

# INST326 Final Project Documentation

Group Name: Four of a Kind

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Game Name: BS

## Explanation of the files in the Repository

File Name	Purpose
Final -> test.py	This file contains the final version of the BS card game program. It includes all the classes and methods needed to run the game, including game logic, player classes, card distribution, bluffing, win/lose conditions, and turn handling.
README.pdf	This file contains the documentation of the BS card game program. It includes how to run and use the program, an annotated bibliography, and attribution documentation.
BS.TXT	File for collaborative programming exercise ( <b>disregard</b> ).
Deliverables -> Bado_Deliverable.py Banahene_Deliverable.py Lu_Deliverable Zachariah_Deliverable.py	Deliverables for the Final project interim deliverable assignment ( <b>disregard</b> ).

## How to Run the Program

Requirements:

- Python 3.x
- test.py file from the repository
- Visual Studio Code

Running the Program (Windows Edition):

1. Open Visual Studio in the folder containing test.py
2. In the command line, run python test.py

Running the Program (Mac Edition):

3. Open Visual Studio in the folder containing test.py
4. In the command line, run python3 test.py

## **How to Use the Program**

1. Run the program from the command line. Once it starts, several displays will appear, including:
  - The game title
  - Rules of the game
  - A prompt asking for the user's name
2. Enter a name of your choice (be creative!) and press Enter
3. Next, you will be prompted to enter the number of CPU players you want to play with. Enter an integer from 2 to 6
4. The program will deal the 52 cards one at a time to all players behind the scenes. After the number of cards each player received is displayed. Some players may receive one more card than others if the deck does not divide evenly
5. The game begins with your turn (the human player). Your screen will display:
  - TURN: [player bane] - Required Rank: [rank to put cards down]
  - Your hand of cards will also be displayed.
6. You will be prompted to select the number of cards (1-4) to put in the center. You can be truthful or bluff
7. After entering the number of cards, you will be prompted to enter the indices of the cards you want to play. Enter them separated by spaces. Refer to your hand for index format:  
[#]
8. CPU players will have the opportunity to call BS or pass
  - If a CPU calls BS on you and you were telling the truth, then the CPU must pick up the center pile.
  - If you were bluffing, you must pick up the center pile
9. The next round begins with the next CPU's turn. The game will display their rank and the number of cards they are claiming. Other CPUs (from lowest to highest) may call BS or pass
10. If no CPU calls BS, you will be prompted to decide whether to call BS or pass. Only one person can call BS per turn.
11. The game continues in this loop until a player has no cards left
12. The program keeps track of the number of cards in each player's hand to determine the winner
13. When the game ends, the screen will display:
  - GAME OVER - Winner : [winner's name]

## **Attribution Table**

Method/Function	Primary Author	Techniques Demonstrated
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Deck.__init__	Elizabeth	random.shuffle()
Player.__repr__	Henry	String representation magic method
HumanPlayer.take_turn	Henry	Key function; sorted()
HumanPlayer.take_turn	Henry	N/A
CpuPlayer.memory_loss	Megan	N/A, part of take_turn
CpuPlayer.take_turn	Megan	List comprehension
CpuPlayer.decide_call_bluff	Megan	Conditional expression
Game.__init__	Elizabeth	Composition of 2 classes
Game.deal_cards	Elizabeth	F-Strings
Game.get_required_rank	Elizabeth	Sequence indexing
Game.advance_rank	Elizabeth	Modulo operator
Game.play	Elizabeth	User input: input()
main()	Seniah	ArgParse
TurnManager.resolve_bluff	Seniah	Optional Parameters
TurnManager.add_play	Seniah	N/A

## Annotated Bibliography

I Doubt It. (2025). Bicyclecards.com. <https://bicyclecards.com/how-to-play/i-doubt-it/>

This website was used to specify the rules of our game when we defined the logic of our code. Additionally, we used it to describe the rules of our game on our slides for our presentation.

Livesey, P. (2020, May 22). The Game Theory of “Bullshit.” Game of Theories.

<https://medium.com/game-of-theories/the-game-theory-of-bullshit-aed0872251e8>

When breaking down the components of the computer class, I wanted to do research to identify any possible strategies outside of the ones I personally use when I play BS. I used this website to only look at the strategies described, I did not open the github for this user’s project to try and avoid directly copying code. I used this source to take inspiration for my computer bluff class as I aimed for my computer to be as honest as possible.