

## Group Assignment #1: Team Project Proposal

Project Title: Simon Says

Group Number: 10

Group Members: Benjamin Meinders, Joao Lira, Joseph Trembley, Sandro Panchame

**Project Summary:** The overall goal of the project is to build a web-based application that behaves similarly to the game "Simon Says". It will have two modes of operation, one typing based and one memory based. In the first gamemode, the user will have to type out the phrase on the screen if it says Simon Says in a certain time limit. In the second, the user will be given a pattern of colors that they will have to replicate. Both game modes will progressively increase in difficulty, with smaller times, longer patterns, and more difficult phrases. The program will also be able to keep track of high scores in both game modes.

**Implementation Outline:**

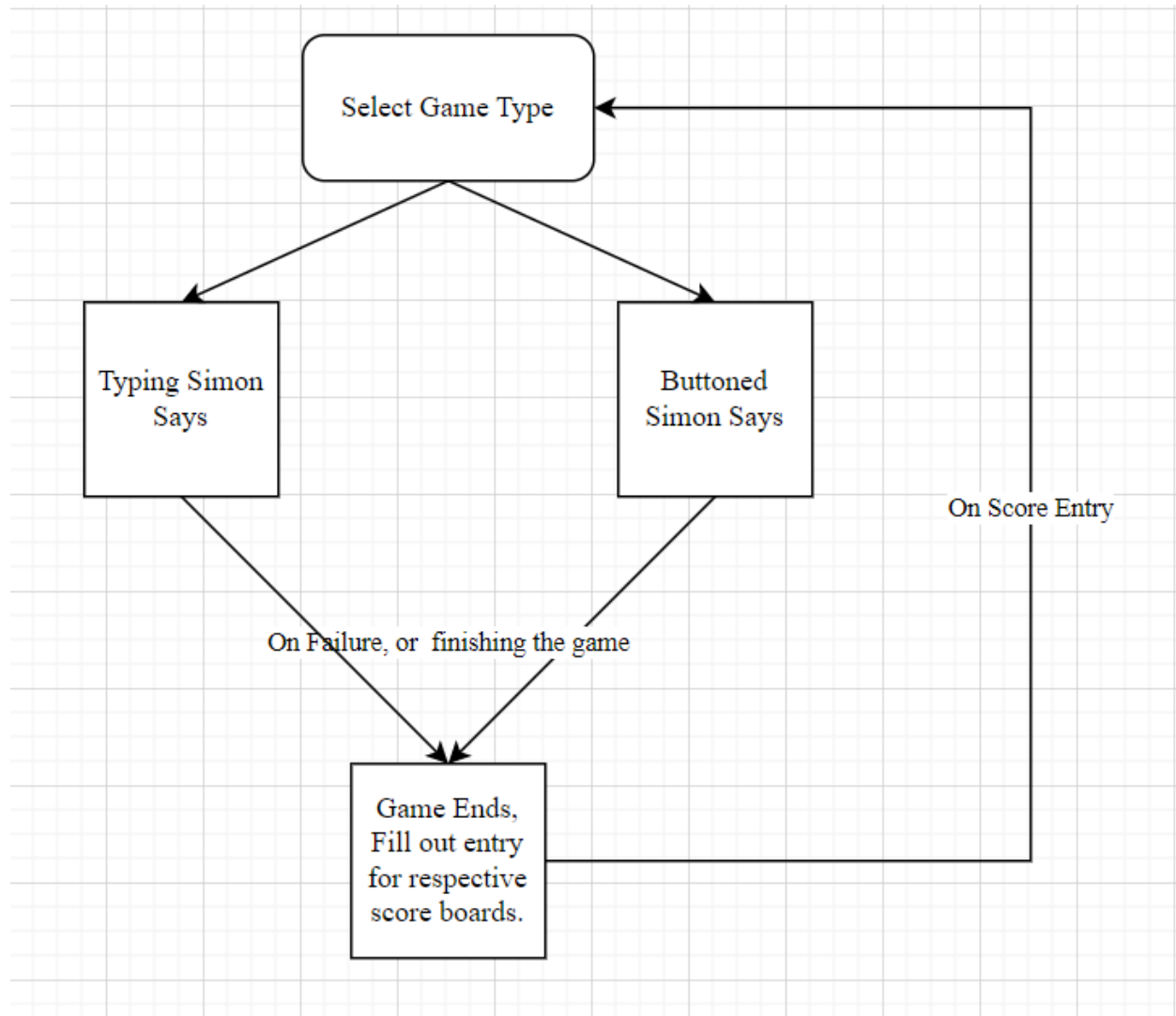
**Frontend (User Interface):** The frontend is where everything the user sees will be handled. All of the graphics will be shown here, and any changes in the screen will be shown. It will take the patterns and phrases from the backend and return the user input. We will be using a combination of React, HTML, and CSS to build the frontend.

**Backend (Background Program):** The backend is where the program does its thinking. It will generate the sequences, find random phrases, and check if the user input matches. It sends data such as the pattern to the frontend, and takes the user input from the frontend. We will mainly be using JavaScript in this portion of the program.

**Unit Testing:** In order to properly test the code for the previous parts, we will be building tests using Jest and Mocha, if necessary.

**Collaboration:** We will be using GitLab to build off of each other's work. This way, we can easily make changes, and carefully merge without interfering with each other.

## General Design:



## Select Game Type:

User selects a game type and is moved to the respective screen.

## Typing Simon Says:

Phrases are selected from a list and become progressively longer; the user has to match the entry under certain time constraints.

## Buttoned Simon Says:

Four buttons light up randomly and are added to a continuing sequence and the user must match the sequence.

Game End:

Score is displayed and the user must enter a name for the scoreboard. Once entered the user returns to the game type screen.