# on this page in a new tab. The main area has a header "Dashboard" and a top bar with icons for completed sessions (4), upcoming sessions (3), today's sessions (1), and no shows (1). Below this are sections for "TODAY'S SESSIONS" and "UPCOMING SESSIONS". Each session card includes details like subject (SUMMER, CHEM100), date (May 19, 2023, May 20, 2023, May 23, 2023), time (2:00 PM - 3:00 PM, 12:00 PM - 1:00 PM, 10:00 AM - 11:00 AM), room (IT115, IT115, IT115), and duration (1 hr). Blue "Cancel session" buttons are at the bottom of each card. The footer says "University of Massachusetts, Boston".

When the student clicks on Schedule, the student gets 2 options to add a schedule for tutoring session and view the history of the sessions which the student has taken till date.

This screenshot is identical to the one above, showing the OATS Dashboard. The difference is that the "Session" link in the sidebar is highlighted with a blue box, indicating it is the active section. The rest of the interface, including the session statistics and the list of sessions, remains the same.

When the student clicks on Add Schedule, the below screen is displayed.

The screenshot shows the 'Available Slots' page. On the left is a sidebar with 'UMass Boston' logo, 'Dashboard', 'ACTIVITY Session', 'SETTINGS Profile', 'Change Password', and 'Logout'. The main area has a title 'Available Slots' and two dropdown menus: 'Choose a course:' with options 'Select Course --', 'CS110', 'IT115', 'CS220', and 'CHEM100'; and 'Choose a tutor:' with 'Select Tutor --'. A 'Clear Filter' button is below the dropdowns. The text 'Course: IT115' is displayed. Below are eight session cards arranged in two rows of four. Each card includes a date, tutor name, time, location, and a 'Book Session' button. The sessions are:

- May 20, 2023, Jim, 9:00 AM - 10:00 AM, CS110
- May 20, 2023, Louis, 2:00 PM - 3:00 PM, CS110
- May 20, 2023, Stephanie, 9:00 AM - 10:00 AM, IT115
- May 20, 2023, Louis, 8:00 AM - 9:00 AM, IT115
- May 20, 2023, Louis, 9:00 AM - 10:00 AM
- May 20, 2023, Peter, 11:00 AM - 12:00 PM
- May 20, 2023, Walter, 9:00 AM - 10:00 AM
- May 22, 2023, Jim, 9:00 AM - 10:00 AM

At the bottom center is the text 'University of Massachusetts, Boston'.

First, the student will first select a course.

This screenshot is identical to the one above, but the 'IT115' option is highlighted in the 'Choose a course:' dropdown menu. The 'Filter' button is also visible next to the dropdowns. The rest of the interface and session data remain the same.

The student will then select a tutor for the selected course.

The screenshot shows the 'Available Slots' section of the OATS system. On the left, there's a sidebar with navigation links: Dashboard, ACTIVITY, Session, SETTINGS, Profile, Change Password, and Logout. The main area has two dropdown menus: 'Choose a course:' set to IT115 and 'Choose a tutor:' with a list of names. A 'Filter' button is located between the dropdowns. Below the dropdowns are several boxes representing available slots, each containing a date, tutor name, time range, and room number (e.g., CS110 or CS115). Each slot has a 'Book Session' button at the bottom. The footer of the page reads 'University of Massachusetts, Boston'.

After selecting the course and tutor, the student has to click on Filter and choose a date from the available options for scheduling the tutoring session.

This screenshot shows the same interface as the previous one, but with the 'Choose a tutor:' dropdown now set to 'Stephanie'. The 'Filter' button is visible below the dropdowns. The list of slots has been filtered to show only those available with Stephanie. For example, on May 20, 2023, there are sessions with Jim (9:00 AM - 10:00 AM), Louis (2:00 PM - 3:00 PM), and Dorothy (9:00 AM - 10:00 AM). On May 22, 2023, there is a session with Jim (9:00 AM - 10:00 AM). Each slot includes a 'Book Session' button.

After clicking on Filter button, the student can see the available slots.

The screenshot shows the 'Available Slots' page. The left sidebar has 'Session' selected. The main area displays a grid of tutoring slots:

- May 20, 2023: 9:00 AM - 10:00 AM (IT115) - Book Session
- May 25, 2023: 9:00 AM - 10:00 AM (IT115) - Book Session
- May 25, 2023: 3:00 PM - 4:00 PM (IT115) - Book Session
- May 27, 2023: 11:00 AM - 12:00 PM (IT115) - Book Session
- May 30, 2023: 11:00 AM - 12:00 PM - Book Session
- May 31, 2023: 9:00 AM - 10:00 AM - Book Session

At the top right, it says 'phil Dunphy'. Below the grid, it says 'University of Massachusetts, Boston'.

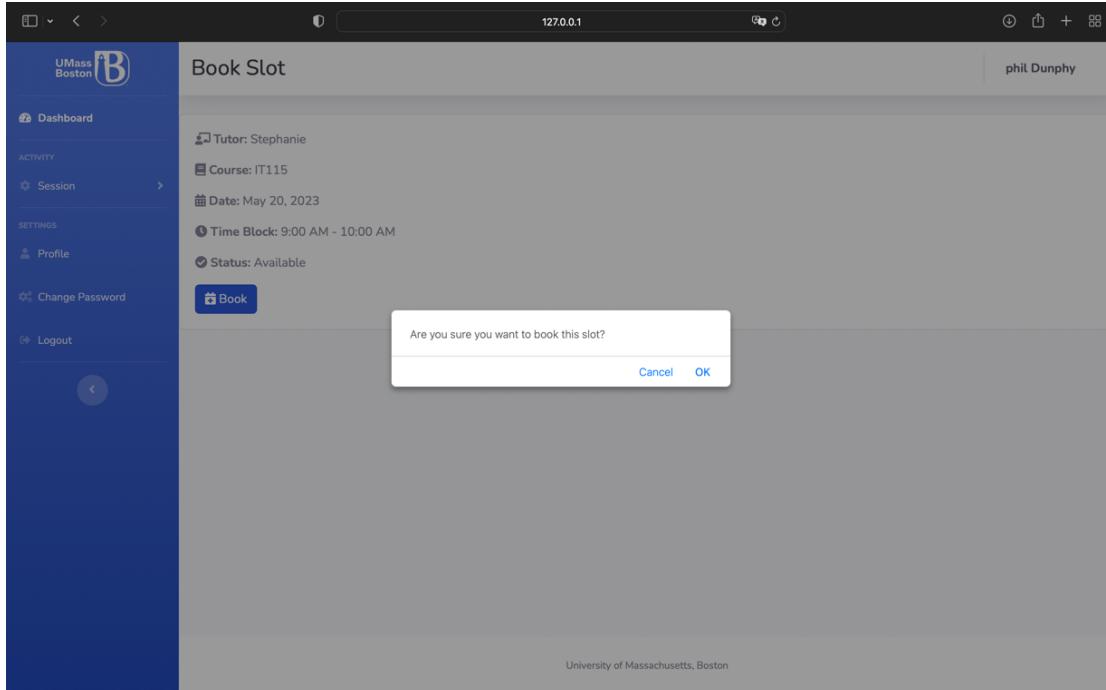
Once the student clicks on Book Session, the student will get a confirmation page which displays all the details of the tutoring session

The screenshot shows the 'Book Slot' confirmation page. The left sidebar has 'Session' selected. The main area displays the details of the booked slot:

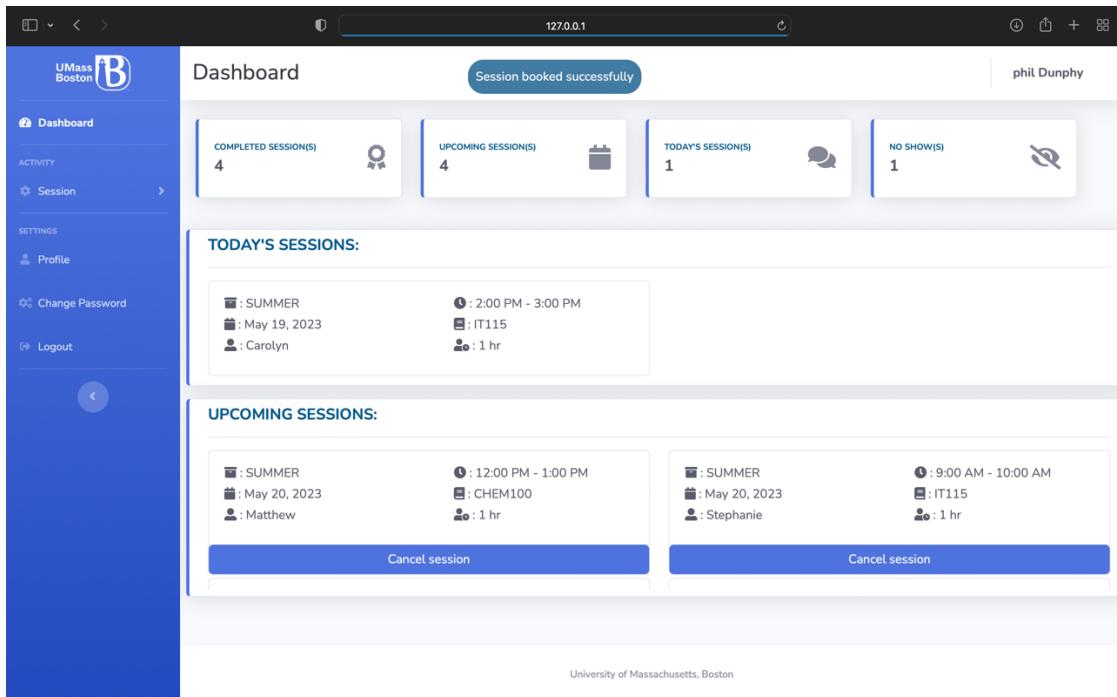
- Tutor: Stephanie
- Course: IT115
- Date: May 20, 2023
- Time Block: 9:00 AM - 10:00 AM
- Status: Available

A 'Book' button is visible at the bottom left. Below the details, it says 'University of Massachusetts, Boston'.

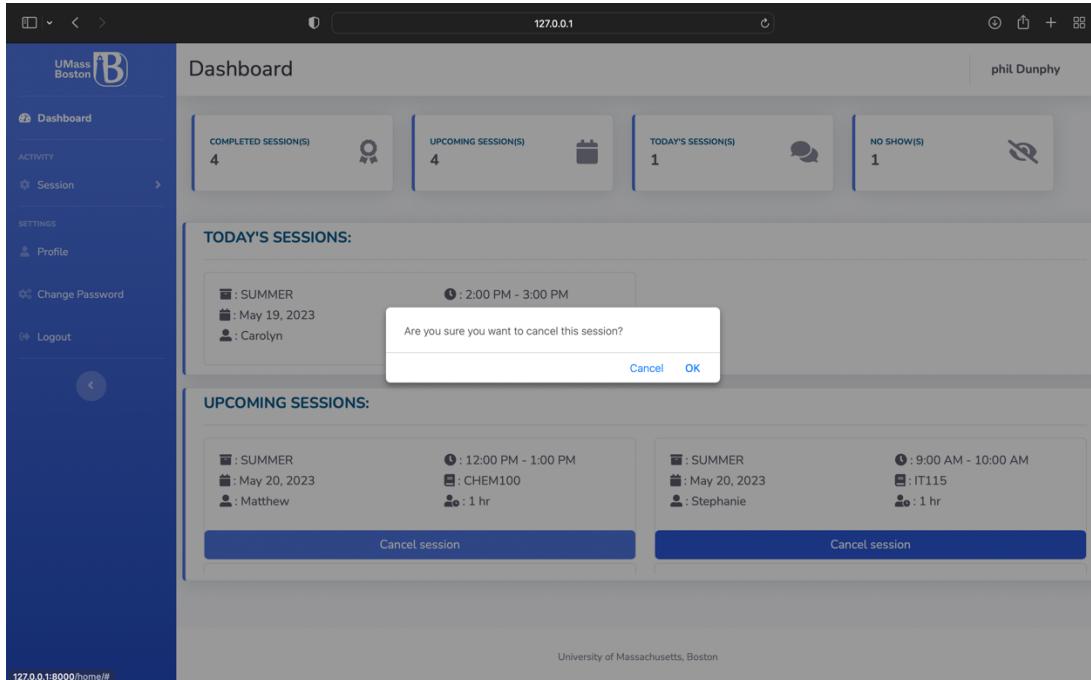
Once the student clicks on Book session, a pop up will appear which will ask for confirmation. Click OK, to continue.



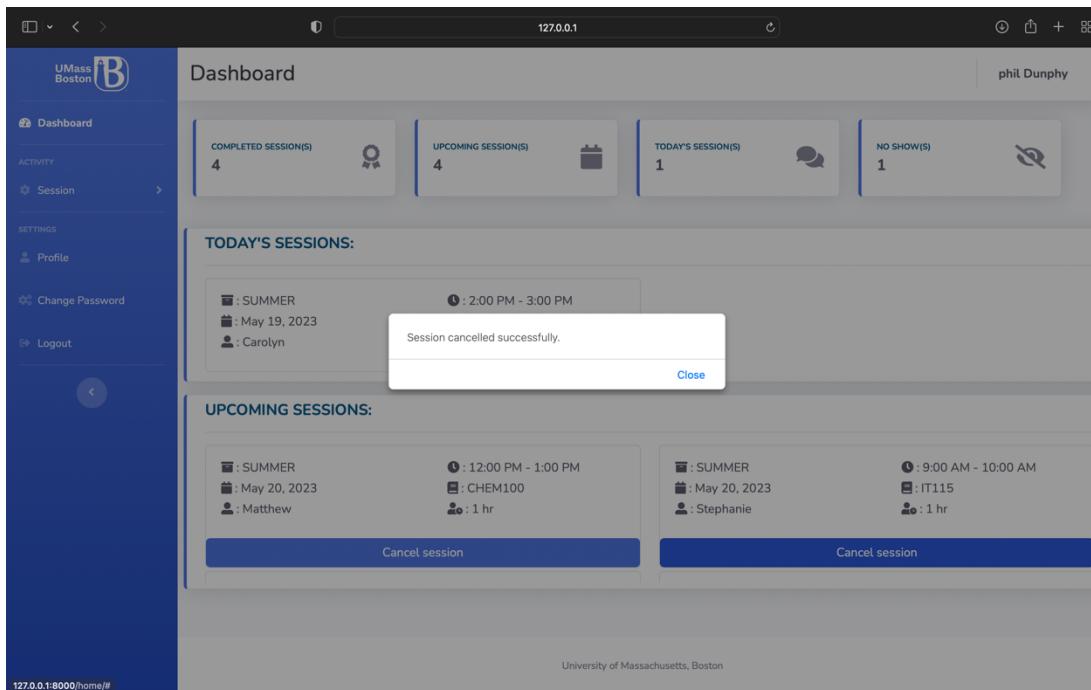
After clicking on OK, there's a message that is displayed on the top of the Screen "Session book successfully" which indicates that the session is successfully booked. The Student can also see the details of the tutoring session in "UPCOMING SESSIONS" tab.



If the student wishes to cancel the session for any reason, the student can click on Cancel Session button. On clicking the button, the below pop up will appear. The student must click OK to cancel a session. **The tutoring session can only be cancelled up to 24 hours before the session date, not beyond that.**



On clicking OK, the student will get confirmation pop up regarding cancelled session.



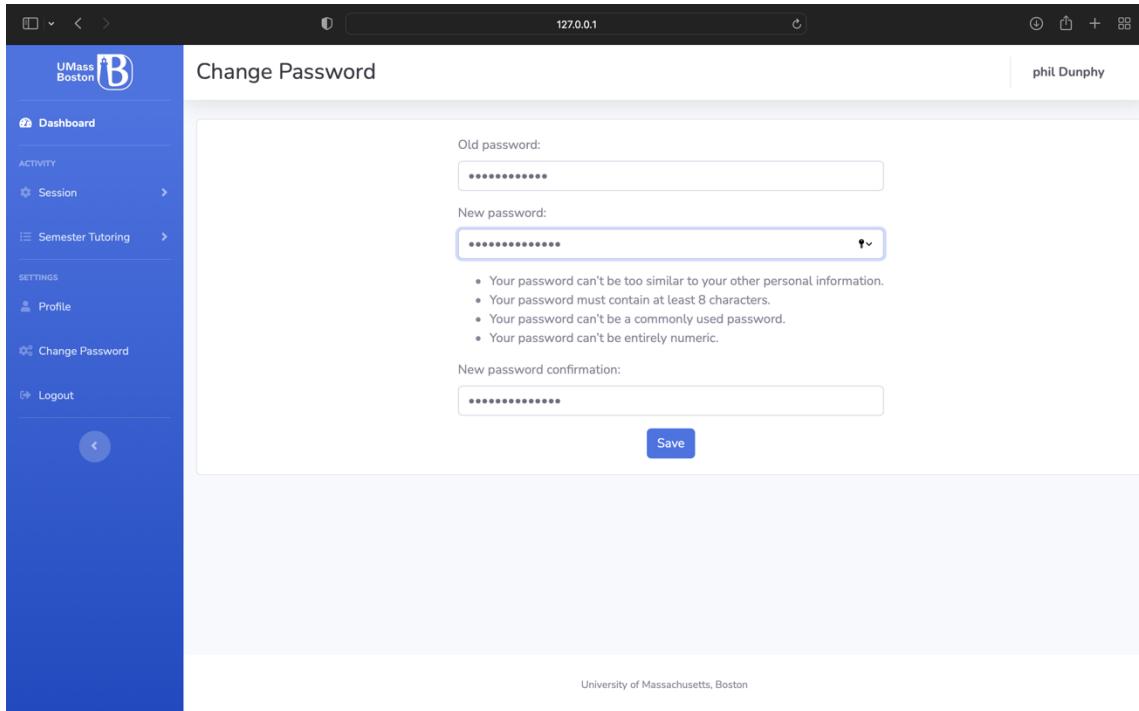
The blue pop up on the top of the screen indicates that the session is successfully cancelled.

The screenshot shows the OATS Dashboard interface. At the top, a blue notification bubble says "Session Cancelled!". Below it, there are four cards: "COMPLETED SESSION(S)" (4), "UPCOMING SESSION(S)" (3), "TODAY'S SESSION(S)" (1), and "NO SHOW(S)" (1). The "TODAY'S SESSION(S)" card shows a session for "SUMMER" on "May 19, 2023" from "2:00 PM - 3:00 PM" with "IT115" and "Carolyn". The "UPCOMING SESSIONS" section shows two sessions: one for "SUMMER" on "May 20, 2023" from "12:00 PM - 1:00 PM" with "CHEM100" and "Matthew", and another for "SUMMER" on "May 23, 2023" from "10:00 AM - 11:00 AM" with "IT115" and "Walter". Each session has a "Cancel session" button at the bottom. The footer of the page reads "University of Massachusetts, Boston".

The student can also view profile details by clicking on Profile option which is available on the left bar of the Dashboard.

The screenshot shows the OATS Profile page. On the left, a sidebar lists "Dashboard", "Session", "Semester Tutoring", "Profile", and "Logout". The main area displays a circular profile picture of a person named "phil". To the right of the profile picture are fields for "First name:" (phil), "Last name:" (Dunphy), "UMB ID:" (0202021), and "Student Courses:" (CS110, IT115, CS220, CHEM100). An "Edit" button is located below the courses. The footer of the page reads "University of Massachusetts, Boston".

If the student wishes to change Password, he can do that by filling in the requirements which is shown in the image below.

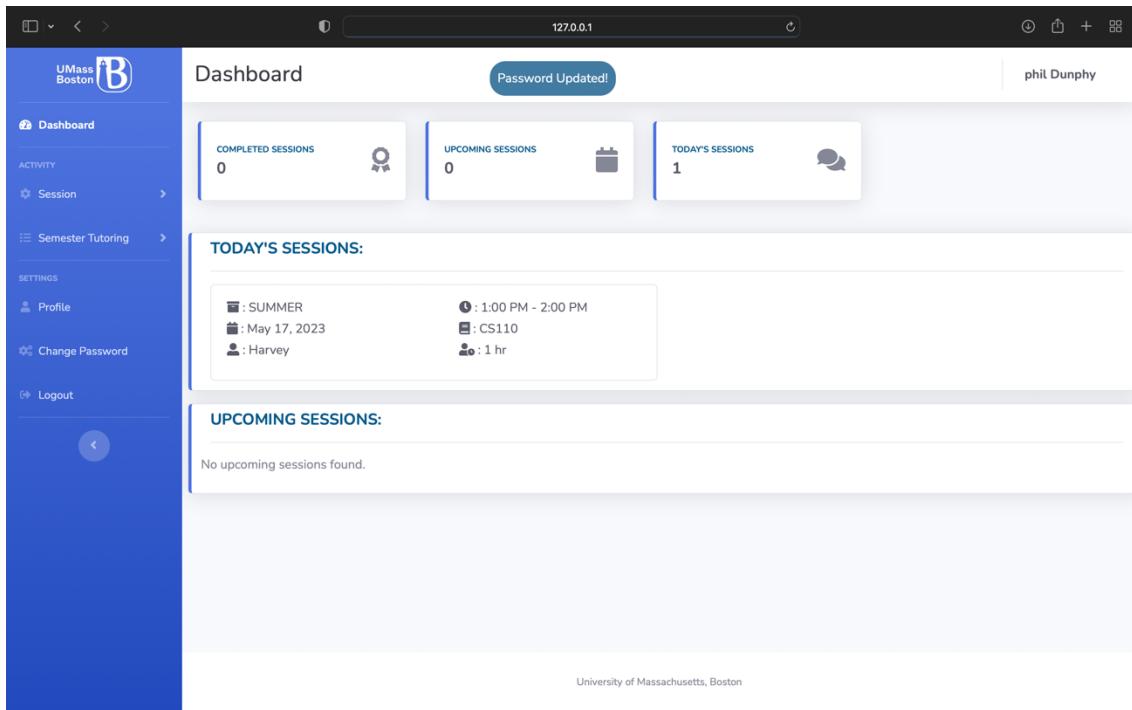


The screenshot shows a web browser window with the URL 127.0.0.1. The page title is "Change Password". On the left, there is a blue sidebar menu with the UMass Boston logo at the top. Below the logo, the menu items are: Dashboard, ACTIVITY (Session, Semester Tutoring), SETTINGS (Profile, Change Password), and Logout. The "Change Password" item is highlighted. The main content area has a light gray background. It contains fields for "Old password" (with placeholder "\*\*\*\*\*"), "New password" (with placeholder "\*\*\*\*\*" and a dropdown arrow), and "New password confirmation" (with placeholder "\*\*\*\*\*"). Below these fields is a list of password requirements:

- Your password can't be too similar to your other personal information.
- Your password must contain at least 8 characters.
- Your password can't be a commonly used password.
- Your password can't be entirely numeric.

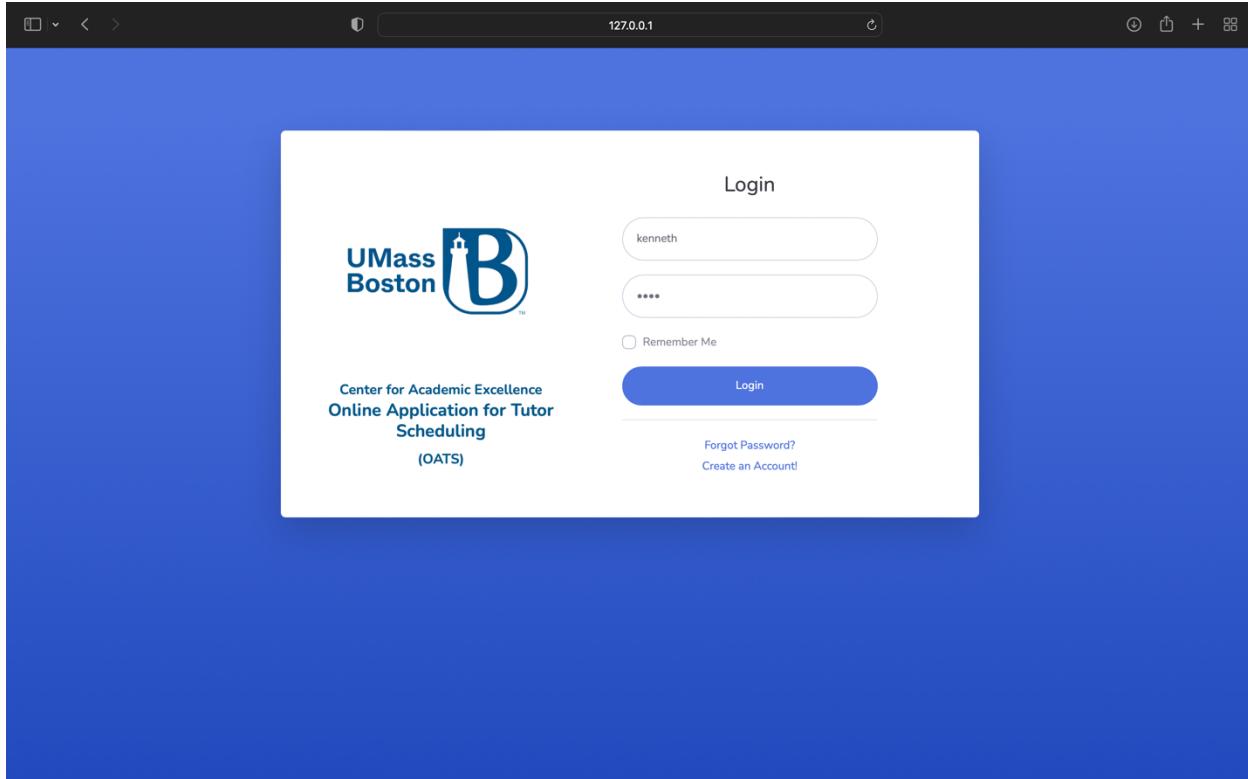
At the bottom right of the form is a blue "Save" button. In the top right corner of the main content area, the name "phil Dunphy" is displayed. At the very bottom center of the page, the text "University of Massachusetts, Boston" is visible.

If the password is successfully updated, a blue pop up will appear which indicates that the Password is successfully updated.

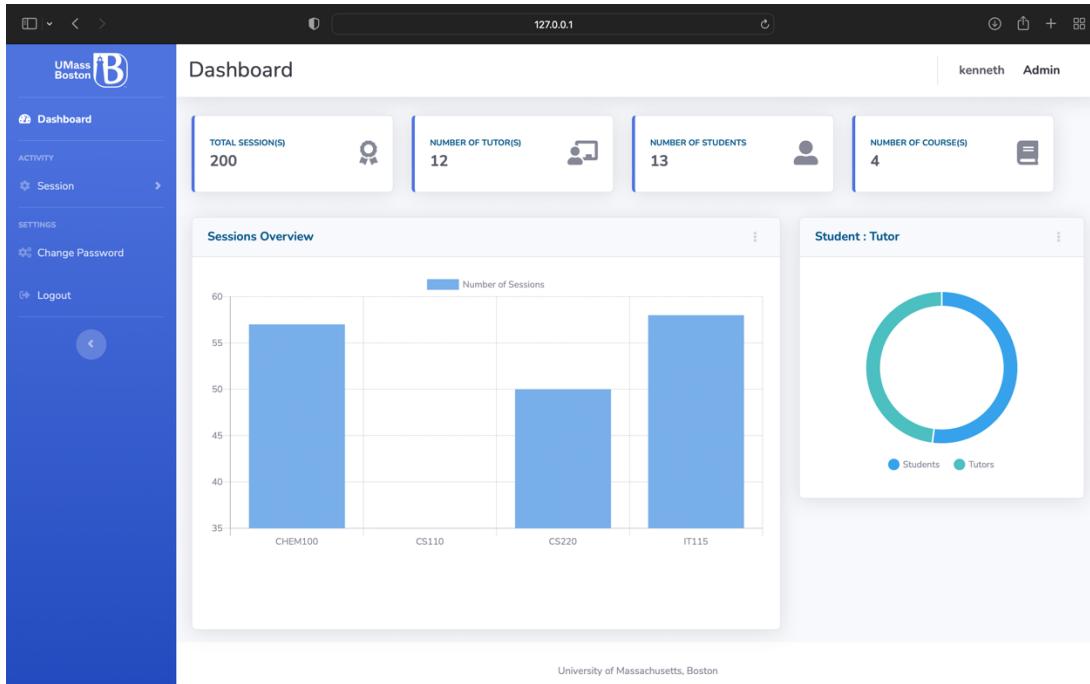


## 2. Admin

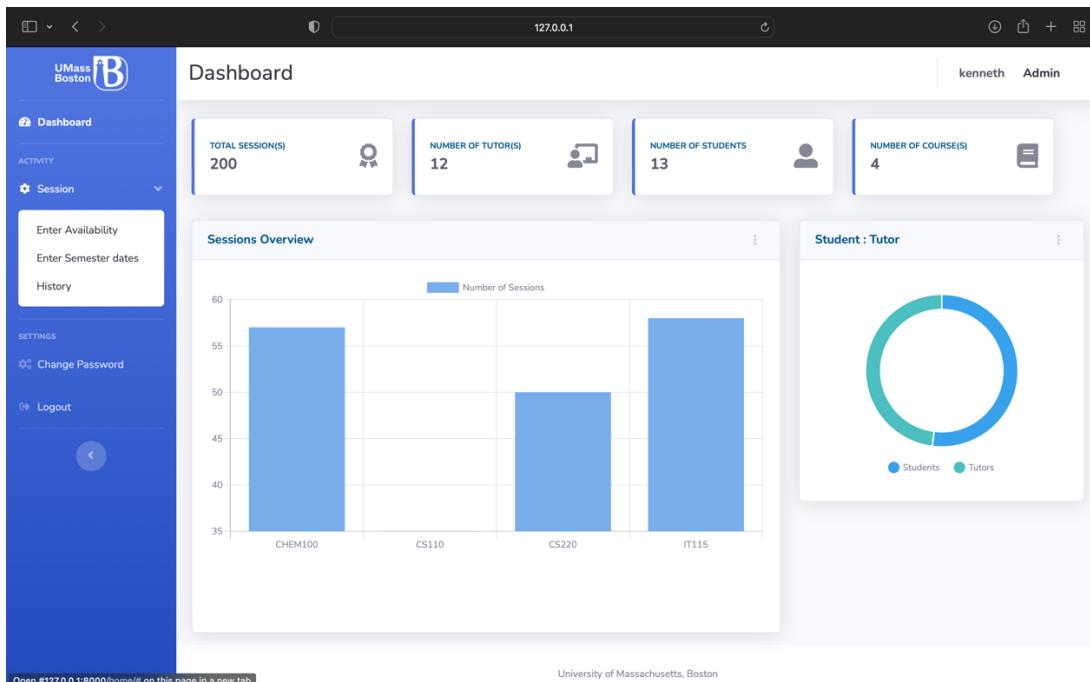
This is Login Page that shows up when the admin visits UMASS OATS application. The admin has to fill in "Login Details" to log into the OATS application.



On successfully logging in, the admin will see the Dashboard Page of OATS application. The Dashboard displays many details like Total Sessions, Number of Tutors, Number of Students and Number of Courses. It also displays two graphs which shows the number of tutoring sessions for each course and also the student to tutor ratio for current semester.



When the student clicks on Schedule, the student gets 3 options to Enter Availability for tutor, enter Semester Dates and view the history of the sessions.



When the admin clicks on Enter Availability, the below screen is displayed. The admin can fill in details of the tutor who is appointed for the tutoring sessions in the upcoming semester and also check existing tutor sessions.

The screenshot shows the 'Enter Availability' page. The sidebar on the left has 'Session' selected under 'ACTIVITY'. The main form contains fields for Tutor, Date (05/19/2023), Timeblock, Course, Student, Status (Available), Semester, and a 'Set Availability' button. To the right, there's a 'Check existing sessions' section with a date input field showing '05/19/2023'.

The admin can next click on “Enter Semester dates” to define the start and end date of the Semester in the application.

The screenshot shows the 'Enter Availability' page. The sidebar on the left has 'Enter Semester dates' highlighted under 'Session'. The main form is identical to the previous one. A blue banner at the bottom left of the page says 'Open "127.0.0.1:8000/enter\_dates" in a new tab'.

The Admin now has to enter the Semester name, Start date and End date of the semester.

Enter Dates

Sem Name:

Start date:

End date:

Add dates

The Admin can next click on History.

Enter Dates

Sem Name:

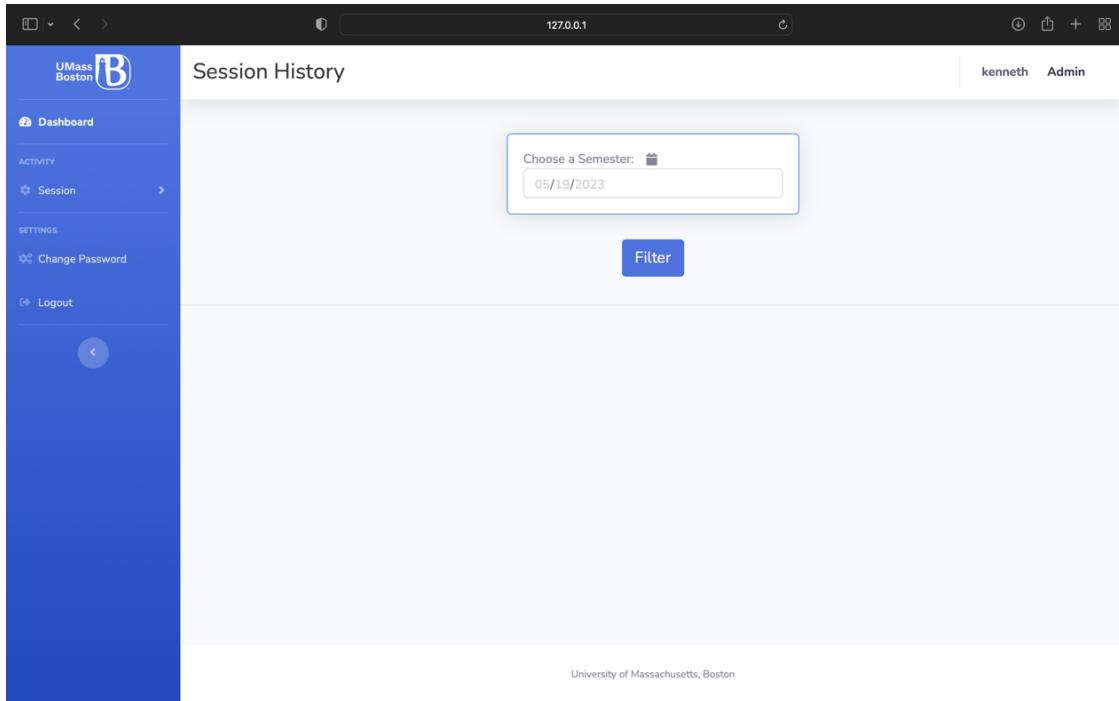
Start date:

End date:

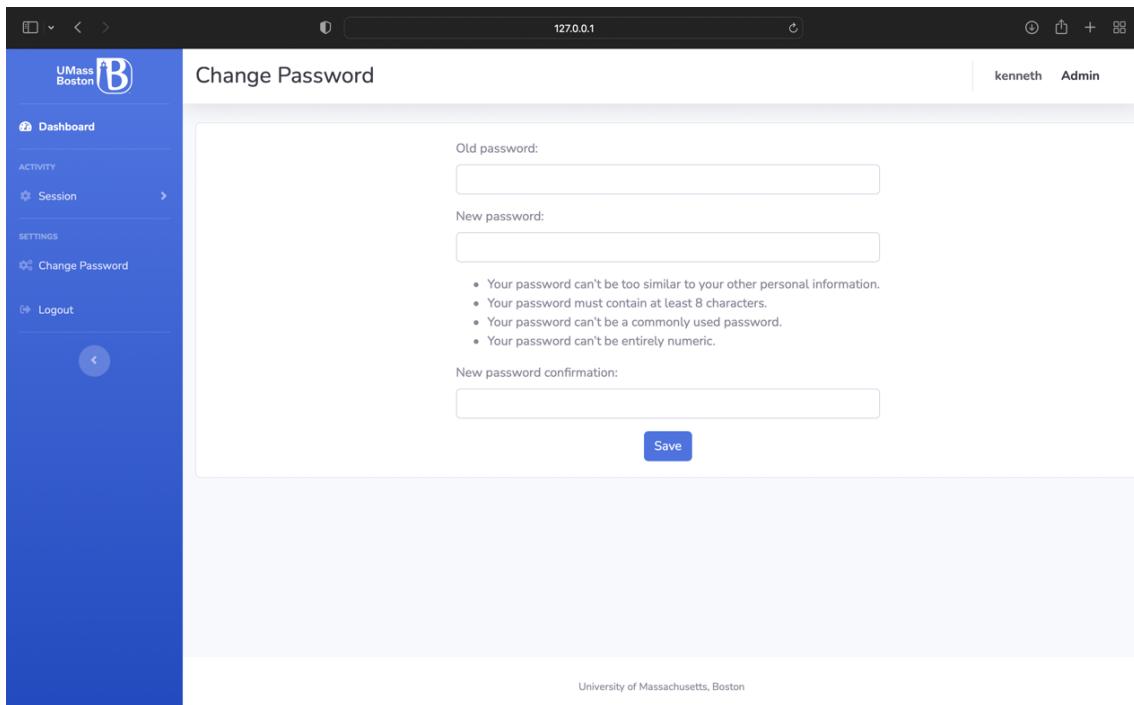
Add dates

Open "127.0.0.1:8000/session-history" in a new tab

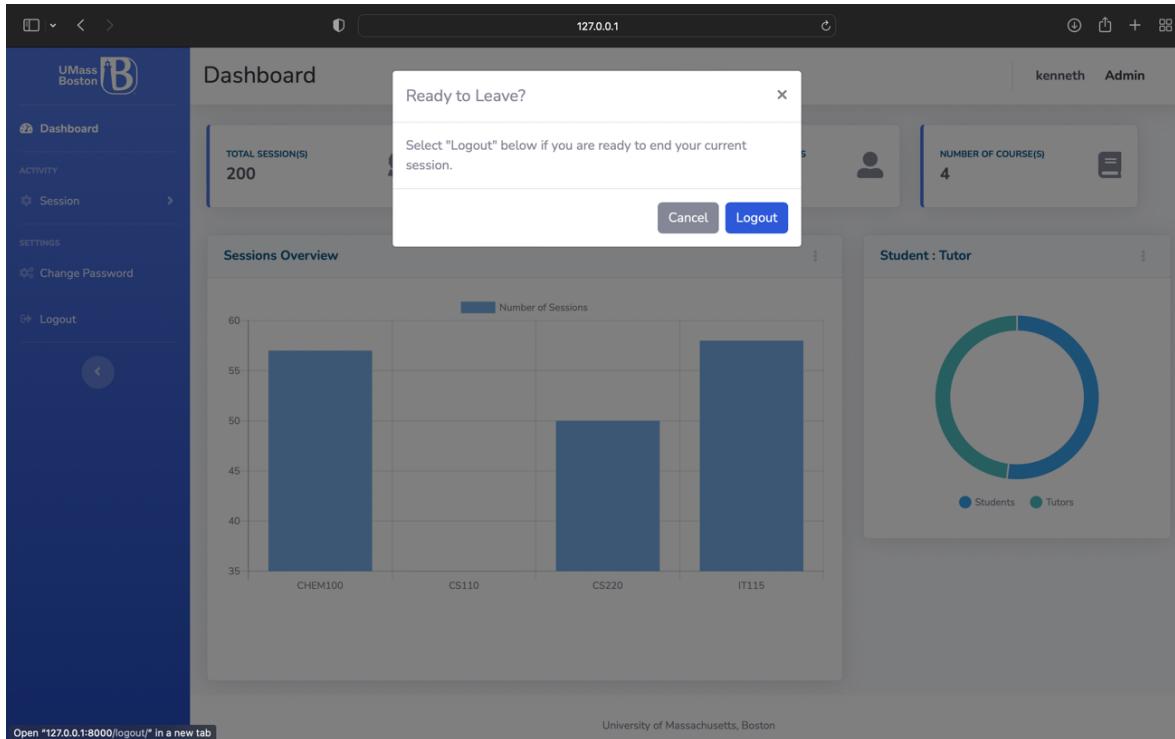
The Admin can just select a date to choose a semester to view the session history in that semester.



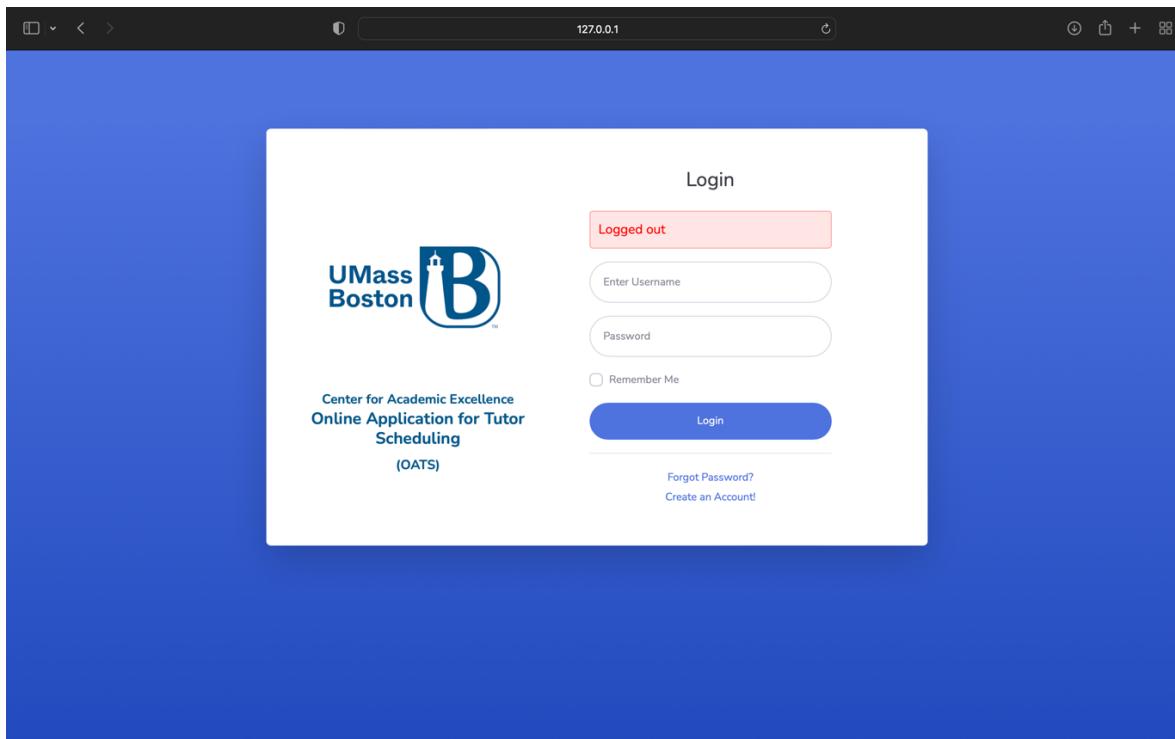
If the admin wishes to change Password, he can do that by filling in the requirements. This can be done by clicking on the "Change Password" option which is available on the left bar.



To logout, the admin just has to click on logout option. A confirmation pop up will appear which will ask if the admin wants to logout or not.

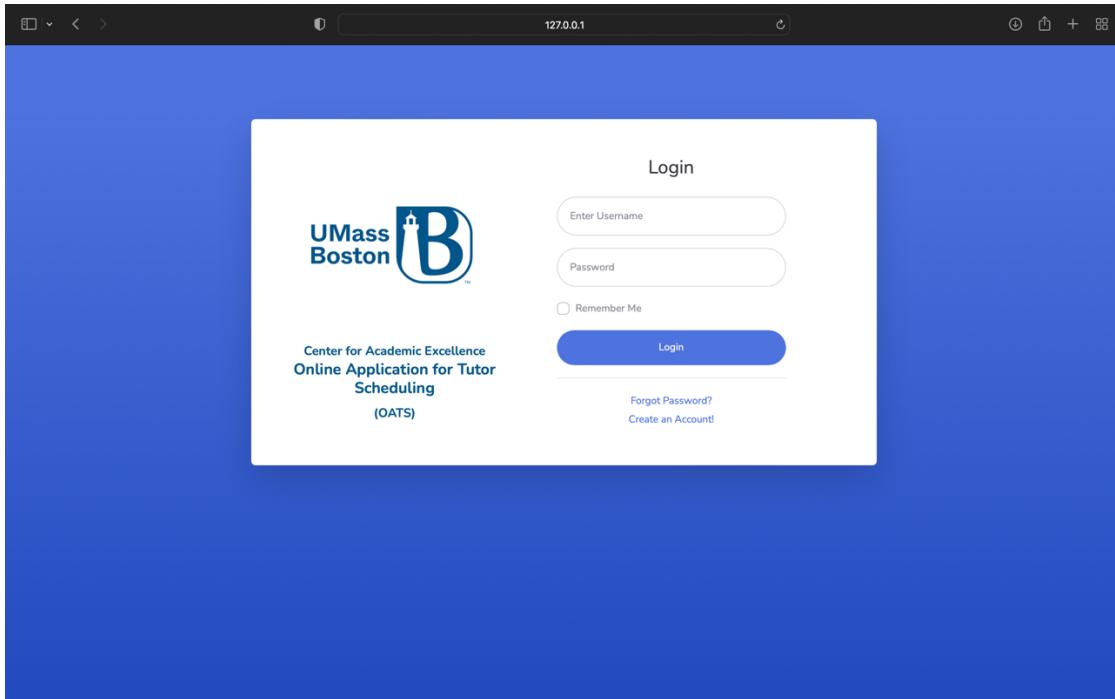


The below screen indicates that the admin has successfully logged out.

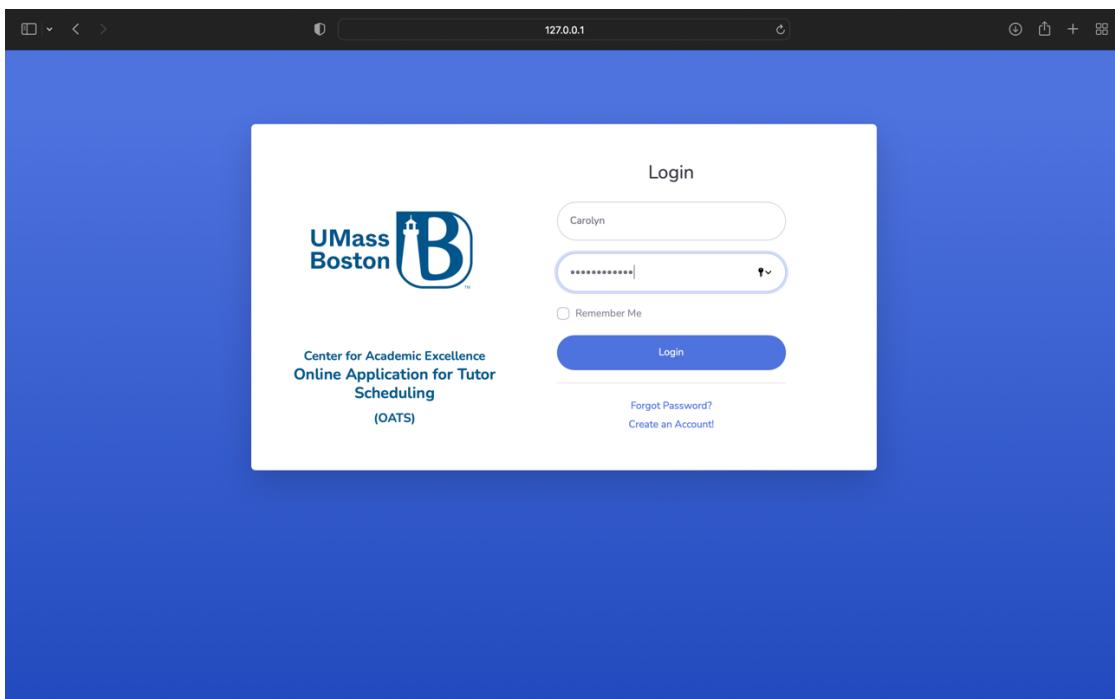


### 3. Tutor

This is Login Page that shows up when the tutor visits UMASS OATS application.



The tutor has to fill in "Login Details" to log into the OATS application.



On successfully logging in, the tutor will see the Dashboard Page of OATS application. The Dashboard displays many tutor details like Completed Sessions, Upcoming Sessions and Today's Session.

The screenshot shows the OATS Dashboard. On the left is a sidebar with the UMass Boston logo, navigation links for Dashboard, Session (selected), Settings, Change Password, and Logout. The main area has a header "Dashboard" and a user profile "Carolyn". Below are three cards: "COMPLETED SESSION(S)" (4), "UPCOMING SESSION(S)" (7), and "TODAY'S SESSION(S)" (1). A section titled "TODAY'S TUTORING SESSIONS:" lists one session: "SUMMER" on "May 19, 2023" from "2:00 PM - 3:00 PM" at "IT115" for "phil" (1 hr). Another section titled "UPCOMING TUTORING SESSIONS:" lists two sessions: "SUMMER" on "May 22, 2023" from "9:00 AM - 10:00 AM" at "IT115" for "None" (1 hr) and "SUMMER" on "May 23, 2023" from "12:00 PM - 1:00 PM" at "IT115" for "james" (1 hr). Each session card has a "Cancel session" button. At the bottom is the text "University of Massachusetts, Boston".

When the tutor clicks on Schedule, the tutor gets 2 options to Enter the availability for tutoring session and view the history of the sessions which the tutor has taken till date.

This screenshot is identical to the one above, showing the OATS Dashboard. The difference is in the sidebar, where the "Session" link is highlighted with a blue background, indicating it is the active page. The rest of the interface, including the session details and the "Cancel session" buttons, remains the same.

When the tutor clicks on Enter Availability, the below screen is displayed. The tutor can fill in details for the tutoring sessions in the upcoming semester and also check existing tutoring sessions.

The screenshot shows the 'Enter Availability' page for a tutor named Carolyn. The left sidebar has a blue background with the UMass Boston logo and navigation links: Dashboard, Session (selected), Profile, Change Password, and Logout. The main content area has a white background with a header 'Enter Availability'. It contains two main sections: 'Tutor: Carolyn' and 'Check existing sessions'. The 'Tutor' section includes fields for Date (05/19/2023), Time block (dropdown menu), Course (dropdown menu), Status (radio button set to Available), and Semester (text input). A 'Set Availability' button is at the bottom. The 'Check existing sessions' section has a header 'Check existing sessions' and a sub-header 'Choose a date:' with a dropdown menu showing '05/19/2023'. The footer of the page says 'University of Massachusetts, Boston'.

The Tutor can next click on History.

This screenshot is similar to the previous one, showing the 'Enter Availability' page for Carolyn. However, the sidebar has a different appearance. The 'Session' link is now highlighted with a grey box, while 'Enter Availability' is still highlighted with a blue box. The rest of the sidebar and the main content area are identical to the first screenshot.

The Tutor can just select a date to choose a semester to view the session history in that semester.

The screenshot shows the 'Session History' page. On the left is a blue sidebar with navigation options: Dashboard, Session, Profile, Change Password, and Logout. The main area has a header 'Session History' and a sub-header 'Carolyn'. A search bar at the top says 'Choose a Semester:' with a dropdown menu showing '05/19/2023'. Below is a 'Filter' button. The main content displays four session entries in a grid:

	Date	Time	Location	Duration
	SUMMER May 9, 2023	10:00 AM - 11:00 AM	IT115	1 hr
	SUMMER May 13, 2023	2:00 PM - 3:00 PM	IT115	1 hr
	SUMMER May 17, 2023	12:00 PM - 1:00 PM	IT115	1 hr
	SUMMER May 18, 2023	10:00 AM - 11:00 AM	IT115	1 hr

At the bottom of the page is the text 'University of Massachusetts, Boston'.

The Tutor can also view profile details by clicking on Profile option which is available on the left bar of the Dashboard.

The screenshot shows the 'Profile' page. The left sidebar is identical to the previous one. The main area has a header 'Profile' and a sub-header 'Carolyn'. It features a circular profile picture of a person with glasses and a blue shirt, with the name 'Carolyn' below it. To the right are fields for 'First name:' (Carolyn) and 'Last name:' (empty), with an 'Edit' button. At the bottom is the text 'University of Massachusetts, Boston'.

If the tutor wishes to change Password, he can do that by filling in the requirements.

Old password:

New password:

- Your password can't be too similar to your other personal information.
- Your password must contain at least 8 characters.
- Your password can't be a commonly used password.
- Your password can't be entirely numeric.

New password confirmation:

**Save**

University of Massachusetts, Boston

To logout, the tutor just has to click on logout option. A confirmation pop up will appear which will ask if the tutor wants to logout or not.

Ready to Leave?

Select "Logout" below if you are ready to end your current session.

**Cancel** **Logout**

COMPLETED SESSION(S)  
4

TODAY'S TUTORING SESSIONS:

<b>SUMMER</b> <b>May 19, 2023</b> <b>phil</b>	<b>2:00 PM - 3:00 PM</b> <b>IT115</b> <b>1 hr</b>
---	---

UPCOMING TUTORING SESSIONS:

<b>SUMMER</b> <b>May 22, 2023</b> <b>None</b>	<b>9:00 AM - 10:00 AM</b> <b>IT115</b> <b>1 hr</b>	<b>SUMMER</b> <b>May 23, 2023</b> <b>james</b>	<b>12:00 PM - 1:00 PM</b> <b>IT115</b> <b>1 hr</b>
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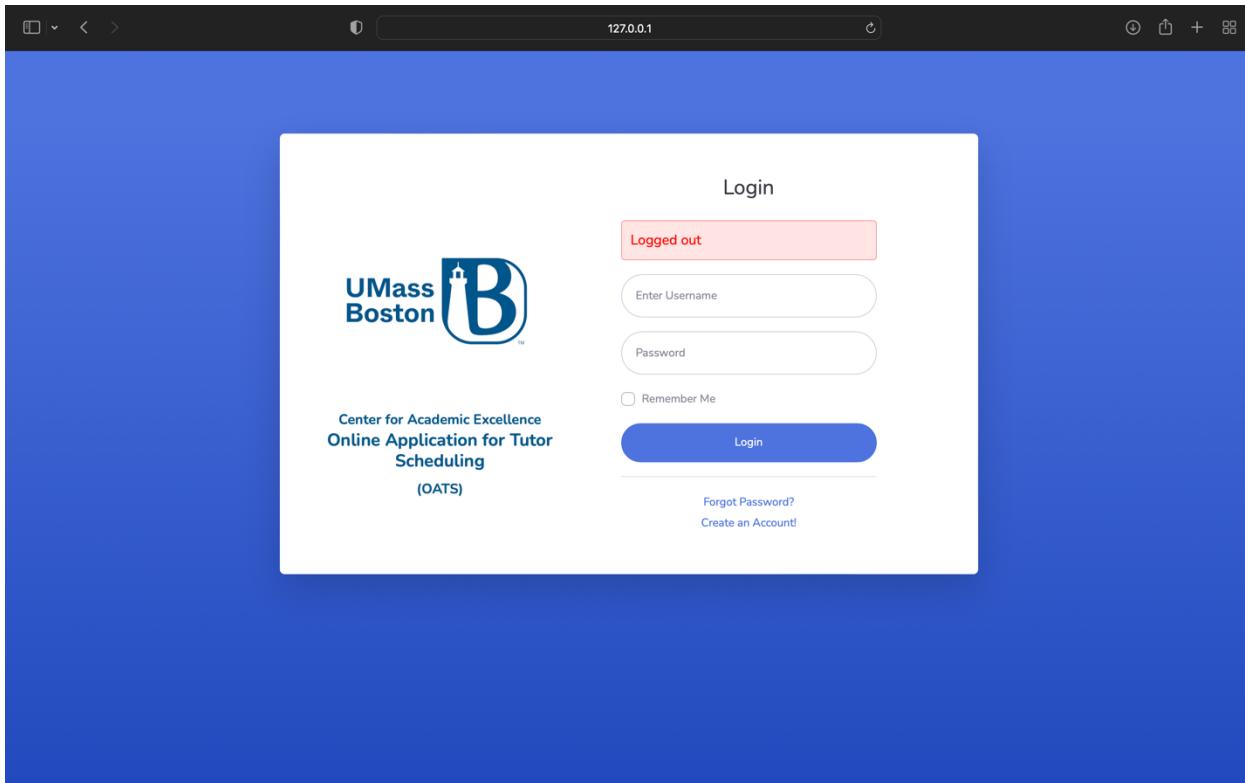
Cancel session

Cancel session

Open "127.0.0.1:8000/logout/" in a new tab

University of Massachusetts, Boston

The below screen indicates that the tutor has successfully logged out.



## FUTURE SCOPE

### 1. Auto-change semester:

- Implement an automated system that transitions students from one semester to another without manual intervention.
- Ensure that student records, course enrollments, and relevant data are properly updated during the transition.
- Streamline the process to minimize errors and reduce administrative workload.

### 2. Student/Tutors Interaction:

- Develop an online platform or portal where students can easily interact with their tutors.
- Include features such as chat functionality, discussion forums, and virtual classrooms to facilitate communication.
- Enable file sharing and collaboration tools to support effective collaboration between students and tutors.

**3. Email Notifications for activity:**

- Set up an email notification system to keep students, tutors, and administrators informed about important activities and updates.
- Send notifications for events such as assignment deadlines, exam schedules, course registration, and general announcements.
- Allow users to customize their notification preferences based on their individual needs and interests.

**4. More features for Admin:**

- Expand the administrative capabilities by introducing features such as user management, course management, and reporting tools.
- Provide the admin with the ability to create and manage user accounts, assign roles and permissions, and generate various reports.
- Enhance the system with administrative dashboards that offer a comprehensive overview of key metrics and data.

**5. Data Analysis:**

- Implement data analysis tools to gather and analyze data on student performance, course enrollment, and other relevant metrics.
- Utilize data visualization techniques to present meaningful insights and trends to administrators, tutors, and students.
- Leverage data analysis to identify areas for improvement, track student progress, and make data-driven decisions.

**6. Semester tutoring:**

- Offer tutoring services specifically tailored to each semester or academic term.
- Allow students to sign up for tutoring sessions based on the courses they are currently enrolled in.
- Provide tutors with resources and materials relevant to the specific semester's curriculum to enhance the tutoring experience.