

Team: Derek Gorthy, Michael Condon, Paige Johnson

Title: Casino Simulator

Description: A website that models casino environment and gives users the ability to modify the probability of different casino games, change customer behaviors and select the financial status of patrons. We will implement the casino with the baseline probabilities of popular games.

Actors:

- People who want to learn about probability using a simulation
- Admins who can add games or probability distributions
- Casino admins (only for stretch functionality)

Functionality:

- Users can modify the probability of winning on different machines
- Users can change the number of each type of machine or table (i.e. blackjack/craps)
- Users can decide the number of patrons per day
- Users can determine the betting behaviors of gamblers
- Users can set the average money to spend per day
- Users can export the inputs and outputs to a downloadable file
- Users can solve for any variable of a system of equations for any machine or table
- Users can choose from a range of probability distributions to model customer behavior
- Admins can create a machine or game with a default probability; instances of machine or table; maximum and minimum bets; and probability distribution

Stretch Functionality:

- Have the ability to play games (i.e slot machines) with chosen probability