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### Adrian's Project 1: Monte-Carlos Simulation of Blackjack

#### ABSTRACT

This project Java language to create a text-based game of Blackjack that runs in terminal. In addition, the project contains a class that simulates the results of real blackjack games and obtain a probability of whether each player will win. The goal of this project was to practice creating and using Java classes. Another goal of this project was to practice creating check classes to see whether our methods within the classes were functioning properly.

## RESULTS

```

≡ mygames.txt
1  Player hand: [2, 4, 11] : 17 Dealer hand: [3, 5, 11] : 19
2  Dealer has won!
3  Player hand: [6, 8, 11] : 25 Dealer hand: [7, 9, 11] : 27
4  Dealer has won!
5  Player hand: [11, 3, 11] : 25 Dealer hand: [2, 4, 11] : 17
6  Dealer has won!
7  Player hand: [5, 7, 11] : 23 Dealer hand: [6, 8, 11] : 25
8  Dealer has won!
9  Player hand: [9, 2, 11] : 22 Dealer hand: [11, 3, 11] : 25
10 Dealer has won!
11 Player hand: [4, 6, 11] : 21 Dealer hand: [5, 7, 11] : 23
12 Player has won!
13 Player hand: [8, 11] : 19 Dealer hand: [9, 2, 11] : 22
14 Player has won!
15 Player hand: [3, 5, 11] : 19 Dealer hand: [4, 6, 11] : 21
16 Dealer has won!
17 Player hand: [7, 9] : 16 Dealer hand: [8, 10] : 18
18 Dealer has won!
19 Player hand: [10, 10] : 20 Dealer hand: [10, 10] : 20
20 It's a draw.

```

Figure 1: Output of playing 10 rounds of Blackjack

	Total number of rounds with this result	Percentage of rounds with this result
Player wins	384	38.4%
Dealer wins	565	56.5%
Push	51	5.1%

Figure 2: Results from executing 1000 games of Blackjack

Collaboration:

I spoke with Bishal Khadka , Emely Pozo-Lin, Tito Garcia Marxuach, Claire Yu, and possibly someone else about this project.

Libraries:

I only imported the libraries that were in the initial code to download and did not consult any other libraries. That is, I used the ArrayList and Random classes.