**Software Development Report**

for

# CSC 121: Programming I: Fall 2022

**Solitaire**

by

**Manel Casado**

# Problem Summary

The program is a playable 15-piece solitaire puzzle card game.

**Problem Requirements**

* Cards can only be place on top one of their same number
* The maximum amount o cards per pile is 4
* There must be 2 piles empty at the start of the game in order to be playable
* Game has to be able to end (Game Over when there is 13 piles full with 4 cards of the same type on each)

# System Design



# Testing Report

All the testing is made at the class GamePlayer.

Lines 19-57 are tests that make sure all methods work properly and it’s testing a 20 cards deck.

From line 60 there is testing with both the 20 card deck and the full 52 card deck.

\*\*No output because it’s some pages long\*\*

**Time Spent**

This program and development report took around 16 hours.

# Outside resources used

Examples from the lectures and labs, and help from my dad at Game at GamePlayer classes were used to develop this program.

**Security report**

• Only possible security problem is the failure to validate correct input.

# Ethical report

* There does not appear to be any way to improve any aspect of society with this software since it only output the values in order.
* The game could cause gambling addiction if more developed with a good graphic interface

**Future Improvements**

* Handle all Exceptions
* Make a graphic interface

# Lessons learned

* How to use UML class diagrams to design a program
* Use of stacks

# Improvements of Work

* Declared and initialized variables in two statements
* Not using words from the syllabus for the development report