**Project 1 Design Document**

The idea behind the project is a slot machine game which mimics how the player and the slot machine interacts in a casino. Only registered users will have access to the slot machine. In this project, all W200 Wednesday 6:30PM students are registered guests with passcode 1234.

When the player initiates the game, he/she would need to input his/her username and passcode for verification. If the player is a verified guest, the casino will give him/her $50 credit to start with. The player can then choose what actions he/she wants to take and corresponding consequences (i.e. lose/win money) will be reflected in the player’s account.

There will be three classes in the program: Player, SlotMachine, and Casino. The Casino acts as the central brain of the program, making the SlotMachine class instances and the Player class instances interact with each other. Under the spin\_wheels () method inside the SlotMachine class, there will be a random symbol generator and selection algorithm for each of the three wheels of the slot machine. Probability of certain symbol being drawn will be set based on the player’s bet amount. Error checking will also be in place for various locations. For instance, the player cannot withdraw more funds than he/she has in the account, and user selection must be valid until the game proceeds.

**Player (username, passcode, balance = 0)**

**Attributes**:

* balance

**Methods**:

* set\_balance(amount)
* deposit(amount)
* withdraw(amount)

**SlotMachine (player, jackpot = 1000000)**

**Attributes**:

* reels

**Static method:**

* center\_message (text, width)

**Methods:**

* spin\_wheels (bet\_amount, symbol\_pool)
* pay\_out (reels)

**Casino (player)**

**Attributes:**

* guest\_list
* menu options
* bet\_amount options

**Static method:**

* center\_message (text, width)

**Methods**:

* display\_menu ()
* verify\_guest (username, passcode)
* start ()