

Don't Panic! Transcript

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Michaelted – Intro + Problem and Solution

Hello. This is *Don't Panic!* Our group consists of Michaelted Acosta, Diana Balderas, Stephen Carlos, and Marcus Schmidt.

Currently, there are many adults suffering from anxiety, especially young adults, ranging from the age of 18 to 29. And given the current global events occurring, the amount may have risen.

There are many resources that try to help people with anxiety, including other mobile apps, therapists, hotlines. And these resources try to reduce the frequency of panic attacks through counseling, medication, having the person do self-reflections. But these resources have little utility during a panic attack because they only try to reduce the chance of one happening, taking a more preventative stance towards these issues. Compared to these options, we find it more appropriate to have a one-on-one interaction with the person suffering from anxiety. We want to be able to help in the moment, and so we have made this app.

Don't Panic! is an Android app that will help the user through the moment of a panic attack. The app includes multiple modules that will help the user through a panic attack, such as Guided Breathing or Exercises to keep the user's mind off of their worries. There's also customizable behavior for what the user finds most calming or most helpful, as well as accessibility settings so that everyone can use the app, no matter if they can't see, or if they can't hear, or the like. And lastly, we have the emergency mode. With one click of a button, the app will lead you to your saved module sequence. So, you can get through your panic attack using the modules you found most helpful.

Diana – App Design & Framework

To assist us with our development process, we utilized the following tools:

- Android Studio to design and deploy the application
- GitHub for collaboration, organization, and to split project into assigned individual work
- Java for both front-end and back-end support
- and SQLite for database development and integration.

However, the initial plan was to use React Native. The first reason was we wanted our project to be compatible for both Android and iOS operating systems since users have different preferences in devices. The second reason was the plug-in feature of React Native, Javascript for the front-end UI (User Interface). However, throughout the process working with React Native, there was some difficulties with the complexity of it, which we cannot continue with this route for our project. However, Android Studio was our second option, and we successfully managed to complete our project with this tool.

Michaelted – Individual Responsibilities: Michaelted

Over the past few months, I mainly worked on my module – App Activities – in which, the user would do activities within the app to get their mind off their worries. I had also helped Stephen with the backend design and implementation, specifically the Launch screen and the General Use screen.

Diana – Individual Responsibilities: Diana

For the past few months, I was fully responsible for the design layout of the application. Also, the main goal was to make the application layout consist of a minimalistic design. The reason behind this is for our users that require accessibility settings, such as scaling of the text, color, and buttons.

Besides that, I worked on the Splash screen, where the application will launch with an informative introduction and directly lead to the main screen. Also, I worked on the Module Selection screen, which is considered as the main screen of the application, where the user can select from the different modules and exercises. The Self-Reflection screen and Mental Exercises screen are two important screens I worked on because it consisted of creating questions and prompts for users who deal with panic attacks. It required to look through the IRB approved survey, where the data is collected, and it helped in my role to identify and prioritize features and modules in the application.

However, not only was I designing the front-end of the screens, I also made sure that the buttons in the screen were working and can direct the users from one screen to the other.

Stephen – Individual Contributions: Stephen

Now for this portion of the project, I was mostly in charge of the structural backend of the app. This involved the logical pathing for all the screens. Meaning I was in charge of, essentially, getting the app to go from one screen to another. And for our setup, we decided to go for, at most, a four-layer deep structure. In which, you would keep going through the screens, and at most, you would be four screens deep.

As for the modules and the module sequences, I was in charge of the backend, in regards to starting them up. Meaning you would press the screen, and a module or module sequence would launch. That involved logic for sending information to and from screens, and also grabbing from the database or from our modules' resources.

One thing of note that I tried to utilize was: I wanted to reuse some of the screen resources that we had, in order to have some sort of conformity, as well as reduce redundancy from creating new screen resources.

I was also in charge of creating sequences in which the user would provide some input and press a couple of buttons in order to add sequences to their setup, as well as provide a name for their

sequences. And once they were done finishing their sequences, that would then save to the database and also be immediately accessible to the user.

And as for my personal module, mine was the haptic heartbeat, in which I eventually decided to create just a simple simulator of a resting heartbeat for the user. More specifically, I used a 75 beat per minute setup for the heartbeat, in which the user would either place the phone or device over their heart or within their hands, in order to simulate that heartbeat. And if they need to stop or start, the user can either stop or start via the screen itself or using the volume buttons. This module was more intended towards an auditory/sensory role, rather than having any sort of visuals to help the user.

Marcus – Individual Contributions: Marcus

For my part in the project, I implemented the Guided Breathing module, and worked on a variety of screens including those to choose a sequence to launch and to change your settings. I also added support for text scaling up to 200% the default size and implemented the database that stores user data for a customizable experience. I found it very interesting to work with what Android Studio calls “intents” to pass data between screens, and I learned a lot about the difficulty involved with UI scaling.

Marcus – Demo

Intro slide: Now let’s see *Don’t Panic!* in action. Launching the app will show you the splash screen for a couple of seconds before giving us the option between “General Use” and “Emergency.” For now, let’s press “General Use” to see the app’s home screen. From here, we can press “Modules” and then “See All Modules” to access each one individually.

Guided Breathing slide: The Guided Breathing module offers a variety of cues of when to breathe in and out, from visual to audio to haptic feedback.

Self Reflection slide: The Self Reflection module asks a series of questions meant to help identify the likely cause of the panic attack.

Mental Exercises slide: The Mental Exercises module provides several different tasks to distract yourself with, from finding objects of a certain color to thinking of things that make you happy.

App Activities slide: The App Activities module is an external distraction to divert thoughts away from the panic attack with activities such as tapping on each circle as it appears.

Haptic Heartbeat slide: Finally, the Haptic Heartbeat module vibrates the phone at a healthy, resting heart rate for you to fall into sync with.

Sequence slides: All of these modules can be arranged into your ideal order with sequences. Simply go to the sequences screen, create a new sequence, and then fill it with the modules that help calm your panic attacks. I’m going to add Guided Breathing and App Activities and name it

“My Sequence.” You can launch this sequence at any time, and it will automatically move through all of the modules you have selected. You can also go to the General Settings screen and set your favorite sequence as the default. Now, you can close the app, launch it again, and this time, press the Emergency button to be immediately taken to your chosen sequence without having to worry about navigating multiple screens to launch it.

Accessibility slide: Finally, anyone who is visually impaired can go to the Accessibility settings screen and increase the text size. This change will propagate across the app without making any screen unusable. And that concludes our demo.

Diana – Timeline

Our timeline for the project was split up into the Fall 2021 semester and the Spring 2022 semester. We treated the Fall as a period for research and ideation while the Spring semester was our implementation and revision period. While we were able to set up some frameworks in Fall, the majority of our coding happened during the Spring semester. This timeline offered us flexibility when approaching project management and communication.

Stephen – Final Thoughts

For future development, I’d love to make more passes towards providing a better user experience, such as giving more utility towards users and editing their sequences. As well as, covering some preferences that we might have not touched upon, and making some more passes towards accessibility needs. And potentially refining our text-to-speech portions or, as well as our text scaling capabilities. Now, personally, I think the most missed opportunity we had no iOS port, but this was more due to us switching UI frameworks in the beginning of our [development] cycle.

Diana – Final Thoughts

This overall experience has been a fun and a challenging one because it takes patience, hard work, and group effort to make this happen. I have learned what it takes to have a flexible schedule and an effective communication to get things done. Also, working with different classmates in this class and project has prepared me for the real-world where teams are set up with different people and overtime one must feel comfortable around them. Not only that but it teaches you to open yourself to those people and learn from each other.

Marcus – Final Thoughts

This project has taught me a lot about the complexity of modular and accessible apps, and I'm proud of the foundation for the unique features in *Don't Panic!* I hope to revisit the idea in the future to be able to distribute it to actual users.

Michaelted – Final Thoughts

This project made me realize that things won't necessarily go the way we planned. We had many setbacks during development, but we managed to finish what we wanted to complete in this semester. I also underestimated how much it would take to develop this app. It was difficult to balance this project and other assignments, at first. I do want to add more to this app though, such as adding more activities and refining the app more.

Stephen – Lessons Learned Overall

Now in regards to what we had learned throughout the duration of this project, we learned a couple of big things. One thing that we noted early on during our development cycle was that shift from React Native to Android Studio, and I think we all realized that there really is a big importance in knowing the IDE (integrated development environment) that you're getting into. As there are some development environments that are extremely complicated for that specific field. Keynote here being React Native, as I even went to go talk with Jason Forsythe about React Native, and how there were some known difficulties of developing with React Native and then how difficult it is to integrate into that platform. Yes, it may be a great idea, and there might be some net positives for the project. But the amount of time you would be sinking into the platform versus time you could instead be using, developing the project on a platform that you are definitely comfortable with; there is a measure that you have to consider there.

The other thing was using our survey to gauge what the public needed. Being able to utilize those public needs to help focus what we wanted to put more development time into, for the app, was great. More specifically, when getting our responses for what existed versus what generally wasn't used let us know which module to pour more development time into. It also helped create some ideas for the app activities, as well as realize what was lacking for users in the user market, that could have potential, that being the mental distractions and the potential use of haptics in our app.

As for the future of the project, our hope is that we want more modules to be integrated since that was the big consideration of having more modules in, and how modular the whole system is. As well as the modularity of the module sequences, so we want to use that to its strength. Also, we want to put in that fully functioning edit capability for the sequences, as I noted earlier.

Michaelted – End

And that concludes our video. Thank you for watching.