

SLIDE 1:

Hello everyone, My name is LUIS AGUILAR along with my fellow group mates Partrick Park and Greg Carag-Chiu, and we are TEAM o7. In this presentation we will be showcasing our project ScrewIt!

SLIDE 2:

What is ScrewIt! You may ask? Well it's a new mobile application made for fun on the go. With a variety of games we have planned, we hope we can make ScrewIt! your one stop shop for all your on the go entertainment needs!

ScrewIt provides the ability for our users to join lobbies to play their favorite games with their peers online! Additionally, we provide a chatting feature so you can connect with your friends and future friends as well.

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Kyle: When we first began developing our app, party games, such as Among Us and Jackbox were definitely rising to the mainstream, which gave us a lot of motivation to pursue this project idea. But one of the most influential games for our app was definitely Jackbox. For those who are unaware of what Jackbox is, it is a digital party game with a large variety of interactive mini games. In order to play, a person who purchased the game can host a lobby on Steam via Windows or with a gaming console, and up to 7 players can join via their mobile device on Jackbox's website.

A few roadblocks we found with Jackbox was that the service was behind a huge paywall, with each bundle of games ranging from \$20-\$30, which also ends up limiting a

group from being able to play if the person who purchased the game isn't available. We found that setting up the game was also inconvenient, since the ability to host a game is not a feature for mobile devices. We really wanted a portable party game that involves a variety of fun and wacky game elements, with opportunities for constant replayability, and not just a one time game to download and uninstall after a few weeks. We also wanted to take a simple approach to user connectivity similar to web applications such as Kahoot or Spyfall, where players can start the app, enter their username, and are immediately able to start playing with friends, without the need to create an account or pay for the service.

Some early concepts we had was in an in person party app which involved passing the phone around, or using a single device to host the game. We decided to scrap that idea since our idea was developed in the midst of quarantine.

Another concept we originally had was a co-op game, played as a handheld device on each player's phone screen, but soon realized we wanted more in-person interactivity among players instead of gluing your eyes to the screen.

SLIDE 4:

Patrick:

For our project, we decided to target smartphone users. According to Statista, 85% of Americans own a smartphone, and according to BankMyCell, 83% of the global population owns a smartphone. So we'll have a huge population we can reach. The mobile game industry has also been booming in recent years. Newzoo research shows that mobile game revenues account for 52% of the overall global game market, which is about 90.7 billion dollars. This is overwhelmingly higher than PC's or consoles, which collectively make up the other 48%. The bottom chart by Newzoo also shows a steady growth in yearly revenues, which indicates a healthy and promising industry. Aside from

financials, COVID-19 also presented an opportunity since stay-at-home advisories became common. When people are stuck at home for extended periods, they become bored and look for forms of entertainment such as games. Finally, our app doesn't contain violence or adult themes, so it's open to all ages, but we do expect a higher percentage of younger audiences.

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Patrick:

For our framework, we went through many resources, and decided on which to use through trial & error and best fit. For our primary UI development, we used React Native. We also used Expo to speed up the configuration process and for convenient testing purposes. For our backend management, we used Node and Express as the middleware. For user authentication and management, we used AWS Amplify, which also provided us with a server and database to store user data. Finally we used socket.io for our servers and multiplayer functionality.

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Patrick:

To manage our project, we used the scrum framework. We developed features incrementally in sprints and conducted weekly standups. During these standups, we went over current progress, future plans, roadblocks, solutions, and backlogs. To give an idea of our sprints, the chart on the right shows our general roadmap for development. We had many sprints, but we grouped up the similar ones to summarize them for this presentation. So our first sprint was app design and conceptualization, which involved making a blueprint of our app and conducting framework research. Our second sprint

involved frontend UI design. Our 3rd sprint involved setting up the backend development such as the server and database. Our 4th sprint focused on the actual game development itself. And our final sprint focused on bug fixing, quality assurance, and extensive testing.

SLIDE 7:

VIDEO DEMO

Patrick:

Alright, so let's get started with our app demo. First, let's head over to the sign up page. From here you can enter your email, username, and password. After you submit, you'll be sent an email with a confirmation code to verify your identity and you'll be redirected to the confirmation page. Once you enter the code you received, you'll be registered as a verified user. After that, you'll be redirected to the sign in page. Finally, you can enter your username and password to login to our application. We also implemented a reset password feature in case you ever lose or forget your password.

Luis:

Here is Rap Battle! When joining the game you are greeted with a welcome card and how to play the game! Users are encouraged to come up with verses based on the randomized prompt above! With the randomizer button, you can change your prompt and create a phrase based on your new prompt! The point of the game is to mess up other players' current rap! Be fast! Here is a small demo of it working!

And that's our demo of rap battle

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Kyle: We'll be talking a little bit about what each of us did individually to help contribute with the project. So this is Kyle speaking. In the beginning of the project, I was mostly motivated to design the front end and UI, and helped to create the login selection screen, the game library UI, and the overall theme of the app. Near the end, we swapped roles, and I put more of my focus on the back-end to implement client-server connectivity among multiple users and finalized the feature to create synchronous private game lobbies using Sockets. I also led the creative design of the game(s) and built the foundation of the game's logic.

Patrick: Hey, this is Patrick. I worked on some backend development with AWS for user authentication, Express for connectivity, and Postgres for database usage. I also worked on some game design as well.

Luis: I am Luis, with my experience of socket.io with previous projects I was tasked with back-end server connection with socket.io Additionally, I started the foundation of our game that was later helped by Greg. Towards the end of development, I was tasked to create the overall theme and graphics for our project as well, that would then be confirmed by all group mates.

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With the scope of this project, there were bound to be challenges!

Luis: Framework variety integration was difficult to implement in a seamless fashion with minor and few hiccups.

Backend development was extremely time consuming. Issues with Socket.io syntax was a team issue that required all hands on deck to solve. Along with minimal resources to debug our issues, this was a huge hurdle for us.

Git issues were also something that plagued us as a group. Many times a group mate would push new packages and dependencies that would completely break our node module packages when we would pull. After many trouble shooting attempts, we finally got to the root of our issues which was a huge relief for us when pushing new updates.

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Luis:

What we learned as a group:

Time management:

With the challenges this project came with, we learned that many areas required more attention than others. We looked at our timeline and adjusted what we needed accordingly.

Team Based Skills:

While all of us are familiar with project work and a team based environment prior to taking on this project, it was all contained to one subject. This project required a cumulative experience from classes that helped us communicate our strengths and weaknesses towards each other.

Scope of Mobile App dev:

We had limited experience with mobile app development prior to this project. We wanted to challenge ourselves with this project. We experience a lot of hurdles and difficulties. Our limited knowledge required us to focus on a lot of research prior to starting the project and a lot of trial and error.

Decision-making regarding persistent issues:

We had ideas for ScrewIt! that we wanted to see come to fruition, but ultimately, we needed to make hard decisions regarding the app in order to publish a successful project.

Game Development using React Native:

Only 1 / 3 members have had any experience with Game Development, but neither us have any experience of game development using react native. This was extremely difficult to navigate around which led us to deviate from our original plan of 3 games to 1 game. This also leads us to revise our ideas in order to fit our project but also allow us to finish it.

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In the beginning, we initially planned to have at least two games ready for launch, but due to complications, we were barely able to finish our initial RapBattle Game. We plan to continue working on improving RapBattle, as it is still currently unpolished and missing a few key features.

Our other game idea is a somewhat familiar concept called Cops and Robbers, which shares elements to a popular party game, called Mafia. I was actually pretty excited about this game and had a lot in mind for the creative direction, but unfortunately we weren't able to start development. If you're interested in the future development of our game, make sure to check out our github.

Moving on, we also had plans to improve the overall QOL of our app. As you know we have made an optional feature to create an account, which is currently working, but offers no additional features. In the future, we want to be able to save game states to an account, and if our application obtains popularity, we may even offer paid downloadable content, available to access to those who have an account. We also want to implement profile customization, such as avatar customization. Finally we want to implement the ability to add users as friends, which will allow you to invite or join other friends that are currently on the app. In terms of UI, we plan to polish the overall graphics and theme to make it more unique and personal to us, such as creating our own official customized logo, a unique splash screen, personalized backdrop, and more. Finally, we hope to be able to

deploy our game and even put it on the Play Store and App Store for other users to be able to enjoy our game.

OUTRO:

This was Team o7 project ScrewIt! We want to thank you for watching and for your consideration and time! Please contact us for any questions you may have, we are happy to answer them for you!

Thank you, and have a great day!