

Quizzical FBLA



Documentation

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Easton Area High School

How to Run App

This mobile application was developed in C# using Visual Studio 2017 and the Xamarin Platform on both Microsoft Windows and OSX. Contained within the competition submission is a folder named “CompiledApp” that contains a signed APK that was created for Android phones and emulators. Simply install the APK to your Android mobile device and run.

Please note that because the Windows Phone platform has been discontinued by Microsoft, it would be inaccurate to judge our entry based off of strictly running the UWP version of the app. Certain features such as bug reporting are only available on Android and iOS systems.

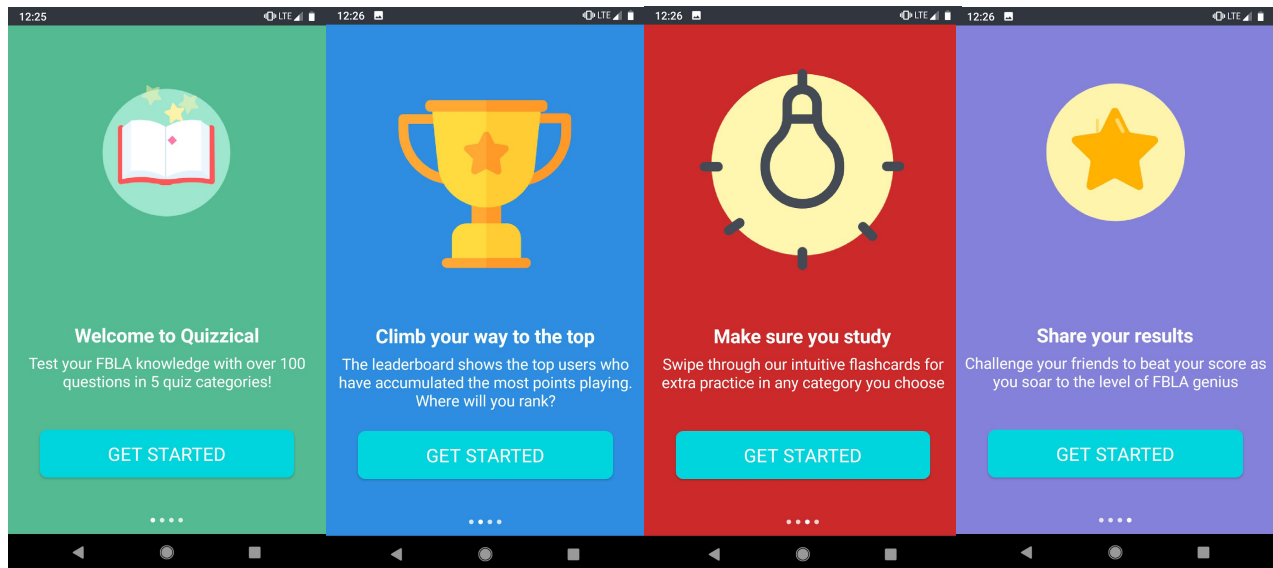
Build Instructions

In order to build for IOS you will need OSX with both XCode and Visual Studio for Mac fully updated and an Internet connection. Upon opening the Visual Studio solution it will immediately download all necessary packages from Nuget. You will need to execute a debug version of the QuizzicalFBLA.iOS project using the iPhone Simulator. We recommend utilizing the iPhone XS Max iOS 12.1 simulator.

In order to build for Android you will need Visual Studio or Visual Studio for Mac. Upon opening the Visual Studio solution it will immediately download all necessary packages from Nuget. You will need to execute a debug version of the QuizzicalFBLA.Android project either on a simulator or by connecting an Android mobile device that has Developer Options and Enable USB debugging turned on.

Screenshots

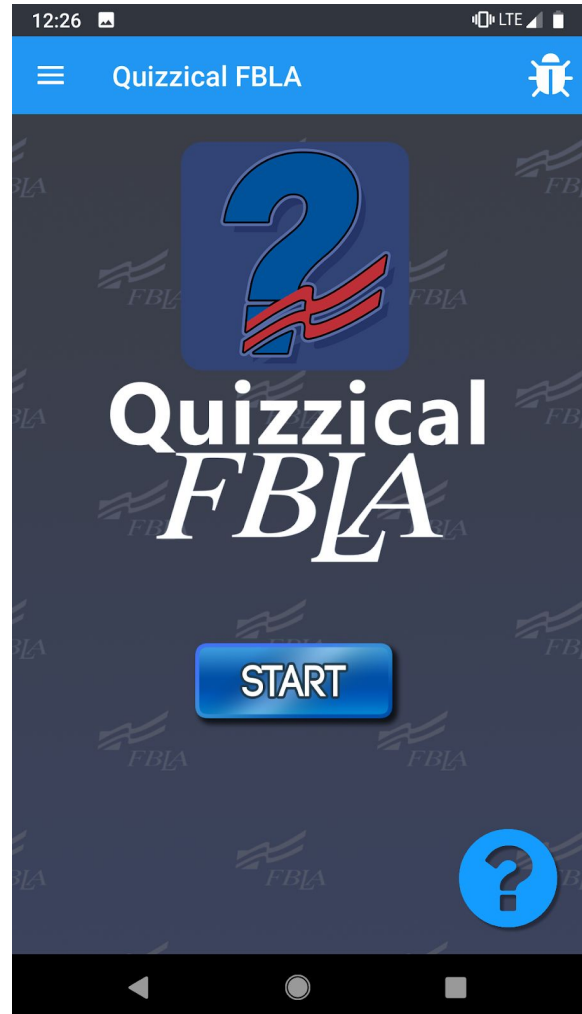
Onboarding Walkthrough



This is what the user is greeted when they first launch the app. It starts with the screen on the left and from there the user can swipe left or right to access the other pages shown above.

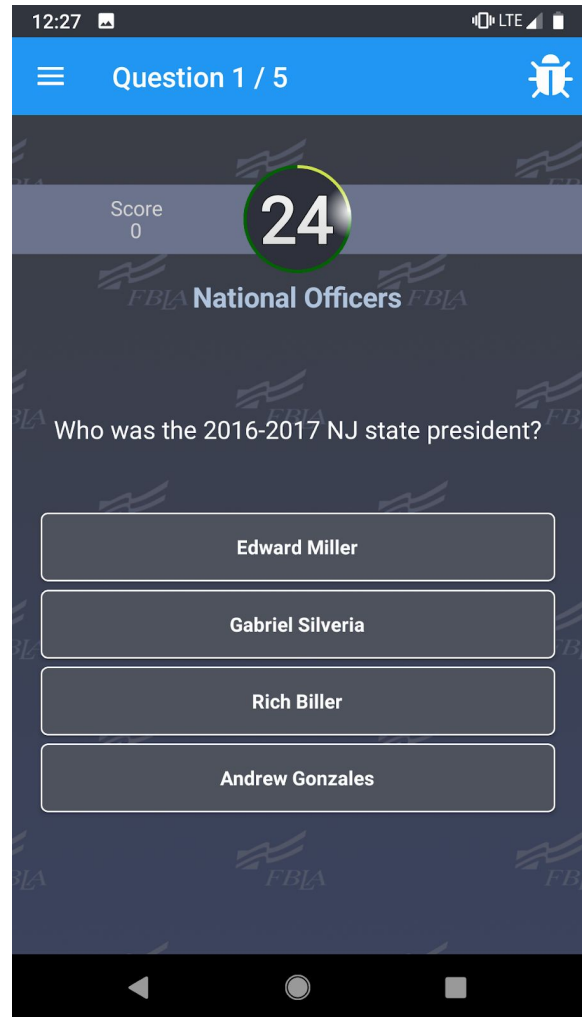
The Play Page

In the center of the screen it contains a START button which starts the quiz. In the bottom right corner is a question mark button, which when tapped brings the user to the instructions page. In the top right corner is a bug icon that opens a menu that allows the user to give feedback on the application. This feedback menu will be accessible on every page. In the top left corner is a “Hamburger Menu” icon that when tapped opens a navigation menu. This navigation menu will be accessible on every page.



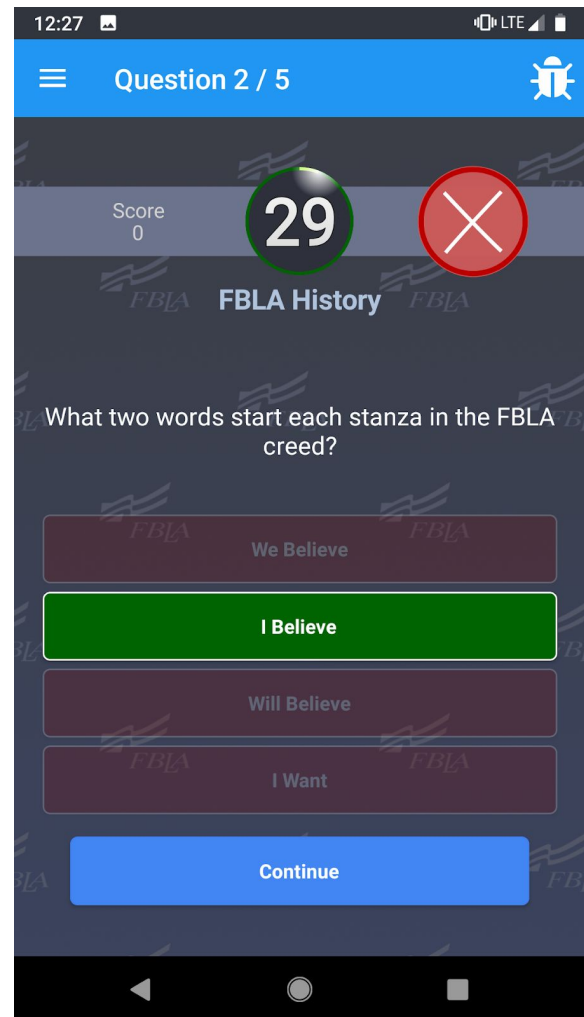
The Question Page

This is the screen that displays the current question that the user is on. The question number is displayed at the top of the page, below is the score, to the right of that is the timer. Below the timer we have the category name and the question is displayed underneath the category. The buttons that are underneath the question correspond to the four possible answers of each question. Only one of the four answers will be correct.



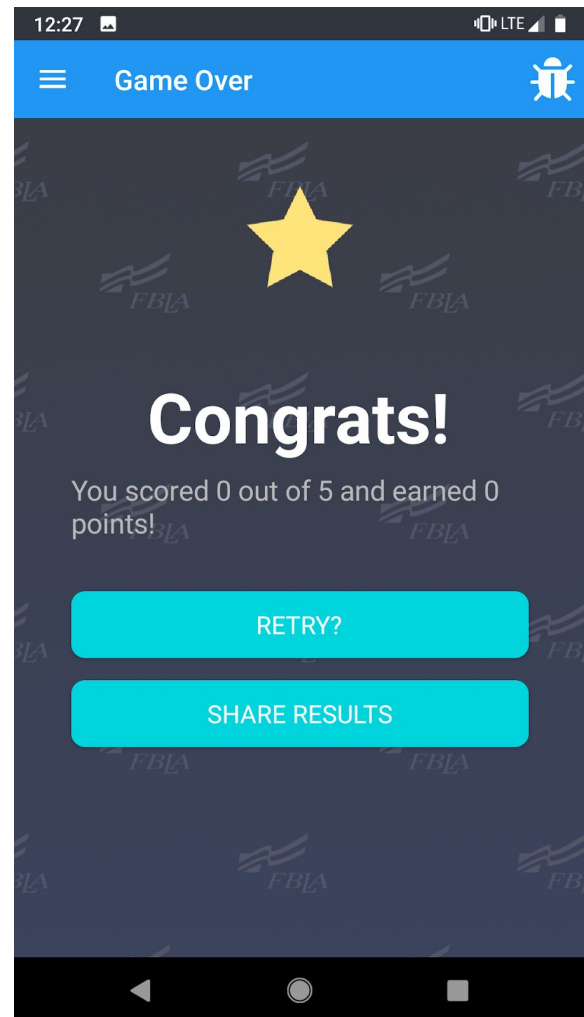
The Answer Screen

This screen will tell the user if they got the answer correct or not. When the user answer the question the correct answer will flash green and the incorrect answer will be red.



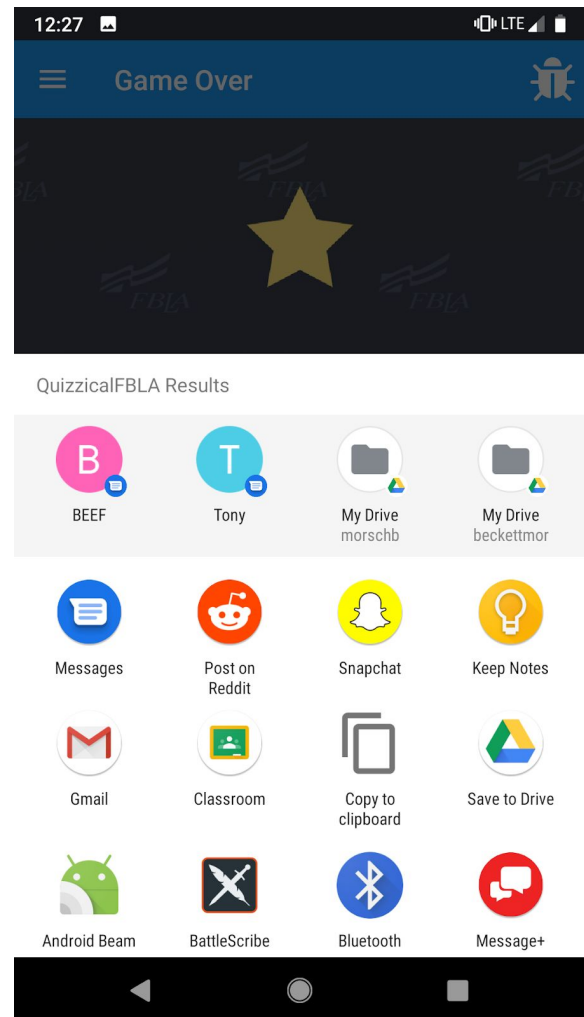
The End Page

This is the End Page. It displays when the quiz has been completed. It displays how many questions the user got right, the score the user achieved, a retry button that brings the user back to the Play Page, and a Share Results button that brings up the Share Screen.



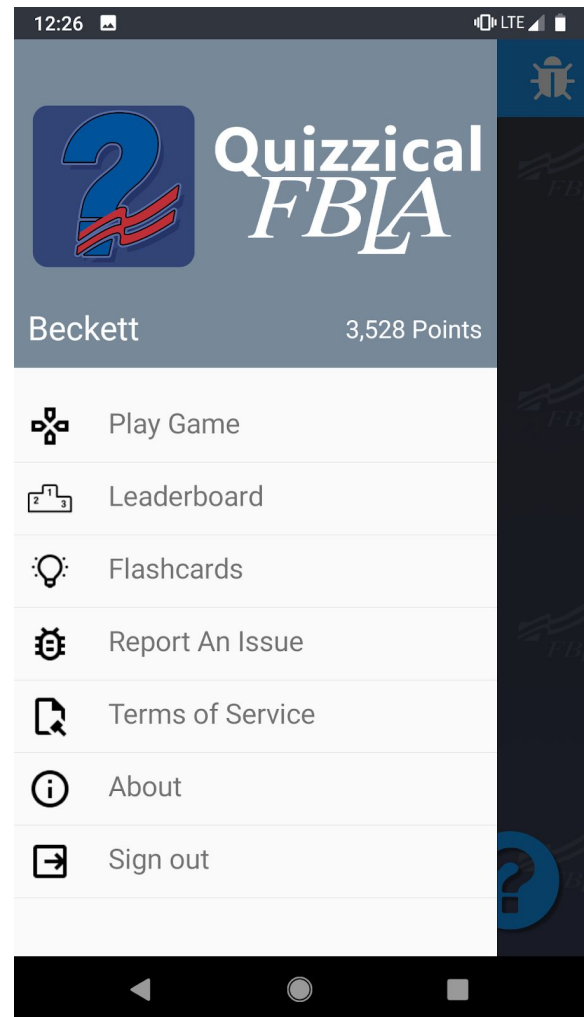
The Share Screen

The share screen can be accessed by completing the quiz then tapping the button labeled 'Share Results.' From this screen the user can share what your results were from the quiz with any social media app that is installed on your phone. For example, Reddit, Snapchat, or even through regular messaging.



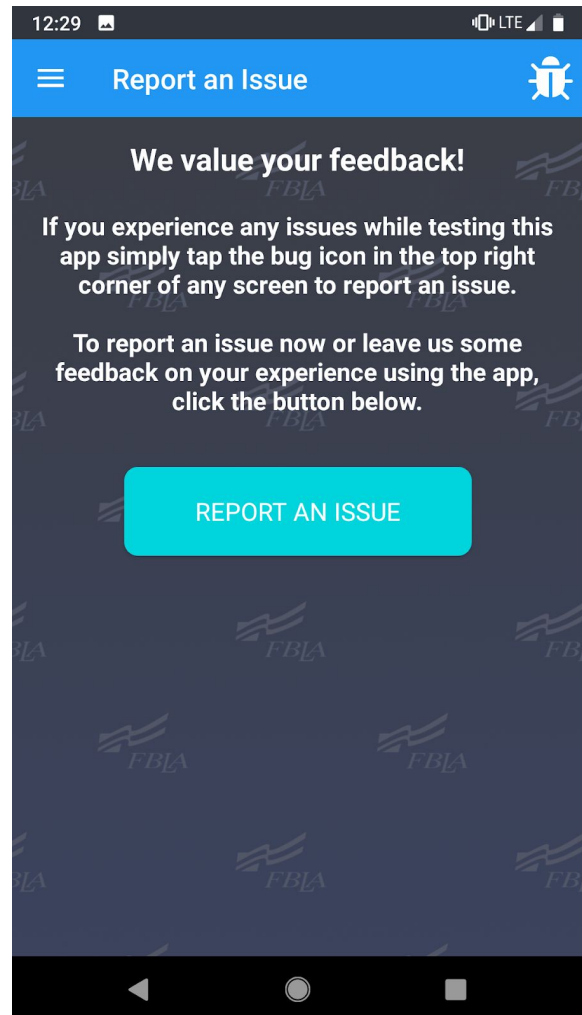
The Navigation Menu

This is the navigation menu. It can be accessed by tapping the “Hamburger Menu” icon in the top left of any screen, or by swiping right starting from the left edge of the screen.



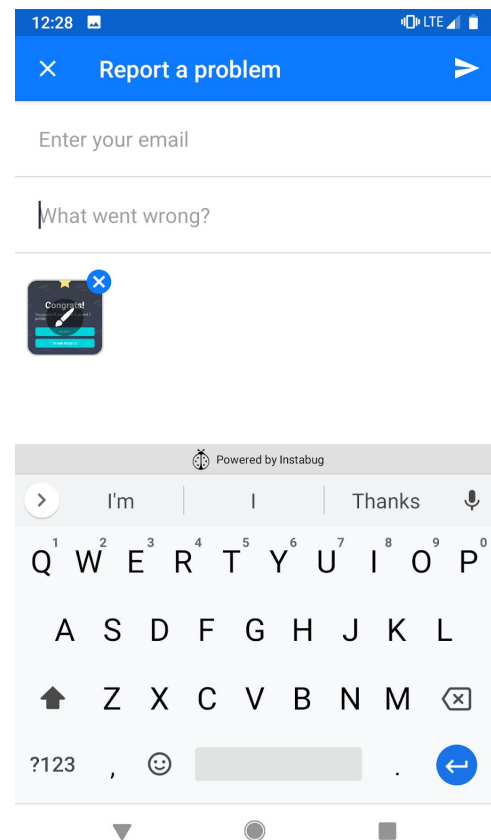
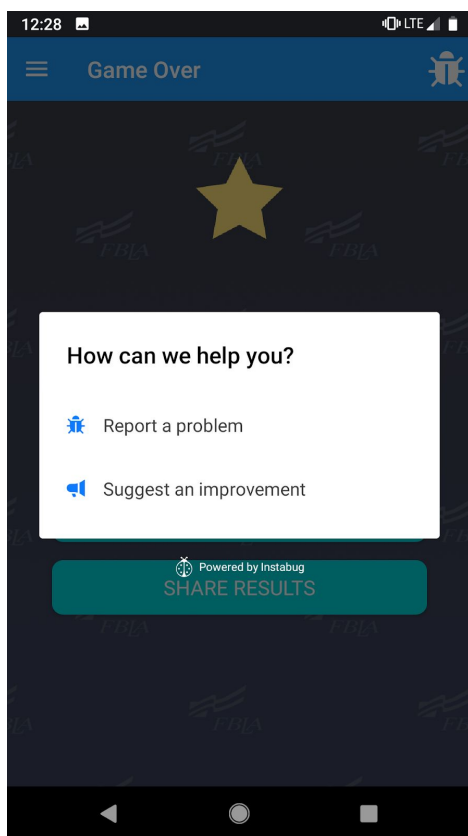
The Report an Issue Page

This page describes how the user would go about reporting any potential errors or issue the user may come across while using the app. There are two ways of submitting an issue. Either, tapping the report an issue button which can only be accessed on this screen or by tapping the bug icon in the top right. The bug icon occurs on any screen so use it on any screen that the user encounter an issue on. Your feedback is always greatly appreciated!



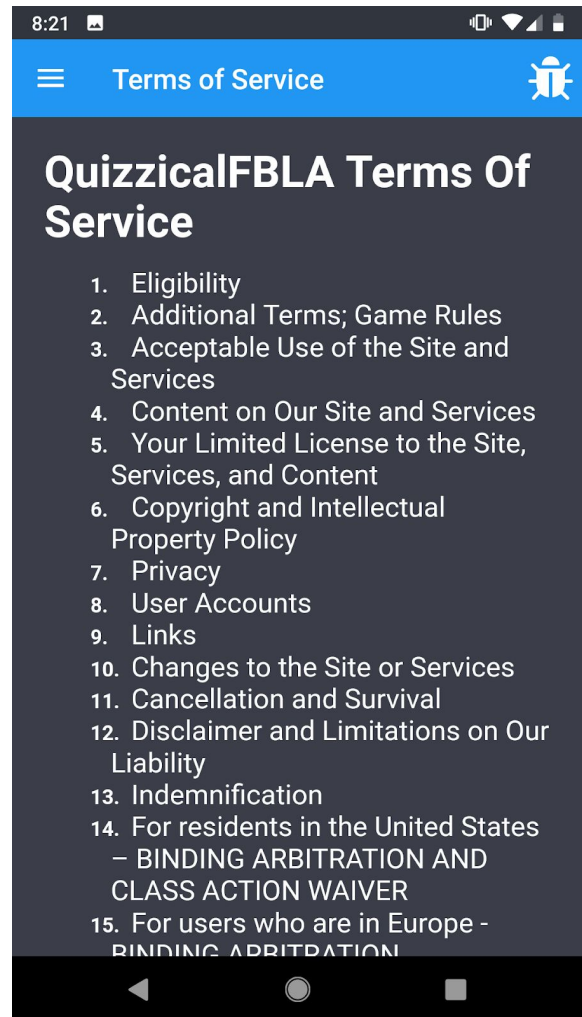
Report an Issue

The page on the left is what pops up when the user hits the bug icon in the top right screen. The user can suggest a problem, an improvement, or just talk to us. If the user taps on the report a problem tab the user goes to the screen on the right. From this screen the user can tell us what's wrong and any other problems the user might have encountered. It also automatically creates a screenshot to send so that we know exactly what screen the user was on when the error occurred.



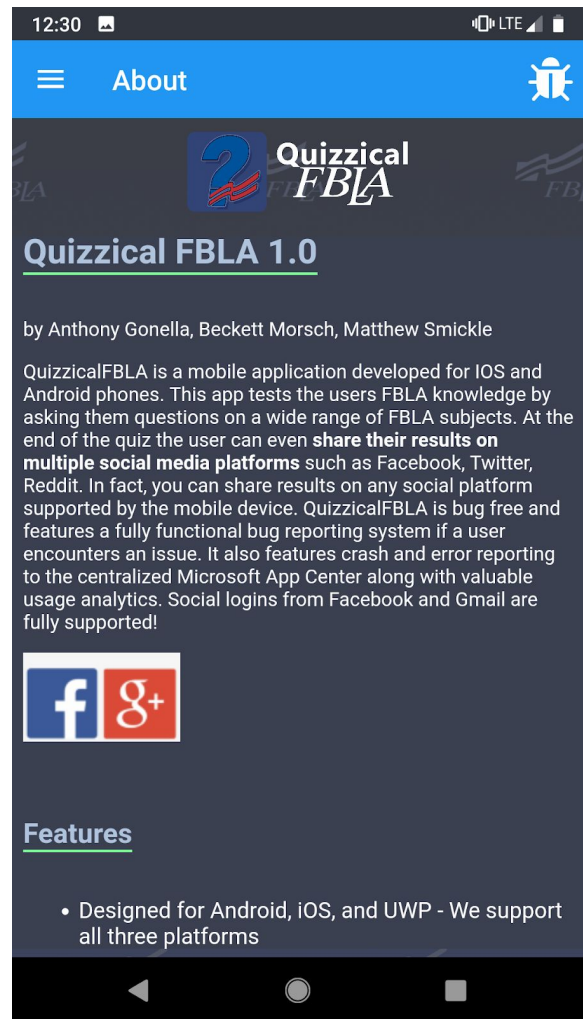
The Terms of Service Page

This page displays the terms of service. The full Terms of Service can be viewed by scrolling down the page.



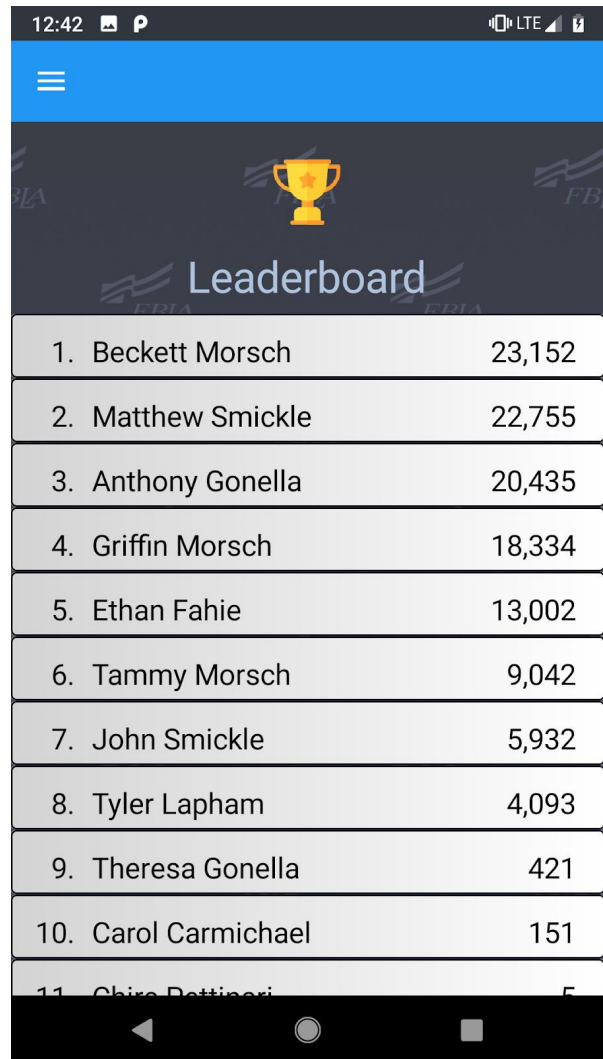
The About Page

This is the About Page and it displays basic information about the app and its features. At the top of the screen the Quizzical FBLA logo is displayed.



Leaderboard

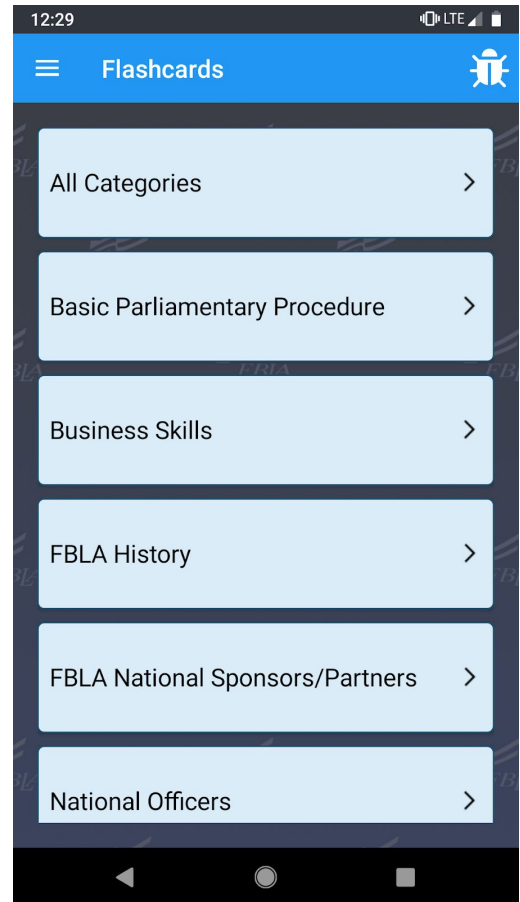
This page displays the highest scores achieved by our users along with their usernames and ranks them accordingly.



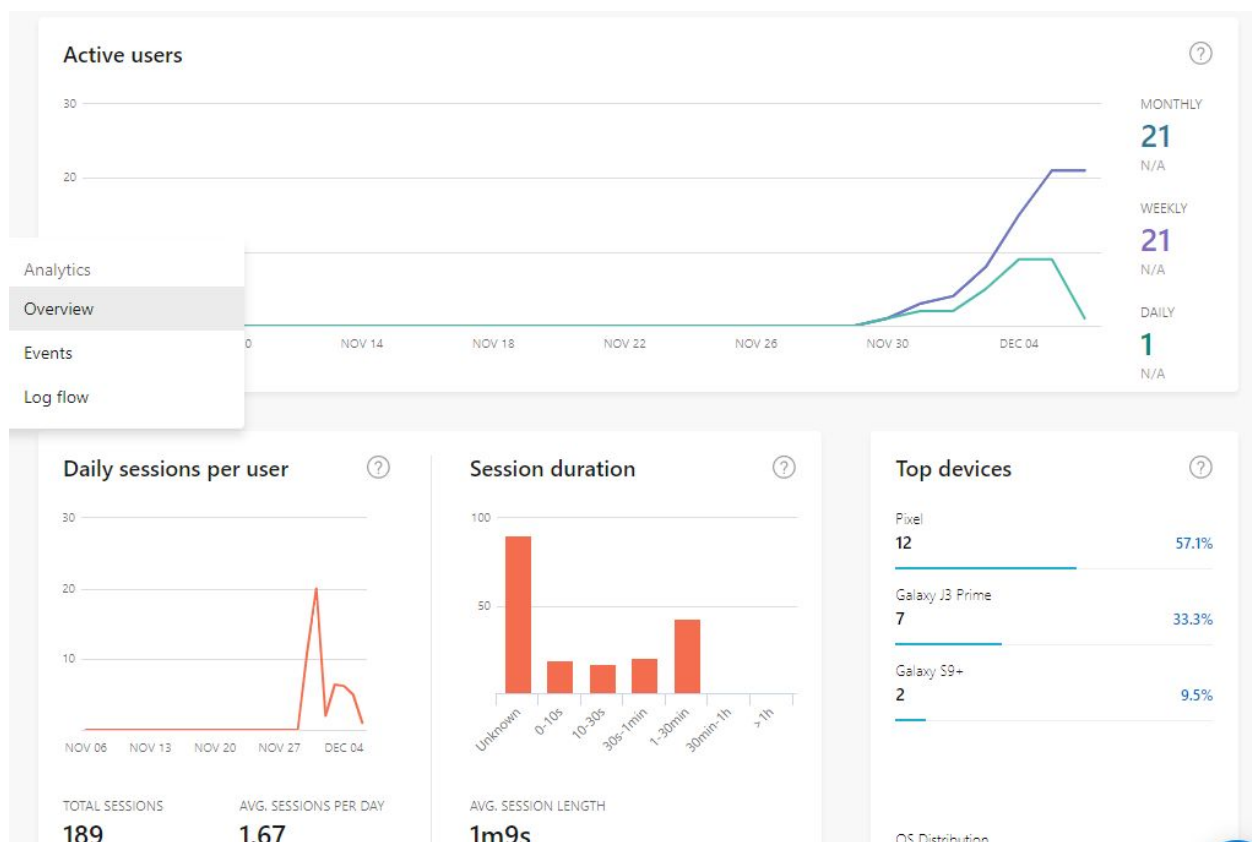
1.	Beckett Morsch	23,152
2.	Matthew Smickle	22,755
3.	Anthony Gonella	20,435
4.	Griffin Morsch	18,334
5.	Ethan Fahie	13,002
6.	Tammy Morsch	9,042
7.	John Smickle	5,932
8.	Tyler Lapham	4,093
9.	Theresa Gonella	421
10.	Carol Carmichael	151
11.	Chira Pettinori	5

Flash Cards

From this page the user can tap any of the categories to get a list of question relating to that category. From there the user can swipe left or right to reveal the answer and swipe up or down to go to the next question.



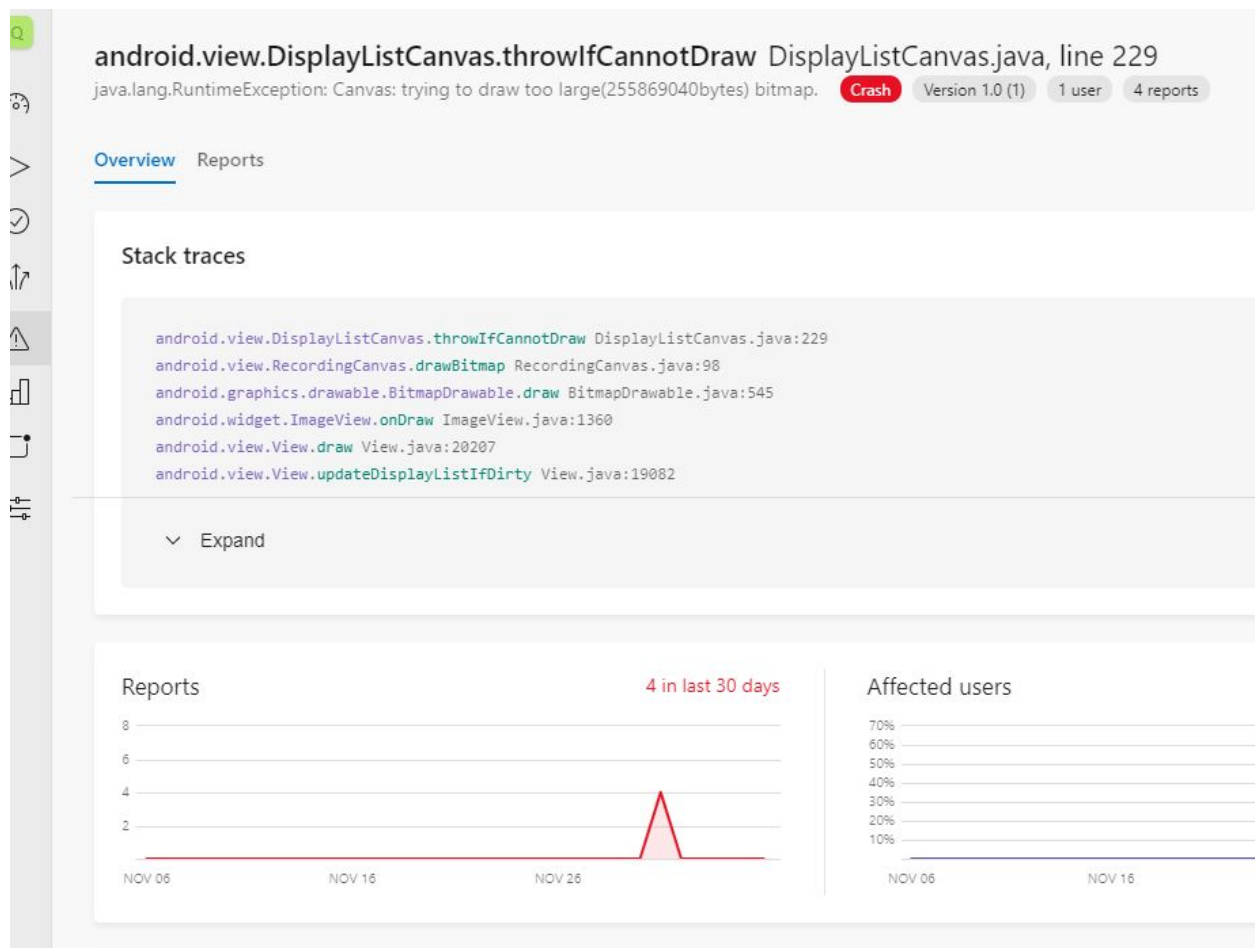
Microsoft App Center Analytics



Microsoft App Center records useful analytic information regarding app usage including the number of active devices, daily sessions, session duration, top devices, countries, and users per version.

Microsoft App Center Crash and Error Reporting

While our QuizzicalFBLA app is crash-free, it is important to collect information if there were to ever be a crash among some device in the vast mobile ecosystem. Our app automatically collects any generated crash logs and error reports and feeds them into Microsoft App Center where we can then turn them into Github issues to manage development.



Our Logo and Icon

To the right is our logo for the QuizzicalFBLA app. The logo is a cross between the FBLA logo as well as a question mark. We felt that being that this is a quiz app it would be appropriate to try to blend a question mark, which can represent the idea of a quiz, with some part of the FBLA logo. The FBLA part of it is to show that the quiz is about FBLA and various FBLA topics. The logo is integrated into our app from the actual app icon to the first app screen, flyout menu, and about screen.



Other Notes

- All of the code that is contained within QuizzicalFBLA is error free and can be run with no issues. QuizzicalFBLA is entirely written in C# using the Xamarin Framework.
- The navigation between pages is also error free and all of the buttons on the app take the user to the intended pages.
- The QuizzicalFBLA app is compatible with Windows, Android, and IOS phones and tablets.
- The questions in the app all pertain to the topic FBLA

Resources Used

Media Assets

Google Material Design Icons

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Sound Effects Obtained via Creative Commons Attribution License

negative_beeps.wav by themusicalnomad

<https://freesound.org/people/themusicalnomad/sounds/253886/>

ultradust_clock.wav by ultradust

<https://freesound.org/people/ultradust/sounds/167385/>

error.wav by distillerystudio

<https://freesound.org/people/distillerystudio/sounds/327737/>

incorrect.wav by bertrof

<https://freesound.org/people/Bertrof/sounds/351565/>

correct.wav by bertrof

<https://freesound.org/people/Bertrof/sounds/351566/>

Additional sound effects from <https://www.zapsplat.com>

Lottie Animations obtained from LottieFiles.com

Lottie animations were not altered in any way and obtained via Creative Commons Attribution License - <https://creativecommons.org/licenses/by/4.0/>

"Checked Done" by LottieFiles - <https://lottiefiles.com/433-checked-done>

"Wrong Answer" by Pedro Silva - <https://lottiefiles.com/4698-wrong-answer>

"Material Loader" by LottieFiles - <https://lottiefiles.com/50-material-loader>

"AashishDeleteAnimation" by Aashish Soam - <https://lottiefiles.com/5474-aashishdeleteanimation>

"Trophy" by Lucas Nemo - <https://lottiefiles.com/677-trophy>

Software and Services Used

Quizzical FBLA was developed using the following software applications and services:

Auth0

<https://www.auth0.com>

Purpose: Auth0 provides a universal authentication & authorization platform for web, mobile and legacy applications. You can easily and quickly connect your apps, choose identity providers, add users, set up rules, customize your login page and access analytics from one dashboard

GameSparks

<https://www.gamesparks.com/>

Purpose: GameSparks is a cloud-based solution for game developers that helps them to build their server-side components without ever having to set up and run a server. We used GameSparks for storage of user accounts and score tracking.

Github

<https://github.com/>

Purpose: Github is an online source hosting service based around the Git version control system. We utilized Github to store source code revisions during this project.

Gitkraken

<https://www.gitkraken.com/>

Purpose: Gitkraken was utilized to manage code revisions, resolve merge conflicts, and test experimental branch features.

Instabug

<https://instabug.com/>

Purpose: We utilize Instabug to provide comprehensive bug reporting and in-app feedback from our users during beta testing. Instabug automatically attaches steps to reproduce a bug, network request logs and view hierarchy inspections with each bug report. It also allows users to record videos demonstrating their problem.

Microsoft App Center

<http://appcenter.ms>

Purpose: Captures analytics information to allow us to learn Quizzical usage patterns as well as logs information about application crashes and any generated exception errors.

Microsoft Visual Studio 2017

Purpose: IDE for developing Xamarin.Forms applications in C#

Photopea

<https://www.photopea.com/>

Purpose: Photopea is an online graphics editor that is similar to Adobe Photoshop. We used Photopea to manipulate all of our graphics.

Additional Software Components

The following software components are also part of the QuizzicalFBLA app:

ChaaSe.GameSparks.NET - <https://christianhaase.github.io/ChaaSe.GameSparks.NET/>

GameSparks.NET is an API wrapper for GameSparks REST API. This package was made with the purpose of making GameSparks integrations with web application, easier for the developer. Instead of having to write your own HTTP requests, GameSparks.NET does the job for you, providing you with easy to use services, classes, and settings. This API wrapper has support for synchronous as well as asynchronous actions.

Com.Airbnb.Xamarin.Forms.Lottie by Martijn van Dijk - <https://www.nuget.org/packages/Com.Airbnb.Xamarin.Forms.Lottie/>

Render After Effects animations natively on Android, iOS, MacOS, TVOs and UWP

Newtonsoft.Json by James Newton-King - <https://www.nuget.org/packages/Newtonsoft.Json/>

Json.NET is a popular high-performance JSON framework for .NET

Xam.Plugin.SimpleAudioPlayer by Adrian Stevens - <https://www.nuget.org/packages/Xam.Plugin.SimpleAudioPlayer/>

A light-weight and easy to use cross-platform audio player for Windows UWP/WPF, Xamarin.iOS, Xamarin.Android, Xamarin.Mac, Xamarin.tvOS, Tizen and Xamarin.Forms. Load wav and mp3 files from any location including a shared library. Works well for sound effects or music. Multiple instances can be instantiated to play multiple sources simultaneously.

Xamarin.Essentials by Microsoft - <https://www.nuget.org/packages/Xamarin.Essentials/>

Xamarin.Essentials: a kit of essential API's for your apps

Xamarin.Forms.PancakeView by Steven Thewissen - <https://www.nuget.org/packages/Xamarin.Forms.PancakeView/>

An extended ContentView for Xamarin.Forms with rounded corners, borders, shadows and more!

References

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Gandy, Dave. "Font Awesome 5." *Font Awesome*, fontawesome.com/?from=io.

"Business Skills for Life-Midterm." *Quizlet*, 14 June 2017, quizlet.com/229744801/business-skills-for-life-midterm-flash-cards/.

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"Sample Terms and Conditions Template." *TermsFeed*, 30 Nov. 2018, termsfeed.com/blog/sample-terms-and-conditions-template/.

Dearie, KJ, and Zachary Paruch. "Mobile App Terms & Conditions Template & Writing Guide." *Termly*, 28 Nov. 2018, termly.io/resources/templates/mobile-app-terms-and-conditions-template/.

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