Proposal

Hot Air

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Submitted in partial fulfillment
Of the requirements of CSC-431
Software Engineering course project

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Preface

This is a proposal for the Hot Air project for partial fulfillment of the requirements of a Software Engineering course (CSC431) project in the department of Computer Science at the University of Miami.

This proposal provides the scope and context of the project to be undertaken. It details the intended user group and the value that the system will have to them.

The intended audience of this document is the course professor and teaching assistants so that they can determine whether the project should be approved as proposed, approved with modifications, or not approved.

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1.0 Overview

1.1. Purpose, Scope and Objectives

The purpose of this project is to make a free to play endless side scroller mobile game in which the player will control the balloon with swipes to avoid obstacles, while the balloon is persistently moving to the right. The player will gain points as long as they avoid obstacles, but one hit and it's game over. The application will have advertisements as well as a $0.99 offer to get rid of the advertisements. Ultimately, the end goal of this project will be to create an app that is at the very least self-sustainable monetarily, and ideally, profitable. The intended audience for this application is anyone who is interested in a fun, free to play casual game for passing time or for simple entertainment purposes. The application will be released on the Apple store as well as the Google Play Store. If the product has great success, then future expansions to PC and handheld console platforms will be considered. The application will be developed in Unity due to its compatibility with both Apple and Android devices. If possible, graphics will be commissioned in bulk due to the simplicity of the product and the similar base model in skins. However, in the event that that is not a possibility or it will be costly, graphics will be made in house using a website that allows free pixil art creation. The application will be tested locally among staff's cellphones and later on will be tested on tester's cell phones. As an added note, any UI components that are too complex to be made using pixil art will be constructed with Adobe Illustrator.

1.2. Project description

Our aim is to develop an exciting, easy to understand, and enjoyable mobile game to be available on mobile devices on pertinent operating systems (iOS and Android). The game will include a menu screen where players can access important settings in addition to the game itself. Once the game begins, players will control a balloon through swipes as it travels through the screen, avoiding obstacles. Swipes on the screen from the user will control the balloon's direction, with swipes of various strengths dictating how affected the balloon's movement will be. As players play they will be able to earn credits to customize their balloon. Once a player has a certain number of credits, they will be able to spend their credits for a new random cosmetic. Credits will be items that randomly spawn while a person is playing, but will not affect gameplay. The app will also include an advertisements screen after game sessions. Advertisements will consist of two types, intrusive and non-intrusive. Intrusive advertisements will cover the entire screen and have a short timer for closing. Non-intrusive advertisements will simply be a short banner on the bottom of the screen constantly looping advertisements in between play sessions. Advertisements from a package deal will be used. Players will have a chance once every 4 hours to get a fixed amount of credits through an intrusive ad that is unskippable. They will also be able to completely remove ads for their game by purchasing a $1 addon in the game's settings. This purchase will of course be linked with the respective Apple and Google Play stores. Graphics and other assets will be developed in bulk unless it is cost prohibitive. The gameplay will be developed in house, and the system to include advertisements will be as well. As previously mentioned, the game will be developed using Unity (due to its compatibility with intended operating

systems) while graphics will be implemented in Pixilart and possibly Adobe Illustrator. Cosmetics will include things like balloon colors and patterns, as well as wearable items like hats and ties. Cosmetics will not affect gameplay in any way.

References

1. Pixilart: https://www.pixilart.com/
2. Adobe Illustrator: https://www.adobe.com/products/illustrator/campaign/pricing.html?gclid=CjwKCAiArY2fBhB9EiwAWqHK6q65rUvgT8tQCfoCbJaCCEBC3S6BE47WOriUTIJwzbkBS7CIFqonpxoCigcQAvD_BwE&sdid=KKQML&mv=search&ef_id=CjwKCAiArY2fBhB9EiwAWqHK6q65rUvgT8tQCfoCbJaCCEBC3S6BE47WOriUTIJwzbkBS7CIFqonpxoCigcQAvD_BwE:G:s&s_kwcid=AL!3085!3!356518781936!e!!g!!adobe%20illustrator!1711729586!70905759510
3. Unity: https://unity.com/
4. iOS: https://www.apple.com/ios/ios-16/
5. Android: https://www.android.com/