**Chris Duncan**

**Object-Orientated Programing - 24500**

**Spring Semester 2020**

**End of Term Project Proposal**

**Title: PIG OUT’PUT, The Game!**

1. **Team members who will be participating in the project:**

This will be a single person project consisting of myself.

1. **A high-level description of your application**

For my project, I will create a graphical version of the game “Pig Out”. Pig Out is a multiplayer game consisting of two rubber pigs that when rolled, end up in various positions equaling various points. Because of the shape of the pigs, some end positions, the higher scoring ones, are more difficult to achieve. The object of the game is to get up to a set amount without going over. If you go over, you have “pigged out” and the other player wins. You may pass the roll to the other player at any time. Whomever is closest to the winning set amount during a series of rounds wins.

My goal is to create a program that will randomly generate two numbers per roll, but favour the occurrence of the lower scoring numbers. Once the numbers have been rolled, a relevant graphic will display showing the results. An array will maintain separate tallies for each of the players

This project will incorporate:

* + Invoking user interfaces
  + Obtaining user input
  + Creating and storing data in arrays
  + Random number generation
  + Math functions
  + Graphical output using paint and frames
  + Potential sound
  + Potential reading of files and displaying graphic images

1. **Detailed application features listed in priority order and a cut-line of what you believe you (and your team) will be able to deliver in the time available**

1. Base functionality: (delivered on time)

a. Two players to be able to roll as often as they desire and passing when desired.

b. Independent scores for players maintained throughout play.

c. Display of results when a player as achieved a win or a loss.

d. Graphical representation on screen to display results

2. Desired functionality: (anticipated to be in first version at time of delivery)

a. Graphical representation of play results designed to look like a pig using graphical images of real pieces.

b. Choice of 1 or 2 players

3. Future enhancements: (anticipated for second version)

a. Select number of players beyond 2

1. **Description of the object-oriented language/platform you intend be working in for the project if it is something other than Java**

I am proposing to utilize Python as I have more experience with this language.

1. **Summary of the object-oriented programming practices/patterns/principles you believe will be most important for this project**

My goal is to make this code as most efficient as possible. As there will need to be a series of repetitive functions, the design principal of DRY (don’t repeat yourself) will be forefront in my coding practice. To help with this non-repetitive, efficient coding, I will be applying the Single Responsibility Principle throughout.