

# Basic Blackjack

In this worksheet, you will work towards creating a simplified version of Blackjack. This game will serve as our entry point to understanding Bayesian Statistics. It will also reinforce how to design a program using NamedTuples, data structures, and functions as your primitives. Your goal is to create a simple game with the ability to look up the results of specific rounds.

Your program must:

1. Allow a human user to play a series of rounds of Blackjack by simply typing `y` or `n`
2. Implement the correct “dealer logic” so the dealer “stops hitting” on any number greater than 16
3. Track the results of each round (win, loss, or tie)
4. Allow the user to examine the result of a particular game prior to exiting

Below is a sample output for the game:

...

```
Would you like to play a game of blackjack? Y
```

```
Dealer shows: 10 of hearts
```

```
Your hand: 10 of diamonds, 9 of clubs
```

```
Would you like to hit? n
```

```
Your final hand: 10 of diamonds, 9 of clubs with a value of 19
```

```
Dealer hand: 10 of hearts, 4 of clubs
```

```
Dealer hits and gets a Ace of clubs
```

```
Dealer hits and gets a 8 of diamonds
```

```
Dealer final hand: 10 of hearts, 4 of clubs, Ace of clubs, 8 of diamonds with a value of 23
```

```
Result of game: win
```

```
Would you like to play a game of blackjack? y
```

```
Dealer shows: Ace of spades
```

```
Your hand: 4 of clubs, 5 of spades
```

```
Would you like to hit? y
```

```
Your hand: 4 of clubs, 5 of spades, 6 of hearts
```

```
Would you like to hit? y
```

```
Your final hand: 4 of clubs, 5 of spades, 6 of hearts, King of hearts with a value of 25
```

```
Result of game: lose
```

```
Would you like to play a game of blackjack? n
Final results: {'win': 1, 'lose': 1, 'tie': 0}
Thanks for playing!
```

```
Would you like to see the results of a particular round? y
Which round would you like to see? 1
User final: 25, Dealer final: 21, Result: lose
Would you like to see the results of a particular round? n
'''
```

## Extensions (5pt bonus)

1. Investigate the use of the `__str__()` function so that the Card NamedTuples will “pretty print” themselves.
2. Add the concept of chips where the user starts with 50 chips and can bet as many chips as they would like. The game should stop if the user reaches 0 chips.