

**Math Jungle Project**  
Analysis and Design

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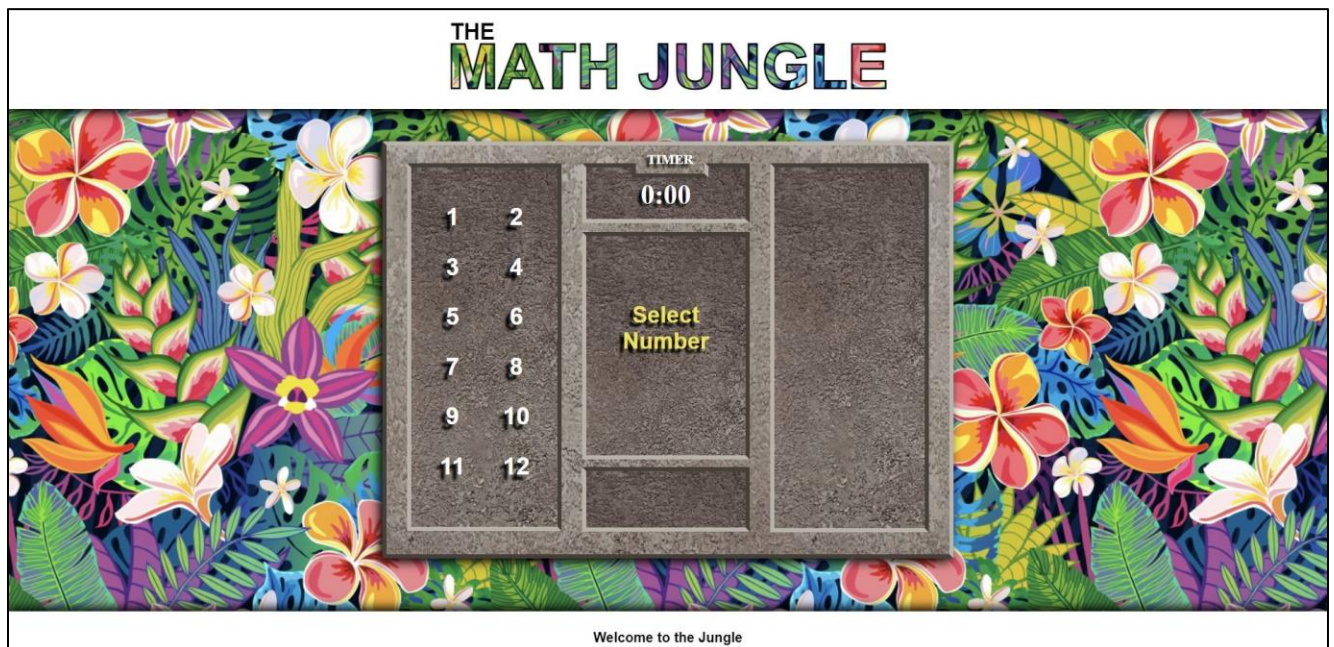
## Overview

The Math Jungle game is a highly interactive game. To navigate through selection options, different menus are shown and hidden in different steps of user interaction. There are three basic steps. Interacting with different menu elements trigger sound effects and music to be played. The sounds will not be changed. The layout of visual elements will be the primary focus of the Math Jungle Project. The following current state describes the way the game is currently displayed. The game does not currently adapt to different display sizes. The future state describes a new view that will be added to accommodate narrow vertical displays with touch screens.

## Current State

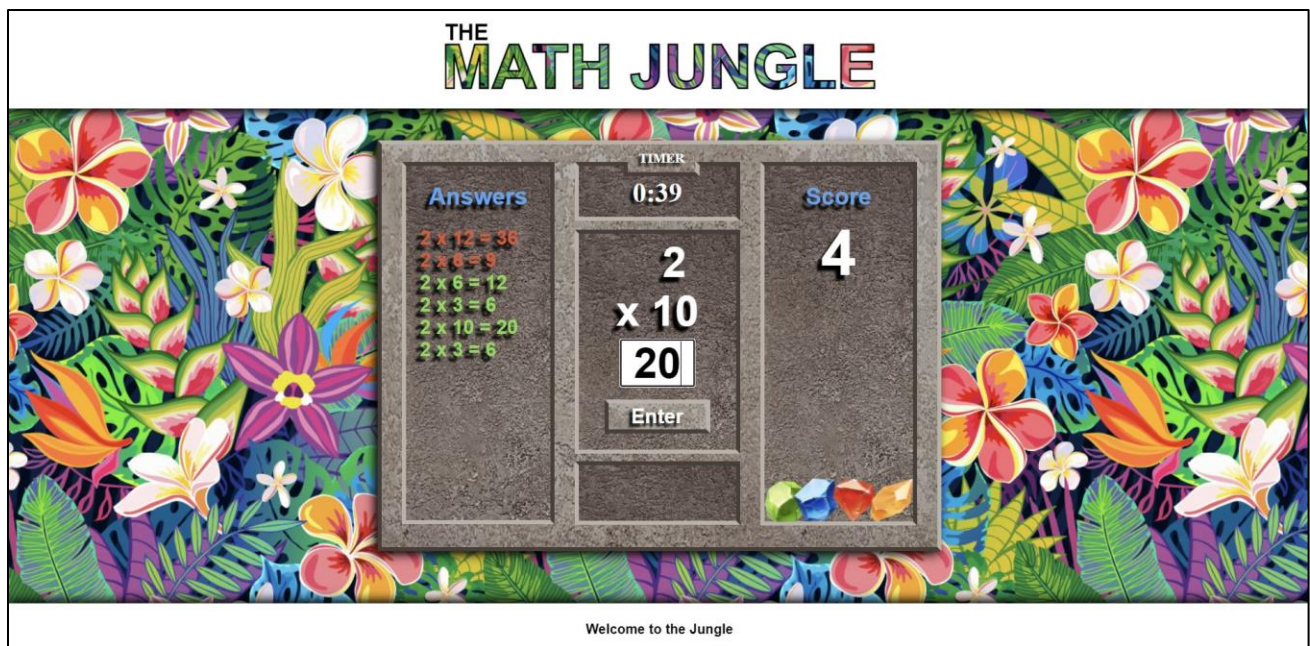
### Step One - Pregame Selection Menu:

This is the pregame menu, including number select and time select. After selecting a number to multiply and then selecting a time limit, the round time limit is populated at the top and a start button appears at the bottom. Clicking the start button moves the player into the second basic step which is the gameplay step. Notice the right panel goes unused throughout step one.



### Step Two – Gameplay:

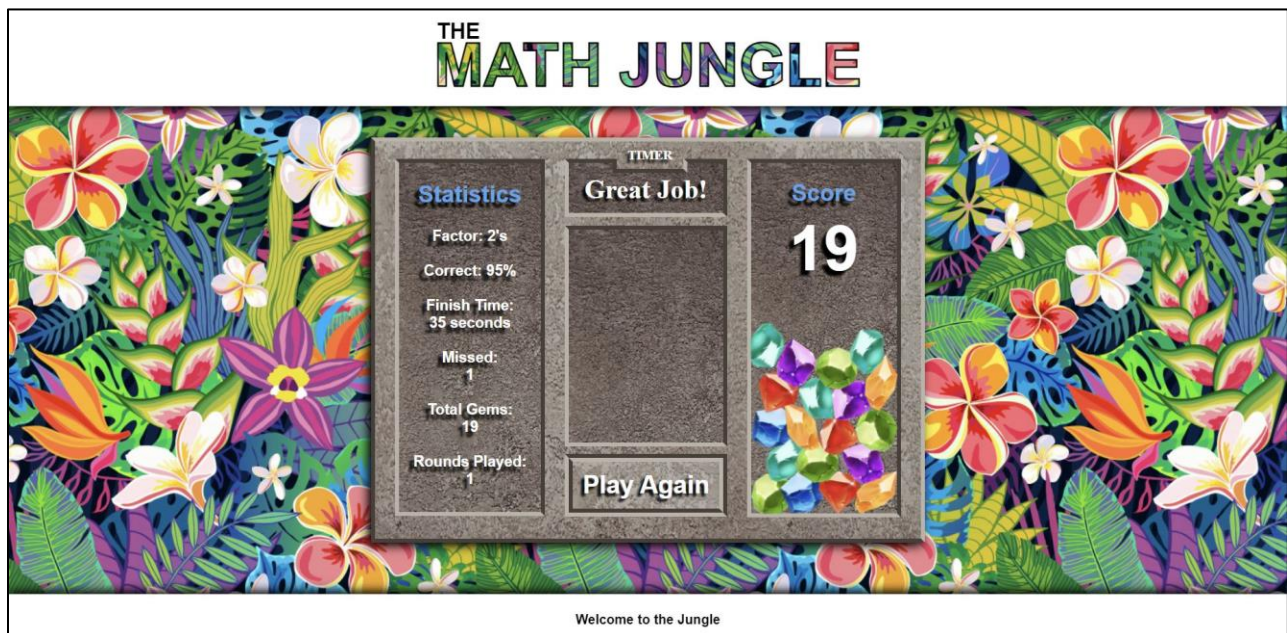
During the gameplay step, math problems populate in the center with the countdown timer above it. In the left side, answers given by the player appear in a list and are color-coded to show whether the player answered with correct answers or wrong answers to the problems that have appeared in the center. In the right side, each correct answer prompts a colored “gem” to fall into place while the number of questions answered correctly updates at the top of the right side.





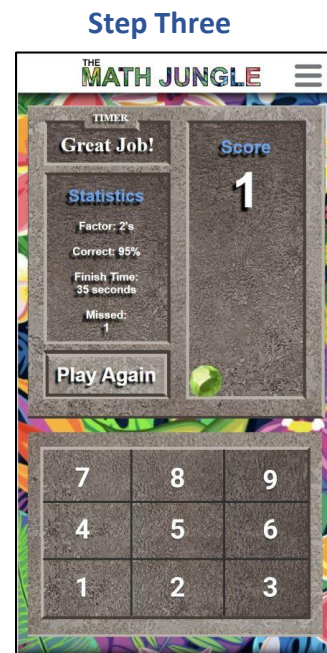
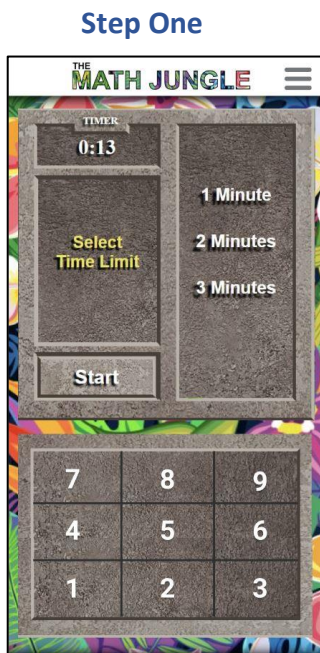
### Step Three – Postgame Statistics

This is the final step in the game's cycle. The left side displays the player's statistics from the previous round including the factor they selected, correct percentage, finish time, and number of missed questions. There are also total collected gems and total rounds played which accumulate throughout multiple rounds played. This left side can scroll to reveal the list of answers given in the previous round for review. The bottom center shows a "Play Again" button which returns the game to the state of step one.



## Future State

In order to accommodate narrower aspect ratios and touchscreens, the interface will be divided into panels that can be arranged in a way that fits narrow screens. A touch keypad with for number entry will also be added for mobile devices. These images of the future state of the Math Jungle describe the vertical orientation that is intended for these narrow vertical screens. For large and small horizontal screens, the game will retain its original layout. In the narrow vertical mobile arrangement, an unused section of the interface will be removed. Similar to the above step descriptions, the future state section shows the vertical mobile layout in each step with a short description.



### Step One - Pregame Selection Menu:

The vertical layout for mobile or narrow screens will move the time options to the right side and remove the left portion of the display.



### Step Two – Gameplay:

The gameplay step will not show a list of right and wrong answers. It will, however continue to signal whether the answer was correct with sounds for each. When an answer is correct, the user's score will increase and a "gem" will appear under the score on the right side.





### Step Three – Postgame Statistics:

After the gameplay step, the user will be able to view their statistics in the left side. They can scroll down to see more statistics and a list of right and wrong answers.

