Student Name: Christopher Bell

Advisor Name: Dr. Sean Hayes

Expected Date of Graduation: Spring 2020

Description of Project:

“At Home Bingo” Application – As an events host in the Charleston area, I host a variety of games in the area, including a bingo show. The show consists of a standard bingo game with the bingo daubers and sheets. Throughout the night as people play, it becomes a lot of fun for everyone involved, however the only reason bingo is fun is because one is not playing alone. If you play bingo alone, you’ll win 100% of the time since there is no competition.   
 The application that I am proposing takes bingo and spins it so that a player could play alone. Similar to solitaire or any other one player game, the user would launch the application and start up a game of bingo and keep track of the spaces on their own randomly generated board while a computer player keeps track of a second, unique board. The application randomizes the number call outs much like a live bingo game and if the player reaches bingo first, they can claim it and beat the computer, else the computer beat them.

Proposed Implementation Language(s): Java

Any software/equipment needed: A working and up-to-date Java environment on a laptop or desktop computer.

Motivation and Problem Statement:

The game of bingo is very basic and that makes it fun for all ages and mindsets. However, the ideal game of bingo would be played with multiple people and sometimes being in a place with people can be hard, whether it’s a stress disorder that keeps you from being in crowded spaces or schedule conflicts that keep friends from meeting. I know in my particular situation, growing up as the only child in the family, I would constantly find myself playing games built for one person since I didn’t have any brothers or sisters to play with.

Because of this problem, I want to propose an application that lets you play bingo with yourself and not have to worry about finding other people to play with or an internet connection. This would let people with social anxieties, schedule conflicts, as well as any other problem play the fun game of bingo by themselves and not with other people.

Outline of Future Research Efforts:

As I strive to build this program, one item I know I will be having to research heavily is Java code that has to do with randomly calling the letter and number combinations a bingo host would normally call out while making sense (so no O-1) and without repeating. Another item that will be interesting to research is randomly generating a Bingo board every time someone hits the reset button and keeping it different every time. As far as the rest of the program, I can already think about how past coding projects will help me for my endeavors.

Schedule:

* Initial product design (by October 22, 2019)
* Create a Requirements Document (by October 22, 2019)
* Create a Test Plan to validate the design, identify usability issues, and reveal implementation bugs (by October 25, 2019)
* Internal Coding (by end of November 2019)
  + User Interface Design
  + Code handling the all the randomized callings and boards
  + Creating a toggle to play, pause, and reset the game pieces
  + Creating interactive boards that let you daub numbers as they’re called
* Testing (December 2019 – Early Spring 2020)
  + Continuously run through games
  + Try to break it by doing things that I shouldn’t be able to
  + Implement the test plan
* Final Product Turn In (Mid-Spring 2020)
  + Create Documentation and Logs of the Application
  + Create the Presentation
  + Present the Presentation