Game Design Document
Pet Bingo

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This document is a 'live' document subject to ongoing change by team members.

Genre

Pet Bingo is an educational game for all ages. It divides the game types into basic arithmetic operations with different difficulty levels. There is a reward system in place for motivation.

*This game meets Common Core standards.

System Requirements

This is a mobile app ported for both on Android OS and Apples IOS. It is not a performance heavy game and will run on older mobile phone models as well as older operating systems.

Game Mechanics

The only mechanics involved is the touchscreen technology to get user input via the touch.

Game Story

The player character is an adorable pet who goes to the 'pet store' to play a game. They have different games for the player to choose. They are based on arithmetic problems such as addition, subtraction, multiplication, and division. The format is a classic bingo game where each answer is a place on the bingo board. Once they get 'bingo', they win a prize. The prize is in the form of vegetables, snacks, etc. And the player character can redeem their prize in the 'pet pen' to enjoy and also run around and play.

Game Control and User Interface

The game control simply consists of user touching the mobile screen to control and interact with the game. At every stage of the game loop, the player is offered simple choices to select by touching the graphic icons and buttons. User first selects the player. They can create a new player by touching the 'New Player' button, upon which a keyboard will scroll up for them to type in their name. They move onto the next stage where they pick a game by touching a square representing different types of arithmetic games. The game play area starts, where they are presented with a problem, and the answer is on the bingo board. They simply touch their choice of answer and if they are correct, the bingo board is marked, if not, the square is deleted.

Replay-ability

Currently, there are three different levels of difficulty. And each level consists of different sets of problems such as:

- Divide by 1
- Divide by 2
- Divide by 3
- Dividing by 12-20 range

The replay-ability of this game is very high since we can add more levels as well as different types of math problems for each level. We can also add math levels beyond simple arithmetic.

Asset List - procurement

I. **Graphics.**
   a. Background.
      i. Splash page.
      ii. Game lobby.
      iii. Choose Game (pet store)
      iv. Game play area.
      v. Report card.
      vi. Pet pen.
   b. Character.
      i. Player
      ii. Pet store (choose game) character(s)
      iii. Game play area (cheer section character(s)
   c. Miscellaneous.
      i. Difficulty level pop-up
II. **Animation.**
   a. Splash screen
   b. Character(s)
III. **Audio.**
   a. Soundtrack.
      i. Splash screen music.
      ii. Game play area music.
      iii. Pet pen area music.
   b. Sound Fx.
      i. Menu UI choice feedback.
      ii. Marking the bingo board (choosing answers on the board).
      iii. Getting the wrong answer (square is deleted)
      iv. 'Bingo' cheer!

Technology Used

C#

Visual Studio Community 2022

Unity

Github

Github for Unity

Azure DevOps

Azure MAUI and XAML

Azure App Service

Azure Serverless Function (optional)