

Steps to Accomplish Step 5:

I did not need to modify my code to work with the newly written Player class because the DeepSeek LLM kept the class data similar by referencing the documentation. However, I changed my roll dice code to match the structure of the other classes for consistency.

```
// Original roll code:
int roll = (int) (Math.random() * 6 + 1);

// DeepSeek's roll code:
Random random = new Random();
int roll = random.nextInt(6) + 1;
```

AI Tools Lab Report

Name and Version of the Tool Used: DeepSeek V3

Date of the Session: February 2, 2025

Goal of the Session: The goal of this session was to recreate the original Bulldog application submitted in Program 1 using an LLM, which in this case was DeepSeek V3.

Summary of Prompts Used:

- “Hello, imagine you are a professional programmer with 10 years of experience. Create code for my bulldog applications. pasted documentation here”
- “Can you write me a UniquePlayer class?”
- “I need these style comments for each method: pasted comment example”

Optimization to the Prompting Strategy: The AI model provided a lot of information and code that I didn’t really need because it was redundant and already existed. I think if I had only asked the AI model to produce relevant code, it would have been easier to work with. Also, I had to wait a while to copy the code because it was updating several classes at the same time.

Transcript of game between FifteenPlayer and WimpPlayer:

```
Enter the number of players: 2
Choose player type for player 1:
1. HumanPlayer
2. RandomPlayer
3. FifteenPlayer
4. UniquePlayer
5. WimpPlayer
Enter choice (1-5): 3
Enter player name: FifteenPlayer
Choose player type for player 2:
1. HumanPlayer
```

2. RandomPlayer
3. FifteenPlayer
4. UniquePlayer
5. WimpPlayer
Enter choice (1-5): 5
Enter player name: WimpPlayer

FifteenPlayer's turn:
FifteenPlayer rolled a 3
Current turn score: 3
FifteenPlayer rolled a 1
Current turn score: 4
FifteenPlayer rolled a 2
Current turn score: 6
FifteenPlayer rolled a 3
Current turn score: 9
FifteenPlayer rolled a 6
Oops! FifteenPlayer rolled a 6. Turn over. Score for this turn: 0
FifteenPlayer's total score: 0

WimpPlayer's turn:
WimpPlayer rolled a 5
WimpPlayer decides to end their turn after the first roll with a score of 5
WimpPlayer's total score: 5

FifteenPlayer's turn:
FifteenPlayer rolled a 4
Current turn score: 4
FifteenPlayer rolled a 3
Current turn score: 7
FifteenPlayer rolled a 5
Current turn score: 12
FifteenPlayer rolled a 5
Current turn score: 17
FifteenPlayer has reached at least 15 points and ends their turn with a score of 17
FifteenPlayer's total score: 17

WimpPlayer's turn:
WimpPlayer rolled a 5
WimpPlayer decides to end their turn after the first roll with a score of 5
WimpPlayer's total score: 10

FifteenPlayer's turn:
FifteenPlayer rolled a 4
Current turn score: 4
FifteenPlayer rolled a 5
Current turn score: 9
FifteenPlayer rolled a 2
Current turn score: 11
FifteenPlayer rolled a 1
Current turn score: 12
FifteenPlayer rolled a 3
Current turn score: 15
FifteenPlayer has reached at least 15 points and ends their turn with a score of 15
FifteenPlayer's total score: 32

WimpPlayer's turn:
WimpPlayer rolled a 3
WimpPlayer decides to end their turn after the first roll with a score of 3
WimpPlayer's total score: 13

FifteenPlayer's turn:
FifteenPlayer rolled a 3
Current turn score: 3
FifteenPlayer rolled a 1
Current turn score: 4
FifteenPlayer rolled a 4
Current turn score: 8

FifteenPlayer rolled a 2
Current turn score: 10
FifteenPlayer rolled a 3
Current turn score: 13
FifteenPlayer rolled a 1
Current turn score: 14
FifteenPlayer rolled a 4
Current turn score: 18
FifteenPlayer has reached at least 15 points and ends their turn with a score of 18
FifteenPlayer's total score: 50

WimpPlayer's turn:
WimpPlayer rolled a 4
WimpPlayer decides to end their turn after the first roll with a score of 4
WimpPlayer's total score: 17

FifteenPlayer's turn:
FifteenPlayer rolled a 6
Oops! FifteenPlayer rolled a 6. Turn over. Score for this turn: 0
FifteenPlayer's total score: 50

WimpPlayer's turn:
WimpPlayer rolled a 2
WimpPlayer decides to end their turn after the first roll with a score of 2
WimpPlayer's total score: 19

FifteenPlayer's turn:
FifteenPlayer rolled a 1
Current turn score: 1
FifteenPlayer rolled a 2
Current turn score: 3
FifteenPlayer rolled a 1
Current turn score: 4
FifteenPlayer rolled a 1
Current turn score: 5
FifteenPlayer rolled a 5
Current turn score: 10
FifteenPlayer rolled a 1
Current turn score: 11
FifteenPlayer rolled a 5
Current turn score: 16
FifteenPlayer has reached at least 15 points and ends their turn with a score of 16
FifteenPlayer's total score: 66

WimpPlayer's turn:
WimpPlayer rolled a 4
WimpPlayer decides to end their turn after the first roll with a score of 4
WimpPlayer's total score: 23

FifteenPlayer's turn:
FifteenPlayer rolled a 1
Current turn score: 1
FifteenPlayer rolled a 5
Current turn score: 6
FifteenPlayer rolled a 3
Current turn score: 9
FifteenPlayer rolled a 1
Current turn score: 10
FifteenPlayer rolled a 1
Current turn score: 11
FifteenPlayer rolled a 4
Current turn score: 15
FifteenPlayer has reached at least 15 points and ends their turn with a score of 15
FifteenPlayer's total score: 81

WimpPlayer's turn:
WimpPlayer rolled a 1
WimpPlayer decides to end their turn after the first roll with a score of 1

WimpPlayer's total score: 24

FifteenPlayer's turn:

FifteenPlayer rolled a 2

Current turn score: 2

FifteenPlayer rolled a 1

Current turn score: 3

FifteenPlayer rolled a 2

Current turn score: 5

FifteenPlayer rolled a 6

Oops! FifteenPlayer rolled a 6. Turn over. Score for this turn: 0

FifteenPlayer's total score: 81

WimpPlayer's turn:

WimpPlayer rolled a 6

Oops! WimpPlayer rolled a 6. Turn over. Score for this turn: 0

WimpPlayer's total score: 24

FifteenPlayer's turn:

FifteenPlayer rolled a 5

Current turn score: 5

FifteenPlayer rolled a 1

Current turn score: 6

FifteenPlayer rolled a 6

Oops! FifteenPlayer rolled a 6. Turn over. Score for this turn: 0

FifteenPlayer's total score: 81

WimpPlayer's turn:

WimpPlayer rolled a 4

WimpPlayer decides to end their turn after the first roll with a score of 4

WimpPlayer's total score: 28

FifteenPlayer's turn:

FifteenPlayer rolled a 6

Oops! FifteenPlayer rolled a 6. Turn over. Score for this turn: 0

FifteenPlayer's total score: 81

WimpPlayer's turn:

WimpPlayer rolled a 1

WimpPlayer decides to end their turn after the first roll with a score of 1

WimpPlayer's total score: 29

FifteenPlayer's turn:

FifteenPlayer rolled a 2

Current turn score: 2

FifteenPlayer rolled a 5

Current turn score: 7

FifteenPlayer rolled a 4

Current turn score: 11

FifteenPlayer rolled a 4

Current turn score: 15

FifteenPlayer has reached at least 15 points and ends their turn with a score of 15

FifteenPlayer's total score: 96

WimpPlayer's turn:

WimpPlayer rolled a 2

WimpPlayer decides to end their turn after the first roll with a score of 2

WimpPlayer's total score: 31

FifteenPlayer's turn:

FifteenPlayer rolled a 3

Current turn score: 3

FifteenPlayer rolled a 1

Current turn score: 4

FifteenPlayer rolled a 1

Current turn score: 5

FifteenPlayer rolled a 3

Current turn score: 8

FifteenPlayer rolled a 4
Current turn score: 12
FifteenPlayer rolled a 3
Current turn score: 15
FifteenPlayer has reached at least 15 points and ends their turn with a score of 15
FifteenPlayer's total score: 111

FifteenPlayer wins the game with a score of 111!

Final Scores:
FifteenPlayer: 111
WimpPlayer: 31

Transcript of game between my UniquePlayer and DeepSeek's UniquePlayer:

Enter the number of players: 2
Choose player type for player 1:
1. HumanPlayer
2. RandomPlayer
3. FifteenPlayer
4. AIUniquePlayer
5. WimpPlayer
6. MyUniquePlayer
Enter choice (1-6): 6
Enter player name: MyUniquePlayer
Choose player type for player 2:
1. HumanPlayer
2. RandomPlayer
3. FifteenPlayer
4. AIUniquePlayer
5. WimpPlayer
6. MyUniquePlayer
Enter choice (1-6): 4
Enter player name: AIUniquePlayer

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 3, cumulative score is 3
MyUniquePlayer's total score: 3

AIUniquePlayer's turn:
AIUniquePlayer rolled a 3
Current turn score: 3
AIUniquePlayer rolled a 4
Current turn score: 7
AIUniquePlayer rolled a 3
Current turn score: 10
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 10
AIUniquePlayer's total score: 10

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 3, cumulative score is 3
Player MyUniquePlayer rolled 1, cumulative score is 4
MyUniquePlayer's total score: 7

AIUniquePlayer's turn:
AIUniquePlayer rolled a 3
Current turn score: 3
AIUniquePlayer rolled a 1
Current turn score: 4
AIUniquePlayer rolled a 2
Current turn score: 6
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 6
AIUniquePlayer's total score: 16

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 4, cumulative score is 4
Player MyUniquePlayer rolled 6, so player scored 0 for the turn.

MyUniquePlayer's total score: 7

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 5
 Current turn score: 5
 AIUniquePlayer rolled a 1
 Current turn score: 6
 AIUniquePlayer rolled a 6
 Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
 AIUniquePlayer's total score: 16

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 1, cumulative score is 1
 MyUniquePlayer's total score: 8

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 5
 Current turn score: 5
 AIUniquePlayer rolled a 2
 Current turn score: 7
 AIUniquePlayer rolled a 6
 Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
 AIUniquePlayer's total score: 16

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 6, so player scored 0 for the turn.
 MyUniquePlayer's total score: 8

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 5
 Current turn score: 5
 AIUniquePlayer rolled a 4
 Current turn score: 9
 AIUniquePlayer rolled a 5
 Current turn score: 14
 AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 14
 AIUniquePlayer's total score: 30

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 5, cumulative score is 5
 MyUniquePlayer's total score: 13

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 6
 Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
 AIUniquePlayer's total score: 30

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 4, cumulative score is 4
 Player MyUniquePlayer rolled 4, cumulative score is 8
 MyUniquePlayer's total score: 21

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 2
 Current turn score: 2
 AIUniquePlayer rolled a 6
 Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
 AIUniquePlayer's total score: 30

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 5, cumulative score is 5
 Player MyUniquePlayer rolled 4, cumulative score is 9
 Player MyUniquePlayer rolled 3, cumulative score is 12
 Player MyUniquePlayer rolled 4, cumulative score is 16
 MyUniquePlayer's total score: 37

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 4

Current turn score: 4
AIUniquePlayer rolled a 2
Current turn score: 6
AIUniquePlayer rolled a 1
Current turn score: 7
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 7
AIUniquePlayer's total score: 37

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 2, cumulative score is 2
Player MyUniquePlayer rolled 5, cumulative score is 7
Player MyUniquePlayer rolled 3, cumulative score is 10
Player MyUniquePlayer rolled 2, cumulative score is 12
Player MyUniquePlayer rolled 3, cumulative score is 15
Player MyUniquePlayer rolled 2, cumulative score is 17
Player MyUniquePlayer rolled 3, cumulative score is 20
Player MyUniquePlayer rolled 3, cumulative score is 23
MyUniquePlayer's total score: 60

AIUniquePlayer's turn:
AIUniquePlayer rolled a 6
Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
AIUniquePlayer's total score: 37

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 5, cumulative score is 5
Player MyUniquePlayer rolled 2, cumulative score is 7
Player MyUniquePlayer rolled 2, cumulative score is 9
Player MyUniquePlayer rolled 1, cumulative score is 10
Player MyUniquePlayer rolled 1, cumulative score is 11
Player MyUniquePlayer rolled 1, cumulative score is 12
Player MyUniquePlayer rolled 2, cumulative score is 14
Player MyUniquePlayer rolled 4, cumulative score is 18
Player MyUniquePlayer rolled 4, cumulative score is 22
Player MyUniquePlayer rolled 1, cumulative score is 23
Player MyUniquePlayer rolled 2, cumulative score is 25
Player MyUniquePlayer rolled 2, cumulative score is 27
Player MyUniquePlayer rolled 2, cumulative score is 29
Player MyUniquePlayer rolled 5, cumulative score is 34
Player MyUniquePlayer rolled 6, so player scored 0 for the turn.
MyUniquePlayer's total score: 60

AIUniquePlayer's turn:
AIUniquePlayer rolled a 5
Current turn score: 5
AIUniquePlayer rolled a 2
Current turn score: 7
AIUniquePlayer rolled a 2
Current turn score: 9
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 9
AIUniquePlayer's total score: 46

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 6, so player scored 0 for the turn.
MyUniquePlayer's total score: 60

AIUniquePlayer's turn:
AIUniquePlayer rolled a 1
Current turn score: 1
AIUniquePlayer rolled a 6
Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
AIUniquePlayer's total score: 46

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 1, cumulative score is 1
MyUniquePlayer's total score: 61

AIUniquePlayer's turn:

AIUniquePlayer rolled a 2
 Current turn score: 2
 AIUniquePlayer rolled a 3
 Current turn score: 5
 AIUniquePlayer rolled a 2
 Current turn score: 7
 AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 7
 AIUniquePlayer's total score: 53

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 2, cumulative score is 2
 Player MyUniquePlayer rolled 1, cumulative score is 3
 MyUniquePlayer's total score: 64

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 2
 Current turn score: 2
 AIUniquePlayer rolled a 5
 Current turn score: 7
 AIUniquePlayer rolled a 1
 Current turn score: 8
 AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 8
 AIUniquePlayer's total score: 61

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 5, cumulative score is 5
 Player MyUniquePlayer rolled 4, cumulative score is 9
 Player MyUniquePlayer rolled 5, cumulative score is 14
 Player MyUniquePlayer rolled 5, cumulative score is 19
 MyUniquePlayer's total score: 83

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 4
 Current turn score: 4
 AIUniquePlayer rolled a 1
 Current turn score: 5
 AIUniquePlayer rolled a 2
 Current turn score: 7
 AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 7
 AIUniquePlayer's total score: 68

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 4, cumulative score is 4
 Player MyUniquePlayer rolled 4, cumulative score is 8
 Player MyUniquePlayer rolled 6, so player scored 0 for the turn.
 MyUniquePlayer's total score: 83

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 2
 Current turn score: 2
 AIUniquePlayer rolled a 3
 Current turn score: 5
 AIUniquePlayer rolled a 3
 Current turn score: 8
 AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 8
 AIUniquePlayer's total score: 76

MyUniquePlayer's turn:
 Player MyUniquePlayer rolled 4, cumulative score is 4
 MyUniquePlayer's total score: 87

AIUniquePlayer's turn:
 AIUniquePlayer rolled a 2
 Current turn score: 2
 AIUniquePlayer rolled a 4
 Current turn score: 6
 AIUniquePlayer rolled a 4
 Current turn score: 10

AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 10
AIUniquePlayer's total score: 86

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 2, cumulative score is 2
Player MyUniquePlayer rolled 2, cumulative score is 4
MyUniquePlayer's total score: 91

AIUniquePlayer's turn:
AIUniquePlayer rolled a 3
Current turn score: 3
AIUniquePlayer rolled a 2
Current turn score: 5
AIUniquePlayer rolled a 3
Current turn score: 8
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 8
AIUniquePlayer's total score: 94

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 6, so player scored 0 for the turn.
MyUniquePlayer's total score: 91

AIUniquePlayer's turn:
AIUniquePlayer rolled a 2
Current turn score: 2
AIUniquePlayer rolled a 1
Current turn score: 3
AIUniquePlayer rolled a 5
Current turn score: 8
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 8
AIUniquePlayer's total score: 102

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 2, cumulative score is 2
MyUniquePlayer's total score: 93

AIUniquePlayer's turn:
AIUniquePlayer rolled a 6
Oops! AIUniquePlayer rolled a 6. Turn over. Score for this turn: 0
AIUniquePlayer's total score: 102

MyUniquePlayer's turn:
Player MyUniquePlayer rolled 1, cumulative score is 1
Player MyUniquePlayer rolled 1, cumulative score is 2
MyUniquePlayer's total score: 95

AIUniquePlayer's turn:
AIUniquePlayer rolled a 1
Current turn score: 1
AIUniquePlayer rolled a 1
Current turn score: 2
AIUniquePlayer rolled a 1
Current turn score: 3
AIUniquePlayer decides to end their turn after 3 consecutive rolls with a score of 3
AIUniquePlayer's total score: 105

AIUniquePlayer wins the game with a score of 105!

Final Scores:
MyUniquePlayer: 95
AIUniquePlayer: 105
