

SchoolBoost Documentation

2023 FBLA SLC Coding and Programming

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Documentation

Table of Contents

	Page #
1. Software Documentation	3
1.1 Overview	
1.2 Home Page	
1.3 Registration Page	
1.4 Login Page	
1.5 Event Gallery Page	
1.6 My Events Page	
1.7 Admin Events Page	
1.8 Create Events Page	
1.9 Winners Page	
1.10 Frequently Asked Questions Page	
1.11 Usage Tips	
2. Source Documentation	24
2.1 Sources	
2.2 Image Documentation	
2.3 Licenses	
3. System Requirements	25
3.1 Windows	
4. Requirements and Accessibility	26
4.1 Application Required Programs	
4.2 Packages and Modules	
4.3 Accessing Source Code	
5. Program Architecture	34
5.1 Program Structure	
5.2 Module Purposes	
6. Version History	35
6.1 Previous Versions	
6.2 Current Version	
6.3 Future Versions	

1. Software Documentation

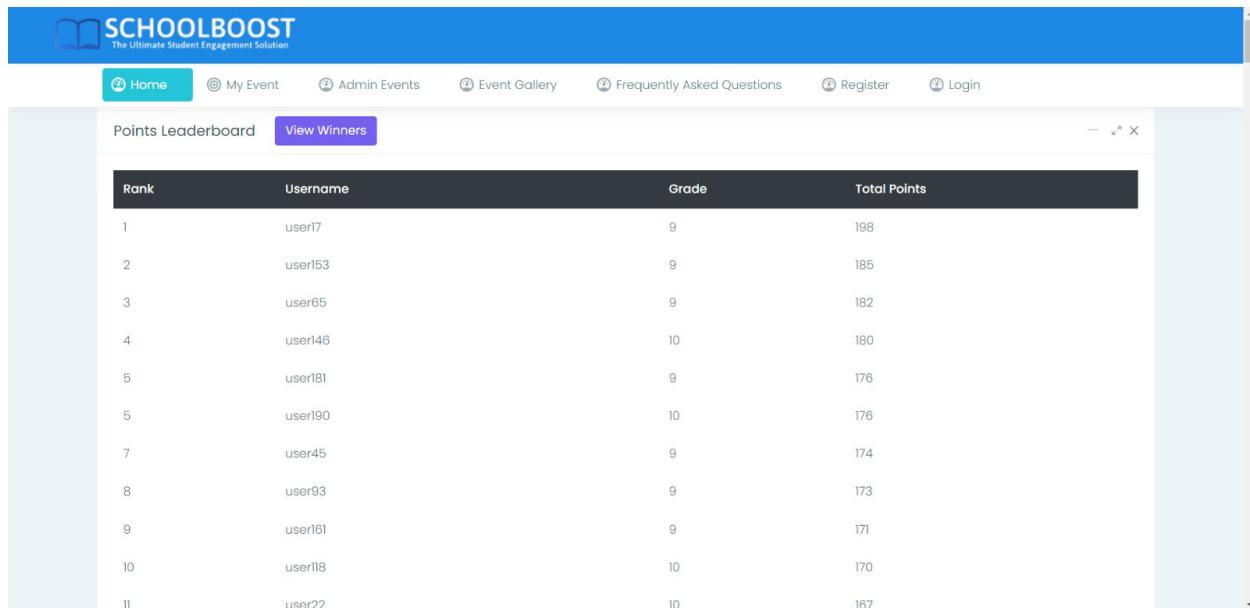
1.1 Overview

SchoolBoost is a .NET-based program designed to improve student involvement in high school events. It tracks student participation and attendance, awards points, and offers prizes based on accumulated points. The program incentivizes students to engage in school events, promoting teamwork, leadership, and time management skills. By making it easier for schools to plan events and engage with their student body, SchoolBoost aims to enhance the overall school experience for students.

1.2 Home Page

Before running our application, please ensure that all required packages and libraries are installed. Visit section 4 for more information.

After running the application, the user is first greeted with the homepage. Please keep in mind that slight design variations may occur across devices. The webpage is fully responsive and can adapt seamlessly to any screen size.



The screenshot shows the SchoolBoost homepage with a blue header bar. The header contains the SchoolBoost logo and the tagline "The Ultimate Student Engagement Solution". Below the header, there is a navigation menu with links: Home (highlighted in green), My Event, Admin Events, Event Gallery, Frequently Asked Questions, Register, and Login. The main content area displays a "Points Leaderboard" table. The table has columns for Rank, Username, Grade, and Total Points. The data in the table is as follows:

Rank	Username	Grade	Total Points
1	user17	9	198
2	user153	9	185
3	user65	9	182
4	user146	10	180
5	user181	9	176
5	user190	10	176
7	user45	9	174
8	user93	9	173
9	user161	9	171
10	user118	10	170
11	user22	10	167

- The home page is a simple front page that displays the student points leaderboard.

Menu Bar

- The home page is equipped with a menu bar. This menu bar allows you to navigate to other web pages by clicking on it.



The screenshot shows the menu bar at the top of the page. It includes links for Home (highlighted in green), My Event, Admin Events, Event Gallery, Frequently Asked Questions, Register, and Login.

Documentation

- The menu bar changes based on the signed-in user's role. If the user is not signed in, it will show the menu bar shown above.

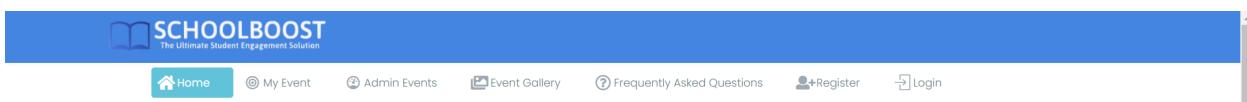
- If the user that is signed in is a student, the menu bar will show the following:



- If the user that is signed in is an admin, the menu bar will show the following:



- To navigate back to the homepage at any point, just click on 'Home' or the SchoolBoost logo located at the top of the page.



Leaderboard

- Next, we have the leaderboard functionality. The leaderboard displays the top students by points into one table.
- The leaderboard only shows data from the current quarter.
- The table shows different data depending on the role of the user signed in.
 - If the user is not signed in or is not a student, it will show the menu bar shown below.

Points Leaderboard		View Winners	
Rank	Username	Grade	Total Points
1	user17	9	198
2	user153	9	185
3	user65	9	182
4	user146	10	180
5	user181	9	176
5	user190	10	176
7	user45	9	174
8	user93	9	173
9	user161	9	171
10	user118	10	170
11	user22	10	167

- If the user signed in is a student, the leaderboard will only display other students in the user's respective grade level, as displayed in the example below where the signed-in user's grade level is 9.

Points Leaderboard		View Winners	
Rank	Username	Grade	Total Points
1	user17	9	198
2	user153	9	185
3	user65	9	182
4	user181	9	176
5	user45	9	174
6	user93	9	173
7	user161	9	171
8	user29	9	166
9	user133	9	165
10	user109	9	163
11	user149	9	160

1.3 Registration Page

The registration page features a clean, modern design with a light gray background. The 'Register' button is prominently displayed in a teal color, matching the header's branding. The input fields are clearly labeled and have placeholder text to guide the user.

- If the user wishes to create an account with SchoolBoost, they will have to click register and will be redirected to the registration page.
- The Registration Page has multiple validators
- Invalid Entries
 - Password: If the password does not meet the minimum password complexity, the website will return the proper error
 - Email: If the email is not of a proper email format such as xxx@xxx.com, it will prompt the respective error.
 - Grade: If the grade level the user inputs is not within grades 9 – 12, the program will prompt the respective error.

[Register](#) [Clear](#)

- Invalid Email
- Invalid Password
- Invalid Grade Level

- Blank Fields

- First Name: If the user does not input a first name into the registration page, the website will return the respective error.
- Last Name: If the user does not input a last name into the registration page, the website will return the respective error.
- Password: If the user does not input a password into the registration page, the website will return the respective error as well as the invalid password error.
- Email: If the user does not input an email into the registration page, the website will return the respective error.
- Grade: If the grade level does not input a grade level, the website will prompt the respective error.

[Register](#) [Clear](#)

- First Name is required
- Last Name is required
- Password is required
- Email is required
- Invalid Password
- Invalid Grade Level

- Duplicate Users

- If the user inputs an email that already exists in the SQL database, the program will output the respective error. As emails are uniquely tied to usernames/IDs, a duplicate email will also not allow duplicate usernames.

[Register](#) [Clear](#)

- Email already exists

- Email Confirmation for Account Creation

- After the user creates an account, they will see this prompt.

Success - Registration successful! Please check your email to confirm your email address.

- Upon completing the registration process, an email will be sent to the user's provided email address from schoolboostfbla@gmail.com, containing a verification link to confirm their email address.



- After clicking the verification link in the email, a confirmation message will be displayed indicating that the email has been successfully verified. The user will then be redirected back to the homepage.

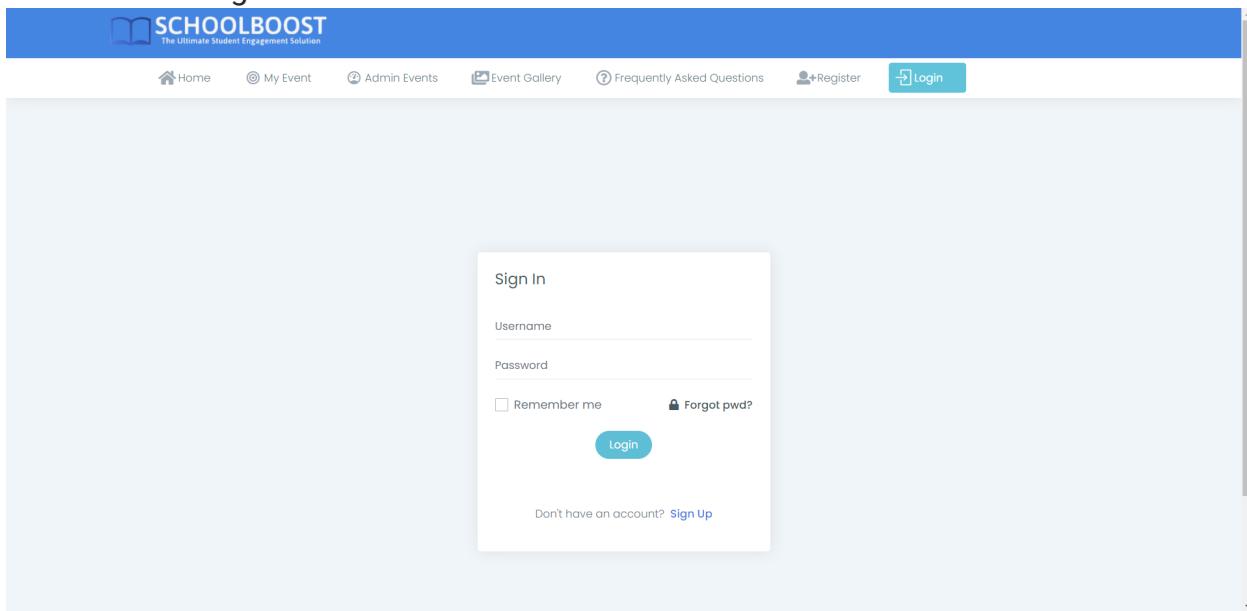
Email Verification

Your email has been successfully verified. Thank you!

[Go to Home Page](#)

1.4 Login Page

- Users can sign up by clicking on the 'Sign Up' button and following the registration process.
- Users can log in by entering their valid credentials on the login page and clicking on the 'login' button.



- The login page includes multiple validators to ensure that users enter their credentials correctly.

Black Username/Password

- If a user leaves the username or password field blank when attempting to log in, the program will prompt an error message in the respective category.

The image shows a 'Sign In' form. At the top, it says 'Sign In'. Below that is a 'Username' input field. Below the 'Username' field is a 'Password' input field, which has a red border and a small red exclamation mark icon indicating it is required. To the right of the 'Password' field is the error message 'Please fill out this field.' Below the input fields are two links: 'Remember me' and 'Forgot pwd?'. A blue 'Login' button is at the bottom. At the very bottom, it says 'Don't have an account? [Sign Up](#)'.

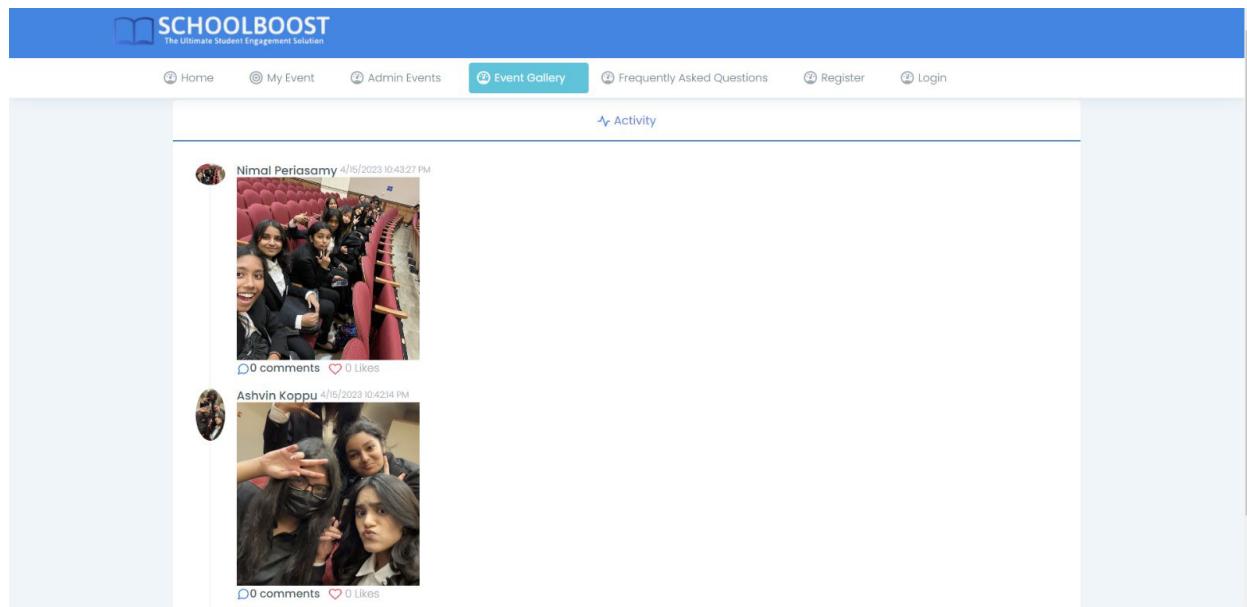
Invalid Username/Password

- If a user enters an incorrect or nonexistent username or password, the program will prompt an error message in the respective category.
- If the user does not verify their email, they will not be permitted to login to the program.

The image shows a 'Sign In' form. At the top, it says 'Sign In'. Below that is a red error message box containing the text 'Error - Invalid Username/Password'. Below the error message box is a 'Username' input field containing the text 'sdf'. Below the 'Username' field is a 'Password' input field containing three dots (...). Below the input fields are two links: 'Remember me' and 'Forgot pwd?'. A blue 'Login' button is at the bottom. At the very bottom, it says 'Don't have an account? [Sign Up](#)'.

1.5 Event Gallery Page

To view or upload pictures of students at events, users can access the Event Gallery webpage.



The Event Gallery Page has a variety of features:

■ Posting a Picture

- The 'Event Upload' button will vary depending on the user's role:
 - If the user is a student, they will have access to the upload button and can post pictures.

A screenshot of a file upload form. It shows a 'Choose File' button with 'No file chosen' next to it, and a purple 'Submit' button below it.

- If the user is an admin or not signed in, the upload button will be fully removed, and they will not be able to upload pictures.

■ Liking Posts

- Users can express their appreciation for other users' posts by clicking on the 'like' button.
- If the user has not already liked the post, the like count will be displayed in gray.



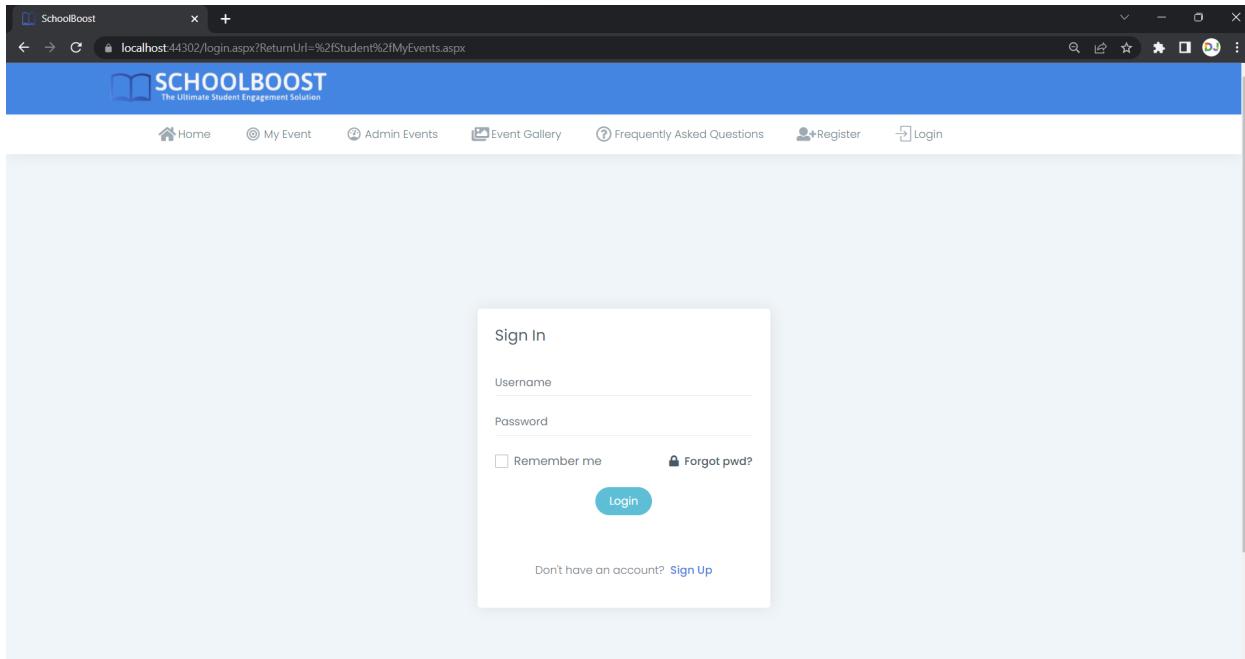
- If the user already liked the post, the like count will be displayed in red.



- To like a post, users simply need to click on the heart or the like counter, and the count will update accordingly.

1.6 My Events Page

- Upon successful login, if the user is a student, they will be automatically redirected to the 'My Events' page.



- If the user is not logged in and tries to access the My Events page, they will be redirected to the login page, which will redirect them to the My Events page upon successful login.

A screenshot of the SchoolBoost My Events page. The header includes the SchoolBoost logo and navigation links for Home, My Event (which is highlighted in teal), Event Gallery, Frequently Asked Questions, and Logout. The main content area has a 'Manage Your Events' section with a 'Add New Event' button and a 'Time Left in Quarter 2' section showing '69 days'. Below is a 'Prize Progress' chart with three items: 'Free Lunch (25 Points)' at 20%, 'Free Dance Ticket (50 Points)' at 10%, and 'Free Hoodie (100 Points)' at 5%. A table lists student events with columns for Event Name, Gained Score, Location, Status, and Date. The table shows three entries: 'Soccer Match vs Valencia' (Pending, 4/14/2023), 'Basketball Game vs Kennedy' (Approved, 4/15/2023), and another 'Basketball Game vs Kennedy' (Rejected, 4/15/2023). A note at the bottom says 'End of records'.

- The My Events Page has a variety of features for students:
 - Time Left in Quarter
 - The page displays the amount of time left in the current school quarter as well as the quarter number.

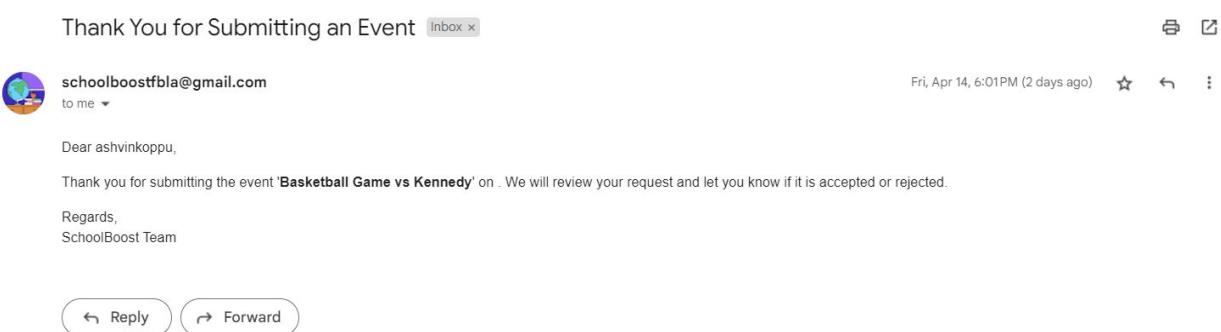
- Prize Progress
 - The website shows the progress a student has made towards earning each of the available prizes, based on the points they have accumulated.
- Event Table
 - The Event Table lists all the events the user has signed up for, including the event name, score, location, status, and date.
- Add New Event:
 - Users can submit new events for verification by clicking on the 'Add New Event' button.
- After clicking on the 'Add New Event' button, users will be presented with a prompt to submit a new event for verification.

The screenshot shows a modal window titled "Add New Event". It contains four input fields with dropdown menus for selecting values. The first field is "Basketball Game vs Kennedy", the second is "mm/dd/yyyy", the third is "--:-- --", and the fourth is "Location". Below these fields is a file upload area with a "Choose File" button and a message "No file chosen". At the bottom of the modal are two buttons: a pink "Close" button and a blue "Submit" button.

- When users fill out the required entries for the new event submission prompt, the Event Table will be updated to include the new event as 'pending' until it has been verified. No points will be given until the status has been changed to 'approved'.

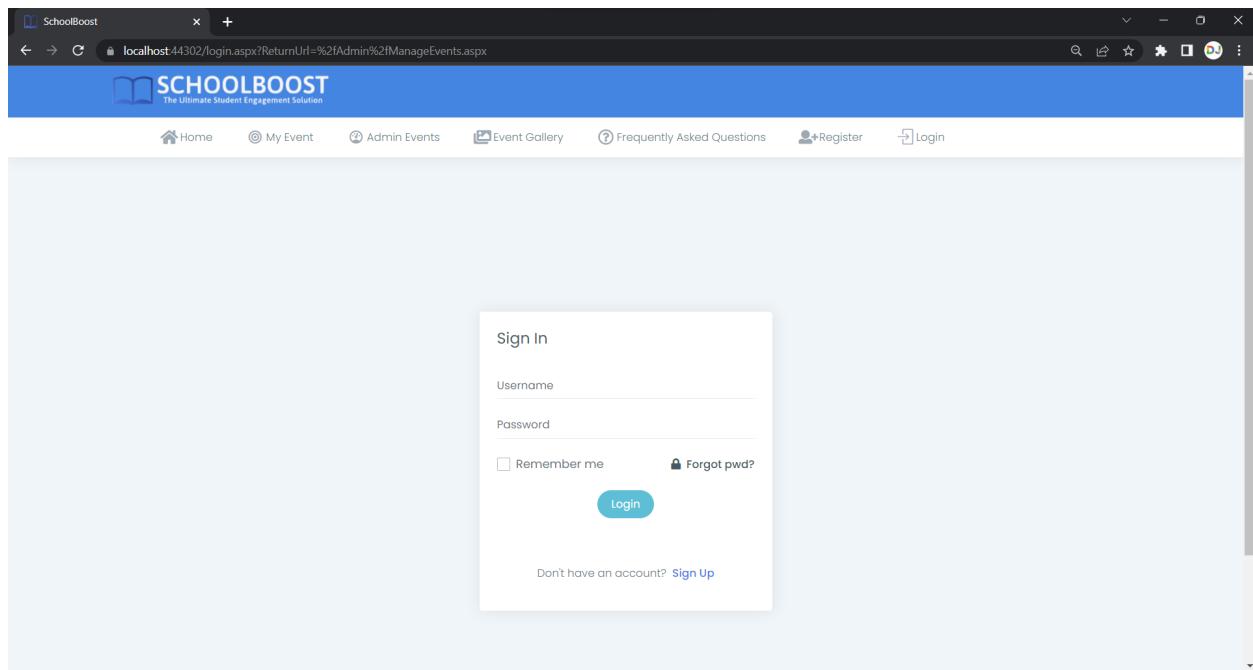
Event Name	Gained Score	Location	Status	Date
FBLA State Leadership Conference	20	Sacramento, CA	Approved	4/27/2023 12:00:00 AM
Basketball Game vs Kennedy	0	Cypress High School	Pending	4/15/2023 12:00:00 AM
End of records				

- Upon submitting an event, the students will also receive a confirmation email.



1.7 Admin Events Page

- Upon successful login, if the user is an admin, they will be automatically redirected to the 'Admin Events' page.



- If the user is not logged in and tries to access the Admin Events page, they will be redirected to the login page, which will redirect them to the Admin Events page upon successful login.

The screenshot shows the 'Manage Your Events' section of the SchoolBoost Admin Events page. It displays a table of events with the following columns: Event Name, Username, Score, Location, Status, Date, and Action. The table contains the following data:

Event Name	Username	Score	Location	Status	Date	Action
Basketball Game vs Kennedy	sashapoosarla	0	Cypress High School	Pending	4/15/2023 12:00:00 AM	<button>Update</button>
Soccer Match vs Valencia	ashvinkoppu	0	Sacramento, CA	Pending	4/14/2023 12:00:00 AM	<button>Update</button>
Basketball Game vs Kennedy	ashvinkoppu	0	Cypress High School	Rejected	4/15/2023 12:00:00 AM	<button>Update</button>
Basketball Game vs Kennedy	akolasani	0	Cypress High School	Rejected	3/12/2023 12:00:00 AM	<button>Update</button>
FBLA State Leadership Conference	dheerajkoppul0	10	Sacramento, CA	Approved	4/27/2023 12:00:00 AM	<button>Update</button>
FBLA State Leadership Conference	debolahson	20	Sacramento, CA	Approved	4/27/2023 12:00:00 AM	<button>Update</button>
FBLA State Leadership Conference	sashapoosarla	20	Sacramento, CA	Approved	4/27/2023 12:00:00 AM	<button>Update</button>

- The Admin Events Page has a variety of features for school administrators to control the program:
 - Time Left in Quarter
 - The page displays the amount of time left in the current school quarter as well as the quarter number.
 - Generate Report
 - Administrators can generate a report containing all student data by clicking on the 'Generate Report' button. The program will automatically compile and display the report.

The screenshot shows an Excel spreadsheet titled 'SchoolBoostStudentData.xlsx'. The data is organized into columns: A (Student ID), B (Username), C (First Name), D (Last Name), E (Grade), F (Total Points), and G (Events Attended). The data includes the following rows:

A	B	C	D	E	F	G	
1	Student ID	Username	First Name	Last Name	Grade	Total Points	Events Attended
2	15	dheerajk0	Dheeraj	Koppu	9	5	1
3	19	DheerajKo	Dheeraj	Koppu	9	5	1
4	20	nabraham	Nikhil	Abraham	9	0	1
5	21	ljamess	Lebron	James	9	5	1
6	23	akolasani	Abhinav	Kolasani	9	0	1
7	24	dheerajk0	Dheeraj	Koppu	9	20	3
8	25	deborahs0	Deborah	Son	9	20	1
9	27	fmansuri	Farheen	Mansuri	9	20	1
10	29	jhelmy	John	Helmy	9	20	1
11	41	ashvinkopp0	Ashvin	Koppu	9	0	3
12	2641	user1	user1	user1	9	137	14
13	2645	user5	user5	user5	9	117	14
14	2649	user9	user9	user9	9	149	14
15	2653	user13	user13	user13	9	136	14
16	2657	user17	user17	user17	9	198	14
17	2661	user21	user21	user21	9	158	14
18	2665	user25	user25	user25	9	120	14
19	2669	user29	user29	user29	9	166	14
20	2673	user33	user33	user33	9	146	14
21	2677	user37	user37	user37	9	138	14
22	2681	user41	user41	user41	9	155	14
23	2685	user45	user45	user45	9	174	14
24	2689	user49	user49	user49	9	140	14
25	2693	user53	user53	user53	9	102	14
26	2697	user57	user57	user57	9	141	14
27	2701	user61	user61	user61	9	141	14

- The generated report is an Excel file contains the following data:

Documentation

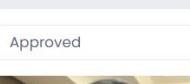
- Student ID
- Username
- First Name
- Last Name
- Grade
- Total Points
- Events Attended
- The Excel table is organized in ascending order by grade level.
- Administrators will receive an email with this report at the end of each quarter.

Event Name	Username	Score	Location	Status	Date	Action
 Basketball Game vs Kennedy	ashvinkoppu	0	Cypress High School	Pending	4/15/2023 12:00:00 AM	<button>Update</button>
 Basketball Game vs Kennedy	ashvinkoppu	0	Cypress High School	Pending	4/15/2023 12:00:00 AM	<button>Update</button>
 Basketball Game vs Kennedy	saishapoosarla	0	Cypress High School	Pending	4/15/2023 12:00:00 AM	<button>Update</button>
 Soccer Match vs Valencia	ashvinkoppu	0	Sacramento, CA	Pending	4/14/2023 12:00:00 AM	<button>Update</button>
 Soccer Match vs Valencia	nabraham	0	Cypress High	Pending	3/11/2023 12:00:00 AM	<button>Update</button>
 Basketball Game vs Kennedy	Akoppu	0	Cypress High	Pending	3/6/2023 12:00:00 AM	<button>Update</button>
 Basketball Game vs Kennedy	akolasani	0	Cypress High School	Pending	3/10/2023 12:00:00 AM	<button>Update</button>

○ Manage Events Table

- The Manage Events Table lists all events in pending status first, to help administrators prioritize their review process.
- The Manage Events Table lists the last 50 entries in the current quarter.

Update Event

User name	ashvinkoppu
Event Title	Basketball Game vs Kennedy
Score	0
Point Range	0 - 5
Status	Approved
Proof	

Update Clear

- To update the point value or status of an event, administrators can click on the 'Update' button.
 - When the 'Update' button is clicked, the website will display the relevant data for the selected student entry.
 - Administrators have the option to approve or reject the event submission based on the provided proof of the event. They can also assign a point value within the score range for the student's performance in the event.
 - After entering the appropriate data, administrators can update the record by clicking on the 'Update' button or exit the update menu by clicking on the 'Clear' button.

Event Status Update: Basketball Game vs Kennedy - Approved Inbox ×

 schoolboostfbla@gmail.com 3:09 PM (0 minutes ago) Star Forward More

to me ▾

Dear Student,

Your event '**Basketball Game vs Kennedy**' status has been updated to '**Approved**'.

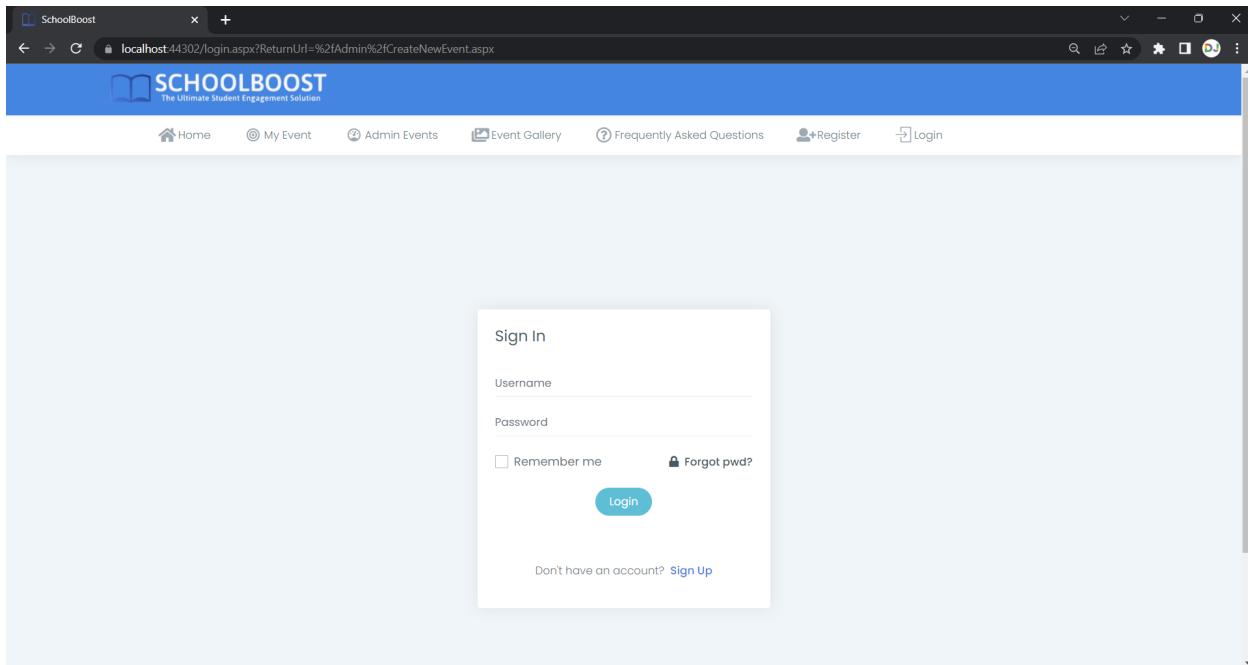
Regards,
SchoolBoost Team

Reply Forward

- Students will also receive an email regarding the status of their event.

1.8 Create Events Page

- The Create Events Page can be accessed through two methods:
 - Direct URL Entry
 - The URL could be entered into the search bar to reach the website.



- If a user tries to access the Create Events Page without being signed in as an admin, the program will prompt them to log in with accepted credentials before allowing access.
- The Admin Events Page

Manage Your Events

View Events
Generate Report

- Clicking on the 'View Events' button from the admin page will redirect administrators to the Create Events Page.

The screenshot shows the 'View Events' section of the SchoolBoost Admin Events page. At the top, there are navigation links: Home, Admin Events, Event Gallery, Frequently Asked Questions, and Logout. Below these, a button labeled 'Create New Event' is visible. The main area displays a table of events with columns: Event Name, Event Type, Start Date, End Date, Points, Status, Minimum Score, Maximum Score, and Action (with a 'Update' button). The events listed are:

Event Name	Event Type	Start Date	End Date	Points	Status	Minimum Score	Maximum Score	Action
FBLA State Leadership Conference	Sports	2023-04-27	2023-04-30	25	active	0	25	<button>Update</button>
Spring Dance	Dances	2023-04-09	2023-04-10	10	active	0	10	<button>Update</button>
Prom	Dances	2023-04-06	2023-04-06	10	active	0	10	<button>Update</button>
Seacherp Competition	Clubs	2023-04-01	2023-04-01	5	active	0	5	<button>Update</button>
Speech Club Debate	Clubs	2023-03-25	2023-03-25	5	active	0	5	<button>Update</button>
Swimming Competition vs Oxford	Sports	2023-03-18	2023-03-18	5	active	0	5	<button>Update</button>
Track Meet vs Arundia	Sports	2023-03-	2023-03-	5	active	0	5	<button>Update</button>

- The Create Events Page has a variety of features for school administrators to control the event aspect of the program:
 - Event Table
 - The Event Table displays all school events in a tabular format, including the following information:
 - Event Name
 - Event Type
 - Start Date
 - End Date
 - Points
 - Status
 - Minimum Score
 - Maximum Score
 - Create New Event
 - To add an event to the program, administrators can click on the 'Create New Event' button.

Create New Event

Enter Event Name

Sports

mm/dd/yyyy

mm/dd/yyyy

Enter Minimum Score

Enter Maximum Score

Close **Submit**

All Rights Reserved by SchoolBoost.

- To create an event, administrators will need to enter the following details:

- Event Name
- Event Type (Dropdown with options of Sports, Dances, Clubs)
- Start Date
- End Date
- Minimum Score
- Maximum Score

- To exit this menu and return to the full Create Events page, administrators can click on the 'Close' button.
- Upon event creation, the event will be added to the event table.

- Update Event

Event Name	Event Type	Start Date	End Date	Points	Status	Minimum Score	Maximum Score	Action
FBLA State Leadership Conference	Sports	2023-04-27	2023-04-30	25	active	0	25	Update

- To update the details of an event, administrators can select the event in the Events Table and click on the 'Update' button.

Update Event

Event Name	FBLA State Leadership Conference
Event Type	Sports
Start Date	04/27/2023
End Date	04/30/2023
Points	25
Status	active
Minimum Score	0
Maximum Score	25

- Administrators can edit the following information:
 - Event Type
 - Start Date
 - End Date
 - Points
 - Status
 - Minimum Score
 - Maximum Score
- To save any changes made to event details, administrators must click on the 'Update' button. The updated data will then be reflected in the Event Table and throughout the program.
- To exit the update menu without saving changes, administrators can click on the 'Clear' button.

1.9 Winners Page

Points Leaderboard	View Winners
--------------------	------------------------------

- The Winners Page can be accessed through the homepage by clicking on 'View Winners' Button above the table.
- The View Winners Page shows the winners by quarter in grade level ascending order.

Top Students by Grade for Each Quarter

Quarter 1

- Users can navigate to different quarters by selecting the desired quarter from the dropdown menu.

Documentation

- The following information is displayed for each quarter.
 - The student with the most point accumulation per grade for that respective quarter.
 - A randomly selected winner per grade for that respective quarter.

The screenshot shows a web application interface for 'SCHOOLBOOST'. At the top, there's a blue header bar with the 'SCHOOLBOOST' logo and the tagline 'The Ultimate Student Engagement Solution'. Below the header, a navigation menu includes links for 'Home', 'My Event', 'Admin Events', 'Event Gallery', 'Frequently Asked Questions', 'Register', and 'Login'. The main content area has a title 'Top Students by Grade for Each Quarter' and a dropdown menu set to 'Quarter 1'. A table displays student data across five columns: Username, Grade, Quarter, Total Score, and Winner Type. The data shows eight students from grades 9 to 12, with their total scores and whether they are 'Top Scorer' or 'Random'. At the bottom of the table, it says 'End of records'. A footer at the very bottom of the page reads 'All Rights Reserved by SchoolBoost.'

Username	Grade	Quarter	Total Score	Winner Type
fmansuri	9	1	20	Top Scorer
user81	9	1	10	Random
user38	10	1	20	Top Scorer
user174	10	1	12	Random
user23	11	1	20	Top Scorer
user51	11	1	9	Random
user40	12	1	20	Top Scorer
user160	12	1	19	Random

- If that user tries to load a quarter that has not yet occurred or been completed, the system will display a notification on the table indicating that the results are not available.

This screenshot shows the same 'Top Students by Grade for Each Quarter' page, but for 'Quarter 2'. The dropdown menu is set to 'Quarter 2'. A prominent blue info box at the bottom of the table area contains the text: 'Info - The winners for this quarter are currently unavailable. We will announce the winners at the end of the selected quarter.'

- The table will automatically update with the corresponding quarter data at 12:00:00 AM when the new quarter commences.

1.10 Frequently Asked Questions Page

- The Frequently Asked Questions Page can be accessed through the menu bar by clicking on 'Frequently Asked Questions'.

The screenshot shows the 'Frequently Asked Questions' section of the SchoolBoost website. At the top, there's a navigation bar with links for Home, My Event, Admin Events, Event Gallery, Frequently Asked Questions (which is highlighted in green), Register, and Login. Below the navigation is a search bar labeled 'Search...'. The main content area is titled 'Frequently Asked Questions' and contains a list of questions with small downward arrows to their right, indicating they can be expanded. The questions listed are:

- How can I contact SchoolBoost if I have any questions?
- How can I create an event?
- How do I submit a point request?
- How can I generate a report with student data?
- How do I create an account?
- How do I post a picture of myself at an event?
- How do I edit an event's details?
- How do I logout?
- How do I login?
- How do I view the winners of each quarter?
- How do I view my prize progress?
- How do I view the time left in the quarter?

- This page shows common frequently asked questions regarding the program.
- Users can navigate the Help Page in two ways:

This screenshot shows the same 'Frequently Asked Questions' page as above, but with a different focus. It highlights the search functionality. At the top, there's a search bar labeled 'Search...'. Below it, the title 'Frequently Asked Questions' is followed by a list of questions. The first question, 'How can I contact SchoolBoost if I have any questions?', is expanded, showing its detailed answer. The other questions are collapsed, indicated by small downward arrows to their right. The list of questions is identical to the one in the previous screenshot.

- By using the search feature
 - The search feature will intelligently filter out questions based on the keywords entered in the search bar.
- By browsing through each question manually.

This screenshot shows the 'Frequently Asked Questions' page again, but with a different question expanded. The question 'How can I contact SchoolBoost if I have any questions?' is now expanded, revealing its detailed answer. The other questions remain collapsed. The expanded answer provides contact information and a response time guarantee. Below this expanded section, another question, 'How can I create an event?', is partially visible with a downward arrow, indicating it can be expanded. A list of instructions follows:

- To access further information about a question, simply click on the question, and the relevant assistance will be displayed.
- For aesthetic purposes, the program permits only one question to be expanded at a time.
 - If you open a new question while another one is already expanded, the program will automatically close the previously opened question.

1.11 Usage Tips

In addition to the information regarding various features listed above, there are a handful of useful tips to know when using our application that will vastly improve your experience.

Documentation

- To access the majority of program features, users must create an account.
- Users cannot become administrators automatically; administrator access must be manually granted by an authorized backend user.
- Clear your browsers cache to get rid of autofill entries anywhere throughout the program.

2. Source Documentation

2.1 Sources

Our application makes use of various files, libraries, and images.

- The icons and template used in our program were sourced from a purchased Bootstrap HTML Template for design purposes only.
- All program functionality, including but not limited to features, functions, and logic, have been created from scratch by our team.
- All images used throughout the program, including the SchoolBoost logo and user pictures, have been created by me.
- As necessary, we have imported libraries from Visual Studio to help support various program features and functions.

2.2 Image Documentation

Our application makes use of attraction images, application logos and icons.

- Program Design/Icons
 - <https://www.wrappixel.com/templates/materialpro/>
 - Available to the public for a fee
 - All rights belong to original author
- Logo image
 - Credits to team members for image use
 - Available to our project for free use
 - All rights belong to original author
- Sources for event submission images and event gallery are available in a folder entitled uploads.
 - Credits to team members for image use
 - Available to our project for free use
 - All rights belong to original author

2.3 Licenses

Our application makes use of various programs, libraries, and modules. We used such resources under specific rules and licenses, of which are outlined below.

- **Visual Studio:** Visual Studio is a software development tool and platform offered by Microsoft. It is used for developing applications for various platforms and programming languages. The program and its releases are open source, and it is also compatible with the GPL license, which guarantees users the freedom to run, study, share, and modify.
- **Microsoft:** The program uses imported libraries from Microsoft, which are subject to their own licensing agreements.

- **Microsoft SQL Server Management Studio:** Microsoft SQL Server Management Studio is a software application used for managing SQL Server databases. It is a programming tool for the back end and can be used to develop SQL Server applications.
- **Material Pro:** Material Pro is a premium HTML template used for the design and layout of this program.
- **DotNet:** DotNet is a widely used programming language and framework developed by Microsoft. It is publicly available and commonly used for developing Windows applications and web services.

3. System Requirements

3.1 Windows

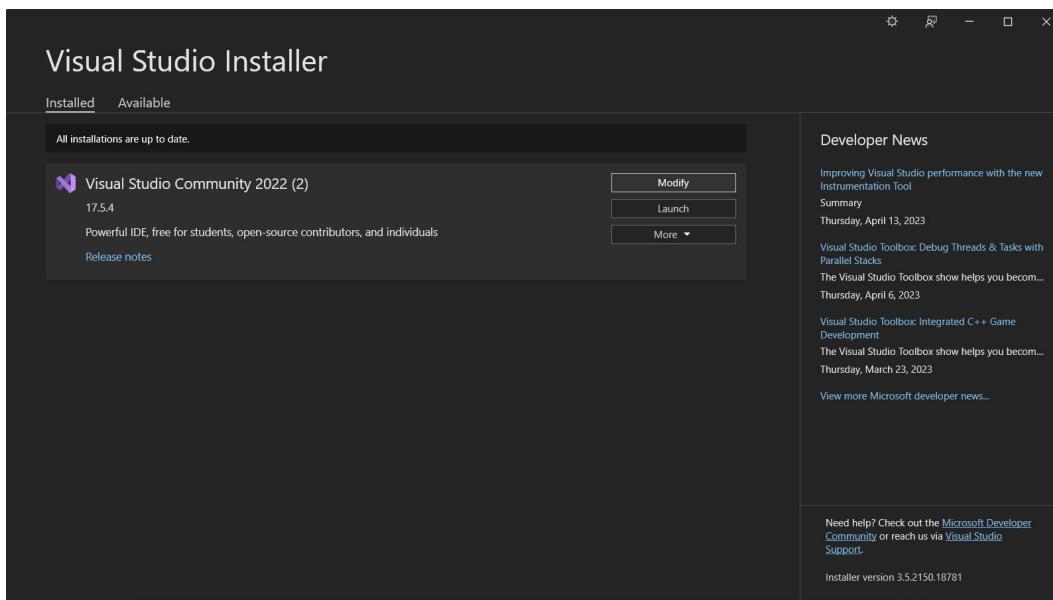
- Operating system must be **Windows 8** or above.
- Device must be able to install all of the necessary programs and libraries.
- Device must have at least **1 GB of RAM**.
- Device must have at least **500 MB of storage space**.

4. Requirements and Accessibility

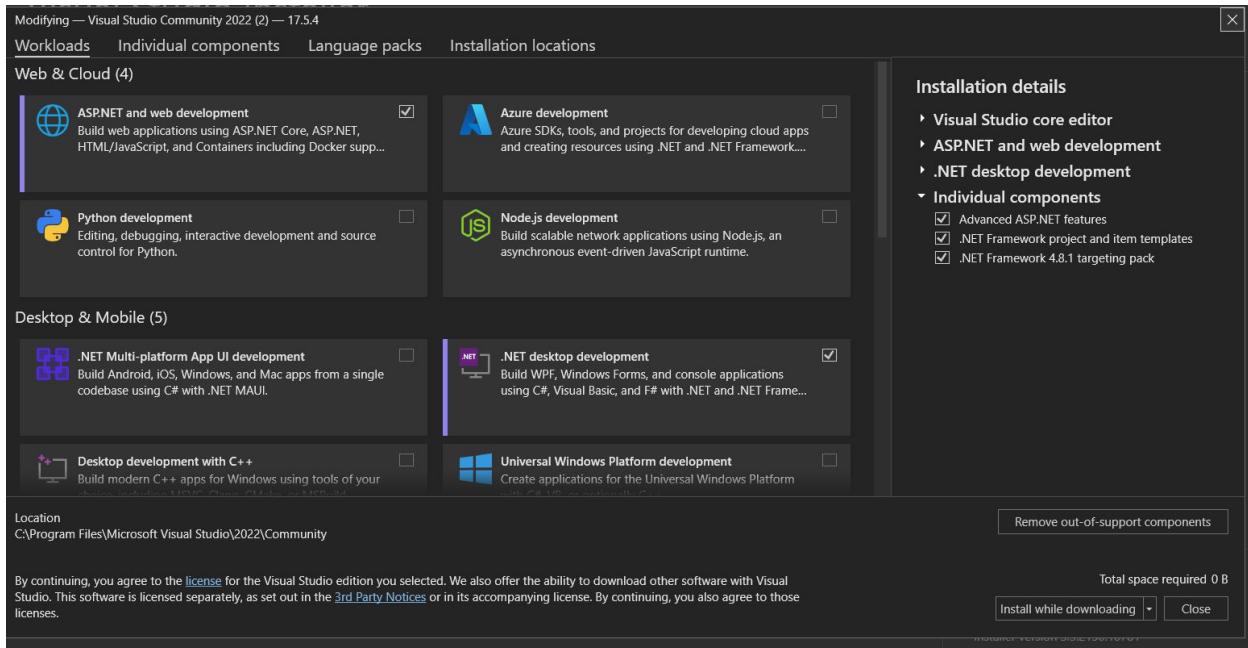
4.1 Application Required Programs

In our application, various programs and libraries are utilized. For the code to properly run, all the following must be properly installed and functioning.

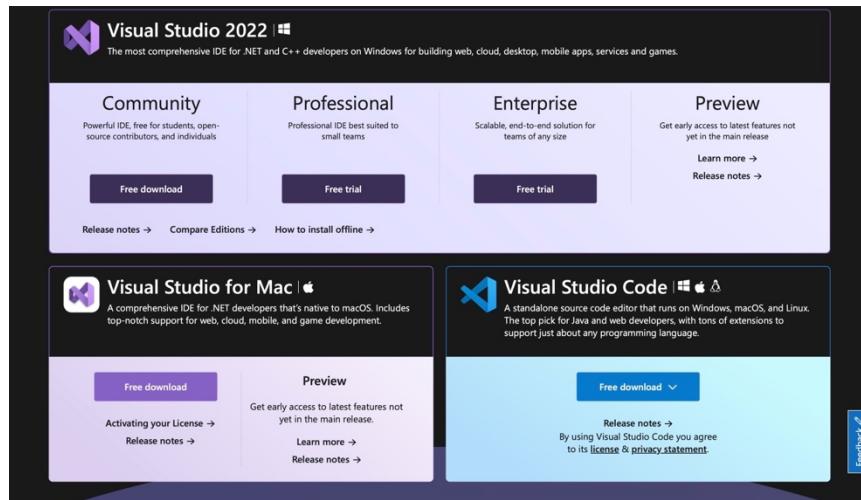
- .Net, v4.8
 - .NET is a free, open-source, cross-platform development framework used for building applications on Windows, Linux, and macOS. It supports multiple programming languages and provides a vast library of pre-built components and tools, making it easier to develop, test, and deploy applications.
 - To install .Net:



- Upon opening the Visual Studio Installer, click on 'Modify'



- Select all the .Net options and follow its instructions until completion.
- Visual Studio v.17.5.4
 - For this project, Visual Studio was used for the development of the application. To find the system requirements and installation process: <https://learn.microsoft.com/en-us/visualstudio/install/install-visual-studio?view=vs-2022>
 - To install Visual Studio:
 - Head to the official homepage for Visual Studio.



- Download the Visual Studio installer and follow its instructions until completion.

- SQL Server Management Studio v19.0
 - Microsoft SQL Server Management Studio (SSMS) is a powerful tool used for managing and administering Microsoft SQL Server databases. It provides a user-friendly interface for database developers and administrators to interact with their databases, create queries, and perform various maintenance tasks. SSMS allows users to create, modify, and delete databases, tables, stored procedures, views, and more. It also provides powerful debugging, tracing, and profiling tools to help users troubleshoot issues and optimize their databases.
 - To find the system requirements and installation process:
<https://learn.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-ver16>
 - To install SQL Server Management Studio:
 - Open the link shown above.

Download SSMS

[Free Download for SQL Server Management Studio \(SSMS\) 19.0.2 ↗](#)

SSMS 19.0.2 is the latest general availability (GA) version. If you have a *preview* version of SSMS 19 installed, you should uninstall it before installing SSMS 19.0.2. If you have SSMS 19.x installed, installing SSMS 19.0.2 upgrades it to 19.0.2.

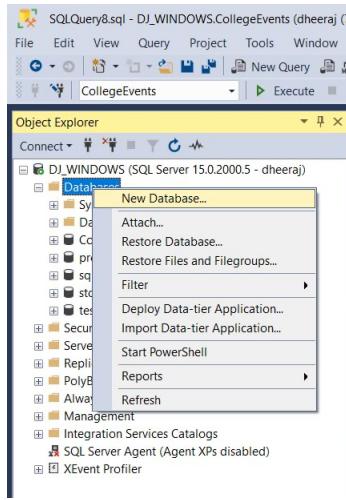
- Release number: 19.0.2
- Build number: 19.0.20209.0
- Release date: March 13, 2023

■ Click on ‘Free Download for SQL Server Management Studio (SSMS) 19.0.2’ and follow the following prompts for installation.

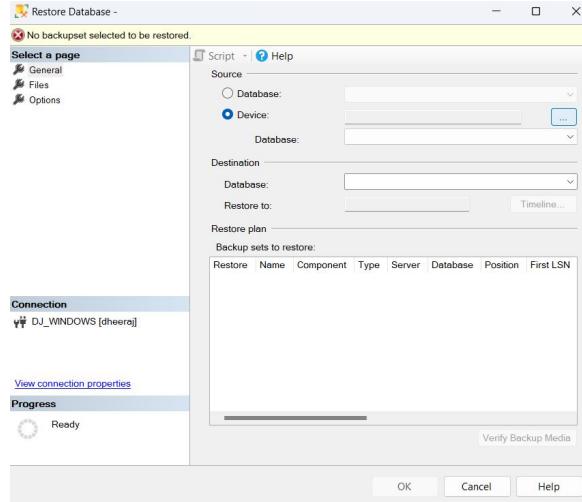
To add all the necessary SQL tables into the program:



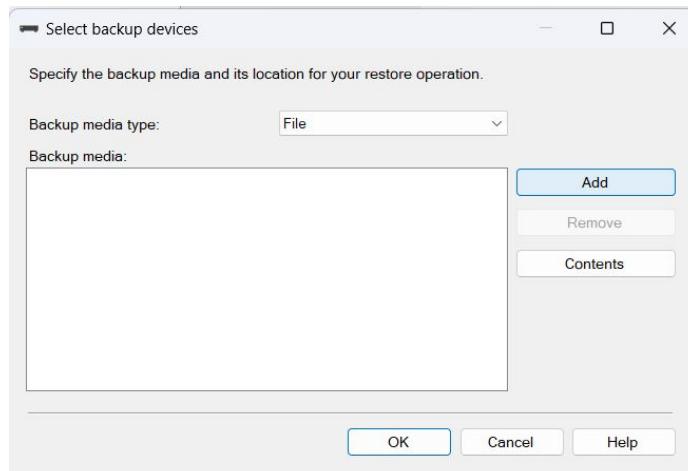
1. Connect to the SQL Server with your credentials.
2. Create a New Database called CollegeEvents in SQL Server Management Studio



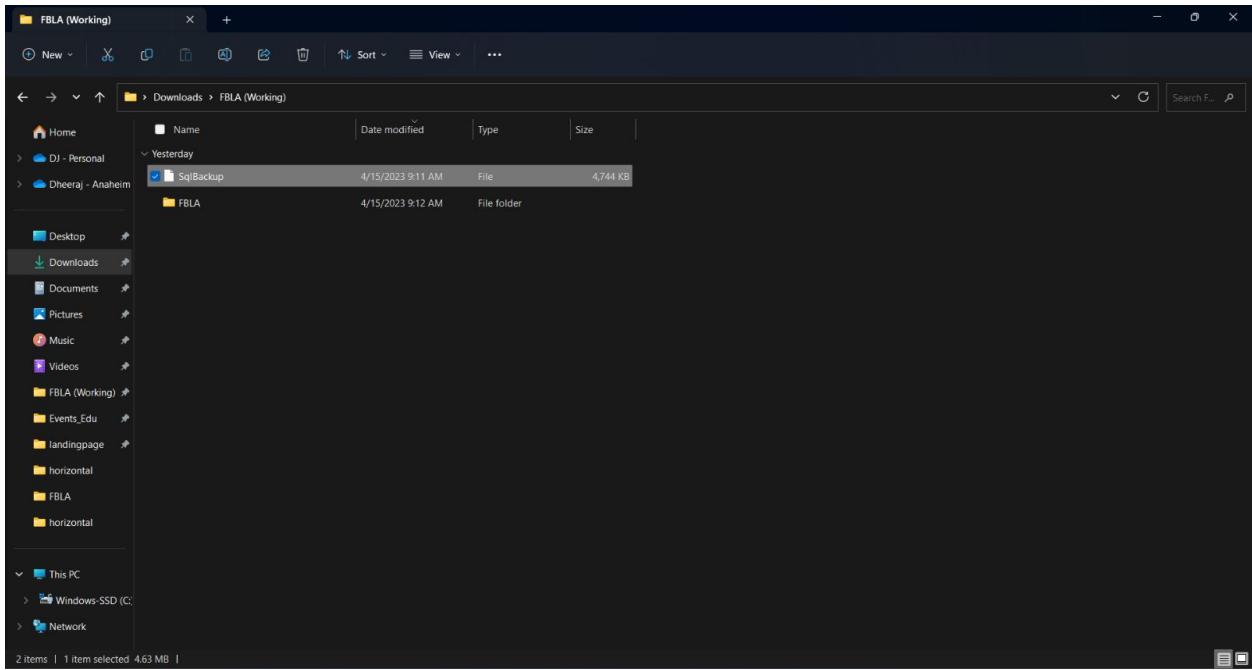
3. Right Click on Databases and Select Restore Database



4. Select Device for the source and click on the '...' button.



5. Select 'Add' for the source and click on the '...' button and navigate to the path of the SQL backup.



- Typically, the path would be 'C:\Users\<YOUR_USERNAME>\Downloads\SchoolBoost\SqlBackup'
- Click 'Ok' and 'Ok' again and follow the prompts to create the database.
- If you would like to erase all the data from the tables, use the command 'truncate <TABLE NAME>' on every table.
- To establish a connection between Dotnet and SQL, update the connection string ID within the Web.Config file with your own login credentials.

```

<?xml version="1.0" encoding="utf-8"?>
<!-- For more information on how to configure your ASP.NET application, please visit
      https://go.microsoft.com/fwlink/?LinkId=316933
-->
<configuration>
  <compilation debug="true" targetFramework="4.7.2" />
  <authentication mode="Forms">
    <forms defaultUrl="default.aspx" loginUrl="login.aspx" timeout="20"/>
  </authentication>
  <system.web>
    <connectionStrings>
      <add name="CollegeEventsConnectionString" connectionString="" providerName="System.Data.SqlClient" />
    </connectionStrings>
  </system.web>
  <system.codedom>
    <compilers>
      <compiler language="c#;cs;csharp" extension=".cs" type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.CSharpCodeProvider, Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=1.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />
      <compiler language="vb;vbs;visualbasic;vbscript" extension=".vb" type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.VBCodeProvider, Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=1.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />
    </compilers>
  </system.codedom>
  <runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
      <dependentAssembly>
        <assemblyIdentity name="System.Runtime.CompilerServices.Unsafe" publicKeyToken="b03f5f7fcd50a3a" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-5.0.0.0" newVersion="5.0.0.0" />
      </dependentAssembly>
    </assemblyBinding>
  </runtime>
</configuration>

```

4.2 Packages and Modules

- Microsoft Addons

- These external libraries were used to provide additional functionality such as creating Excel files, encrypting passwords, and more.
- To install the libraries:

■ Open the source in Visual Studio (see 4.3)

```

<?xml version="1.0" encoding="utf-8"?>
<!-- For more information on how to configure your ASP.NET application, please visit
      https://go.microsoft.com/fwlink/?LinkId=316933
-->
<configuration>
  <compilation debug="true" targetFramework="4.7.2" />
  <authentication mode="Forms">
    <forms defaultUrl="default.aspx" loginUrl="login.aspx" timeout="20"/>
  </authentication>
  <system.web>
    <connectionStrings>
      <add name="CollegeEventsConnectionString" connectionString="" providerName="System.Data.SqlClient" />
    </connectionStrings>
  </system.web>
  <system.codedom>
    <compilers>
      <compiler language="c#;cs;csharp" extension=".cs" type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.CSharpCodeProvider, Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=1.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />
      <compiler language="vb;vbs;visualbasic;vbscript" extension=".vb" type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.VBCodeProvider, Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=1.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />
    </compilers>
  </system.codedom>
  <runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
      <dependentAssembly>
        <assemblyIdentity name="System.Runtime.CompilerServices.Unsafe" publicKeyToken="b03f5f7fcd50a3a" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-5.0.0.0" newVersion="5.0.0.0" />
      </dependentAssembly>
    </assemblyBinding>
  </runtime>
</configuration>

```

■ Right Click on the project name and click Manage NuGet Packages

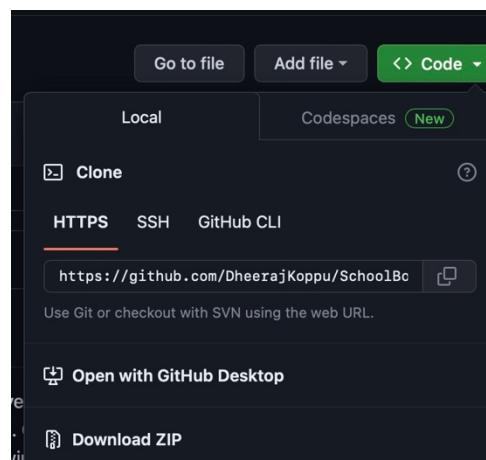
■ In the Browse Section, install the following if not already installed:

■ DocumentFormat.OpenXml

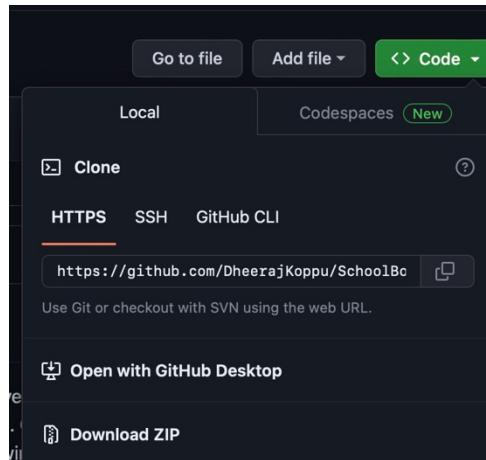
- System.ValueTuple
- System.Threading.Tasks.Extensions
- System.Runtime.CompilerServices.Unsafe
- System.Numerics.Vectors
- System.Memory
- System.Diagnostics.DiagnosticSource
- System.Buffers
- Microsoft.Extensions.Primitives
- Microsoft.Extensions.Options
- Microsoft.Extensions.Logging.Abstractions
- Microsoft.Extensions.Logging
- Microsoft.Extensions.DependencyInjection.Abstractions
- Microsoft.Extensions.DependencyInjection.
- Microsoft.CodeDom.Providers.DotNetCompilerPlatform
- Microsoft.Bcl.AsyncInterfaces

4.3 Accessing Source Code

- All necessary files for the application are stored on GitHub, a hosting site for project management and version control. The source code includes everything related to running our application and SQL tables as well. Commentary is provided to assist the process of running the source code.
- To access the source code and open it on your own device, several approaches can be taken.
 - a. Clone the code from GitHub onto your local Visual Studio. This can be done:
 - i. Through the github.com interface. The link to our GitHub repository can be found [here](#).



- b. Download the zip file from GitHub and open them in your local IDE.



- Download the ZIP file with all program files and unzip.

Downloads > FBLA (Working) > FBLA > FBLA				
	Name	Date modified	Type	Size
	Web.Release.config	4/12/2023 11:29 PM	XML Configuration...	2 KB
	WebForm1.aspx	4/12/2023 11:29 PM	ASP.NET Server Pa...	1 KB
	WebForm1.aspx.cs	4/12/2023 11:29 PM	C# Source File	1 KB
	WebForm1.aspx.designer.cs	4/12/2023 11:29 PM	C# Source File	1 KB
	FBLA.csproj.user	4/12/2023 11:29 PM	Per-User Project O...	2 KB
	<input checked="" type="checkbox"/> FBLA.sln	4/12/2023 11:29 PM	Visual Studio Solut...	2 KB
	Gallery.aspx	4/12/2023 11:29 PM	ASP.NET Server Pa...	22 KB
	Gallery.aspx.cs	4/12/2023 11:29 PM	C# Source File	1 KB

- Navigate to FBLA.sln located in
'C:\Users\<YOUR_USERNAME>\Downloads\SchoolBoost\FBLA\FBLA\FBLA.sln'
 - This file path is assuming the zip file has been downloaded to the downloads folder.
- With all that, all the source code should be available on your own device.

5. Program Architecture

5.1 Program Structure

- Our application makes use of filtering as well as sorting algorithms to suggest tourist attractions to the user in a visual application. Additional intelligent features are also supported.
 - The home page of the application provides access to the menu bar and leaderboard, allowing users to navigate to other sections of the program.
 - Access to certain pages within the application may require user authentication, while others are available to all users.
 - Upon logging in as a student user, the My Events page is loaded with personalized data, such as points and event information.
 - The Admin Events page is accessible to administrators, providing a view of all event data and allowing for the creation and editing of events, as well as the management of student event point requests and report generation.
 - The leaderboard on the homepage highlights a student user's ranking among their peers.
 - The application also offers additional intelligent features such as the ability to upload event photos, a help menu including FAQs and documentation, and the ability to generate user reports.

5.2 Module purposes

- Different modules and libraries are imported with the goal of enhancing our application and improving the user's experience. Each respective library has a specialized purpose.
 - Creation of application and its architecture (Microsoft SQL Server Management Studio, .Net v4.8)
 - Improving user experience and elevating program functions (Material Pro, SQL Server Management Studio v19.0)

6. Version History

6.1 Previous Version(s)

- 1.0
 - Basic ability with limited error notifications
 - Limited functionality
 - Admins have limited functionality over the website controls
 - No Event Gallery Feature
 - No quarter functionality
 - No email verification/functionality

6.2 Current Version

- 2.0
 - A homepage that dynamically changes the data shown based on user grade level.
 - Incorporates appropriate icons for menu bar items.
 - An Event Gallery Page where users can post pictures of themselves at events.
 - Shows time left in quarter.
 - Shows all data based on the current quarter.
 - homepage that dynamically changes the data shown based on user grade level.
 - Admin events table now filters to show pending events at the top before other event statuses.
 - Added functionality of the user report.
 - Added email functionality
 - Includes Events Count for each user
 - Added a Frequently Asked Questions Page.
 - Included a View Winners page that displays the names of program winners.
 - Added email verification.
 - Added comments throughout the code.

6.3 Future Versions

- Make the website hosted on a website server as well as integrate it with a global SQL server so it can be used worldwide.
- Increase user data protection and security.
- Increase performance.

- Add comment functionality for Event Gallery.
- Implement the Forgot Password Functionality.
- Add more error notifications for commonly arisen errors.
- Add the option to sign in via Google for added user convenience.
- Make code more efficient.
- Allow administrators to control more stuff through the GUI rather than through manual SQL entries.
 - Control Quarter Length
 - Delete Events
 - Delete Users
 - End Quarter
- Improve aesthetics of application.
- Add a 'View Profile' page where users and admin can view their profile and have the ability to change their username, password, email, etc.
- Usability across all 3 major operating systems (Windows, macOS, and Linux).
- Implement Paging functionality to tables.
- Incorporate Bootstrap Validators throughout the program.