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Final Application Report

1. Abstract

Mobile applications can be used in many different ways, by many different people for a multitude of reasons. Applications for entertainment, as well as information and education exist. For example, entertainment applications allow the public to play games and stream television shows. Informational apps are used widely as well, such as apps that identify constellations in the sky using the camera and GPS. Educational apps keep up with the technological advancements of the world while providing the public with ways to obtain knowledge about a variety of topics. For this reason, the continued development of mobile applications is important because it keeps up with the high-tech pace of the world today. Through the development of a gaming app, this need was met for users of all ages.

1. Background

While coming up with an idea for a mobile application that could be widely used with ease, the idea of gaming apps was discussed at length. In the end, it was agreed upon unanimously that a gaming app would be the best kind of application to develop because it provides entertainment for a large audience that ranges in age, as well as allowing for improvement over time and continued development that is almost unlimited as more ideas and innovations are applied to the application. Due to its ease of understanding, the popular game of Tic Tac Toe was chosen to be developed in the mobile application. Tic Tac Toe is a fairly simple game and does not require much explanation. This allows it to be played by children and adults of all ages, because no age restriction is needed. This game is also useful because it does not require more than one player, because the app uses a program to allow the user to play against a computer. Although the game of Tic Tac Toe is easy to understand and play, that does not stop it from being developed further. For example, possible improvements to the mobile application would be to include a multiplayer mode in which the device is passed back and forth between two users. Another improvement that could be made is to add special features to the application that make it more appealing to the user. This includes a change in color schemes as well as changes in graphics to keep the user interested while the application is being used.

3. Method

There are many methods or approaches in changing an app for friendly use. In our app of Thr33 in a Row we revolutionized the regular boring tic tac toe and turned it into a more exciting app with the use of different shapes, sounds, and graphics. By incorporating different shapes for players to use such as diamonds and triangles we changed the regularly boring tic tac toe from X’s and O’s to more exciting shapes as well as creating a method for players to be more interested in the game play of the app. Secondly, by incorporating different audio effects such as when the winner wins a game, players will tend to consistently play for audio effects. The audio effects allow for as friendlier user interface and also can be used as a method for users of all ages to use the app. Finally, by editing the graphics of the game the users of the app are allowed to have more fun with the app and also create a method for the user to become entertained by the app. It allows for the user to be more in touch with the app.

4. Results

In order to modify tic tac toe into our app thr33 in a row we had to change the strings, add a java class, create an mp3 audio file, insert background images, create a new logo and edit the android manifest. By creating a new java class and linking to the audio class, the result was a sound when the user won the game. By adjusting item in the string.xml the user was able to change the shape of the icons that were used in the app and allowed for the user to be able to use the app in a way in their own creative way. Furthermore by adjusting the strings.xml the user was able to change the icon of the app before they entered the activity lifecycle for the app as well as change the name of the app in the home screen. By inserting the background the user has to copy the image and paste it on drawable and the insert the code <**ImageView android: layout\_width="fill\_parent", android: layout\_height="wrap\_content", android:src="@drawable/background"** /> in whatever portion of the app they want in order for the background to change. In order for the background to result in a full screen the user developer has to change the wrap content to fill parent. In order for the logo the developer for the app had to use adobe Photoshop from there the image is saved as a picture and the placed in the app the same method as a background image resulting in the image appearing on the app however the developer wanted it to be. The android manifest controls the whole app. In order for the apps images such as the front icon and the home screen of the app to change the android manifest must compensate for the change. All these results combined allow for the whole app to be constructed into however the developers want it to be.

5. Discussion

Problems that we faced throughout our project were a complete lack of time. The amount of time needed to design the app was insufficient to that of the normal time to make an app. Because of all the switches from eclipse and then too android studios more than half the time necessary for teaching how to make an app was disrupted because of improper software. Furthermore, the software that was downloaded for processing did not work because of a broken agreement between android and processing in December therefore, half of the people in the group did not have the software necessary for developing the app. Additionally, the amount of necessary code needed for the app was not taught because of the lack of memory because of constant downloading of unnecessary materials in the computer, as well as, a lack of understanding the lecture presented because students who were new to coding did not understand what was being taught. However, in the end the app was successfully made with the teamwork of the group and because of the group understanding the basics for coding.

7. Conclusion

The success we had in our app was high. Although we were unable to incorporate processing into our app we developed a code through processing that demonstrated an accelerometer that changed the background color dependent on the screens movement speeds and the angle that the tablet was being tilt. However, the function of the main app was perfect and consisted of random AI’s in the difficulties of medium and easy but a static AI in the difficulty hard allowing the user to feel challenged in a simple game. In the end the app worked properly and was able to run smoothly on the tablet that allowed for proper game play and limitless fun.

7. References

* <https://github.com/livando/android-tic-tac-toe/tree/master/bin/me/livanec/don/tic_tac> (main contributor allowed for app to be modified)
* <https://github.com/>
* Android Studio
* Adobe Photoshop
* <https://developer.android.com/training/basics/firstapp/index.html>
* Maya