Yahtzee

Yahtzee is a dice game where the user tries to get as many points as possible by rolling dice into specific combinations. On each turn, the user gets three rolls to form the optimal combination, and on each roll can choose to roll as many or as few dice as they like. There are 13 turns: six upper combinations to try for and seven lower. The upper combinations are to roll as many ones as possible, twos, etc. through sixes. The lower combinations are three of a kind, four of a kind, full house (two of one number and three of another), small straight and large straight (four and five in a row, respectively), chance (the sum of all the dice), and Yahtzee (five of a kind). If the user gets 63 points on the upper combinations, they get a bonus fifty extra points added to their score.

The game relies on random number generation to roll the dice. Clicking on the various billboards in the game triggers mouse eventListeners, which call procedures relevant to the billboard the user clicked. Some of these procedures (the procedure to hold a die so it is not rerolled and the procedure to select a combination to put the final roll under) accept parameters in the form of the billboard that was clicked on it and the TextModel associated with it. The game also uses lists to organize the objects: the list “text” is the 5 TextModels that show the dice roll, the list “values” is the 13 TextModels that show the points a roll will get for each combination, and the list “boards” is the 13 Billboards that show the combinations. The world also utilizes global Scene variables to keep track of various game values, such as the number of rolls a user has already used.