**RANDOM (P1 and P2) VS GREEDY (P3 and P4) 2 -13**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

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Game over! The winner is: 4

Final Score:

Player 1: 61

Player 2: 60

Player 3: 63

Player 4: 80

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 1

New Game 2

Current Board Layout:

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Game over! The winner is: 4

Final Score:

Player 1: 58

Player 2: 55

Player 3: 56

Player 4: 71

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 2

New Game 3

Current Board Layout:

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Game over! The winner is: 3

Final Score:

Player 1: 55

Player 2: 51

Player 3: 85

Player 4: 58

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 1

Player 4 win count: 2

New Game 4

Current Board Layout:

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Game over! The winner is: 3

Final Score:

Player 1: 70

Player 2: 55

Player 3: 81

Player 4: 77

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 2

New Game 5

Current Board Layout:

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Game over! The winner is: 4

Final Score:

Player 1: 50

Player 2: 44

Player 3: 69

Player 4: 78

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 3

New Game 6

Current Board Layout:

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Game over! The winner is: 2

Final Score:

Player 1: 53

Player 2: 81

Player 3: 72

Player 4: 56

Player 1 win count: 0

Player 2 win count: 1

Player 3 win count: 2

Player 4 win count: 3

New Game 7

Current Board Layout:

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Game over! The winner is: 3

Final Score:

Player 1: 64

Player 2: 49

Player 3: 81

Player 4: 72

Player 1 win count: 0

Player 2 win count: 1

Player 3 win count: 3

Player 4 win count: 3

New Game 8

Current Board Layout:

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Game over! The winner is: 4

Final Score:

Player 1: 55

Player 2: 46

Player 3: 80

Player 4: 82

Player 1 win count: 0

Player 2 win count: 1

Player 3 win count: 3

Player 4 win count: 4

New Game 9

Current Board Layout:

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Game over! The winner is: 3

Final Score:

Player 1: 71

Player 2: 46

Player 3: 84

Player 4: 69

Player 1 win count: 0

Player 2 win count: 1

Player 3 win count: 4

Player 4 win count: 4

New Game 10

Current Board Layout:

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Game over! The winner is: 2

Final Score:

Player 1: 57

Player 2: 70

Player 3: 69

Player 4: 60

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 4

Player 4 win count: 4

New Game 11

Current Board Layout:

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Game over! The winner is: 4

Final Score:

Player 1: 45

Player 2: 46

Player 3: 70

Player 4: 109

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 4

Player 4 win count: 5

New Game 12

Current Board Layout:

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Game over! The winner is: 3

Final Score:

Player 1: 47

Player 2: 62

Player 3: 66

Player 4: 65

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 5

Player 4 win count: 5

New Game 13

Current Board Layout:

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Game over! The winner is: 4

Final Score:

Player 1: 61

Player 2: 65

Player 3: 65

Player 4: 67

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 5

Player 4 win count: 6

New Game 14

Current Board Layout:

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1 3 1 1 1 \_ 3 \_ \_ 1 1 4 4 1 1 4 4 1 1 1

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Game over! The winner is: 4

Final Score:

Player 1: 60

Player 2: 52

Player 3: 73

Player 4: 84

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 5

Player 4 win count: 7

New Game 15

Current Board Layout:

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3 3 \_ 4 4 \_ 3 3 3 4 4 4 2 2 4 4 4 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 55

Player 2: 57

Player 3: 81

Player 4: 85

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 5

Player 4 win count: 8

TOTAL REWARD:

RANDOM: 1,701 pts + 2 wins

GREEDY: 2,208 pts + 13 wins

--------------------------------------------------------------

**CENTER CONTROL (P1 and P2) VS RANDOM (P3 and P4) 15 - 0**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

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\_ 3 \_ 2 \_ 1 1 1 1 1 2 \_ 1 2 1 1 \_ 1 \_ 1

\_ 3 \_ 2 2 \_ 2 2 2 2 1 2 2 1 1 1 \_ \_ 1 1

3 3 \_ \_ 2 2 \_ \_ \_ 2 1 2 1 2 2 2 2 \_ 1 \_

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\_ \_ 3 \_ 3 3 3 \_ 2 3 3 3 2 \_ \_ 2 \_ 2 \_ \_

3 3 \_ 3 \_ \_ \_ 3 3 \_ 3 \_ 2 \_ \_ 2 \_ 2 \_ \_

\_ 3 \_ 3 3 \_ \_ \_ 3 3 \_ 3 \_ 2 \_ 2 \_ \_ 2 2

\_ \_ \_ \_ 3 3 \_ 3 \_ \_ \_ 3 2 2 \_ 2 \_ \_ \_ 2

3 3 3 3 \_ \_ \_ \_ \_ 3 3 3 \_ 2 \_ 2 \_ \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 71

Player 2: 72

Player 3: 49

Player 4: 64

Player 1 win count: 0

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 0

New Game 2

Current Board Layout:

1 1 \_ \_ \_ \_ \_ 1 \_ \_ 4 4 \_ \_ \_ 4 4 4 4 4

1 \_ \_ \_ 1 \_ 1 1 \_ 4 4 \_ \_ 1 4 \_ \_ \_ \_ \_

1 1 \_ \_ 1 \_ 1 \_ 4 \_ \_ \_ \_ 1 4 \_ 1 \_ \_ \_

\_ \_ 1 \_ 1 \_ 1 4 4 4 \_ \_ \_ 1 4 \_ 1 \_ 4 4

\_ \_ 1 3 1 4 4 1 4 \_ 4 4 4 1 4 1 1 1 4 4

\_ \_ 1 3 1 \_ \_ 1 2 \_ 4 1 1 4 1 4 4 4 1 \_

\_ 1 1 3 3 1 1 1 2 1 1 2 4 4 1 1 \_ 4 1 1

3 3 3 1 3 \_ \_ 2 1 1 2 2 4 \_ 4 4 \_ 4 \_ 1

3 \_ 1 1 1 1 2 2 2 1 2 1 4 \_ \_ 4 4 \_ 4 \_

\_ 3 \_ 3 3 2 1 1 1 2 1 2 2 2 4 \_ 4 \_ \_ 2

3 3 \_ 3 \_ 2 1 1 2 2 1 1 2 2 4 4 \_ 4 4 2

3 \_ 3 1 3 2 2 \_ 1 1 2 1 1 \_ 2 2 2 2 4 2

\_ \_ 3 1 3 1 1 1 \_ 1 \_ 2 2 2 \_ \_ 2 4 4 2

3 3 3 1 1 3 1 3 \_ 1 1 \_ 2 \_ 2 \_ 4 2 2 4

1 1 1 3 3 3 3 \_ 2 2 \_ \_ 2 \_ 2 2 4 2 \_ 4

\_ 3 3 \_ \_ 2 2 2 3 2 2 2 \_ 2 2 \_ 4 2 4 4

\_ \_ 3 3 \_ \_ \_ 2 3 3 3 \_ 2 \_ \_ 4 4 2 \_ 4

3 3 \_ 3 \_ \_ \_ 2 \_ 3 \_ 2 2 \_ \_ 2 \_ 4 2 2

3 \_ \_ \_ 3 3 3 3 3 \_ 2 2 \_ 2 2 2 4 4 4 2

3 3 \_ \_ \_ 2 2 2 2 2 \_ \_ \_ 2 \_ \_ \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 80

Player 2: 77

Player 3: 49

Player 4: 66

Player 1 win count: 1

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 0

New Game 3

Current Board Layout:

1 1 \_ \_ \_ 4 4 \_ \_ \_ \_ \_ 4 \_ \_ \_ \_ \_ 4 4

1 \_ \_ \_ \_ 4 \_ 4 4 4 1 1 4 4 4 \_ \_ 4 4 \_

1 1 \_ 4 \_ \_ \_ 4 \_ 4 1 1 4 1 \_ 4 4 \_ 4 \_

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3 \_ 1 \_ \_ 4 4 \_ \_ 1 4 4 1 1 4 \_ \_ \_ \_ \_

3 1 1 1 \_ \_ 1 1 1 1 \_ \_ 1 \_ 4 4 \_ 4 4 \_

3 \_ 3 \_ 1 \_ \_ 3 3 3 1 1 4 4 \_ 4 \_ 4 2 2

3 \_ 3 1 1 1 1 3 1 \_ 1 1 \_ 4 2 \_ 4 4 2 2

3 \_ 3 \_ 3 3 3 1 1 1 2 1 2 4 2 2 2 2 \_ 1

\_ 3 2 2 2 3 3 1 2 2 1 2 2 2 4 4 \_ 1 1 1

3 2 3 3 3 2 2 2 1 2 1 1 1 2 \_ 4 4 1 2 2

3 2 \_ 3 1 1 2 \_ 1 1 \_ 2 2 1 1 1 1 2 2 2

3 3 3 \_ 3 1 1 1 \_ 1 1 2 1 2 2 2 2 1 1 1

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3 3 3 3 \_ \_ \_ 3 1 2 \_ 1 2 2 2 \_ 2 2 2 1

\_ 3 \_ \_ 3 \_ \_ 3 1 2 1 1 2 \_ \_ \_ \_ 2 \_ \_

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3 \_ \_ 3 \_ 3 3 \_ 1 2 \_ 1 1 1 2 2 2 \_ 2 2

3 3 3 \_ 3 3 \_ 3 3 2 \_ \_ 2 2 \_ 2 \_ \_ \_ 2

3 \_ \_ \_ \_ 3 \_ 3 3 \_ 2 2 2 \_ \_ \_ \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 72

Player 3: 57

Player 4: 48

Player 1 win count: 2

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 0

New Game 4

Current Board Layout:

1 1 \_ 4 4 \_ \_ \_ \_ 4 4 \_ 4 4 4 4 \_ 4 4 4

1 \_ 4 4 \_ \_ \_ \_ \_ 4 4 4 \_ 2 2 \_ 4 \_ \_ 4

1 1 4 \_ 4 4 4 4 4 \_ 2 2 2 \_ 2 2 4 4 \_ 4

\_ \_ 1 4 \_ \_ \_ 1 \_ 4 \_ 2 4 4 4 4 2 2 \_ \_

\_ \_ 1 4 4 4 \_ 1 \_ 1 1 2 4 1 2 \_ 4 2 \_ \_

\_ 1 1 1 \_ 1 1 1 \_ 1 2 4 1 1 2 4 4 \_ \_ \_

3 \_ \_ \_ 1 \_ \_ \_ 1 1 2 4 \_ 1 2 4 \_ 4 4 \_

3 3 3 1 1 1 1 2 2 2 1 1 1 \_ 2 1 1 4 4 \_

3 1 1 3 3 3 \_ 1 1 1 2 \_ 1 1 2 1 4 \_ \_ \_

1 1 3 \_ \_ 3 3 1 1 \_ 1 2 2 2 1 4 4 4 4 \_

\_ 1 3 1 1 1 1 3 \_ 1 \_ \_ 2 2 1 1 1 2 \_ \_

\_ \_ 3 \_ \_ \_ 1 \_ \_ 1 \_ 2 \_ 1 2 2 \_ 2 \_ \_

3 \_ 3 1 1 1 3 3 3 1 \_ 2 2 1 2 \_ 2 2 \_ 2

3 \_ 3 \_ 3 3 1 1 \_ 1 2 2 \_ 1 2 \_ 2 \_ 2 2

\_ 3 \_ \_ 3 3 1 1 \_ 1 \_ \_ \_ 1 2 \_ \_ \_ \_ 2

\_ 3 \_ \_ 1 1 3 3 1 \_ \_ 2 2 2 \_ 2 2 2 2 \_

\_ 3 \_ \_ \_ 1 1 3 1 1 \_ 2 \_ \_ 2 \_ \_ 2 \_ \_

\_ 3 \_ 3 3 3 3 1 2 1 1 2 \_ 2 2 \_ \_ \_ 2 2

\_ \_ 3 \_ \_ \_ 3 1 2 2 2 \_ 2 2 \_ 2 2 2 \_ 2

3 3 3 3 2 2 2 2 \_ \_ 2 \_ \_ \_ \_ 2 \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 80

Player 3: 42

Player 4: 52

Player 1 win count: 3

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 0

New Game 5

Current Board Layout:

1 1 \_ 1 1 \_ 4 4 \_ \_ \_ \_ 4 \_ \_ \_ \_ 4 4 4

1 \_ 1 1 \_ 1 \_ 4 4 4 \_ \_ 4 2 2 4 4 \_ \_ \_

1 1 \_ \_ \_ 1 4 \_ \_ \_ 4 4 4 2 2 4 \_ 4 4 \_

\_ \_ 1 \_ \_ 1 4 4 \_ \_ \_ 2 \_ 4 4 2 2 \_ 4 \_

\_ \_ 1 \_ 1 1 4 \_ 1 1 1 2 4 \_ 2 2 \_ 4 4 \_

\_ 1 1 1 \_ 4 \_ 1 1 \_ 4 2 4 2 \_ 4 4 \_ \_ 4

3 \_ \_ \_ 1 4 4 4 \_ 1 4 2 4 2 2 4 4 2 \_ 4

3 3 3 1 1 1 1 4 \_ 1 4 2 4 2 4 \_ \_ 2 4 4

3 \_ 1 3 3 3 3 1 1 1 4 4 2 \_ 2 2 \_ 2 2 \_

1 1 1 \_ \_ 3 1 2 2 2 1 2 2 2 1 2 2 1 \_ 2

1 \_ 3 3 3 \_ 1 1 1 2 2 1 1 2 1 1 2 1 1 1

\_ 3 \_ \_ 3 \_ 3 1 2 1 \_ 2 2 1 2 2 1 2 2 2

\_ 3 \_ \_ \_ 3 3 2 2 1 \_ 2 1 1 2 \_ 1 2 \_ \_

\_ 3 3 3 \_ 3 \_ 2 2 1 2 2 \_ 1 2 \_ 1 2 \_ 2

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3 3 \_ 3 3 3 3 \_ 3 1 \_ 1 1 \_ \_ 2 2 2 2 \_

3 \_ 3 \_ \_ \_ \_ \_ 3 \_ 1 1 2 2 2 \_ \_ 2 \_ \_

\_ 3 3 3 \_ \_ \_ \_ 3 1 \_ 2 1 2 \_ \_ 2 \_ 2 2

\_ \_ 3 \_ 3 3 3 \_ 3 1 1 2 1 2 \_ 2 2 2 \_ 2

3 3 \_ \_ \_ 3 \_ 3 \_ 1 1 2 1 \_ \_ \_ 2 \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 80

Player 2: 82

Player 3: 48

Player 4: 50

Player 1 win count: 3

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 0

New Game 6

Current Board Layout:

1 1 4 4 \_ \_ 1 1 \_ 4 4 4 \_ \_ \_ 4 4 4 4 4

1 4 4 \_ 4 4 4 1 1 4 \_ 4 \_ \_ 4 \_ \_ \_ \_ \_

1 1 4 1 1 1 1 4 4 \_ 4 \_ 4 4 \_ \_ \_ 4 4 4

4 4 1 \_ \_ \_ 4 4 2 4 4 4 2 4 \_ 4 4 \_ \_ 4

4 1 1 1 1 \_ 4 2 2 \_ 4 \_ 2 4 4 \_ \_ 4 4 \_

2 4 4 4 4 1 \_ \_ \_ 2 2 2 \_ 1 1 4 \_ 4 4 \_

2 \_ 1 \_ \_ 1 \_ 2 2 1 1 2 2 1 1 4 4 2 2 4

2 1 1 1 \_ 1 2 2 \_ 2 2 1 1 \_ 2 4 4 2 2 4

2 \_ 1 \_ 1 1 2 \_ \_ 2 2 1 2 1 2 2 2 \_ \_ 4

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3 3 3 \_ 3 \_ 1 1 2 \_ 1 1 1 2 4 4 4 4 \_ \_

\_ 3 \_ \_ 3 1 \_ \_ 1 1 2 2 2 \_ 2 2 2 2 \_ \_

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3 3 3 \_ 3 \_ 1 \_ \_ 1 1 \_ \_ 2 2 2 1 2 2 1

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3 3 3 \_ 3 \_ 3 3 3 3 \_ 2 \_ 3 3 3 1 1 2 2

3 \_ \_ 3 3 3 \_ \_ \_ \_ 3 3 3 \_ \_ 3 1 3 3 2

3 \_ \_ \_ 3 \_ 3 \_ \_ 3 3 \_ \_ 3 3 \_ 3 3 2 2

Game over! The winner is: 1

Final Score:

Player 1: 86

Player 2: 72

Player 3: 53

Player 4: 66

Player 1 win count: 4

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 0

New Game 7

Current Board Layout:

1 1 \_ \_ 4 4 \_ \_ 4 4 4 \_ \_ 4 \_ 4 4 4 \_ 4

1 \_ 4 4 4 1 4 4 2 4 2 4 4 \_ \_ \_ 4 \_ 4 4

1 1 \_ 1 1 1 4 2 2 4 2 4 4 1 4 4 \_ \_ 4 \_

\_ \_ 1 3 3 1 4 4 2 \_ 2 4 1 1 1 4 \_ \_ \_ 4

\_ 1 1 1 1 3 3 3 \_ 2 4 1 4 1 \_ 4 \_ \_ \_ 4

\_ \_ 3 3 3 1 \_ 2 2 2 4 1 4 4 4 \_ \_ 4 4 4

3 3 1 1 3 1 \_ 2 4 4 2 2 1 1 4 \_ 4 \_ 2 \_

3 3 1 1 3 1 2 \_ 1 4 1 2 2 1 1 \_ 4 2 2 2

\_ 1 3 3 1 1 2 2 1 2 1 2 1 2 2 2 4 \_ 2 \_

1 1 1 3 3 \_ 1 1 1 2 1 1 2 1 2 2 4 2 \_ \_

\_ 3 3 2 3 1 \_ \_ \_ 1 2 \_ 2 1 1 4 \_ 2 \_ \_

3 \_ 3 2 2 1 1 1 \_ 1 1 2 2 4 4 4 4 2 2 2

\_ \_ 3 \_ 2 2 1 \_ \_ 1 1 2 \_ 2 2 2 2 4 4 4

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3 3 \_ 3 3 3 \_ \_ \_ 1 1 1 \_ 1 \_ \_ 2 2 2 \_

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3 3 1 1 1 1 1 3 1 \_ 2 1 1 \_ 2 \_ \_ 2 \_ \_

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3 3 \_ \_ \_ \_ 3 \_ 3 3 3 \_ 2 2 3 3 3 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 82

Player 2: 81

Player 3: 61

Player 4: 60

Player 1 win count: 5

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 0

New Game 8

Current Board Layout:

1 1 4 4 1 \_ 4 \_ \_ \_ \_ \_ 4 4 4 \_ 4 4 \_ 4

1 \_ 4 1 1 \_ 4 \_ \_ 4 4 \_ \_ 4 \_ 4 \_ \_ \_ 4

1 1 4 1 4 2 4 4 2 4 4 \_ 4 \_ 4 4 \_ 4 4 4

4 4 1 4 4 2 4 2 2 \_ \_ 4 4 4 \_ 4 4 \_ 2 2

\_ 4 1 4 2 2 2 4 4 4 4 \_ 4 \_ 4 \_ \_ \_ 2 2

4 4 1 \_ 4 4 4 2 2 \_ 1 1 \_ 4 4 \_ 4 4 \_ 2

3 1 1 2 2 2 2 1 \_ 2 2 1 \_ 4 \_ 4 4 \_ 2 \_

3 3 \_ 1 \_ \_ \_ 1 2 2 \_ 1 1 4 2 4 \_ 4 2 \_

\_ 3 \_ 1 \_ 1 1 1 2 1 1 \_ 2 1 2 2 2 4 2 \_

3 \_ 1 1 1 \_ 2 2 1 1 \_ 2 2 2 1 1 2 4 2 \_

3 3 \_ 3 3 1 2 2 1 \_ 1 1 1 2 1 1 4 4 2 \_

\_ 3 3 \_ 3 1 1 1 2 1 1 2 2 1 2 2 2 2 4 4

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3 3 3 3 \_ \_ 3 3 1 1 3 1 2 2 2 \_ \_ 2 2 4

1 1 1 \_ \_ \_ 3 3 1 1 3 1 2 \_ \_ 2 \_ 2 4 \_

3 3 3 1 1 1 1 1 3 3 1 \_ 2 3 2 2 3 2 4 4

3 3 1 3 3 3 \_ 3 1 3 1 3 3 3 3 2 3 2 4 4

\_ 1 1 3 \_ \_ 3 3 1 3 1 1 2 2 2 3 3 \_ 2 2

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3 3 3 1 1 \_ \_ \_ 1 \_ 3 3 3 3 3 2 2 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 81

Player 3: 62

Player 4: 74

Player 1 win count: 6

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 0

New Game 9

Current Board Layout:

1 1 4 4 \_ 1 4 \_ \_ \_ 4 4 \_ \_ \_ \_ \_ \_ 4 4

1 \_ 4 \_ 4 1 4 4 4 \_ 4 \_ 4 \_ \_ \_ \_ \_ 4 4

1 1 4 4 \_ 1 4 1 \_ 4 \_ 4 4 \_ 4 4 4 4 \_ \_

4 4 1 \_ 4 4 1 1 4 4 4 \_ 4 4 \_ \_ \_ \_ 4 4

4 4 1 \_ 4 \_ \_ \_ 1 4 \_ \_ \_ \_ 4 \_ \_ 4 \_ \_

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3 \_ 3 \_ 1 4 4 4 4 4 1 1 2 2 4 \_ \_ 4 \_ \_

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3 3 \_ 3 \_ 3 3 1 1 1 2 1 2 1 1 \_ \_ 4 4 4

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3 3 \_ 3 \_ 3 1 \_ 1 \_ 1 1 1 2 1 1 2 2 \_ \_

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3 3 3 3 \_ 3 1 1 2 1 1 2 \_ 1 2 1 2 2 2 1

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3 3 3 \_ \_ 3 2 2 1 2 \_ \_ \_ 1 2 1 1 1 \_ 1

3 \_ \_ 3 3 \_ 3 3 1 2 \_ 2 2 2 \_ 2 2 2 2 \_

3 \_ 3 3 3 \_ 3 3 1 2 \_ 2 1 1 \_ \_ \_ 2 \_ \_

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\_ 3 \_ 3 3 3 \_ 3 1 2 1 1 2 2 \_ 2 \_ \_ \_ 2

3 3 3 \_ 3 \_ 3 3 3 1 1 \_ 2 2 \_ 2 \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 65

Player 3: 54

Player 4: 60

Player 1 win count: 7

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 0

New Game 10

Current Board Layout:

1 1 4 4 2 2 2 \_ \_ \_ 4 \_ \_ \_ \_ \_ 4 \_ \_ 4

1 4 4 \_ 4 2 \_ 4 \_ 4 4 \_ \_ \_ 4 \_ \_ 4 4 4

1 1 \_ \_ 4 \_ 2 4 \_ \_ 4 \_ \_ 4 4 \_ \_ 4 2 \_

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2 2 2 2 2 \_ 1 1 1 \_ \_ 2 2 2 \_ \_ 2 4 4 1

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3 3 3 1 3 3 1 1 1 \_ \_ 3 1 1 2 2 3 2 2 \_

3 \_ \_ 1 \_ 3 \_ \_ 1 \_ 1 1 3 \_ 3 2 3 2 \_ \_

3 \_ 1 1 1 3 3 \_ 1 \_ 1 1 3 3 3 2 3 2 1 1

\_ 3 3 3 3 \_ \_ 3 3 3 3 3 1 1 1 1 3 2 1 \_

3 \_ \_ \_ 3 \_ 1 1 1 \_ 1 1 3 \_ 3 3 1 1 2 2

3 \_ 3 3 \_ 3 3 3 1 \_ 1 3 3 3 1 1 3 3 \_ 2

3 \_ 3 3 \_ 3 \_ \_ \_ 1 1 \_ 3 1 1 3 3 3 2 2

Game over! The winner is: 2

Final Score:

Player 1: 84

Player 2: 85

Player 3: 57

Player 4: 61

Player 1 win count: 7

Player 2 win count: 3

Player 3 win count: 0

Player 4 win count: 0

New Game 11

Current Board Layout:

1 1 \_ 3 \_ 3 3 \_ 4 \_ \_ \_ 4 \_ \_ \_ \_ \_ \_ 4

1 \_ 3 3 3 \_ 3 3 4 \_ 4 4 \_ 4 4 4 4 \_ \_ 4

1 1 \_ 3 \_ \_ 3 1 4 4 \_ 4 1 4 \_ \_ \_ 4 \_ 4

3 3 1 \_ 3 \_ \_ 1 \_ \_ 4 4 1 1 1 1 \_ 4 4 \_

3 3 1 \_ 3 1 1 1 \_ 1 1 1 4 4 \_ 4 4 \_ 4 \_

3 1 1 1 3 \_ \_ \_ 1 1 \_ \_ 4 4 \_ \_ 4 \_ \_ \_

1 3 3 3 1 3 3 3 3 3 1 1 4 \_ 4 \_ 4 4 \_ \_

1 3 \_ 1 1 1 1 \_ 1 \_ 1 1 \_ 4 4 4 \_ \_ 4 \_

1 3 \_ 3 \_ \_ \_ 1 1 1 2 1 2 \_ 4 \_ 2 \_ 4 \_

1 \_ 3 3 1 \_ \_ 1 2 2 1 2 2 2 \_ 4 2 2 \_ 4

1 \_ 3 \_ 1 1 1 \_ 1 2 1 1 1 2 4 4 4 2 \_ 4

3 3 \_ 3 3 3 1 3 1 1 \_ 2 2 1 1 1 1 2 4 4

3 \_ 1 3 1 1 3 1 3 1 1 2 1 2 2 2 2 \_ 4 \_

3 1 1 1 3 1 3 1 3 3 2 2 \_ 1 1 2 1 1 1 4

3 \_ 2 2 3 3 \_ 2 2 2 3 3 2 2 1 1 2 2 2 4

\_ 3 3 2 2 3 3 \_ \_ 2 3 2 2 2 \_ \_ \_ 2 \_ 4

\_ 3 3 \_ 3 2 2 2 \_ 2 3 3 \_ \_ 2 2 \_ 2 \_ 4

\_ \_ \_ 3 3 2 3 3 2 \_ 2 2 2 2 \_ 2 2 \_ 2 2

\_ \_ \_ \_ 3 \_ 3 2 2 \_ 2 \_ \_ \_ \_ \_ 2 \_ \_ 2

3 3 3 3 \_ 3 3 \_ 2 \_ \_ 2 2 2 2 2 \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 80

Player 2: 71

Player 3: 74

Player 4: 52

Player 1 win count: 8

Player 2 win count: 3

Player 3 win count: 0

Player 4 win count: 0

New Game 12

Current Board Layout:

1 1 \_ 4 4 4 4 \_ 4 4 \_ \_ 4 4 \_ \_ \_ \_ 4 4

1 \_ 1 1 \_ \_ \_ 4 4 \_ 4 4 \_ 4 4 4 \_ \_ 4 \_

1 1 \_ 1 1 \_ 1 \_ \_ \_ 4 4 \_ \_ \_ \_ \_ \_ 4 \_

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1 \_ \_ 1 \_ 1 1 1 1 2 2 1 1 2 2 \_ 4 4 \_ 4

1 \_ \_ 1 3 3 3 2 2 1 1 2 \_ 2 2 \_ 4 \_ \_ 4

1 \_ 1 1 1 3 3 2 1 1 \_ \_ 2 4 2 \_ \_ 4 \_ 4

\_ 1 \_ 3 3 1 1 3 1 \_ 1 1 2 4 \_ \_ 4 4 \_ 4

1 1 1 3 3 1 1 1 \_ 2 1 2 2 4 4 4 \_ 4 \_ 4

3 3 3 1 1 \_ 3 \_ 2 2 1 2 1 2 2 2 \_ 4 2 \_

3 \_ 3 1 1 \_ 3 3 \_ 2 2 1 1 1 2 \_ 4 \_ 2 2

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3 3 1 \_ 3 3 \_ 3 1 \_ \_ 2 2 2 4 2 2 2 2 \_

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\_ 3 1 \_ \_ \_ 3 \_ 1 3 \_ 2 \_ 2 2 2 2 \_ 2 2

\_ 3 1 3 3 3 3 1 1 3 2 \_ \_ 2 \_ \_ \_ \_ \_ 2

3 3 3 1 1 1 1 3 3 3 2 2 2 \_ 2 2 2 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 67

Player 3: 49

Player 4: 60

Player 1 win count: 9

Player 2 win count: 3

Player 3 win count: 0

Player 4 win count: 0

New Game 13

Current Board Layout:

1 1 \_ \_ 1 \_ \_ 4 \_ 4 4 4 \_ \_ 4 4 \_ 4 \_ 4

1 \_ 1 1 1 \_ 4 4 4 \_ 4 4 \_ 4 4 \_ 4 \_ 4 4

1 1 \_ \_ 4 \_ 4 \_ \_ 4 1 \_ 4 \_ 2 \_ 4 4 \_ 4

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\_ 1 3 3 \_ 1 1 \_ 2 2 2 1 1 2 4 \_ 2 4 \_ \_

3 3 1 3 \_ 1 1 1 2 2 1 2 2 \_ 4 4 4 \_ 4 4

3 3 1 3 2 2 2 2 1 1 \_ 2 \_ 2 2 2 2 \_ 4 \_

3 \_ 1 3 \_ 3 \_ 2 \_ 1 2 2 3 3 \_ 2 \_ 4 4 \_

1 \_ 1 \_ 3 3 1 \_ \_ 1 1 \_ 3 3 \_ \_ 2 2 2 4

1 1 \_ \_ 3 1 1 1 1 \_ \_ 3 \_ 2 2 2 \_ 2 \_ 4

1 3 3 3 \_ 3 3 3 \_ \_ 3 3 3 2 \_ \_ 4 2 4 4

\_ 1 3 \_ 3 \_ \_ \_ 3 3 \_ 3 \_ 2 \_ 2 4 4 2 2

1 1 \_ \_ 3 \_ \_ 3 \_ 3 \_ 2 2 \_ 2 2 2 4 4 2

3 3 3 3 \_ \_ \_ \_ \_ 2 2 2 \_ \_ \_ 2 \_ \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 73

Player 2: 74

Player 3: 40

Player 4: 71

Player 1 win count: 9

Player 2 win count: 4

Player 3 win count: 0

Player 4 win count: 0

New Game 14

Current Board Layout:

1 1 \_ \_ \_ \_ \_ \_ 4 4 4 4 4 \_ 4 4 \_ 4 4 4

1 4 4 4 \_ 4 4 4 \_ 2 1 1 1 4 \_ 4 \_ \_ 4 4

1 1 \_ \_ 4 \_ \_ 4 4 2 \_ \_ 1 4 4 \_ \_ 4 \_ \_

\_ \_ 1 \_ 4 \_ \_ 2 2 2 1 1 4 4 \_ 4 4 4 \_ \_

\_ \_ 1 \_ 4 \_ 2 \_ \_ 1 2 1 1 \_ 1 \_ \_ 4 \_ \_

\_ 1 1 1 4 2 2 2 \_ 1 2 1 \_ 1 1 1 4 \_ \_ \_

\_ 4 4 4 1 \_ 2 1 1 1 2 \_ \_ 4 2 2 4 \_ \_ 4

4 \_ 4 1 1 1 1 2 2 \_ 2 4 4 4 2 2 4 4 4 \_

4 \_ 1 4 4 3 \_ 1 1 1 2 \_ \_ \_ 4 4 2 2 2 \_

1 1 1 4 4 3 \_ 1 1 \_ \_ 2 2 2 \_ 4 2 4 4 2

1 3 3 3 3 \_ 3 3 \_ 1 \_ 1 2 2 \_ 4 4 \_ 4 2

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\_ 3 3 3 3 1 1 1 1 \_ 1 1 \_ 2 1 1 2 \_ 4 2

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3 3 3 \_ 1 1 \_ 3 3 1 2 \_ 2 \_ 2 2 1 2 4 4

3 \_ \_ 3 3 1 3 \_ \_ 1 2 \_ \_ 2 2 \_ 1 2 4 \_

3 \_ \_ 3 3 \_ 3 3 \_ 1 2 2 \_ \_ \_ 1 1 2 \_ \_

\_ 3 3 \_ \_ 3 3 \_ 3 1 3 2 1 1 2 2 2 1 2 2

3 3 \_ \_ 3 \_ \_ \_ 3 3 1 1 1 2 \_ 2 1 1 1 2

3 \_ \_ \_ 3 3 3 3 \_ 3 \_ \_ 2 2 \_ 2 \_ 1 2 2

Game over! The winner is: 1

Final Score:

Player 1: 85

Player 2: 73

Player 3: 50

Player 4: 69

Player 1 win count: 10

Player 2 win count: 4

Player 3 win count: 0

Player 4 win count: 0

New Game 15

Current Board Layout:

1 1 \_ \_ 1 4 \_ \_ \_ \_ \_ \_ 4 4 \_ \_ \_ \_ 4 4

1 \_ 1 1 1 4 \_ \_ 4 4 4 4 \_ \_ \_ 4 \_ \_ 4 4

1 1 \_ \_ 4 4 \_ 4 \_ \_ \_ 4 \_ \_ \_ 4 4 \_ 4 \_

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3 3 3 \_ 1 \_ 1 2 2 1 2 1 1 4 \_ 4 \_ 4 \_ 4

3 \_ \_ \_ 1 \_ 2 2 \_ 1 2 1 2 \_ 4 \_ 4 4 4 \_

\_ 3 \_ 1 1 \_ 2 1 1 1 \_ 2 2 2 4 \_ \_ 4 \_ \_

\_ 3 3 3 \_ 1 1 2 2 2 2 1 \_ 2 4 2 2 \_ 4 4

2 2 2 3 \_ 1 1 1 2 1 1 2 2 \_ 2 2 2 \_ 4 4

2 3 3 2 2 2 2 2 1 2 2 2 \_ \_ \_ \_ 4 4 2 2

2 \_ 3 \_ \_ \_ \_ \_ 1 1 \_ \_ 2 2 2 2 \_ 4 4 2

\_ 3 \_ \_ \_ 3 3 3 3 1 1 \_ 2 1 \_ \_ 2 2 2 4

3 \_ 3 3 3 \_ 1 1 1 3 \_ 1 1 1 2 2 \_ 2 4 4

3 \_ 3 \_ 3 \_ \_ 1 3 3 \_ 1 3 \_ 2 \_ \_ 2 \_ 4

3 \_ \_ \_ \_ 3 1 3 3 1 1 \_ 3 2 2 \_ 2 \_ 2 2

3 \_ \_ \_ 3 3 1 1 \_ 3 1 3 3 \_ \_ 2 2 2 \_ 2

3 \_ \_ \_ 3 \_ \_ 1 3 3 3 \_ \_ 3 3 3 2 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 68

Player 2: 66

Player 3: 48

Player 4: 65

Player 1 win count: 11

Player 2 win count: 4

Player 3 win count: 0

Player 4 win count: 0

TOTAL REWARD:

CENTER CONTROL:2,327 pts + 15 wins  
RANDOM: 1,711 pts + 0 wins

----------------------------------------------------------------

**RANDOM (P1 and P2) VS CORNER CONTROL (P3 and P4) 0 -15**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

1 1 1 4 4 1 1 1 \_ 1 1 1 \_ \_ \_ 3 3 \_ 4 4

\_ 1 1 4 1 4 4 1 1 4 1 \_ 4 4 \_ 3 3 4 4 \_

1 4 4 1 1 4 4 4 \_ 4 4 \_ 4 3 3 4 \_ 4 3 4

1 4 4 \_ 4 1 \_ \_ \_ 4 3 4 4 3 4 4 4 \_ 3 4

1 1 1 \_ 4 1 1 1 \_ 4 3 \_ \_ 4 3 4 3 3 3 4

4 4 4 1 4 \_ \_ 1 4 \_ 4 3 \_ 4 3 3 4 4 \_ \_

4 1 1 1 4 4 \_ \_ 4 \_ 3 3 4 4 4 3 \_ 4 4 \_

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1 1 1 3 3 1 1 3 1 \_ \_ 1 3 \_ 3 \_ 4 4 4 2

\_ 1 \_ 3 3 1 1 3 3 3 3 1 3 2 2 \_ 3 2 2 4

1 3 1 \_ 3 \_ \_ 1 1 1 1 3 3 \_ 2 2 3 2 2 4

1 \_ 3 3 2 \_ 3 \_ \_ \_ \_ 3 \_ 2 \_ 2 3 \_ 2 4

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3 3 2 2 2 \_ 2 \_ \_ \_ 2 2 2 \_ \_ \_ \_ \_ 2 2

Game over! The winner is: 3

Final Score:

Player 1: 64

Player 2: 55

Player 3: 80

Player 4: 73

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 1

Player 4 win count: 0

New Game 2

Current Board Layout:

1 \_ 1 1 1 1 3 3 3 3 1 1 1 1 \_ \_ \_ \_ 4 4

1 1 \_ 1 3 3 1 1 \_ 1 3 \_ 4 1 4 \_ \_ 4 4 \_

1 \_ 1 3 1 3 1 1 \_ 1 3 \_ 4 4 4 \_ 4 \_ 4 \_

\_ 1 \_ 3 1 3 1 3 1 1 3 4 \_ \_ \_ 4 4 4 \_ \_

\_ 1 \_ 3 1 \_ 3 1 \_ \_ 3 4 4 4 \_ \_ 4 \_ \_ \_

1 1 3 3 1 3 3 1 1 4 3 4 \_ \_ 4 4 \_ \_ 4 \_

1 3 \_ \_ 1 3 \_ \_ \_ 4 4 3 3 4 4 2 2 2 4 \_

3 3 1 1 3 1 3 3 1 4 2 2 3 4 2 2 4 4 4 \_

1 3 1 1 3 1 3 1 1 4 2 3 3 2 4 4 2 2 \_ 4

1 1 \_ \_ 1 3 3 1 3 3 3 2 2 2 4 \_ \_ \_ 4 4

\_ 1 1 \_ 1 1 1 3 3 \_ 2 \_ 2 4 4 \_ 4 \_ \_ 4

1 \_ \_ 3 3 \_ 1 \_ 4 3 2 \_ 4 2 \_ 4 4 \_ \_ \_

1 \_ 3 3 3 \_ 3 4 4 3 2 4 4 2 2 4 \_ 4 4 \_

1 1 1 \_ \_ 3 3 4 3 3 3 4 4 2 \_ 4 \_ 4 \_ 2

3 3 \_ \_ 3 3 4 3 4 4 4 3 2 \_ 4 \_ \_ 4 2 2

3 3 \_ 3 \_ \_ 4 3 4 2 2 3 2 2 2 \_ 2 4 2 2

\_ \_ 3 3 3 \_ 4 3 3 2 2 3 2 \_ \_ 2 2 2 4 4

\_ 3 \_ 3 \_ 3 4 3 2 \_ \_ 2 3 3 2 \_ 2 4 2 4

\_ 3 3 \_ \_ 3 2 4 4 2 2 2 2 3 2 2 \_ 4 2 2

3 3 \_ 3 3 3 2 2 2 4 4 4 4 4 \_ 2 2 4 \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 62

Player 2: 60

Player 3: 109

Player 4: 85

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 0

New Game 3

Current Board Layout:

1 \_ 1 \_ \_ \_ 1 3 3 \_ 1 \_ 3 3 3 \_ \_ \_ 4 4

1 \_ 1 4 4 \_ 1 3 3 \_ 1 3 4 4 4 3 3 4 4 \_

1 1 \_ 4 1 1 1 \_ \_ 3 1 3 4 \_ \_ 4 \_ 4 3 \_

\_ \_ 1 4 4 \_ \_ 1 3 3 1 3 4 \_ 4 4 4 \_ 3 \_

\_ \_ 4 1 1 4 \_ 1 1 3 1 3 1 4 \_ 4 3 3 3 \_

\_ 4 4 1 1 4 4 4 1 1 3 1 1 4 \_ 3 4 4 \_ 3

3 1 4 \_ 3 1 1 1 4 4 \_ 3 4 4 \_ 3 3 4 4 3

3 1 1 1 3 3 1 \_ 4 3 3 3 \_ 4 \_ 3 3 4 \_ 3

3 3 1 3 1 3 1 4 4 3 \_ \_ 3 3 3 4 4 \_ \_ 3

1 1 3 3 1 1 3 3 3 4 4 3 3 \_ \_ \_ 4 4 4 3

1 \_ \_ \_ \_ 1 4 3 \_ 4 4 \_ \_ \_ 4 4 \_ 2 \_ \_

1 1 3 3 3 3 4 3 \_ 4 \_ 4 4 4 \_ 4 2 2 2 \_

3 3 1 3 \_ \_ 3 4 4 2 \_ \_ 4 \_ \_ 4 \_ 2 \_ \_

\_ 3 1 \_ \_ 3 3 4 4 2 \_ \_ 4 2 2 4 \_ \_ 2 2

3 3 1 \_ 3 3 4 3 2 2 \_ \_ \_ \_ 2 \_ 4 2 2 \_

1 1 \_ 3 \_ 4 4 3 2 \_ 2 2 2 2 \_ 2 2 4 2 \_

1 \_ 3 3 3 4 \_ 3 \_ \_ 4 \_ \_ \_ 2 \_ \_ 4 \_ 2

1 3 \_ 3 4 \_ 3 3 \_ \_ 4 \_ \_ \_ 2 2 \_ 4 2 \_

1 3 3 4 4 2 2 2 2 2 4 \_ 2 \_ 2 \_ \_ 4 2 2

3 3 2 2 2 4 4 4 4 4 2 2 2 2 \_ \_ \_ \_ \_ 2

Game over! Tied between players: 3, 4

Final Score:

Player 1: 56

Player 2: 46

Player 3: 104

Player 4: 104

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 0

New Game 4

Current Board Layout:

1 1 \_ \_ 1 \_ 4 \_ 4 4 4 4 1 1 1 4 4 \_ 4 4

\_ 1 \_ 1 1 4 4 4 \_ 1 \_ \_ \_ 1 \_ 1 1 4 4 \_

\_ 1 1 4 4 1 1 1 \_ 1 1 1 1 3 1 1 4 \_ 4 \_

1 4 4 \_ 4 4 3 3 1 \_ \_ 4 4 3 1 4 4 4 3 3

1 1 4 1 1 \_ 3 3 1 \_ 4 4 4 3 4 1 4 \_ \_ 3

1 1 4 1 1 3 4 4 1 \_ \_ 3 3 4 4 1 3 3 \_ 3

\_ 3 4 3 3 1 \_ 4 1 \_ 3 3 4 4 1 1 3 3 3 1

\_ 3 3 4 \_ 1 4 4 1 \_ 4 4 3 3 3 3 1 \_ 1 3

3 4 4 4 \_ 1 1 1 4 4 4 1 4 \_ \_ 3 1 1 1 3

3 4 \_ \_ 4 4 4 4 1 \_ \_ 1 4 \_ 3 \_ 2 2 \_ 3

3 3 3 \_ \_ 4 \_ 1 1 1 1 4 4 4 3 3 3 2 2 3

\_ \_ \_ 3 3 3 4 4 4 4 4 \_ 3 \_ 3 2 2 \_ 2 3

\_ \_ 3 3 4 4 3 2 2 \_ 3 3 3 3 \_ \_ \_ 3 3 2

\_ 3 \_ \_ 4 3 3 2 \_ 3 \_ 2 2 \_ \_ 2 2 \_ 3 2

\_ 3 3 4 3 3 2 3 3 3 2 \_ 2 2 2 \_ 2 3 3 2

\_ 3 \_ 3 \_ \_ 2 3 \_ \_ 2 \_ \_ \_ \_ \_ 2 \_ \_ 2

\_ \_ 3 3 3 2 2 \_ 2 \_ 2 \_ 2 2 2 \_ 2 \_ \_ 2

\_ 3 \_ 3 \_ \_ 2 \_ 2 2 \_ 2 \_ \_ 2 \_ \_ 2 2 \_

\_ 3 3 \_ 2 2 \_ 2 2 \_ \_ 2 2 2 \_ 2 \_ 2 2 \_

3 3 \_ \_ \_ 2 2 \_ \_ \_ \_ 2 \_ \_ 2 2 2 \_ \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 61

Player 2: 60

Player 3: 85

Player 4: 73

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 3

Player 4 win count: 0

New Game 5

Current Board Layout:

1 4 4 4 \_ 1 1 \_ \_ \_ \_ 1 1 1 1 1 \_ \_ 4 4

1 1 1 4 1 1 \_ 1 1 1 1 \_ \_ 4 \_ \_ \_ 4 4 \_

\_ \_ 1 4 1 4 \_ \_ \_ 1 \_ 4 4 4 \_ 4 \_ 4 \_ \_

1 1 3 1 4 4 1 1 1 4 \_ 4 \_ \_ 4 4 4 \_ \_ 4

1 \_ 3 \_ 1 \_ 4 \_ \_ 4 4 \_ \_ 4 \_ 4 \_ \_ 4 4

1 1 3 1 1 \_ 4 4 4 3 4 \_ 4 4 2 \_ 4 4 \_ 4

3 3 1 3 1 \_ 4 \_ 3 3 4 \_ 4 4 2 \_ \_ 4 4 \_

3 3 1 3 3 1 \_ 4 3 4 \_ 4 \_ 2 2 2 \_ 4 \_ 4

\_ 1 3 \_ \_ 1 1 4 \_ 3 \_ 4 \_ 4 4 4 2 2 2 4

\_ 1 \_ 3 3 3 \_ 4 3 3 4 4 2 2 2 2 4 4 2 4

1 1 1 \_ \_ 3 4 4 \_ 3 \_ 4 \_ \_ 2 \_ 4 4 2 4

\_ \_ \_ 1 1 3 \_ \_ 4 3 \_ \_ 4 2 \_ \_ \_ 2 4 \_

\_ 3 \_ \_ 1 1 3 4 4 \_ 3 3 4 \_ 2 \_ 2 2 4 2

\_ 3 3 \_ \_ 3 3 4 3 3 3 \_ 4 2 2 \_ \_ \_ 2 2

\_ 3 3 \_ 3 3 4 3 \_ \_ 2 2 4 2 \_ 2 2 \_ 2 \_

3 \_ \_ 3 \_ \_ 4 3 3 3 \_ 2 4 2 \_ 2 2 2 \_ \_

3 \_ 3 3 3 4 4 3 2 2 3 2 2 \_ 2 \_ \_ \_ 2 2

\_ 3 \_ 3 \_ \_ 3 \_ 3 2 3 3 3 2 2 2 \_ \_ \_ \_

\_ 3 3 \_ 3 \_ 3 3 3 2 \_ \_ 3 \_ 2 \_ \_ \_ \_ \_

3 3 \_ 3 3 3 2 2 2 \_ 2 2 2 2 \_ 2 2 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 47

Player 2: 61

Player 3: 71

Player 4: 84

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 3

Player 4 win count: 1

New Game 6

Current Board Layout:

1 1 \_ \_ \_ \_ \_ \_ 1 1 1 1 3 3 \_ \_ \_ \_ 4 4

1 1 4 1 1 1 1 1 4 4 4 \_ \_ 4 3 3 3 4 4 \_

\_ \_ 1 4 4 4 4 4 1 1 1 4 4 4 \_ 4 3 4 \_ \_

1 1 \_ 1 1 1 \_ \_ \_ 4 \_ 4 \_ \_ 4 4 4 3 3 \_

1 \_ 1 4 4 1 \_ 1 \_ 4 4 \_ \_ 4 \_ 4 3 3 \_ 3

\_ \_ 1 \_ 4 \_ 1 1 \_ \_ 4 \_ 4 4 3 3 4 4 \_ 3

\_ 1 1 1 4 \_ 1 4 4 \_ 4 3 3 4 3 3 \_ 4 4 3

1 3 3 3 3 4 1 4 4 4 \_ \_ 3 \_ 3 \_ 3 4 \_ 3

1 2 2 2 3 4 4 1 1 \_ 3 \_ 3 3 \_ \_ 4 \_ \_ 3

1 1 1 2 \_ 3 4 \_ 1 \_ 3 3 \_ 4 \_ \_ 4 \_ 4 4

\_ \_ 2 1 1 3 1 \_ 1 1 3 \_ \_ 4 \_ 4 4 4 \_ 4

\_ 2 2 3 3 3 1 1 \_ \_ 3 \_ \_ 4 4 \_ 2 \_ 4 4

2 3 3 2 2 2 3 1 \_ \_ \_ 3 3 4 3 4 2 4 2 \_

2 \_ 3 2 \_ 3 3 \_ \_ 3 3 3 \_ 3 3 4 2 4 2 \_

2 3 3 2 3 3 \_ \_ 3 \_ 2 \_ \_ 2 2 4 2 4 2 \_

2 2 \_ 3 2 \_ 3 3 3 2 2 \_ 2 2 4 4 2 4 2 \_

\_ \_ 3 3 3 2 2 \_ 3 \_ 2 2 4 4 \_ 2 \_ 2 4 \_

\_ 3 \_ 3 \_ 2 2 \_ 2 2 \_ \_ 2 4 \_ 2 2 2 4 2

\_ 3 3 \_ 2 \_ \_ 2 2 \_ \_ 2 2 2 2 \_ 4 4 2 2

3 3 \_ \_ 2 \_ \_ 2 \_ \_ \_ \_ \_ \_ \_ \_ 4 4 2 2

Game over! The winner is: 4

Final Score:

Player 1: 50

Player 2: 62

Player 3: 74

Player 4: 84

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 3

Player 4 win count: 2

New Game 7

Current Board Layout:

1 \_ \_ \_ \_ 1 \_ \_ 1 1 \_ 1 \_ 1 1 1 \_ \_ 4 4

1 1 4 1 1 1 1 4 4 4 1 1 1 4 4 1 1 4 4 \_

\_ 1 1 4 4 4 4 1 1 1 \_ 1 4 4 4 \_ 4 2 4 \_

1 \_ \_ 1 \_ \_ 1 4 4 1 \_ \_ 1 1 1 4 4 4 2 \_

1 3 3 1 1 1 \_ \_ 4 1 \_ 4 4 4 3 3 4 \_ 2 \_

1 3 3 1 \_ \_ \_ 4 \_ \_ 4 4 3 \_ 4 4 3 3 2 2

1 \_ 1 3 1 1 \_ 4 4 4 \_ 3 3 4 4 \_ 3 2 4 2

\_ \_ 1 1 3 1 \_ 4 3 3 3 \_ 3 4 3 3 4 2 4 \_

1 1 \_ \_ 3 1 3 3 \_ \_ 3 \_ 4 3 3 4 4 2 4 \_

1 \_ \_ 3 3 3 1 3 \_ \_ 3 4 4 4 4 \_ 4 2 4 \_

1 1 3 \_ 1 1 1 3 3 4 4 3 3 3 3 4 \_ 2 4 \_

\_ \_ 3 \_ 4 1 4 4 4 3 4 4 \_ \_ \_ 4 4 4 2 2

4 \_ 3 \_ 4 \_ 3 \_ 4 3 \_ \_ 2 2 2 \_ \_ 4 2 2

4 3 3 4 4 3 3 3 4 3 3 \_ 2 2 \_ \_ 4 2 \_ \_

3 4 4 \_ 3 4 3 4 3 \_ 3 2 3 3 2 2 4 2 \_ \_

3 4 4 3 3 4 4 4 3 2 2 2 3 2 3 3 4 2 \_ \_

3 \_ 3 3 \_ \_ \_ 3 3 \_ \_ \_ 3 2 3 4 4 2 \_ \_

\_ 3 \_ \_ 3 3 3 \_ 3 \_ \_ 2 2 2 3 3 \_ \_ 2 2

\_ 3 3 \_ \_ 3 3 \_ \_ 3 3 3 3 3 2 2 2 2 \_ 2

3 3 \_ \_ \_ \_ \_ \_ \_ \_ \_ 2 2 2 \_ \_ 2 \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 57

Player 2: 48

Player 3: 104

Player 4: 109

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 3

Player 4 win count: 3

New Game 8

Current Board Layout:

1 1 \_ 1 1 \_ 1 1 1 1 \_ 1 1 \_ 1 \_ \_ \_ 4 4

1 4 \_ \_ 1 1 \_ \_ 1 \_ 1 1 4 1 1 \_ \_ 4 4 \_

1 4 \_ \_ \_ \_ 1 1 \_ 1 \_ 1 4 1 1 4 \_ 4 \_ \_

1 4 4 4 \_ \_ 1 1 \_ 1 \_ 4 4 \_ 4 4 4 \_ \_ 4

4 1 1 1 1 1 4 4 1 1 1 4 \_ 4 \_ 4 \_ \_ 4 4

4 4 \_ \_ \_ 4 1 1 4 4 4 1 1 4 \_ \_ 4 4 \_ 4

\_ 1 4 4 4 4 1 \_ 4 3 4 \_ 4 4 4 \_ \_ 4 4 2

1 1 1 \_ 1 1 4 4 3 3 \_ 4 \_ \_ 2 2 2 4 2 \_

\_ 1 \_ 1 1 4 4 4 \_ 3 4 4 4 4 \_ 4 4 2 2 2

1 \_ \_ 1 \_ 1 \_ 3 4 3 \_ 3 3 \_ 4 \_ 4 4 2 \_

\_ 3 3 3 1 1 1 3 3 4 3 3 4 4 4 2 2 2 4 4

\_ 3 \_ 3 \_ \_ \_ \_ 3 4 \_ \_ 4 \_ 3 3 3 2 2 4

\_ \_ 3 \_ \_ \_ 3 \_ 3 4 \_ 3 3 3 \_ 2 2 3 3 4

\_ \_ 3 3 3 \_ 3 3 \_ 4 3 \_ 3 3 2 2 \_ 3 3 \_

3 \_ 3 \_ \_ 3 3 \_ 3 3 3 \_ 2 2 3 3 3 2 2 \_

3 3 \_ \_ 3 \_ \_ \_ 3 2 2 3 2 \_ 3 \_ \_ 3 2 \_

3 \_ \_ 3 3 3 \_ 2 \_ 2 2 3 2 2 3 \_ 3 3 2 2

\_ \_ 3 \_ 3 \_ \_ 2 2 \_ \_ 2 3 3 2 2 2 2 3 \_

\_ 3 3 \_ \_ \_ 3 2 \_ 2 2 2 \_ 3 2 \_ \_ \_ 2 2

3 3 \_ 3 3 3 3 \_ \_ \_ \_ 2 \_ 3 \_ \_ 2 2 \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 58

Player 2: 51

Player 3: 80

Player 4: 77

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 4

Player 4 win count: 3

New Game 9

Current Board Layout:

1 1 1 1 1 \_ 1 4 4 \_ \_ 1 1 4 4 \_ \_ \_ 4 4

\_ \_ \_ \_ \_ 1 1 4 1 4 \_ 1 \_ 4 \_ \_ \_ 4 4 \_

\_ 1 1 1 1 \_ 1 4 1 1 1 4 \_ 4 4 \_ \_ \_ 4 \_

\_ \_ \_ 4 4 4 4 1 \_ \_ \_ 4 4 \_ \_ \_ 4 4 \_ 4

\_ \_ \_ 4 \_ 1 1 4 4 4 \_ 4 \_ \_ \_ 4 4 \_ \_ 4

\_ 1 1 \_ 1 4 4 1 \_ 4 \_ 4 \_ 4 \_ 4 \_ \_ \_ 4

1 1 \_ 1 1 1 4 1 1 4 \_ \_ 4 4 4 \_ \_ 4 4 \_

\_ 3 3 3 1 3 1 1 \_ \_ 4 4 \_ 4 \_ \_ 4 4 4 2

\_ 3 \_ 1 3 3 \_ \_ \_ 4 \_ 4 \_ \_ 4 4 \_ \_ 2 2

\_ 3 \_ 1 \_ 3 1 4 4 4 \_ 4 4 2 2 4 4 4 2 \_

\_ \_ \_ 1 1 3 1 \_ \_ 4 \_ \_ 2 3 3 3 2 2 4 \_

1 1 \_ 1 3 1 1 3 3 3 3 \_ 2 2 2 2 3 2 4 4

1 1 3 3 3 1 3 1 1 1 3 2 \_ \_ \_ 3 3 2 2 4

3 1 3 1 1 3 3 \_ 3 \_ 2 2 3 3 3 \_ 2 \_ 4 \_

3 3 1 1 3 3 \_ 3 3 2 2 3 \_ 3 3 2 2 2 4 4

3 \_ 1 3 1 1 1 3 \_ 3 3 3 2 2 \_ \_ 2 \_ 4 2

\_ \_ 3 3 3 1 2 3 \_ \_ \_ 3 2 2 2 3 3 2 2 4

\_ 3 \_ 3 2 1 2 \_ 3 2 2 2 3 3 3 2 2 2 \_ 4

\_ 3 3 \_ 2 \_ 2 2 2 \_ \_ \_ 3 \_ 3 \_ 3 3 2 2

3 3 \_ 2 2 2 \_ \_ \_ 2 2 2 2 \_ \_ 3 3 \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 65

Player 2: 58

Player 3: 72

Player 4: 76

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 4

Player 4 win count: 4

New Game 10

Current Board Layout:

1 \_ 3 3 \_ 1 1 \_ \_ \_ \_ 1 1 1 1 \_ 1 \_ 4 4

1 1 3 3 \_ 1 1 \_ 4 4 4 4 1 4 \_ 1 1 4 4 \_

3 3 1 1 1 4 4 1 1 1 1 1 4 4 \_ 4 1 4 \_ \_

\_ 3 1 4 4 1 1 4 4 3 3 \_ 4 \_ 4 4 4 \_ \_ 4

3 3 1 4 4 4 \_ 4 3 4 \_ \_ 4 \_ \_ 4 \_ \_ 4 4

1 1 3 3 3 1 4 4 3 4 4 4 \_ \_ 2 \_ 4 4 \_ 4

1 3 1 1 3 1 1 \_ 3 4 \_ \_ 2 2 2 \_ \_ 4 4 \_

1 3 3 1 1 \_ 1 \_ \_ 3 4 4 4 4 \_ 2 \_ 4 \_ 4

\_ \_ 3 1 \_ \_ 3 3 3 4 3 3 4 \_ \_ 2 \_ \_ 4 4

1 \_ 1 3 3 1 1 3 \_ 4 3 4 \_ \_ \_ 2 \_ \_ 2 2

\_ 1 1 \_ 3 1 1 3 \_ 4 \_ 4 4 4 4 \_ 2 2 2 \_

1 1 \_ 1 3 3 1 \_ 3 4 \_ \_ \_ 3 \_ 4 4 4 \_ 2

\_ \_ 3 1 1 1 3 \_ 3 4 3 3 3 3 \_ 2 \_ 4 \_ 2

\_ 3 3 1 \_ 3 3 \_ 3 3 4 \_ 2 2 3 2 2 4 \_ 2

\_ 3 3 \_ 3 3 \_ 3 \_ 3 4 4 2 3 3 \_ \_ 2 \_ 2

\_ \_ \_ 3 \_ \_ \_ 3 \_ 4 2 4 2 2 3 2 2 2 2 \_

\_ \_ 3 3 3 \_ 2 3 3 4 2 2 4 4 2 3 3 3 3 3

\_ 3 \_ 3 \_ 3 2 3 2 4 2 \_ \_ 4 2 2 2 \_ 2 \_

\_ 3 3 \_ \_ 3 \_ 2 2 2 4 2 2 4 2 \_ \_ 2 2 \_

3 3 \_ \_ \_ 3 3 3 2 \_ \_ \_ 2 2 \_ \_ 2 \_ 2 2

Game over! The winner is: 3

Final Score:

Player 1: 57

Player 2: 55

Player 3: 85

Player 4: 80

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 5

Player 4 win count: 4

New Game 11

Current Board Layout:

1 \_ \_ \_ 1 1 1 1 1 \_ 1 1 1 4 4 4 4 \_ 4 4

1 1 1 1 \_ 3 3 3 \_ 1 1 4 \_ 1 1 1 \_ 4 4 \_

\_ \_ \_ \_ \_ 3 1 1 1 \_ \_ 1 4 4 \_ 4 \_ 4 \_ \_

\_ 3 3 3 \_ 3 1 3 3 3 \_ 1 4 \_ 4 4 4 \_ \_ 2

\_ 3 3 \_ 3 \_ 1 \_ 3 \_ \_ 1 4 4 \_ 4 \_ \_ 2 2

\_ \_ \_ \_ 3 3 3 1 1 3 3 1 \_ 1 1 \_ 4 4 2 \_

\_ \_ 3 3 1 \_ 3 1 \_ \_ 3 3 1 1 4 1 1 4 4 2

1 1 \_ 3 \_ 1 1 3 3 3 4 \_ 3 4 4 \_ \_ 4 \_ 2

1 1 3 3 \_ 1 1 \_ 3 \_ 4 \_ 3 4 \_ 4 4 \_ 2 2

\_ 3 1 1 1 \_ 1 \_ 3 4 4 4 3 4 \_ \_ 4 \_ 2 \_

\_ 3 1 \_ 3 1 \_ 4 4 3 \_ \_ 4 3 3 \_ 4 4 \_ 2

\_ 3 \_ 3 \_ 1 1 1 4 3 3 4 4 2 2 4 \_ 2 2 2

\_ 3 \_ 3 \_ 1 3 \_ 4 3 \_ 2 4 2 \_ 4 \_ 2 \_ \_

\_ 3 \_ 3 \_ \_ 3 3 4 3 \_ 2 4 2 \_ 4 4 4 2 2

\_ \_ 3 3 \_ 3 3 4 3 4 4 \_ 2 4 2 2 \_ \_ 4 2

3 3 \_ \_ 3 \_ \_ 4 3 4 4 \_ 2 4 4 2 2 4 4 2

3 \_ \_ 3 3 3 4 4 3 3 4 2 2 2 4 \_ 2 \_ 4 2

3 \_ 3 \_ 3 \_ 3 3 4 3 2 \_ \_ 4 2 2 \_ 2 2 4

\_ 3 3 \_ 2 2 3 2 4 4 2 2 2 4 2 \_ \_ 2 2 4

3 3 \_ \_ 2 \_ 2 2 2 2 \_ 2 \_ 4 2 2 \_ \_ \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 55

Player 2: 58

Player 3: 81

Player 4: 80

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 6

Player 4 win count: 4

New Game 12

Current Board Layout:

1 1 1 \_ 1 1 1 \_ \_ \_ 1 1 4 4 4 \_ \_ \_ 4 4

\_ 1 \_ 1 \_ \_ 1 \_ 4 4 4 1 4 2 2 2 \_ 4 4 \_

\_ 1 \_ 1 1 4 4 4 \_ 4 1 1 4 2 \_ 4 \_ 4 \_ 4

\_ \_ 1 \_ 1 4 4 \_ \_ 4 \_ 4 1 2 4 4 4 \_ 2 4

1 1 1 \_ 4 1 1 4 4 \_ 4 4 1 4 2 4 2 2 2 4

1 \_ \_ 1 4 1 4 1 1 \_ 4 1 1 4 \_ 2 4 4 2 4

\_ \_ 3 1 4 1 4 1 1 \_ 4 1 4 4 \_ 2 \_ 4 4 \_

\_ 3 3 1 4 1 4 3 \_ 1 1 4 \_ 4 \_ 2 \_ 4 \_ \_

\_ 1 3 1 4 3 3 3 3 4 4 4 2 \_ 4 2 2 \_ 2 2

3 1 1 3 3 4 4 4 \_ 4 \_ \_ 2 \_ 4 \_ \_ 2 \_ \_

3 1 \_ 4 3 4 \_ 4 3 3 3 \_ 2 \_ 4 4 3 2 \_ \_

3 1 4 4 3 3 4 \_ 3 \_ 2 3 2 \_ 2 2 3 2 \_ \_

1 3 1 1 4 4 3 \_ 3 2 2 3 2 \_ 2 \_ 3 2 \_ \_

\_ 3 \_ 1 4 4 3 3 \_ 2 \_ 2 3 2 2 \_ 3 \_ 2 2

\_ 3 1 \_ \_ 3 3 \_ \_ 2 \_ 2 2 \_ 3 3 \_ \_ 2 \_

\_ 3 1 1 3 \_ \_ 3 3 3 \_ \_ 2 2 3 3 3 \_ 2 2

\_ 3 1 3 3 3 \_ \_ \_ 3 3 \_ \_ 3 2 2 2 2 \_ \_

\_ \_ 3 1 3 \_ 3 \_ \_ \_ \_ 3 3 3 \_ \_ 2 \_ 2 2

\_ 3 3 1 1 \_ 3 3 3 3 \_ \_ \_ 3 \_ 2 \_ \_ 2 2

3 3 \_ 1 1 \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ 2 2 2 \_ 2

Game over! The winner is: 4

Final Score:

Player 1: 61

Player 2: 61

Player 3: 69

Player 4: 76

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 6

Player 4 win count: 5

New Game 13

Current Board Layout:

1 1 1 3 3 4 4 4 4 1 1 1 \_ \_ \_ \_ \_ \_ 4 4

\_ 1 3 3 1 1 1 1 1 4 4 1 \_ 4 \_ \_ \_ 4 4 \_

3 3 1 1 3 3 3 \_ \_ 4 4 1 4 4 \_ 4 \_ 4 \_ \_

3 3 1 1 3 1 1 1 4 1 1 \_ 4 \_ 4 4 4 \_ \_ 4

1 \_ 1 \_ 1 3 4 4 4 1 1 \_ 4 2 \_ 4 \_ \_ 4 4

1 1 \_ 1 \_ 3 4 \_ \_ 4 4 4 2 2 2 \_ 4 4 \_ 4

\_ \_ 1 1 \_ 3 3 3 \_ 3 4 \_ 2 \_ \_ 2 2 4 4 \_

1 3 1 3 3 \_ \_ \_ 3 3 4 \_ 3 2 2 \_ \_ 4 \_ \_

1 3 1 3 1 1 1 1 3 \_ 3 3 \_ 2 \_ \_ 4 \_ \_ \_

\_ 1 3 1 \_ 3 \_ \_ 3 \_ 3 \_ \_ 2 2 4 4 4 4 \_

1 1 3 1 1 3 3 3 4 \_ 3 3 4 4 4 2 \_ \_ \_ 4

1 \_ 3 1 \_ 3 \_ \_ \_ 4 \_ \_ \_ 4 4 2 \_ \_ \_ 4

\_ \_ \_ 1 \_ \_ 3 \_ \_ 4 4 4 4 \_ 2 2 \_ 4 4 4

\_ 3 3 3 3 \_ 3 3 \_ \_ 3 \_ 2 4 2 \_ \_ \_ \_ \_

3 \_ 3 \_ \_ 3 3 \_ 3 3 3 \_ 2 4 4 2 2 \_ \_ \_

3 3 \_ \_ 3 \_ \_ \_ 3 4 4 2 2 2 4 2 \_ 2 2 2

3 \_ \_ 3 3 3 4 4 4 3 \_ 4 4 4 2 4 4 \_ 2 \_

\_ \_ 3 \_ 3 4 3 3 \_ 3 3 3 3 4 2 4 \_ 2 \_ \_

\_ 3 3 \_ 4 4 3 3 3 \_ \_ 2 \_ \_ 2 4 4 2 2 \_

3 3 \_ \_ \_ \_ 4 4 4 4 4 2 2 2 \_ \_ 2 \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 50

Player 2: 42

Player 3: 80

Player 4: 109

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 6

Player 4 win count: 6

New Game 14

Current Board Layout:

1 1 1 \_ \_ \_ 3 3 3 1 1 \_ 1 1 1 2 \_ \_ 4 4

\_ \_ 1 \_ 3 3 1 1 1 3 1 1 4 4 4 2 2 4 4 2

\_ \_ 1 \_ \_ 3 1 \_ 3 3 1 4 1 1 4 \_ 2 2 4 2

\_ 1 \_ 1 3 3 \_ 1 1 1 4 4 1 1 4 \_ 4 4 2 \_

1 1 1 3 1 1 \_ \_ 1 4 1 1 \_ \_ \_ 4 4 2 2 \_

\_ 1 3 1 1 \_ 3 3 1 4 1 1 \_ 4 \_ 4 1 \_ 2 \_

1 3 3 1 \_ \_ 1 3 \_ 4 4 1 4 4 4 1 1 \_ \_ 2

1 \_ 3 \_ 1 1 1 3 1 1 1 4 1 4 1 2 1 2 2 2

1 \_ 3 \_ 1 3 3 1 1 \_ \_ 4 1 1 1 2 1 2 1 1

1 \_ \_ 3 3 1 1 3 3 3 4 4 \_ \_ \_ 2 2 1 1 \_

1 3 3 \_ 3 1 3 3 \_ 4 3 4 \_ \_ \_ \_ 2 \_ \_ 2

\_ 1 3 \_ 3 3 4 4 \_ 4 3 \_ 2 2 2 2 \_ \_ \_ 2

\_ 1 3 4 4 4 3 \_ 4 4 3 3 3 \_ \_ \_ 2 2 \_ 2

3 \_ 3 4 4 3 3 3 4 \_ \_ 4 \_ \_ 4 \_ 2 \_ 2 2

3 3 4 \_ 3 4 3 4 3 4 4 4 2 2 4 2 \_ 2 \_ \_

3 4 4 3 3 4 4 4 3 \_ \_ 4 2 2 4 2 \_ 2 \_ \_

\_ 4 3 3 \_ \_ \_ 3 3 3 4 \_ 2 4 4 2 \_ 2 2 2

\_ 3 4 4 4 3 3 \_ \_ \_ 4 4 4 2 2 4 2 \_ \_ \_

\_ 3 3 4 \_ 3 3 3 4 \_ \_ \_ 4 2 2 4 2 2 2 \_

3 3 \_ \_ 4 4 4 4 3 3 3 3 3 \_ \_ 4 2 \_ \_ 2

Game over! The winner is: 4

Final Score:

Player 1: 76

Player 2: 56

Player 3: 77

Player 4: 80

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 6

Player 4 win count: 7

New Game 15

Current Board Layout:

1 1 \_ \_ 1 \_ 4 4 4 \_ 1 1 1 1 \_ \_ 1 \_ 4 4

1 1 \_ 1 1 1 1 4 \_ \_ 1 4 4 4 1 1 1 4 4 \_

\_ \_ 1 \_ 4 4 4 1 1 1 \_ \_ 4 4 1 4 \_ 4 \_ \_

\_ \_ 1 1 4 \_ 4 \_ 1 1 \_ \_ \_ \_ 4 4 4 2 2 4

\_ \_ 1 4 \_ 4 \_ \_ 4 4 1 1 \_ 4 \_ 4 2 2 4 4

\_ 1 \_ 1 \_ 4 4 4 \_ \_ 4 1 1 4 2 2 4 4 2 2

\_ \_ 1 1 1 4 \_ \_ 4 4 4 \_ 4 4 2 2 \_ 4 4 2

1 \_ \_ 1 \_ \_ 3 \_ 4 3 3 4 \_ 4 \_ 2 \_ 4 \_ 2

1 1 1 \_ 1 3 3 4 3 2 3 4 \_ \_ 2 4 4 \_ \_ \_

1 \_ \_ 1 1 3 \_ 4 3 2 3 4 4 \_ 2 4 \_ 4 4 4

\_ \_ 1 1 \_ 3 4 4 3 2 2 \_ 4 \_ 2 4 \_ \_ \_ 4

1 1 \_ \_ 3 2 2 3 3 2 3 2 2 \_ 2 4 \_ \_ \_ 4

1 \_ 3 3 3 \_ 3 2 2 3 3 2 \_ 2 3 2 2 2 2 \_

1 \_ 3 \_ \_ 3 3 \_ 2 2 \_ 3 \_ 2 3 2 3 3 3 3

3 1 1 1 3 3 \_ 3 2 \_ 3 3 2 2 2 3 2 2 2 \_

3 1 \_ 3 1 1 \_ 3 3 3 \_ 3 \_ 3 3 2 3 3 3 2

3 1 3 3 3 1 \_ 3 \_ \_ \_ 3 \_ 3 3 2 2 \_ 3 2

1 3 \_ 3 1 1 3 \_ \_ \_ 3 \_ 3 2 3 \_ 2 \_ 3 2

1 3 3 1 \_ 3 3 3 \_ \_ 3 3 3 2 \_ \_ 2 \_ \_ 2

3 3 \_ 1 1 \_ \_ \_ \_ \_ \_ \_ \_ 2 2 2 \_ 2 \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 67

Player 2: 61

Player 3: 76

Player 4: 69

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 7

Player 4 win count: 7

TOTAL REWARD:

RANDOM: 1,720 + 0 wins

CORNER CONTROL: 2,506 + 15 wins

-----------------------------------------------------------

**CENTER CONTROL (P1 and P2) VS GREEDY (P3 and P4) 10-5**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

1 1 \_ 4 4 4 1 \_ \_ 1 \_ \_ 4 \_ \_ \_ \_ \_ 4 4

1 \_ 4 1 1 1 1 \_ \_ 1 \_ 1 4 4 4 \_ \_ 4 4 \_

1 1 4 4 4 4 \_ 1 1 1 4 1 4 1 \_ 4 4 \_ 4 \_

4 4 1 \_ \_ \_ 4 4 4 \_ 1 4 1 1 4 4 2 2 2 4

4 1 1 1 1 4 4 1 1 4 1 4 4 1 4 \_ 2 \_ 4 4

4 3 \_ 3 \_ 1 \_ 1 1 4 1 \_ 1 4 \_ 4 4 2 \_ 4

3 \_ 3 3 3 1 \_ 1 \_ 4 1 4 4 4 \_ 4 2 2 2 4

3 3 \_ 3 1 1 1 \_ 1 4 1 4 2 2 2 4 4 2 4 2

\_ 3 3 1 3 3 3 1 1 1 4 1 1 1 2 2 \_ \_ 4 2

3 1 1 1 \_ 3 \_ 1 \_ 4 4 2 2 2 1 \_ 4 4 4 2

3 1 \_ \_ 3 \_ 1 \_ 1 4 4 \_ 2 2 1 1 1 \_ 2 4

1 3 3 3 3 \_ 1 \_ 1 1 \_ 2 3 3 2 2 2 2 \_ 4

1 \_ \_ \_ \_ 3 1 1 \_ 1 1 2 2 3 3 \_ 2 \_ \_ 4

1 3 3 3 \_ 3 3 1 2 \_ 2 2 3 2 2 2 \_ 2 2 4

1 \_ \_ \_ 3 3 \_ \_ 2 2 3 3 3 2 3 \_ \_ 2 \_ 4

\_ 3 3 3 \_ 2 2 2 \_ 2 2 \_ 3 2 3 4 4 2 4 \_

3 \_ 3 3 \_ \_ 2 3 3 3 3 3 2 3 3 4 4 2 4 \_

3 3 \_ \_ 3 3 3 2 2 \_ \_ 2 2 3 2 2 2 4 2 2

3 \_ 3 3 \_ \_ 3 \_ 2 \_ 3 2 3 2 \_ 2 4 4 4 2

3 \_ 3 3 \_ \_ 3 \_ 2 2 3 3 3 2 \_ 2 \_ 4 2 2

Game over! The winner is: 4

Final Score:

Player 1: 73

Player 2: 73

Player 3: 73

Player 4: 81

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 1

New Game 2

Current Board Layout:

1 1 \_ 4 \_ \_ \_ 4 4 4 \_ \_ \_ \_ 4 4 \_ 4 \_ 4

1 \_ 4 4 4 \_ 4 \_ \_ 4 4 2 4 4 \_ \_ 4 4 2 4

1 1 \_ 4 \_ 4 4 \_ 4 \_ \_ 2 4 4 4 \_ 4 \_ 2 4

\_ \_ 1 \_ 4 4 \_ 4 4 4 4 2 2 2 \_ 4 \_ 4 2 4

\_ 3 1 \_ \_ \_ 4 1 \_ \_ 2 4 \_ \_ 2 4 4 4 2 4

3 1 1 1 4 4 4 1 1 1 2 4 \_ \_ 2 2 2 2 4 2

3 3 3 \_ 1 \_ 4 \_ \_ 1 2 4 4 4 \_ 4 4 4 4 2

3 \_ \_ 1 1 1 1 4 1 \_ 2 1 1 2 4 \_ \_ 2 2 \_

\_ 3 \_ 3 3 3 3 1 1 1 2 1 2 4 4 4 2 \_ 2 2

\_ 3 3 \_ 1 1 \_ 1 2 2 1 2 2 2 \_ 4 2 2 \_ 2

\_ 3 \_ \_ 1 1 1 2 1 2 1 1 1 2 \_ \_ \_ 2 \_ \_

\_ 3 \_ 3 3 \_ 2 2 1 1 \_ 2 2 1 1 1 1 2 1 \_

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3 3 3 \_ \_ 1 1 1 1 \_ 2 2 \_ 1 1 2 \_ \_ 1 \_

3 \_ \_ 3 3 \_ \_ \_ 1 \_ \_ 1 1 2 2 \_ 2 2 2 \_

\_ 3 \_ 3 3 \_ 1 1 \_ 1 1 1 2 2 2 3 3 2 3 3

3 3 \_ 3 \_ \_ 1 1 3 3 3 3 3 \_ 3 3 \_ 2 3 3

\_ \_ 3 \_ 3 3 3 3 1 1 1 \_ \_ 3 \_ 3 \_ 3 2 2

\_ \_ 3 \_ 3 1 1 1 3 3 1 \_ 3 3 \_ \_ 3 3 3 2

3 3 3 \_ \_ \_ 3 3 3 \_ 1 3 3 \_ 3 3 \_ 3 2 2

Game over! The winner is: 1

Final Score:

Player 1: 76

Player 2: 69

Player 3: 73

Player 4: 62

Player 1 win count: 1

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 1

New Game 3

Current Board Layout:

1 1 3 4 4 \_ 4 \_ 4 4 4 4 4 2 2 2 2 \_ 4 4

1 3 3 3 \_ 4 4 4 1 1 1 \_ 2 4 4 4 \_ 4 4 \_

1 1 3 4 4 \_ 4 \_ 1 2 2 1 2 4 2 4 \_ 4 \_ \_

\_ 3 1 \_ 4 \_ \_ 1 2 2 \_ 2 1 2 2 2 4 \_ \_ 4

3 \_ 1 \_ 4 \_ \_ 1 2 1 1 2 1 1 4 4 4 \_ 4 4

3 1 1 1 4 1 1 1 \_ 1 1 2 4 4 1 \_ 4 \_ \_ 4

3 \_ 4 4 1 4 4 \_ 1 4 1 2 4 4 1 1 \_ 4 \_ 4

3 \_ 4 4 1 4 1 1 1 4 4 2 \_ 4 \_ 1 \_ 4 4 \_

3 \_ 3 3 1 4 1 4 4 1 1 4 2 \_ 4 4 4 \_ 4 \_

\_ 3 3 1 1 \_ 4 4 1 1 \_ 2 2 2 4 2 2 2 4 \_

\_ 3 \_ 3 \_ 1 \_ 4 1 \_ 1 1 1 2 4 \_ 2 2 \_ 4

3 \_ 3 3 3 1 1 1 4 1 \_ 2 2 1 2 2 \_ 4 4 4

3 \_ 3 1 1 \_ 1 4 4 1 \_ 2 \_ 1 2 4 2 4 2 \_

3 \_ 1 3 \_ 1 4 \_ 4 1 2 2 1 1 2 4 4 \_ 2 2

3 3 1 3 3 1 4 3 3 1 \_ \_ 1 \_ 2 \_ 4 \_ \_ 2

\_ \_ 1 3 1 1 4 \_ 3 1 \_ 2 2 2 \_ 2 2 2 2 \_

\_ \_ 1 3 \_ 1 4 3 3 \_ 3 2 3 \_ \_ \_ \_ 2 \_ \_

\_ \_ 3 \_ 3 3 3 4 \_ 3 3 2 3 \_ 2 2 2 \_ 2 2

3 3 3 \_ \_ \_ 3 4 \_ 3 2 3 3 3 \_ 2 \_ \_ \_ 2

3 \_ \_ 3 3 \_ 3 4 \_ 3 2 2 2 \_ \_ 2 \_ \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 76

Player 2: 69

Player 3: 58

Player 4: 109

Player 1 win count: 1

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 2

New Game 4

Current Board Layout:

1 1 4 \_ \_ \_ 4 4 4 \_ 4 \_ \_ \_ \_ \_ \_ \_ 4 4

1 \_ \_ 4 \_ \_ 4 \_ \_ 4 4 4 4 \_ 4 \_ 4 4 4 \_

1 1 \_ 4 4 \_ 4 \_ \_ \_ 1 1 \_ 4 4 4 \_ \_ 2 4

\_ \_ 1 \_ 4 4 \_ 4 4 \_ \_ 1 1 2 4 \_ \_ 4 2 4

\_ 1 1 1 1 \_ 4 4 \_ 1 1 \_ 1 2 2 4 4 4 2 4

\_ \_ \_ \_ \_ 1 \_ 4 1 1 \_ 2 \_ 4 4 2 2 4 2 4

\_ 1 \_ \_ \_ 1 4 \_ \_ 1 3 2 \_ 4 2 4 2 2 \_ 4

\_ 1 1 1 \_ 1 4 4 1 3 3 2 4 4 2 4 4 4 4 \_

\_ 1 \_ \_ 1 1 4 4 1 3 \_ 2 \_ 2 \_ 2 \_ \_ 2 \_

3 3 4 4 4 4 1 1 1 3 \_ 2 1 1 1 2 2 1 2 2

3 1 1 1 1 1 3 3 3 1 1 1 2 1 1 \_ 2 1 2 \_

3 \_ 3 3 \_ \_ \_ 3 1 1 \_ 2 2 \_ \_ 1 2 1 1 2

\_ 3 3 1 3 3 3 1 \_ \_ 2 2 \_ 2 2 2 1 2 2 2

1 1 3 1 3 1 1 1 3 \_ 3 3 2 \_ 2 1 1 2 \_ 3

3 1 1 \_ 3 1 3 \_ 3 3 \_ 2 2 \_ 2 \_ 1 \_ \_ 3

3 3 3 1 1 3 3 3 \_ 3 3 2 2 \_ \_ 2 2 2 2 3

\_ \_ 3 1 1 \_ 3 \_ 2 2 2 3 3 3 3 3 \_ 2 3 3

\_ 3 \_ \_ 3 3 2 2 \_ \_ 2 \_ 2 \_ 2 2 3 3 2 2

\_ 3 \_ 3 3 3 2 2 3 \_ 2 \_ 2 2 \_ 2 3 \_ 3 2

3 3 3 2 2 2 3 3 3 3 \_ 2 2 \_ \_ 2 3 3 2 2

Game over! The winner is: 2

Final Score:

Player 1: 74

Player 2: 79

Player 3: 71

Player 4: 60

Player 1 win count: 1

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 2

New Game 5

Current Board Layout:

1 1 4 4 4 \_ 4 4 4 4 4 \_ 4 4 2 4 4 \_ 4 4

1 \_ \_ 4 \_ 4 1 1 2 2 2 4 4 4 2 4 4 \_ 4 \_

1 1 \_ 4 \_ 4 1 1 4 1 \_ 2 2 2 4 \_ \_ 4 4 \_

\_ \_ 1 \_ \_ 4 4 4 1 1 1 \_ 4 2 4 4 4 \_ \_ 2

\_ 1 1 1 1 \_ 1 1 4 1 4 4 4 4 2 4 \_ 4 \_ 2

3 3 3 3 \_ 1 \_ 1 4 4 1 1 1 2 \_ \_ 4 4 4 2

\_ \_ \_ 3 \_ 1 2 1 \_ 4 2 2 \_ 2 2 2 2 4 \_ 2

3 3 3 \_ \_ 1 2 2 2 4 \_ 2 2 \_ \_ 4 4 2 2 \_

3 \_ 3 \_ 1 1 \_ 1 2 1 1 2 1 1 1 \_ 4 4 2 2

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\_ 1 3 3 3 \_ 1 \_ 2 2 2 1 2 \_ \_ 1 1 \_ 4 4

1 1 1 3 1 1 \_ 1 1 1 \_ 2 2 1 1 1 \_ 1 4 \_

\_ 3 3 1 3 1 \_ \_ 1 2 1 2 1 2 2 2 2 1 4 4

3 3 \_ 1 3 1 1 \_ 1 2 2 \_ 1 \_ \_ 2 4 4 1 1

3 \_ \_ 1 \_ 3 3 3 \_ 2 2 \_ 1 1 1 \_ 2 2 2 1

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3 3 \_ 1 3 2 2 3 2 2 3 3 3 3 3 \_ \_ 2 \_ \_

\_ 3 \_ 3 3 3 2 2 3 3 2 2 2 \_ \_ 3 3 \_ 2 2

\_ \_ 3 \_ 2 2 3 3 3 \_ 3 3 2 3 3 \_ 3 \_ \_ 2

3 3 3 3 2 2 \_ \_ \_ 3 3 3 2 3 3 \_ 3 3 2 2

Game over! The winner is: 2

Final Score:

Player 1: 81

Player 2: 84

Player 3: 67

Player 4: 62

Player 1 win count: 1

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 2

New Game 6

Current Board Layout:

1 1 4 4 1 \_ 4 4 1 4 \_ 4 \_ 4 4 4 \_ 4 4 4

1 4 4 1 1 4 1 \_ 1 4 \_ \_ 4 \_ \_ 4 \_ 4 \_ \_

1 1 4 1 4 4 1 \_ 1 4 \_ 4 4 4 \_ \_ \_ 4 \_ 2

3 3 1 4 4 1 1 1 \_ 4 4 \_ 4 \_ 4 4 4 \_ \_ 2

3 1 1 1 1 4 4 4 4 1 1 4 \_ 1 4 \_ 4 2 2 2

3 4 4 4 4 1 4 \_ \_ 1 1 4 4 1 1 1 2 4 4 4

\_ 3 3 3 \_ 1 \_ 4 4 1 \_ 1 1 \_ 2 1 4 2 4 \_

\_ \_ \_ 3 3 1 \_ 4 4 \_ \_ \_ 1 1 2 2 4 2 4 \_

3 3 3 \_ 1 1 \_ 1 4 1 1 1 \_ 1 2 \_ 4 4 2 2

3 \_ 3 \_ \_ \_ 1 1 1 \_ \_ 1 1 \_ 2 \_ \_ 4 2 2

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\_ \_ \_ 3 3 \_ \_ 3 1 2 1 2 2 2 \_ 2 4 4 4 \_

\_ 3 \_ 3 \_ 3 3 3 2 2 1 2 1 1 1 1 4 1 \_ 4

3 3 3 \_ 3 \_ \_ 3 \_ 2 2 1 2 2 2 2 1 1 1 4

\_ 3 \_ \_ 3 \_ 3 \_ 2 \_ \_ 1 2 \_ 1 1 2 2 2 4

3 \_ 3 3 \_ 3 3 3 2 2 \_ 1 1 1 2 2 \_ 2 \_ 4

3 \_ \_ 3 \_ 3 \_ 2 3 2 2 \_ \_ 2 2 2 \_ 2 \_ 4

3 \_ \_ 3 \_ \_ 3 2 3 3 \_ 2 2 \_ \_ \_ \_ \_ 2 2

3 \_ \_ 3 \_ \_ 3 2 3 2 2 2 \_ \_ \_ \_ \_ \_ \_ 2

3 \_ \_ \_ 3 3 3 2 3 \_ \_ \_ 2 2 2 2 2 \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 72

Player 2: 70

Player 3: 57

Player 4: 74

Player 1 win count: 1

Player 2 win count: 2

Player 3 win count: 0

Player 4 win count: 3

New Game 7

Current Board Layout:

1 1 \_ 1 \_ \_ \_ 1 \_ 4 \_ 4 4 4 4 \_ \_ 4 4 4

1 \_ 1 1 \_ 1 1 1 4 \_ \_ \_ 4 \_ \_ 4 \_ 4 \_ 4

1 1 \_ 1 2 2 2 1 4 \_ 4 \_ \_ \_ \_ 4 4 \_ \_ \_

3 \_ 1 2 \_ 1 1 2 4 2 4 4 \_ \_ 4 4 \_ 4 4 4

3 3 1 2 1 1 2 2 4 2 \_ 4 \_ 4 \_ \_ 4 \_ \_ 4

\_ 3 1 \_ 1 2 1 1 4 2 2 4 \_ 4 \_ 4 4 4 \_ 4

3 1 1 2 2 2 1 1 2 4 2 \_ 4 4 4 \_ 4 \_ \_ \_

3 3 \_ 1 \_ 2 1 2 2 4 4 4 \_ 1 1 \_ \_ 4 \_ \_

3 \_ 1 1 1 1 2 1 2 1 1 4 1 1 2 2 \_ 4 4 \_

\_ 3 \_ \_ 3 3 1 1 1 2 1 2 2 2 1 2 2 \_ 4 4

3 3 3 \_ 3 3 1 2 2 2 1 1 2 2 1 1 2 4 \_ \_

3 \_ \_ \_ 3 \_ 2 1 1 1 \_ 2 1 1 2 2 1 4 4 \_

\_ 3 3 3 \_ 3 2 2 2 1 \_ 2 2 \_ 2 1 \_ 4 4 \_

3 3 \_ \_ 3 3 3 \_ 2 1 2 2 1 1 2 1 4 \_ \_ \_

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3 \_ 3 3 \_ \_ \_ 3 \_ 2 \_ 2 3 \_ 3 \_ \_ 2 3 3

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\_ 3 \_ 3 3 3 3 \_ \_ 2 \_ \_ 3 3 \_ 3 3 3 \_ 2

3 3 3 \_ \_ \_ \_ 3 3 3 3 3 \_ \_ \_ 3 \_ \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 67

Player 2: 72

Player 3: 69

Player 4: 61

Player 1 win count: 1

Player 2 win count: 3

Player 3 win count: 0

Player 4 win count: 3

New Game 8

Current Board Layout:

1 1 2 \_ \_ 2 2 2 2 4 4 \_ 4 4 4 \_ \_ \_ \_ 4

1 2 2 \_ 2 \_ \_ 1 1 2 2 4 4 \_ \_ \_ 4 4 4 4

1 1 2 \_ 2 \_ \_ 1 \_ 2 2 1 1 4 4 4 \_ \_ \_ \_

\_ 2 1 2 2 2 1 1 \_ 2 1 2 1 4 \_ \_ \_ 4 4 4

2 2 1 \_ \_ \_ 2 2 1 \_ 1 2 1 4 \_ 4 4 \_ 4 \_

2 1 1 1 \_ 1 1 1 1 \_ 1 2 \_ 1 4 \_ 4 \_ 4 \_

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3 3 3 1 1 1 1 \_ \_ 1 \_ 2 4 2 4 \_ 4 4 4 4

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3 \_ 3 \_ \_ \_ 1 1 1 4 1 1 1 2 \_ \_ 4 \_ \_ \_

3 \_ 3 3 3 1 \_ 1 \_ 1 1 2 2 \_ 2 2 \_ 4 4 \_

3 \_ \_ \_ 3 1 \_ \_ 1 2 2 2 1 1 2 4 4 \_ 4 \_

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3 \_ \_ 3 \_ 1 3 1 \_ 1 1 \_ \_ \_ 2 4 4 \_ \_ \_

3 \_ \_ 3 1 1 3 1 1 \_ \_ 2 2 2 \_ 2 2 2 2 \_

\_ 3 3 \_ 1 \_ 3 1 3 1 1 2 3 3 3 \_ 3 2 \_ \_

\_ \_ 3 3 \_ 1 1 3 3 1 3 2 3 \_ 2 3 3 \_ 2 2

3 3 \_ 3 \_ 1 1 3 \_ 3 3 3 2 2 2 \_ 3 \_ \_ 2

3 3 3 \_ 3 \_ \_ 3 \_ 3 \_ \_ 2 \_ \_ \_ 3 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 75

Player 2: 68

Player 3: 60

Player 4: 56

Player 1 win count: 2

Player 2 win count: 3

Player 3 win count: 0

Player 4 win count: 3

New Game 9

Current Board Layout:

1 1 \_ 4 4 4 4 4 \_ 4 4 4 4 \_ \_ \_ 4 4 4 4

1 4 4 \_ \_ \_ \_ \_ 4 \_ \_ \_ \_ 4 4 4 \_ 2 4 \_

1 1 4 4 \_ \_ 4 \_ 4 4 4 4 \_ \_ \_ 4 \_ 2 \_ 4

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4 4 1 \_ 4 4 \_ \_ 4 4 \_ \_ 4 4 4 2 4 4 4 2

4 1 1 1 \_ 4 4 \_ 4 \_ 4 4 \_ \_ 2 2 4 \_ 4 2

3 4 4 4 1 \_ \_ 4 4 1 2 4 4 4 2 4 \_ \_ \_ 2

3 3 3 1 1 1 1 \_ \_ 1 2 1 \_ 2 4 4 4 \_ \_ 2

\_ 3 1 3 \_ 2 2 1 1 1 2 1 1 1 1 4 2 2 \_ 2

1 1 1 3 3 1 1 2 2 2 1 2 2 2 \_ 1 1 2 2 \_

\_ \_ \_ 3 3 1 3 2 1 1 1 \_ 2 2 1 1 1 \_ 2 \_

3 3 3 \_ \_ 3 3 \_ 1 \_ \_ 2 1 1 2 2 2 2 1 \_

3 \_ 3 \_ 3 3 1 1 \_ 1 \_ 2 2 1 1 1 2 1 1 1

\_ 3 1 1 1 1 3 \_ 1 1 2 2 1 \_ 2 \_ 1 2 2 \_

\_ 3 3 \_ 3 \_ 3 3 3 1 1 3 2 2 2 1 1 2 3 \_

\_ 3 \_ 3 3 \_ 3 \_ 2 2 3 3 2 \_ 1 1 3 2 3 3

\_ 3 \_ 3 \_ 3 2 2 \_ 2 2 2 3 2 2 2 3 2 3 \_

3 \_ 3 \_ 3 3 3 2 \_ \_ \_ \_ 3 2 \_ \_ 3 3 2 2

\_ \_ 3 \_ \_ 3 2 3 3 3 3 3 \_ 2 \_ 3 \_ 3 \_ 2

3 3 3 \_ \_ 2 2 2 \_ \_ \_ \_ 3 3 3 3 \_ \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 68

Player 2: 76

Player 3: 69

Player 4: 69

Player 1 win count: 2

Player 2 win count: 4

Player 3 win count: 0

Player 4 win count: 3

New Game 10

Current Board Layout:

1 1 4 1 \_ \_ 1 \_ 4 4 \_ 4 4 \_ 2 \_ \_ 4 4 4

1 4 4 1 4 1 1 1 4 4 4 2 4 2 2 2 \_ 4 \_ \_

1 1 4 1 4 4 1 4 1 \_ \_ 2 4 4 2 \_ \_ 4 2 \_

4 4 1 4 4 1 4 4 1 \_ \_ 2 2 2 4 4 4 2 2 2

4 \_ 1 \_ 1 1 4 1 1 2 2 1 4 4 \_ 4 2 4 \_ \_

4 4 1 4 1 \_ 4 \_ 2 2 1 2 4 \_ \_ 4 2 4 \_ \_

\_ 1 1 4 1 4 1 1 \_ 2 1 2 4 \_ \_ 2 2 4 \_ 4

3 \_ \_ 1 4 4 1 2 2 1 \_ 2 4 2 2 \_ \_ 4 \_ 4

3 3 \_ 1 4 1 1 2 2 1 \_ 2 \_ 2 2 4 \_ 4 \_ 4

3 \_ 1 1 1 2 2 1 1 1 \_ 2 \_ 2 4 4 4 \_ \_ 4

\_ 3 3 \_ \_ 1 1 2 2 2 2 \_ 2 \_ 2 4 2 4 4 \_

3 3 3 \_ \_ 1 1 1 2 1 \_ 2 2 3 2 2 4 4 \_ 4

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3 \_ \_ 3 \_ \_ \_ 3 \_ 1 1 \_ 2 2 2 2 3 3 4 4

3 \_ 3 3 \_ \_ 3 3 1 \_ \_ \_ 2 3 3 3 2 2 2 4

3 3 \_ \_ 3 3 \_ 1 1 1 1 3 3 2 2 3 \_ 2 4 \_

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3 3 3 3 \_ \_ 3 1 \_ 1 1 3 3 \_ 3 3 3 4 \_ 2

3 \_ \_ \_ 3 3 3 3 \_ \_ 3 1 1 1 1 1 3 4 2 2

Game over! The winner is: 4

Final Score:

Player 1: 74

Player 2: 73

Player 3: 70

Player 4: 81

Player 1 win count: 2

Player 2 win count: 4

Player 3 win count: 0

Player 4 win count: 4

New Game 11

Current Board Layout:

1 1 3 3 4 \_ \_ 1 \_ 1 1 1 1 1 \_ 4 4 4 4 4

1 \_ 3 \_ 4 4 4 1 1 4 \_ 4 \_ 2 4 2 2 \_ \_ \_

1 1 3 4 \_ \_ 4 1 4 4 \_ 4 4 2 4 2 2 4 4 4

3 3 1 4 \_ 1 1 4 4 \_ 4 4 2 2 4 4 4 2 2 4

3 3 1 4 4 1 4 \_ \_ 2 2 2 4 4 2 \_ 2 2 4 2

\_ 3 1 4 1 1 4 4 1 1 2 1 4 4 2 2 4 4 4 2

3 1 1 \_ 4 \_ 1 \_ 1 1 2 1 4 \_ 4 4 \_ \_ 4 2

3 \_ \_ 1 4 1 1 \_ 1 2 \_ 1 1 1 4 \_ 4 4 2 \_

3 \_ \_ 1 4 3 1 2 2 1 1 \_ 2 \_ 4 4 \_ 4 2 \_

3 \_ 1 1 1 3 1 \_ 1 1 \_ 2 2 2 1 \_ \_ 4 2 4

3 \_ \_ 3 3 1 \_ \_ 1 \_ 1 1 1 2 1 1 1 4 2 4

\_ 3 3 \_ 3 1 1 1 \_ 1 1 2 2 1 2 2 2 2 4 4

\_ \_ 3 3 \_ \_ 1 \_ \_ 2 2 2 \_ 2 1 1 2 \_ 4 \_

\_ 3 \_ 3 2 2 2 2 2 \_ \_ \_ 2 2 1 1 \_ 2 2 4

\_ 3 3 2 3 3 \_ 3 3 3 3 2 2 \_ \_ 2 3 2 4 4

\_ \_ 3 2 2 3 \_ \_ 3 \_ 2 3 3 2 2 2 3 2 4 \_

\_ \_ 3 2 3 3 \_ 3 \_ 2 2 \_ 3 2 3 3 3 2 \_ 4

\_ 3 \_ 3 \_ \_ 3 3 3 2 2 \_ 3 3 2 2 2 3 2 2

\_ 3 \_ 3 3 3 \_ 3 \_ \_ \_ 3 \_ \_ 2 \_ 3 3 \_ 2

3 3 3 \_ 3 \_ 3 \_ 3 3 3 3 \_ \_ 2 \_ \_ 3 2 2

Game over! The winner is: 2

Final Score:

Player 1: 68

Player 2: 84

Player 3: 74

Player 4: 70

Player 1 win count: 2

Player 2 win count: 5

Player 3 win count: 0

Player 4 win count: 4

New Game 12

Current Board Layout:

1 1 4 \_ 4 4 4 \_ 4 4 \_ \_ 4 4 4 4 4 \_ \_ 4

1 4 4 4 \_ \_ \_ 4 4 \_ \_ 4 2 2 \_ \_ \_ 4 4 4

1 1 4 \_ 4 4 \_ 4 \_ 4 \_ 4 2 \_ 2 4 \_ 4 \_ \_

4 4 1 \_ 4 4 4 \_ 4 \_ \_ 4 4 4 2 4 4 \_ 4 4

4 4 1 \_ 1 1 1 4 4 4 4 \_ \_ \_ 2 2 4 \_ \_ 4

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4 1 1 4 \_ \_ 1 1 2 \_ 2 2 \_ 2 4 4 \_ 4 \_ \_

4 4 4 1 4 4 1 \_ 2 1 1 2 \_ 2 2 2 \_ 4 4 4

\_ 4 1 1 1 1 \_ 1 2 1 1 \_ 2 1 \_ \_ 2 4 \_ \_

\_ 1 3 3 \_ \_ 1 1 1 2 1 2 2 2 1 \_ 2 2 4 \_

1 1 1 \_ 3 3 1 \_ 2 2 2 1 1 2 1 2 \_ 2 4 4

3 1 3 \_ 3 3 \_ 1 1 1 \_ 2 2 1 1 1 \_ 2 \_ 4

3 3 3 \_ 3 \_ 3 3 \_ 1 \_ 2 \_ 2 2 2 2 \_ 2 2

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\_ 3 3 3 \_ 3 3 \_ 2 2 1 1 1 \_ \_ 1 2 2 2 \_

3 \_ \_ 3 \_ \_ \_ 3 3 2 2 \_ \_ 1 1 1 3 2 3 3

3 3 \_ \_ 3 \_ 3 3 2 3 3 3 \_ 1 3 3 3 2 3 3

3 \_ \_ 3 3 3 \_ 3 2 2 \_ 3 \_ 2 2 2 2 3 2 2

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3 3 3 3 \_ 3 3 3 3 \_ 3 \_ 3 3 3 3 3 \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 65

Player 2: 71

Player 3: 68

Player 4: 77

Player 1 win count: 2

Player 2 win count: 5

Player 3 win count: 0

Player 4 win count: 5

New Game 13

Current Board Layout:

1 1 \_ \_ \_ \_ 4 4 4 \_ \_ \_ 4 \_ 4 4 \_ \_ 4 4

1 \_ 1 1 1 1 1 \_ 4 \_ 4 4 4 \_ 4 \_ \_ \_ 4 4

1 1 \_ \_ \_ \_ \_ 1 4 \_ 4 2 \_ 4 \_ 4 4 4 \_ 4

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\_ 1 1 1 1 \_ 1 1 1 4 \_ 2 \_ 4 4 \_ 4 \_ 4 4

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\_ 1 1 1 \_ 1 \_ 2 4 2 2 4 4 2 2 2 4 \_ 4 \_

\_ 1 \_ \_ 1 1 \_ 2 4 2 2 \_ 2 4 4 \_ 4 \_ 4 \_

3 3 3 3 \_ \_ 1 1 1 2 1 2 2 2 4 4 \_ 4 4 \_

\_ \_ 3 \_ 1 \_ 1 1 2 \_ 2 1 1 2 \_ 4 \_ \_ 4 \_

3 3 \_ 3 1 1 \_ 2 1 1 2 2 2 1 2 2 2 2 \_ 4

3 3 \_ 3 \_ 1 1 2 \_ 1 1 1 2 1 1 4 2 4 4 4

\_ \_ \_ 3 3 3 2 2 2 \_ 2 2 1 1 4 4 4 2 2 4

3 \_ 3 \_ \_ 2 3 3 3 3 3 2 2 4 1 1 1 2 4 \_

\_ 3 3 3 2 2 2 \_ 2 2 2 3 2 4 1 3 3 2 4 4

3 \_ 3 2 3 2 3 \_ 2 \_ 3 3 \_ 4 1 3 3 2 \_ 4

3 2 2 2 3 3 3 \_ 2 3 3 2 2 3 3 1 3 \_ 2 2

3 \_ 3 3 2 2 \_ 3 \_ 2 2 3 3 3 \_ 1 1 3 3 2

3 3 \_ 3 3 2 \_ 3 3 3 2 2 \_ \_ \_ 1 \_ 3 2 2

Game over! The winner is: 2

Final Score:

Player 1: 62

Player 2: 78

Player 3: 61

Player 4: 75

Player 1 win count: 2

Player 2 win count: 6

Player 3 win count: 0

Player 4 win count: 5

New Game 14

Current Board Layout:

1 1 \_ \_ 4 \_ 4 4 \_ \_ 4 4 4 \_ \_ 4 4 4 \_ 4

1 \_ \_ 4 4 \_ 4 4 \_ \_ 4 \_ 4 \_ \_ 4 \_ \_ 4 4

1 1 4 4 \_ 4 \_ \_ 4 4 \_ 4 \_ 4 \_ 4 \_ \_ 4 4

4 4 1 \_ 4 4 4 \_ 4 1 1 4 \_ 4 4 \_ \_ 4 \_ \_

4 \_ 1 4 2 4 \_ 4 4 1 2 4 \_ 1 4 \_ \_ 4 4 4

4 1 1 1 2 2 1 1 1 \_ 2 4 1 \_ 4 \_ \_ 4 \_ \_

4 \_ 3 3 1 2 1 1 2 2 2 4 1 \_ \_ 4 4 \_ \_ 4

3 3 \_ 3 1 \_ 2 2 1 1 1 2 1 1 1 \_ 4 4 \_ 4

3 \_ 3 3 1 2 2 1 2 2 1 1 2 \_ \_ 1 4 \_ 4 4

\_ 3 \_ 1 1 2 1 1 1 1 \_ 2 2 2 3 1 1 1 \_ 4

\_ 3 3 2 2 1 2 2 2 2 2 \_ \_ 2 3 3 3 1 \_ 1

3 3 \_ 3 2 1 1 1 \_ \_ \_ 2 2 3 2 2 2 2 1 1

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1 1 1 3 1 1 \_ \_ 3 \_ 2 2 3 2 1 1 1 2 2 1

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3 \_ 3 1 \_ 1 \_ 3 3 \_ 3 3 2 1 1 \_ \_ 2 \_ 1

3 \_ 3 3 \_ \_ 3 \_ 3 3 \_ 2 \_ \_ 1 1 \_ 2 \_ 1

3 \_ \_ \_ 3 3 3 \_ \_ \_ \_ 2 2 3 2 2 2 \_ 2 2

3 \_ 3 \_ \_ \_ 3 \_ \_ 3 3 2 2 3 \_ 2 \_ \_ \_ 2

3 \_ 3 3 3 3 \_ 3 3 3 \_ 3 3 3 \_ 2 \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 77

Player 2: 65

Player 3: 70

Player 4: 65

Player 1 win count: 3

Player 2 win count: 6

Player 3 win count: 0

Player 4 win count: 5

New Game 15

Current Board Layout:

1 1 4 \_ 4 \_ 4 \_ 4 1 4 4 4 \_ \_ 4 4 4 4 4

1 \_ 4 4 4 \_ 4 \_ 4 1 4 4 \_ \_ 4 \_ \_ \_ \_ \_

1 1 \_ \_ \_ 4 4 \_ 1 4 1 1 4 4 4 \_ 4 \_ 4 4

\_ \_ 1 \_ 1 4 1 1 1 4 1 1 4 1 1 4 4 4 \_ 4

\_ \_ 1 \_ 1 1 4 4 \_ 4 4 4 1 4 1 1 4 \_ 2 4

\_ 1 1 1 \_ 1 1 4 4 \_ \_ 1 1 4 4 4 \_ 4 2 4

3 3 \_ \_ 1 \_ \_ 4 \_ 2 2 2 1 4 1 \_ 4 4 2 \_

3 3 \_ 1 1 1 1 \_ 2 2 1 1 2 2 1 4 \_ 4 2 \_

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\_ \_ 3 \_ 2 2 2 1 1 2 2 1 \_ 1 2 2 2 2 4 4

\_ 3 3 \_ 2 3 1 2 2 1 2 \_ 2 1 1 1 1 4 4 1

\_ 3 \_ 3 \_ 3 1 2 2 2 \_ 2 2 4 4 4 4 1 1 1

3 \_ 3 3 3 \_ 1 1 \_ \_ 2 2 4 2 2 2 2 1 \_ \_

3 3 \_ 3 \_ 3 \_ 1 2 2 \_ 4 4 4 \_ 2 \_ \_ \_ 3

3 3 \_ \_ 3 3 3 2 1 2 \_ 3 2 2 2 \_ 2 2 2 3

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3 \_ 3 3 \_ 1 3 3 2 2 2 2 3 2 2 3 3 3 2 2

\_ 3 1 1 1 \_ 3 \_ \_ \_ \_ 2 3 3 3 \_ 3 \_ \_ 2

3 3 3 3 \_ \_ \_ 3 3 3 3 3 2 2 3 \_ 3 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 80

Player 2: 73

Player 3: 69

Player 4: 71

Player 1 win count: 4

Player 2 win count: 6

Player 3 win count: 0

Player 4 win count: 5

TOTAL REWARD:

CENTER CONTROL: 2,192 + 10 wins

GREEDY: 1,951 + 5 wins

-------------------------------------------------------------

**GREEDY (P1 and P2) VS CORNER CONTROL (P3 and P4) 5-10**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

1 \_ \_ 3 3 1 1 \_ 1 1 4 1 1 1 1 1 \_ \_ 4 4

1 1 1 3 \_ 1 1 1 4 4 1 \_ 4 4 4 \_ \_ 4 4 \_

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3 \_ 1 3 3 \_ \_ 4 \_ 4 3 4 \_ \_ 4 4 \_ \_ 4 4

3 3 3 1 1 3 3 3 \_ 4 4 3 3 4 4 \_ 4 4 \_ 4

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1 1 \_ \_ 1 3 3 \_ 3 2 3 2 2 \_ 4 2 \_ 2 2 2

1 \_ 1 1 1 3 \_ 3 3 3 2 \_ 2 2 4 2 \_ 2 \_ 2

1 1 \_ \_ 3 3 1 2 \_ \_ 3 3 3 2 4 2 2 \_ 2 4

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\_ 3 3 3 3 1 3 3 2 \_ 2 2 2 \_ \_ 4 4 2 2 4

3 \_ 3 1 1 3 3 2 3 \_ 2 \_ 4 4 4 \_ 4 4 2 4

3 1 1 1 3 2 2 2 3 3 \_ 2 4 2 2 2 2 2 4 \_

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1 1 3 \_ 3 2 2 3 \_ 3 \_ 2 4 2 2 \_ 4 4 4 \_

1 3 3 \_ 2 2 3 3 3 2 2 4 4 2 2 2 \_ \_ \_ 2

3 3 \_ 3 3 3 2 2 \_ 2 2 \_ 4 \_ \_ \_ 2 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 62

Player 2: 76

Player 3: 76

Player 4: 77

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 1

New Game 2

Current Board Layout:

1 1 1 \_ 1 \_ \_ \_ 1 1 \_ 1 \_ 1 1 1 1 \_ 4 4

4 4 1 \_ 1 1 1 \_ 1 1 4 1 1 4 \_ \_ 1 4 4 \_

4 4 1 \_ 1 \_ \_ \_ 1 \_ 4 1 4 4 4 4 \_ \_ 4 \_

4 \_ 4 1 \_ 1 1 1 \_ \_ 4 4 1 \_ \_ \_ 4 4 \_ \_

1 \_ 4 1 1 4 \_ 1 1 \_ \_ 4 1 \_ \_ 4 4 \_ \_ \_

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3 3 1 3 4 4 \_ 2 2 \_ \_ 1 2 1 1 \_ 1 1 2 \_

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\_ 1 \_ 4 3 3 4 \_ 3 3 3 \_ 1 1 2 2 \_ 2 2 \_

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1 \_ 3 3 3 \_ 3 3 4 3 4 \_ \_ 1 2 \_ 2 2 2 3

\_ 3 3 \_ \_ 3 3 4 3 4 3 3 3 3 3 \_ 2 3 3 3

3 \_ \_ \_ 3 \_ \_ 4 3 4 4 2 2 2 \_ 3 3 2 2 \_

3 3 \_ 3 3 3 \_ 4 3 3 4 \_ 3 2 \_ \_ 3 \_ 2 \_

3 \_ 3 \_ 3 \_ 4 4 3 4 3 3 3 2 \_ 3 3 \_ 2 2

\_ 3 3 4 4 4 3 \_ 4 4 3 \_ 2 \_ \_ \_ 2 2 \_ \_

3 3 \_ 3 3 3 3 \_ \_ 4 \_ \_ 2 2 2 2 \_ 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 75

Player 2: 57

Player 3: 71

Player 4: 81

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 2

New Game 3

Current Board Layout:

1 \_ \_ 1 1 1 1 \_ \_ 4 4 4 3 3 4 4 4 \_ 4 4

1 1 1 \_ \_ \_ 4 1 1 1 4 \_ 3 4 3 3 3 4 4 \_

\_ 1 \_ 1 1 1 4 4 4 1 \_ 4 4 4 3 4 3 4 \_ 4

1 \_ \_ 4 1 1 4 \_ \_ 4 \_ 4 3 3 4 4 4 3 3 4

1 \_ 4 4 4 4 1 1 \_ 4 4 \_ 4 4 \_ 4 3 3 3 4

1 3 1 \_ 1 \_ 4 1 1 1 4 \_ 4 3 3 3 4 4 \_ 4

1 3 3 1 1 1 4 \_ 3 \_ 4 \_ 3 \_ \_ 3 2 4 4 \_

1 3 1 3 1 3 1 1 3 \_ 3 3 3 \_ \_ 3 2 4 2 2

\_ 1 1 3 3 \_ \_ 1 3 3 1 \_ 3 \_ 4 4 4 2 2 \_

1 1 \_ \_ 3 \_ 1 1 3 1 1 4 4 4 \_ 3 4 3 3 2

\_ \_ 1 1 1 3 3 3 1 3 1 4 4 3 3 3 4 3 3 2

1 1 \_ 1 3 3 \_ \_ 1 3 3 3 3 4 2 2 3 4 4 2

1 1 \_ 1 \_ \_ 3 \_ 1 2 2 2 2 4 2 2 3 4 \_ 2

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1 1 1 1 3 3 \_ 3 3 3 \_ 2 \_ 4 \_ 2 2 4 2 2

\_ \_ \_ 3 1 1 \_ 3 \_ 2 2 2 \_ 4 \_ \_ 2 \_ \_ 2

\_ \_ 3 3 3 1 2 2 \_ 2 \_ \_ 2 \_ 4 2 2 \_ \_ 2

\_ 3 \_ 3 2 1 1 2 2 \_ 2 \_ 2 2 2 4 4 2 2 \_

\_ 3 3 \_ 2 \_ \_ 2 \_ 2 \_ \_ 2 \_ \_ \_ 4 4 2 2

3 3 \_ \_ 2 2 2 \_ 2 2 2 2 \_ 2 2 2 2 2 \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 72

Player 2: 66

Player 3: 80

Player 4: 76

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 1

Player 4 win count: 2

New Game 4

Current Board Layout:

1 \_ 1 1 1 1 1 \_ \_ \_ \_ 1 2 2 1 1 1 1 4 4

1 1 4 4 \_ \_ 4 4 4 4 1 1 1 1 2 2 2 4 4 \_

\_ 1 \_ 4 \_ \_ 4 \_ 1 1 4 \_ \_ \_ 2 4 2 4 2 4

\_ 1 4 4 \_ 4 \_ \_ 1 \_ 4 4 2 2 4 4 4 \_ 2 4

\_ 4 1 \_ 4 4 \_ 1 1 \_ 1 4 2 4 2 4 2 \_ 2 4

4 4 1 1 4 4 1 4 4 1 1 4 2 4 2 2 4 4 2 4

4 1 1 \_ 1 1 1 4 1 1 4 2 4 4 4 2 \_ 4 4 2

\_ 4 4 \_ \_ \_ 1 \_ 4 4 4 2 2 \_ \_ 4 \_ 4 \_ 2

3 4 4 1 1 1 \_ 1 4 2 \_ 2 3 2 \_ 4 \_ \_ 4 2

3 1 1 4 4 1 2 2 2 2 3 3 2 2 4 4 2 2 4 2

3 1 1 3 \_ 1 \_ 1 3 3 2 2 4 2 2 4 2 \_ 4 2

3 1 3 3 3 3 1 1 1 3 2 2 4 4 4 2 2 \_ 2 \_

3 \_ 1 1 1 1 3 1 3 3 2 4 2 2 \_ 3 3 2 2 2

\_ 3 3 3 \_ 1 3 3 1 1 3 4 4 2 2 3 2 \_ 2 \_

\_ \_ 3 3 \_ 3 3 1 3 3 3 4 3 3 2 3 2 \_ 3 3

3 3 \_ \_ 3 \_ 1 1 3 \_ 4 3 4 3 3 2 2 2 3 3

3 \_ \_ 3 3 3 \_ 1 \_ 3 4 3 3 \_ 2 3 3 3 2 \_

\_ \_ 3 \_ 3 1 1 3 3 3 4 \_ 3 2 2 \_ \_ 3 2 \_

\_ 3 3 \_ 1 1 3 1 1 3 4 \_ 3 \_ 2 \_ 2 3 2 2

3 3 \_ \_ \_ 3 3 3 1 \_ 4 \_ \_ \_ 2 \_ 2 2 \_ 2

Game over! The winner is: 4

Final Score:

Player 1: 73

Player 2: 77

Player 3: 77

Player 4: 84

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 1

Player 4 win count: 3

New Game 5

Current Board Layout:

1 1 1 1 1 \_ \_ 1 4 4 4 2 2 2 1 1 1 1 4 4

\_ \_ \_ \_ \_ 1 1 1 4 \_ 4 1 1 2 1 2 \_ 4 4 \_

\_ \_ \_ \_ \_ 1 \_ 4 1 \_ 1 4 1 1 2 2 2 \_ 4 \_

\_ 1 1 1 \_ \_ 1 4 1 1 1 4 4 1 \_ 2 4 4 \_ 2

\_ 1 \_ \_ 1 1 1 4 \_ 2 \_ 4 2 2 2 4 4 \_ 2 2

\_ 1 \_ 1 3 1 \_ 4 4 2 2 4 2 4 2 4 2 4 4 2

3 3 1 1 3 \_ 1 2 2 4 2 2 4 4 4 2 2 2 4 2

3 3 1 1 3 \_ 1 1 1 4 4 4 3 4 3 4 4 4 2 4

\_ 1 3 3 \_ \_ 1 3 3 3 3 4 3 3 3 2 2 2 2 4

1 1 1 1 3 3 3 1 4 4 4 3 4 4 4 3 3 3 4 2

\_ \_ \_ \_ 1 3 1 1 1 4 3 3 \_ \_ 4 4 3 \_ \_ 2

\_ 3 1 1 1 3 \_ 1 \_ 4 \_ 3 4 4 3 2 4 4 4 2

\_ 3 3 3 3 1 3 \_ 1 1 1 3 4 4 3 2 2 3 4 2

\_ \_ \_ \_ 1 1 3 3 \_ 1 3 1 4 3 3 2 2 3 4 2

\_ \_ 3 3 1 3 3 \_ 3 3 3 1 3 \_ 2 3 3 3 2 4

\_ 3 3 \_ 3 1 1 1 3 1 \_ 3 3 2 2 \_ 2 2 2 4

\_ \_ \_ 3 3 3 \_ 1 1 \_ \_ 3 2 3 2 2 \_ \_ 2 4

\_ \_ 3 \_ 3 \_ 3 3 \_ 1 1 3 \_ 2 3 3 3 3 3 4

\_ 3 3 1 1 \_ 3 3 3 1 1 \_ 3 2 \_ \_ 2 2 \_ 4

3 3 \_ 1 \_ 1 1 1 1 \_ \_ 3 3 2 2 2 \_ 2 2 2

Game over! The winner is: 3

Final Score:

Player 1: 86

Player 2: 66

Player 3: 104

Player 4: 69

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 3

New Game 6

Current Board Layout:

1 1 \_ \_ 3 3 3 \_ 1 4 \_ 1 1 1 1 \_ 1 \_ 4 4

1 1 1 3 1 3 1 1 1 4 1 \_ \_ 4 \_ 1 1 4 4 \_

3 3 3 1 1 1 3 3 1 4 1 4 4 4 \_ 4 1 4 \_ \_

3 1 1 \_ 1 3 3 1 3 4 1 4 1 1 4 4 4 1 1 \_

\_ 1 3 1 \_ 1 \_ 1 3 4 \_ \_ 4 1 \_ 4 1 1 2 2

\_ 1 3 1 1 1 \_ 1 3 \_ 4 4 4 4 1 1 4 4 \_ 2

\_ 1 \_ 3 3 3 2 1 3 \_ 1 \_ 1 1 4 1 1 4 4 2

1 \_ 1 1 3 2 2 1 3 1 1 \_ 4 1 4 1 \_ 4 \_ 2

1 1 3 1 3 2 3 3 1 1 4 4 4 1 4 4 1 1 2 4

\_ 1 3 1 1 3 2 3 \_ \_ 1 1 1 4 1 4 2 2 2 4

\_ 1 3 3 \_ 3 2 3 3 4 4 \_ 1 4 2 2 4 4 2 4

1 \_ 3 \_ 3 3 \_ 2 2 2 4 4 1 4 \_ 2 4 4 4 \_

1 1 \_ \_ 3 \_ 3 \_ \_ 2 \_ 2 4 4 2 2 \_ 2 \_ 4

1 3 3 3 \_ \_ 3 3 \_ 2 \_ 2 2 \_ \_ \_ 2 2 2 4

1 3 \_ \_ \_ 3 3 \_ 3 3 2 \_ 2 \_ 2 2 \_ 2 \_ 4

\_ 3 \_ \_ 3 \_ \_ 3 3 3 2 \_ 2 \_ \_ 2 \_ 4 \_ 4

\_ \_ \_ 3 3 3 \_ \_ \_ \_ 2 2 \_ 2 \_ 2 2 4 4 \_

\_ \_ 3 \_ 3 \_ 3 3 3 3 2 \_ 2 2 2 4 4 2 2 \_

\_ 3 3 \_ \_ \_ 3 2 2 2 3 2 3 \_ 2 \_ 2 4 2 2

3 3 2 2 2 2 2 \_ 2 2 3 3 3 \_ \_ 2 2 2 \_ 2

Game over! The winner is: 1

Final Score:

Player 1: 85

Player 2: 71

Player 3: 75

Player 4: 66

Player 1 win count: 1

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 3

New Game 7

Current Board Layout:

1 1 \_ 1 \_ \_ 1 1 1 \_ \_ 1 1 \_ \_ 4 4 \_ 4 4

\_ 1 \_ 1 4 1 \_ 1 4 4 4 1 1 4 4 \_ \_ 4 4 \_

3 1 \_ 1 4 1 3 1 \_ 4 \_ 1 4 4 \_ \_ 4 \_ 4 \_

3 1 \_ 1 4 1 3 4 \_ 4 1 4 \_ \_ \_ 4 4 4 \_ 4

3 \_ 1 \_ 4 1 3 4 1 1 4 4 4 4 \_ \_ 4 \_ 4 4

3 1 1 1 4 1 3 4 4 4 1 1 1 \_ 4 4 \_ 4 2 2

3 \_ 1 \_ 1 4 4 3 3 3 3 \_ 1 4 4 \_ 4 4 2 \_

\_ 3 3 3 1 4 1 3 1 1 1 1 \_ 4 \_ \_ 2 4 2 2

\_ 3 \_ 1 1 4 1 1 3 1 \_ 4 4 \_ \_ 2 2 2 4 4

\_ 3 \_ 1 4 1 1 3 3 4 4 1 4 4 4 \_ 2 \_ 2 4

\_ \_ 3 3 3 \_ 3 1 1 3 4 1 1 2 \_ 4 4 \_ 2 4

\_ 3 \_ \_ 3 3 \_ \_ 1 3 4 4 1 2 \_ 4 4 \_ 2 4

\_ 3 3 \_ \_ \_ 3 1 1 3 1 1 \_ 2 1 4 2 \_ 2 2

\_ 3 3 \_ \_ 3 3 3 \_ 1 1 \_ 1 2 1 \_ 2 2 \_ \_

3 \_ \_ \_ 3 \_ 3 \_ 3 1 \_ 1 1 2 1 2 2 \_ 2 2

3 3 \_ 3 3 2 \_ 2 3 \_ 2 2 2 1 2 \_ \_ \_ 2 2

3 \_ 3 3 \_ 2 2 3 3 2 3 3 2 1 2 2 2 \_ 2 \_

\_ 3 \_ 2 3 3 2 \_ 3 2 3 1 2 1 1 1 2 \_ \_ 2

\_ 3 3 2 2 3 3 2 2 3 3 1 1 2 \_ \_ \_ 2 2 2

3 3 \_ 3 3 2 2 2 \_ \_ \_ 1 2 2 2 2 \_ \_ \_ 2

Game over! The winner is: 1

Final Score:

Player 1: 80

Player 2: 65

Player 3: 71

Player 4: 73

Player 1 win count: 2

Player 2 win count: 0

Player 3 win count: 2

Player 4 win count: 3

New Game 8

Current Board Layout:

1 1 \_ \_ \_ 4 4 4 4 \_ \_ \_ \_ \_ 4 4 4 \_ 4 4

1 1 4 4 \_ 4 1 1 \_ 4 \_ \_ 4 4 \_ \_ \_ 4 4 \_

\_ 1 4 4 4 \_ 4 \_ 1 4 4 \_ 4 \_ \_ 4 \_ 4 \_ \_

4 4 1 1 1 4 4 1 1 4 \_ 4 4 \_ 4 4 4 \_ \_ 4

4 4 1 \_ 1 4 1 1 \_ 4 1 1 \_ 4 \_ 4 \_ \_ 4 4

\_ 1 4 4 3 1 4 4 1 1 1 4 \_ 4 \_ \_ 4 4 \_ 4

3 1 1 4 3 1 1 1 2 2 \_ \_ 4 4 4 \_ \_ 4 4 \_

3 1 \_ 3 3 3 1 2 2 4 4 4 \_ \_ \_ \_ \_ 4 \_ 4

3 1 3 1 1 1 3 3 1 2 \_ 4 4 \_ 3 3 3 3 3 4

1 3 3 \_ 1 \_ 1 1 1 2 3 3 3 3 \_ \_ 2 2 \_ 4

1 3 \_ \_ 1 \_ 1 \_ 2 2 3 2 \_ \_ 3 \_ 2 4 2 4

1 \_ 3 3 3 3 \_ 1 3 3 2 2 2 3 3 \_ 2 4 2 4

1 1 \_ 3 1 1 3 1 1 3 \_ \_ 2 3 3 \_ 2 4 4 \_

3 \_ 1 \_ 1 3 3 3 1 3 3 2 3 2 2 2 \_ \_ 2 2

3 1 1 1 3 \_ 3 1 3 2 2 3 3 2 \_ \_ 2 2 2 \_

3 3 1 3 3 2 \_ 2 3 2 2 2 3 2 \_ 2 \_ \_ \_ 2

1 1 3 3 \_ 2 2 2 3 3 \_ \_ 2 \_ 2 2 2 \_ 2 2

1 3 2 2 2 3 3 3 2 3 2 2 2 2 3 2 3 2 \_ \_

1 3 3 2 \_ 3 2 3 2 2 3 3 3 3 \_ 3 3 2 2 2

3 3 \_ 2 \_ 2 2 2 \_ 2 2 \_ 2 2 2 2 2 \_ \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 64

Player 2: 78

Player 3: 80

Player 4: 75

Player 1 win count: 2

Player 2 win count: 0

Player 3 win count: 3

Player 4 win count: 3

New Game 9

Current Board Layout:

1 1 \_ 1 4 1 \_ 1 1 1 1 1 \_ \_ 1 \_ \_ \_ 4 4

\_ 1 1 4 4 1 1 4 4 4 4 \_ 1 1 1 \_ \_ 4 4 2

\_ \_ 1 4 1 1 4 1 1 \_ 4 \_ 1 4 \_ \_ 4 \_ 4 2

\_ 1 \_ 3 4 4 4 \_ 1 \_ \_ 1 4 4 \_ 4 4 4 \_ 2

1 1 1 3 3 3 4 1 1 \_ \_ 1 \_ \_ 4 \_ 4 2 2 \_

\_ 1 3 1 1 1 1 4 4 1 1 1 \_ 4 4 2 \_ \_ 2 2

1 3 3 1 \_ \_ 4 4 4 \_ \_ \_ 4 4 \_ 2 2 2 \_ 2

1 3 \_ 3 3 4 \_ 3 \_ 4 4 4 \_ 3 4 4 \_ 2 4 4

1 1 \_ 1 3 4 3 3 4 4 3 3 3 \_ \_ 4 \_ 4 2 4

\_ 1 \_ 1 3 3 \_ 3 \_ \_ 3 \_ 3 \_ \_ 4 4 \_ 2 4

\_ \_ 1 2 2 2 \_ 3 \_ 3 \_ \_ \_ \_ 4 \_ 2 4 2 \_

\_ \_ 1 2 1 1 1 \_ 3 3 \_ 3 3 \_ 4 \_ 2 4 2 \_

\_ \_ 1 1 2 1 3 \_ 3 \_ 3 3 3 4 4 2 2 4 2 \_

1 \_ 1 2 2 3 3 \_ 3 2 \_ 2 \_ 3 4 2 4 2 4 4

1 1 \_ 2 3 3 2 3 2 2 \_ 2 2 3 2 4 4 2 4 \_

1 1 \_ 3 2 2 2 3 3 3 2 2 \_ 2 2 2 4 2 4 4

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\_ 3 \_ 3 \_ 2 3 2 2 2 2 3 2 2 \_ 2 \_ \_ 2 2

\_ 3 3 \_ 2 2 3 3 3 3 \_ 2 \_ 2 \_ 2 \_ \_ 2 2

3 3 2 2 \_ 2 \_ 2 2 2 2 \_ 2 2 \_ 2 2 2 \_ 2

Game over! The winner is: 2

Final Score:

Player 1: 62

Player 2: 85

Player 3: 65

Player 4: 71

Player 1 win count: 2

Player 2 win count: 1

Player 3 win count: 3

Player 4 win count: 3

New Game 10

Current Board Layout:

1 \_ \_ \_ \_ 1 1 1 \_ \_ 1 1 1 \_ \_ \_ \_ \_ 4 4

1 1 1 \_ \_ 1 3 1 \_ 1 \_ 1 4 4 \_ \_ \_ 4 4 \_

1 \_ \_ \_ \_ \_ 3 \_ 1 1 \_ \_ 4 \_ \_ 4 \_ 4 3 4

\_ 1 1 1 1 1 3 1 \_ 1 \_ 4 4 \_ 4 4 4 \_ 3 4

1 \_ \_ \_ 3 3 1 1 \_ 1 \_ \_ \_ 4 \_ 4 3 3 3 4

1 1 1 3 \_ 3 1 1 \_ 4 4 4 \_ 4 \_ 3 4 4 \_ 2

3 1 3 3 1 1 \_ \_ 3 3 4 3 4 4 3 3 \_ 4 4 2

3 3 1 3 \_ 1 1 \_ 1 3 4 3 \_ 4 3 4 3 4 \_ 2

3 \_ 1 3 1 \_ 1 \_ 1 3 \_ \_ 3 3 \_ 4 4 \_ 4 2

1 1 1 \_ 3 3 3 1 1 \_ 3 3 3 4 4 \_ 4 \_ 2 \_

\_ \_ 3 3 \_ 3 \_ 1 3 3 \_ 4 4 3 3 \_ 4 2 2 2

\_ \_ 3 2 \_ 3 \_ 3 3 3 2 2 4 3 2 2 2 4 2 \_

\_ 3 3 2 \_ 2 3 \_ 4 4 4 2 \_ 3 2 \_ \_ 4 \_ \_

3 \_ \_ 2 \_ 2 3 3 4 2 4 2 2 3 2 4 4 4 2 \_

3 \_ \_ 2 2 3 3 \_ \_ 4 2 4 4 4 4 2 2 \_ 2 2

3 \_ 2 \_ 3 2 2 3 3 4 2 4 2 2 2 4 2 2 \_ 2

3 2 2 3 3 3 2 3 4 4 2 2 \_ 2 4 4 2 \_ \_ 2

3 2 3 2 3 2 2 3 3 \_ 2 4 4 2 4 4 \_ 2 \_ \_

\_ 3 3 2 2 3 3 2 2 2 4 \_ 4 4 \_ \_ \_ 2 2 \_

3 3 \_ 2 \_ 3 3 2 2 4 4 4 2 2 2 2 2 \_ 2 2

Game over! The winner is: 3

Final Score:

Player 1: 50

Player 2: 75

Player 3: 85

Player 4: 76

Player 1 win count: 2

Player 2 win count: 1

Player 3 win count: 4

Player 4 win count: 3

New Game 11

Current Board Layout:

1 1 3 3 \_ 1 \_ \_ \_ 1 \_ 1 1 1 1 \_ 1 \_ 4 4

\_ 1 1 3 1 1 1 \_ \_ 1 \_ 4 4 4 4 1 1 4 4 \_

1 \_ 1 3 1 \_ \_ 1 1 1 \_ 1 4 1 1 4 1 4 \_ \_

1 3 3 1 \_ 1 \_ 3 \_ \_ 1 \_ \_ 1 4 4 4 2 2 4

1 3 3 1 1 1 \_ 3 3 3 1 1 1 4 \_ 4 2 2 4 4

1 \_ 1 3 3 3 1 1 1 3 1 4 4 4 2 2 4 4 \_ 2

1 \_ 1 3 1 1 3 3 3 \_ \_ 4 \_ 2 \_ 2 2 4 4 2

\_ 1 1 3 \_ 3 3 1 1 3 3 3 2 2 \_ \_ 2 4 \_ 2

\_ \_ 1 \_ \_ \_ 1 3 1 1 3 3 2 2 \_ 4 4 2 \_ 2

\_ 1 \_ 1 1 1 1 3 3 4 4 4 3 4 4 4 2 2 2 \_

1 1 \_ 3 3 \_ 4 3 \_ 4 4 \_ 4 \_ 2 2 4 2 4 2

1 1 \_ 1 3 3 4 3 4 2 \_ \_ 4 \_ 4 2 4 4 4 2

\_ \_ 1 1 1 \_ 3 4 4 2 2 4 4 4 \_ 2 \_ \_ \_ 4

\_ 1 \_ 1 \_ 3 3 4 \_ 2 3 3 3 \_ \_ 2 4 4 4 4

1 1 \_ \_ 3 3 4 3 \_ 2 3 \_ 3 2 2 \_ \_ 2 2 \_

1 \_ \_ 3 \_ \_ 4 3 3 3 2 2 2 3 2 2 2 \_ 2 \_

1 \_ 3 3 3 4 4 3 2 \_ 3 3 2 3 3 \_ \_ 2 2 \_

\_ 3 \_ 3 4 \_ \_ \_ 3 2 2 3 2 3 2 2 2 3 3 2

\_ 3 3 \_ 4 3 3 3 3 \_ 2 2 \_ \_ 3 3 3 2 2 2

3 3 4 4 4 \_ \_ \_ \_ \_ 2 \_ 2 2 2 2 2 \_ \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 76

Player 2: 69

Player 3: 80

Player 4: 69

Player 1 win count: 2

Player 2 win count: 1

Player 3 win count: 5

Player 4 win count: 3

New Game 12

Current Board Layout:

1 \_ \_ 1 1 1 \_ \_ \_ \_ 1 1 4 4 \_ 1 \_ \_ 4 4

1 1 1 4 4 4 4 4 \_ \_ 1 1 1 4 1 1 1 4 4 \_

1 4 4 1 \_ \_ \_ \_ 4 4 4 \_ 4 1 \_ 1 4 \_ 4 \_

\_ 4 4 1 1 1 1 4 4 \_ \_ 4 \_ 1 1 4 4 4 \_ 1

1 1 1 4 4 4 4 1 \_ \_ 4 4 4 4 1 1 4 1 1 1

\_ \_ 1 4 \_ 2 1 1 \_ 1 1 1 1 1 4 4 1 4 4 \_

3 3 1 3 \_ 2 2 1 1 4 4 4 \_ 4 4 1 1 4 \_ \_

3 1 3 3 1 1 1 2 2 1 4 1 1 4 1 2 4 4 \_ \_

3 1 3 \_ 1 2 1 2 2 1 \_ 4 4 1 1 2 \_ \_ 4 \_

3 1 1 3 3 2 2 1 3 1 1 4 \_ 1 4 2 \_ 4 4 \_

\_ 1 \_ 1 3 2 3 3 3 \_ 1 4 4 \_ 4 2 \_ 4 4 \_

1 3 1 1 3 3 2 2 3 2 3 3 \_ 4 4 2 4 2 \_ \_

1 \_ 3 1 \_ 2 3 2 2 3 3 3 2 2 2 \_ 4 2 2 2

1 3 3 3 3 2 3 3 \_ 2 2 2 3 3 2 2 4 4 4 2

1 2 2 2 2 3 3 \_ 3 2 3 3 2 2 4 4 \_ 2 2 \_

3 3 \_ \_ 3 \_ \_ 2 3 2 3 3 2 4 2 2 \_ 2 2 2

3 \_ \_ 3 3 3 \_ 2 3 3 2 \_ 2 4 \_ 2 2 \_ \_ \_

3 \_ 3 \_ 3 \_ 3 2 2 3 2 \_ 2 4 2 \_ 2 \_ \_ \_

\_ 3 3 \_ \_ 3 3 3 \_ 2 2 2 \_ 2 2 2 \_ \_ 2 \_

3 3 \_ \_ \_ \_ \_ \_ 3 3 3 3 3 2 \_ \_ 2 2 2 2

Game over! The winner is: 1

Final Score:

Player 1: 80

Player 2: 76

Player 3: 69

Player 4: 76

Player 1 win count: 3

Player 2 win count: 1

Player 3 win count: 5

Player 4 win count: 3

New Game 13

Current Board Layout:

1 1 \_ 1 1 1 1 1 \_ \_ 1 \_ \_ \_ 4 4 4 \_ 4 4

\_ 1 1 4 4 4 \_ \_ 1 1 1 \_ 4 4 \_ \_ \_ 4 4 \_

\_ 4 1 4 1 1 4 4 1 4 4 \_ 4 \_ \_ 4 \_ 4 \_ \_

\_ 1 4 1 1 1 4 \_ 4 4 \_ 4 4 \_ 4 4 4 \_ \_ 4

\_ 1 4 4 \_ \_ 4 4 \_ 1 \_ \_ \_ 4 2 4 \_ \_ 4 4

\_ 1 1 1 \_ \_ 1 1 3 1 1 1 1 4 2 2 4 4 \_ 4

1 \_ \_ \_ 1 1 1 3 1 3 3 3 4 4 \_ \_ 2 4 4 \_

1 1 3 1 \_ \_ \_ 3 1 3 4 3 \_ 4 2 2 \_ 4 \_ 2

1 3 3 1 1 3 3 1 1 1 4 4 4 \_ 4 2 \_ 2 2 2

1 3 1 1 \_ 1 3 \_ \_ \_ 4 2 2 2 4 2 2 \_ \_ 2

\_ 1 3 3 3 1 3 3 4 4 3 3 3 2 2 \_ \_ 2 \_ \_

1 3 \_ \_ 3 3 4 4 4 \_ 2 3 2 3 3 3 3 2 2 \_

1 3 3 4 4 4 3 \_ \_ \_ 2 2 2 3 2 2 \_ 2 \_ 2

1 3 3 4 \_ 3 3 2 2 2 3 3 3 2 2 \_ \_ 2 \_ 2

1 \_ \_ 4 3 3 \_ \_ 2 2 \_ 2 3 \_ 2 \_ \_ \_ 2 \_

4 4 4 3 4 4 3 3 3 3 2 2 3 2 \_ \_ \_ 2 2 2

4 4 3 3 3 4 2 2 3 2 2 3 \_ 2 2 2 2 \_ 2 \_

\_ 3 \_ 3 \_ 4 3 2 2 3 3 3 \_ \_ \_ \_ \_ 3 3 2

\_ 3 3 \_ 3 4 3 3 3 \_ \_ 3 2 2 2 2 2 3 3 2

3 3 \_ \_ 3 3 \_ \_ 2 2 2 2 3 3 3 3 3 2 2 2

Game over! The winner is: 3

Final Score:

Player 1: 57

Player 2: 74

Player 3: 82

Player 4: 76

Player 1 win count: 3

Player 2 win count: 1

Player 3 win count: 6

Player 4 win count: 3

New Game 14

Current Board Layout:

1 \_ \_ 4 1 \_ \_ 1 \_ 1 1 1 1 1 \_ 1 \_ 1 4 4

1 1 4 4 1 \_ \_ 1 1 \_ 4 \_ \_ 4 1 1 1 4 4 \_

1 1 4 4 1 1 1 \_ 1 1 4 \_ 4 4 4 4 1 \_ 4 \_

\_ \_ 1 1 4 4 \_ \_ \_ \_ 4 4 3 \_ 1 1 4 4 2 2

1 1 \_ 1 4 \_ 4 4 4 4 \_ 4 3 1 1 4 4 \_ 2 \_

1 \_ \_ 1 \_ 4 \_ 3 \_ 4 \_ 3 3 4 \_ 4 \_ 4 4 2

1 1 \_ 1 \_ 4 3 3 \_ \_ 3 \_ 4 4 4 3 \_ 4 2 2

\_ \_ \_ \_ 1 4 3 \_ 3 3 3 \_ \_ 4 3 3 4 4 2 \_

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\_ 1 \_ \_ 1 4 \_ 3 \_ \_ \_ 3 3 3 \_ 4 \_ 2 2 2

\_ 1 1 1 4 3 3 3 2 2 2 2 \_ 3 4 4 4 2 \_ \_

1 \_ 3 1 4 3 \_ 2 3 3 3 2 \_ 3 2 2 2 3 2 \_

1 3 3 3 3 4 3 2 2 3 3 \_ 2 \_ 3 2 3 \_ 2 \_

1 1 \_ 1 \_ \_ 3 3 2 2 \_ 3 2 \_ 3 3 3 2 2 \_

1 \_ 1 1 1 3 3 \_ 3 \_ 2 3 2 2 2 \_ \_ \_ 2 \_

\_ 1 \_ 1 3 1 1 1 3 3 2 2 \_ 3 3 2 2 2 \_ \_

1 1 \_ 3 3 3 1 2 3 2 2 \_ 3 \_ 3 2 2 \_ 2 \_

1 \_ 3 \_ 3 1 2 2 2 3 3 3 3 \_ 2 3 3 \_ 2 \_

1 3 3 1 1 1 \_ 2 \_ \_ \_ \_ 2 2 2 3 3 \_ 2 2

3 3 2 2 2 2 2 \_ 2 2 2 2 \_ \_ 2 \_ 2 2 \_ 2

Game over! The winner is: 3

Final Score:

Player 1: 73

Player 2: 73

Player 3: 77

Player 4: 56

Player 1 win count: 3

Player 2 win count: 1

Player 3 win count: 7

Player 4 win count: 3

New Game 15

Current Board Layout:

1 1 1 \_ \_ \_ 1 \_ \_ 1 \_ \_ 4 4 1 1 1 \_ 4 4

\_ 1 \_ 1 \_ 1 1 \_ 1 1 1 4 4 4 1 1 \_ 4 4 \_

\_ 1 \_ 1 1 \_ 1 1 3 1 4 1 1 1 \_ \_ 4 \_ 4 \_

\_ 3 3 3 1 1 3 3 3 \_ 4 \_ \_ 1 \_ 4 4 4 2 \_

3 3 1 1 3 3 1 1 1 1 4 4 \_ 1 4 \_ 4 2 2 \_

1 \_ 1 3 1 3 1 \_ \_ \_ 4 1 1 4 4 \_ 2 \_ 4 2

\_ 1 1 3 1 3 \_ 1 \_ 4 1 1 4 4 2 2 2 4 4 2

1 \_ \_ 1 1 3 \_ 1 1 4 4 4 2 2 4 4 \_ 4 \_ 4

1 \_ \_ 1 3 1 \_ 1 \_ 4 \_ \_ 4 2 \_ 4 \_ 4 2 4

1 \_ 3 3 3 1 \_ 1 \_ 3 3 3 4 2 2 4 4 \_ 2 4

1 \_ 3 1 1 3 3 3 3 \_ 3 4 2 \_ 4 \_ 2 2 2 4

1 \_ \_ 1 2 2 2 3 4 \_ 3 4 2 2 4 4 4 4 \_ 2

\_ 3 \_ 1 1 \_ 3 2 \_ 4 4 4 2 4 \_ 2 \_ 2 2 2

\_ 3 3 \_ \_ 3 3 \_ 2 2 2 \_ 2 4 4 2 2 \_ \_ 2

\_ 3 3 \_ 3 3 \_ 2 2 3 3 2 \_ 2 4 \_ 2 2 \_ \_

\_ \_ \_ 3 2 2 3 3 3 \_ 3 2 2 2 \_ 2 \_ 3 2 2

\_ \_ 3 3 3 2 2 \_ 3 \_ \_ 3 3 3 2 2 3 3 2 2

\_ 3 \_ 3 2 3 3 2 3 2 2 2 2 2 3 2 2 3 \_ \_

\_ 3 3 2 2 3 2 2 2 3 3 3 3 3 2 3 3 2 2 2

3 3 \_ \_ 2 3 3 2 \_ \_ \_ 2 2 2 2 \_ 3 3 2 2

Game over! The winner is: 2

Final Score:

Player 1: 67

Player 2: 85

Player 3: 81

Player 4: 61

Player 1 win count: 3

Player 2 win count: 2

Player 3 win count: 7

Player 4 win count: 3

TOTAL REWARD:

GREEDY: 2,155 pts + 5 wins

CORNER CONTROL: pts 2,259 + 10 wins

----------------------------------------------------------

**CENTER CONTROL (P1 and P2) VS CORNER CONTROL (P3 and P4) 7-7-1**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

1 1 \_ \_ \_ \_ \_ 1 1 \_ \_ 1 1 1 1 \_ \_ \_ 4 4

1 \_ \_ 4 4 \_ 1 1 4 1 1 4 4 \_ \_ \_ \_ 4 4 \_

1 1 4 4 4 \_ 1 4 \_ 1 \_ \_ 4 1 1 4 \_ 4 \_ 4

4 4 1 \_ \_ 4 4 4 1 1 \_ 4 4 1 4 4 4 \_ 4 4

4 1 1 1 1 4 1 1 4 4 1 1 1 4 1 4 1 1 \_ 4

\_ 4 4 4 4 1 \_ 1 1 4 4 4 \_ 4 1 1 4 4 \_ 2

4 \_ \_ 1 4 1 4 4 4 1 1 \_ 4 4 1 \_ 1 4 4 2

4 1 1 1 2 1 4 \_ 1 4 1 1 \_ 4 \_ \_ 1 4 \_ 2

4 2 2 2 1 1 4 \_ 1 4 1 \_ 2 \_ 4 1 1 1 4 2

4 1 1 1 2 2 1 1 1 4 4 2 2 2 4 4 4 \_ 4 2

4 1 1 3 2 2 3 3 3 1 1 1 \_ 2 4 \_ 2 2 2 \_

1 4 3 3 3 3 2 2 1 1 \_ 2 2 3 3 3 3 2 2 \_

1 4 2 2 2 2 3 2 2 3 1 2 3 2 2 2 2 3 3 \_

1 4 \_ 3 \_ 2 3 3 2 3 2 2 3 3 3 2 \_ 3 \_ 3

1 3 3 3 \_ 3 3 2 3 3 \_ 3 2 2 2 3 2 2 2 3

1 3 \_ \_ 3 \_ 2 2 3 \_ 3 3 2 \_ \_ 3 3 2 \_ 3

3 \_ \_ 3 3 3 2 \_ 2 2 3 3 2 \_ 3 \_ 3 2 3 3

\_ \_ 3 \_ 3 2 3 3 3 2 2 2 3 3 3 2 2 3 2 2

\_ 3 3 \_ 2 2 3 \_ 3 \_ \_ \_ 2 2 3 2 \_ 3 \_ 2

3 3 \_ 3 3 2 \_ \_ \_ 3 3 3 3 3 \_ 3 3 3 2 2

Game over! The winner is: 3

Final Score:

Player 1: 80

Player 2: 76

Player 3: 81

Player 4: 77

Player 1 win count: 0

Player 2 win count: 0

Player 3 win count: 1

Player 4 win count: 0

New Game 2

Current Board Layout:

1 1 \_ \_ \_ \_ \_ \_ \_ \_ \_ 2 2 \_ \_ \_ \_ \_ 4 4

1 \_ 4 4 4 \_ \_ 4 4 4 \_ 2 4 \_ 4 2 2 4 4 \_

1 1 4 4 \_ 4 \_ 4 \_ \_ 4 2 4 4 4 2 2 \_ 4 \_

\_ 4 1 \_ \_ 4 \_ 4 2 2 4 4 2 2 2 \_ 4 4 \_ \_

\_ 4 1 2 4 4 4 \_ 4 2 2 4 \_ \_ 2 4 4 \_ \_ \_

4 4 1 2 2 \_ \_ 4 4 4 2 4 \_ 4 2 4 \_ 4 4 \_

2 1 1 2 \_ 2 2 2 2 2 4 \_ 4 4 4 2 2 4 \_ \_

2 2 2 1 3 3 3 \_ 1 \_ 2 2 2 4 2 \_ 4 4 \_ \_

\_ 2 1 1 1 1 3 \_ 1 2 2 4 4 \_ 2 2 2 \_ 4 \_

3 1 2 2 2 3 1 1 1 3 3 2 2 2 \_ 1 2 4 4 2

3 1 \_ 2 1 1 3 3 3 1 3 3 2 2 1 1 1 \_ 4 2

3 1 1 2 1 1 1 3 \_ 1 1 2 3 1 2 2 2 2 4 2

3 \_ 1 \_ 2 2 3 1 1 \_ 1 1 3 1 1 \_ 2 \_ \_ 2

3 \_ 3 3 3 2 3 3 1 1 3 \_ 1 1 \_ 1 1 2 2 3

\_ 3 3 2 2 3 3 1 3 3 3 1 \_ 3 \_ 1 \_ 2 \_ 3

3 \_ 2 2 3 \_ \_ 1 3 1 1 3 3 3 1 1 \_ 2 \_ 3

3 3 \_ 3 3 3 1 1 1 \_ 3 1 1 3 \_ \_ \_ 2 3 3

\_ \_ 3 \_ 3 1 3 3 3 1 3 1 1 \_ 3 3 3 3 2 2

\_ 3 3 \_ \_ 1 3 3 \_ 1 3 3 3 \_ \_ \_ 3 \_ \_ 2

3 3 \_ \_ \_ 1 \_ \_ 1 1 \_ \_ \_ 3 3 3 \_ \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 72

Player 2: 81

Player 3: 76

Player 4: 61

Player 1 win count: 0

Player 2 win count: 1

Player 3 win count: 1

Player 4 win count: 0

New Game 3

Current Board Layout:

1 1 \_ \_ \_ \_ 1 \_ \_ 4 4 2 2 2 2 2 \_ \_ 4 4

1 \_ 1 1 \_ \_ 1 \_ 4 \_ 2 \_ 4 4 4 \_ \_ 4 4 \_

1 1 4 1 1 \_ 1 \_ 4 2 2 2 \_ \_ 4 2 2 2 4 \_

4 4 1 \_ \_ 1 1 4 4 4 2 \_ 2 2 4 2 4 4 2 2

4 1 1 1 1 4 4 1 1 \_ 4 4 4 2 2 4 4 \_ 2 2

\_ 4 4 4 4 1 4 1 1 4 4 \_ \_ 4 2 4 \_ 4 4 \_

1 1 1 1 4 1 4 1 2 1 2 2 4 4 4 2 \_ 4 \_ \_

\_ 3 \_ \_ 1 1 1 2 2 1 2 2 \_ 4 \_ 2 4 4 \_ \_

\_ 3 \_ 1 2 2 2 1 1 1 2 \_ 2 \_ 2 2 2 \_ 4 \_

\_ 3 1 1 1 2 1 2 2 2 1 2 2 2 4 4 \_ 4 4 \_

2 3 1 2 2 \_ 1 \_ 1 1 2 1 1 2 4 4 4 \_ 4 \_

2 3 2 2 3 \_ 1 1 \_ 1 \_ 2 2 3 2 2 2 2 4 \_

2 2 3 3 3 \_ 3 1 \_ 1 1 2 \_ 3 3 3 2 3 3 4

3 2 3 \_ \_ 3 3 3 \_ \_ 2 2 \_ 2 2 2 3 2 2 4

3 3 \_ \_ 3 \_ 3 \_ 3 2 \_ \_ \_ 2 \_ \_ 3 2 3 4

3 \_ \_ 3 3 \_ \_ \_ 3 2 3 3 3 2 3 3 3 2 3 4

\_ \_ 3 3 \_ \_ \_ 3 3 3 \_ \_ 3 3 \_ \_ \_ 2 3 4

\_ 3 \_ \_ 3 3 3 \_ \_ \_ 3 \_ \_ \_ 3 3 3 3 2 2

\_ 3 3 \_ \_ 3 3 \_ \_ 3 3 3 3 \_ \_ \_ \_ 3 \_ 2

3 3 \_ \_ \_ \_ \_ \_ 3 \_ \_ \_ \_ 3 3 3 3 \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 56

Player 2: 85

Player 3: 73

Player 4: 65

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 1

Player 4 win count: 0

New Game 4

Current Board Layout:

1 1 4 4 4 \_ \_ 4 4 4 4 4 3 \_ 4 4 4 \_ 4 4

1 \_ 4 1 1 4 4 3 3 3 \_ 3 3 4 \_ \_ \_ 4 4 \_

1 1 4 1 1 4 3 4 4 4 3 \_ 4 4 4 4 \_ \_ 4 1

\_ \_ 1 \_ \_ 4 3 1 4 3 3 \_ \_ \_ \_ \_ 4 4 \_ 1

3 1 1 1 1 4 1 1 4 3 4 4 4 \_ \_ 4 4 \_ \_ 1

3 \_ 4 4 4 1 \_ 1 3 4 4 2 \_ 4 \_ 4 \_ \_ 4 1

3 3 3 4 4 1 \_ 3 3 1 2 2 4 4 4 \_ 4 4 4 1

4 4 4 3 1 1 1 3 3 1 2 1 1 4 1 1 4 1 1 \_

4 3 4 3 3 3 3 1 1 1 2 1 \_ 1 \_ 1 1 4 1 1

\_ 3 3 4 1 1 1 \_ 2 2 1 1 \_ 1 1 4 1 4 1 \_

\_ 3 4 4 1 1 2 3 2 2 2 \_ 2 \_ 1 4 4 2 4 1

\_ 3 4 3 3 3 2 3 3 3 \_ 2 2 \_ 1 2 2 2 4 1

3 4 3 3 2 2 3 2 \_ 3 2 2 1 1 \_ 1 2 4 4 1

3 4 4 2 2 3 3 \_ 2 2 3 3 2 2 2 2 4 \_ 1 1

3 4 2 \_ 3 3 \_ 2 \_ 2 \_ 3 2 \_ \_ \_ 2 2 2 \_

3 2 2 3 \_ \_ 3 2 \_ 2 2 3 \_ \_ \_ 2 \_ 2 \_ \_

3 \_ 3 3 3 \_ \_ 2 3 3 3 2 2 2 \_ 2 \_ 2 \_ \_

\_ 3 \_ 3 \_ 3 \_ 2 3 2 3 2 \_ \_ \_ 2 2 \_ 2 2

\_ 3 3 \_ \_ 3 \_ 2 \_ 2 \_ 2 \_ 2 \_ 2 \_ \_ \_ 2

3 3 \_ \_ 3 3 3 \_ 2 2 \_ \_ 2 2 2 \_ \_ \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 66

Player 2: 73

Player 3: 77

Player 4: 81

Player 1 win count: 0

Player 2 win count: 2

Player 3 win count: 1

Player 4 win count: 1

New Game 5

Current Board Layout:

1 1 \_ \_ \_ \_ 1 1 1 1 \_ 1 1 1 2 \_ \_ \_ 4 4

1 \_ \_ 4 4 \_ \_ 4 4 4 1 \_ 1 4 2 2 \_ 4 4 \_

1 1 4 \_ 4 4 4 \_ 4 \_ 1 4 4 4 2 4 \_ 4 \_ 4

3 \_ 1 4 1 1 \_ 4 \_ \_ 1 4 2 2 4 4 4 \_ \_ 4

3 \_ 1 4 4 1 \_ 4 4 4 1 1 4 2 2 4 \_ \_ 4 4

3 1 1 1 4 1 1 4 1 1 4 4 4 4 2 \_ 4 4 \_ 2

3 4 4 4 1 \_ \_ 1 4 4 1 1 \_ 2 \_ \_ \_ 4 4 2

4 3 3 1 1 1 1 \_ 1 4 1 1 \_ 2 2 2 2 4 \_ 2

4 3 3 \_ 3 3 3 1 1 1 2 1 2 \_ 4 4 4 2 \_ 2

4 3 \_ 3 1 1 \_ 1 2 2 1 2 2 2 4 \_ \_ 2 2 \_

4 \_ \_ 3 1 3 3 3 3 1 1 1 \_ 2 4 \_ 4 4 2 \_

4 \_ 3 3 3 1 1 3 1 3 1 2 2 \_ \_ 4 4 4 2 \_

\_ 3 \_ \_ 1 1 3 1 1 3 \_ 2 3 2 2 2 2 \_ 4 4

\_ 3 3 \_ 1 3 3 1 3 3 2 2 3 \_ \_ 2 4 4 \_ 4

\_ 3 1 1 3 3 \_ 1 3 2 3 3 2 2 2 3 2 2 2 4

\_ 1 1 3 1 1 3 \_ 1 2 3 \_ 2 3 3 \_ \_ 2 \_ 4

1 \_ 3 3 3 1 3 \_ 1 2 3 3 2 3 \_ 2 \_ 2 \_ \_

1 3 \_ 3 \_ 1 3 \_ 1 2 \_ 2 3 3 2 2 2 3 2 2

1 3 3 1 1 3 3 \_ 1 2 \_ 2 2 \_ 3 2 \_ 3 3 2

3 3 \_ 1 1 \_ \_ \_ 1 \_ \_ 2 2 \_ 3 3 3 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 71

Player 3: 71

Player 4: 76

Player 1 win count: 1

Player 2 win count: 2

Player 3 win count: 1

Player 4 win count: 1

New Game 6

Current Board Layout:

1 1 \_ \_ \_ \_ \_ 4 4 4 4 \_ \_ \_ 2 2 2 \_ 4 4

1 \_ \_ 4 4 \_ \_ \_ \_ \_ 4 \_ \_ 4 2 \_ \_ 4 4 \_

1 1 4 4 4 \_ 4 4 4 \_ \_ 4 4 4 2 4 \_ 4 \_ 4

\_ 4 1 \_ \_ 4 4 \_ \_ 4 \_ 4 \_ 2 4 4 4 \_ 4 4

4 4 1 \_ \_ 1 1 4 1 4 4 \_ 2 2 2 4 \_ \_ 4 2

\_ 4 1 \_ 1 1 \_ 4 1 4 \_ 4 4 4 \_ 2 4 4 \_ 2

\_ 1 1 \_ 1 4 1 1 1 4 \_ \_ 4 \_ \_ 2 \_ 4 4 2

1 \_ \_ 1 \_ \_ 4 4 4 1 1 \_ 4 2 2 \_ \_ 4 \_ 2

1 \_ 1 1 1 1 4 1 4 1 1 \_ \_ \_ 2 2 4 2 \_ 2

1 3 3 3 \_ 3 1 1 1 \_ 1 2 2 2 \_ 2 4 \_ 2 \_

1 3 \_ 1 3 3 1 2 2 2 2 1 2 2 4 4 4 \_ 2 2

1 3 \_ 1 1 1 \_ 1 1 1 3 2 \_ 4 2 2 2 2 4 2

\_ 1 3 3 \_ 1 3 \_ 1 3 3 2 2 4 4 4 2 4 4 2

1 1 3 1 1 3 3 \_ 1 3 2 2 \_ 2 2 2 4 2 2 \_

1 3 3 1 3 3 \_ 3 2 2 3 3 3 \_ 2 \_ 4 2 3 3

1 \_ \_ 3 1 1 1 3 2 3 3 2 2 3 2 3 4 2 3 \_

\_ \_ 3 3 3 \_ 1 3 3 2 2 3 2 2 \_ 3 4 2 3 3

\_ 3 \_ 3 1 1 \_ 3 \_ 2 \_ 3 3 3 \_ 3 4 3 2 2

\_ 3 3 \_ 3 3 1 1 2 2 \_ 3 2 \_ 3 3 \_ 3 \_ 2

3 3 \_ \_ 3 3 3 1 1 \_ 2 2 2 \_ \_ \_ 3 3 2 2

Game over! The winner is: 4

Final Score:

Player 1: 69

Player 2: 77

Player 3: 67

Player 4: 78

Player 1 win count: 1

Player 2 win count: 2

Player 3 win count: 1

Player 4 win count: 2

New Game 7

Current Board Layout:

1 1 \_ \_ \_ 4 4 \_ 1 1 1 1 4 4 4 4 4 \_ 4 4

1 \_ 4 \_ 4 \_ 4 \_ 4 4 4 \_ 1 \_ \_ \_ \_ 4 4 \_

1 1 4 4 4 \_ \_ 4 4 1 \_ 4 1 \_ \_ 4 \_ 4 \_ 4

\_ \_ 1 \_ \_ 4 4 \_ 1 1 4 4 1 \_ 4 4 4 \_ \_ 4

\_ 1 1 1 1 4 4 4 1 \_ \_ 4 1 4 \_ 4 1 1 2 4

1 4 4 4 4 1 2 \_ \_ 1 1 4 1 4 1 1 4 4 2 2

1 1 1 \_ 4 1 2 \_ 1 1 4 1 4 4 4 1 2 4 4 2

1 4 4 4 \_ 1 2 \_ 1 4 4 4 1 1 1 4 2 4 \_ 2

\_ \_ 1 4 1 1 2 1 4 1 1 1 \_ 4 4 4 2 2 2 \_

1 1 1 2 2 2 1 1 1 \_ \_ 1 1 4 2 2 4 4 4 \_

1 \_ \_ 1 1 2 1 \_ \_ 1 1 4 4 2 2 2 4 \_ \_ 2

3 3 3 1 1 1 2 2 2 2 1 2 2 3 3 3 4 2 2 2

3 2 2 2 2 2 3 \_ \_ 2 1 2 3 2 2 2 2 \_ 2 \_

2 3 3 3 \_ 3 3 2 2 3 2 2 3 \_ \_ 2 3 3 3 3

2 3 3 \_ 3 3 2 3 3 3 \_ \_ 2 3 3 3 2 2 2 3

2 \_ \_ 3 \_ 2 2 3 \_ \_ 3 3 3 2 3 \_ \_ 2 3 \_

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\_ 3 \_ 3 2 2 3 3 3 \_ \_ 3 2 \_ \_ 3 \_ \_ 2 2

\_ 3 3 \_ 3 2 3 \_ 3 \_ \_ 3 \_ 3 3 3 3 \_ \_ 2

3 3 \_ 3 3 3 \_ \_ \_ 3 3 3 \_ \_ \_ \_ \_ \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 71

Player 2: 75

Player 3: 72

Player 4: 77

Player 1 win count: 1

Player 2 win count: 2

Player 3 win count: 1

Player 4 win count: 3

New Game 8

Current Board Layout:

1 1 \_ \_ \_ \_ \_ 1 \_ \_ 2 \_ 2 2 2 \_ \_ \_ 4 4

1 \_ 4 4 4 4 1 1 4 2 2 2 4 4 4 2 \_ 4 4 \_

1 1 4 1 1 1 4 4 4 \_ 2 4 \_ 4 2 2 4 \_ 4 \_

\_ \_ 1 \_ \_ 1 4 \_ \_ 4 4 4 \_ \_ 2 4 4 4 2 \_

3 1 1 1 1 \_ \_ \_ 1 1 1 4 2 2 4 2 4 2 2 2

3 3 \_ \_ \_ 1 \_ 1 1 \_ 4 2 2 4 4 2 2 4 4 1

3 \_ 3 3 \_ 1 \_ 4 4 1 4 2 4 4 \_ 4 1 4 4 1

\_ \_ 3 3 1 1 1 4 4 1 4 4 2 2 2 4 \_ 1 4 1

3 3 4 3 4 4 4 1 1 1 4 1 1 2 2 4 4 1 \_ 1

3 3 4 4 3 3 1 4 4 4 1 1 2 1 1 1 4 1 \_ 1

\_ 4 3 4 \_ 3 1 1 1 4 1 \_ 2 3 1 1 \_ \_ 1 \_

3 4 3 \_ 3 3 \_ 1 \_ 2 3 2 2 3 3 3 1 1 1 \_

3 4 3 3 4 \_ 3 \_ 2 2 3 2 3 2 2 2 1 2 2 2

3 4 3 \_ 4 3 3 3 \_ 2 2 3 2 \_ 2 1 \_ \_ \_ 2

3 3 4 4 3 4 3 4 3 3 \_ 3 1 1 2 1 1 1 1 2

\_ \_ 4 3 3 4 4 4 3 2 3 3 3 1 1 2 2 2 2 \_

\_ 4 3 3 \_ \_ \_ 3 3 2 \_ 2 2 2 2 1 1 2 \_ \_

\_ 3 \_ \_ 3 3 \_ \_ 2 \_ \_ 2 \_ \_ \_ 1 1 \_ 2 2

\_ 3 3 \_ \_ 3 3 3 2 2 2 \_ 2 2 2 2 2 1 1 2

3 3 \_ \_ 2 2 2 2 \_ \_ 2 \_ \_ 1 1 1 1 \_ 2 2

Game over! The winner is: 2

Final Score:

Player 1: 80

Player 2: 81

Player 3: 65

Player 4: 79

Player 1 win count: 1

Player 2 win count: 3

Player 3 win count: 1

Player 4 win count: 3

New Game 9

Current Board Layout:

1 1 3 3 \_ \_ \_ 4 4 \_ 1 \_ \_ 4 4 4 1 \_ 4 4

1 \_ 3 \_ \_ 4 4 3 3 4 1 1 \_ \_ 4 1 1 4 4 \_

1 1 3 3 4 4 4 3 3 4 1 \_ 4 4 1 \_ 4 \_ 4 \_

3 3 1 4 3 3 3 4 4 4 \_ 1 4 \_ 1 4 4 4 \_ 4

\_ 3 1 4 3 \_ 1 1 \_ \_ 4 1 4 4 1 1 4 \_ \_ 4

3 \_ 1 4 3 \_ 1 \_ 4 4 4 1 1 1 4 4 1 1 1 4

3 1 1 4 4 1 1 \_ 1 1 4 \_ \_ 4 4 1 \_ 1 1 4

3 4 4 1 \_ \_ 3 1 1 4 1 1 1 4 1 1 1 \_ \_ 4

3 4 \_ 1 \_ 3 3 1 4 4 4 4 1 1 4 4 1 \_ 4 \_

3 4 1 1 1 3 1 \_ \_ 2 2 2 4 4 4 1 4 4 4 2

4 3 3 3 3 1 1 1 1 2 2 4 \_ 2 1 1 4 2 \_ 2

4 4 2 2 3 \_ 2 2 2 1 \_ 2 2 2 1 2 2 2 \_ 2

\_ 4 \_ 3 2 2 3 \_ 2 1 \_ 2 1 1 \_ \_ 2 3 \_ 2

4 3 3 3 2 3 3 \_ 2 1 2 1 2 2 2 2 3 3 3 2

4 3 \_ \_ 3 3 \_ 3 \_ 1 2 \_ 2 \_ 3 3 2 2 2 3

4 \_ \_ 3 \_ \_ \_ 3 \_ 1 2 2 3 3 \_ 2 3 2 \_ 3

4 \_ 3 3 3 2 2 3 3 \_ 2 \_ 3 3 3 2 3 2 \_ 3

\_ 3 \_ 3 2 3 2 3 \_ 2 3 3 \_ \_ 2 2 3 3 2 2

\_ 3 3 2 2 3 2 \_ 3 3 3 2 2 \_ 2 3 \_ \_ \_ 2

3 3 2 2 3 3 3 2 2 2 2 \_ 2 2 \_ \_ \_ \_ 2 2

Game over! The winner is: 3

Final Score:

Player 1: 73

Player 2: 73

Player 3: 85

Player 4: 79

Player 1 win count: 1

Player 2 win count: 3

Player 3 win count: 2

Player 4 win count: 3

New Game 10

Current Board Layout:

1 1 \_ 4 4 4 \_ \_ \_ \_ \_ \_ \_ \_ \_ 4 4 \_ 4 4

1 \_ 4 \_ \_ \_ 4 4 4 4 4 \_ 4 4 4 \_ \_ 4 4 \_

1 1 4 4 4 4 \_ 1 \_ 2 2 4 4 \_ \_ 4 \_ 4 \_ 4

4 4 1 \_ \_ \_ \_ 1 2 2 4 \_ 1 \_ 4 4 4 \_ \_ 4

4 1 1 1 1 4 1 1 1 2 4 4 1 1 \_ 4 \_ \_ 4 4

4 4 \_ 4 4 1 4 4 2 1 4 4 1 4 1 1 4 4 \_ \_

3 \_ 4 4 \_ 1 4 4 2 1 1 1 \_ 4 4 4 1 4 4 \_

3 \_ 1 1 \_ 1 2 2 2 \_ 2 2 2 4 2 2 \_ 4 \_ \_

3 1 1 3 1 1 3 3 3 2 2 1 1 1 2 2 4 \_ \_ 4

3 1 \_ 3 3 3 1 1 1 3 3 2 2 2 1 1 4 \_ 4 4

1 3 3 \_ \_ \_ 1 1 2 2 2 3 2 2 1 1 4 4 \_ 4

1 3 3 1 1 1 \_ 2 1 1 2 \_ 1 1 2 2 4 \_ 2 \_

1 3 \_ \_ \_ 1 3 2 2 1 1 1 \_ 1 2 4 2 2 2 4

1 \_ 3 3 3 1 3 3 2 2 \_ 2 1 \_ 2 4 2 \_ 4 4

1 3 3 1 1 3 3 2 3 \_ 2 \_ 1 1 2 4 4 4 3 3

3 \_ 1 1 3 \_ \_ 2 3 2 2 1 1 3 3 2 2 2 2 3

3 3 \_ 3 3 3 \_ 2 3 3 2 \_ 3 1 3 \_ \_ 2 3 3

3 \_ 3 \_ 3 \_ 3 2 3 2 3 3 3 1 3 2 2 3 2 2

\_ 3 3 \_ \_ \_ 3 2 \_ 2 3 2 2 1 3 2 \_ 3 \_ 2

3 3 \_ \_ \_ 3 3 3 2 2 2 \_ \_ 1 \_ 3 3 3 2 2

Game over! The winner is: 4

Final Score:

Player 1: 79

Player 2: 73

Player 3: 73

Player 4: 80

Player 1 win count: 1

Player 2 win count: 3

Player 3 win count: 2

Player 4 win count: 4

New Game 11

Current Board Layout:

1 1 \_ \_ \_ 1 \_ \_ \_ 1 \_ 1 1 1 1 1 \_ \_ 4 4

1 \_ 1 1 1 1 4 4 \_ 1 1 \_ 4 4 4 \_ \_ 4 4 \_

1 1 \_ \_ 4 4 4 1 1 4 1 \_ \_ 4 4 \_ 4 \_ 4 2

4 \_ 1 4 1 1 1 4 4 4 1 4 \_ \_ \_ 4 4 4 \_ 2

4 \_ 1 \_ \_ 4 \_ 4 \_ 1 4 4 4 4 \_ \_ 4 \_ 4 2

4 1 1 1 4 4 4 \_ \_ 1 \_ \_ \_ \_ 4 4 \_ \_ 4 2

4 \_ 4 4 1 \_ \_ 1 1 1 \_ \_ \_ 4 4 \_ 2 2 4 2

\_ 4 4 1 1 1 1 \_ \_ \_ 4 \_ \_ 4 \_ 4 4 2 2 3

\_ 1 1 4 4 4 \_ 1 1 1 4 4 4 \_ \_ 4 2 \_ 2 3

1 1 3 4 \_ 3 \_ 1 1 2 4 \_ 2 2 2 4 2 2 3 2

1 \_ \_ 3 3 3 1 \_ 2 2 2 4 4 2 2 4 \_ 2 3 \_

\_ 3 3 1 \_ 3 1 1 1 2 \_ 2 2 3 3 3 3 2 3 2

3 \_ 3 1 1 1 3 1 2 3 \_ 2 3 2 2 2 2 3 2 2

3 \_ 3 3 \_ 1 3 3 2 3 2 2 3 3 \_ 2 3 3 \_ 2

3 \_ 1 1 1 3 3 1 3 3 \_ \_ 2 3 \_ \_ 2 2 2 3

3 3 \_ 1 3 1 1 \_ 3 \_ 3 \_ 2 2 3 3 3 2 \_ 3

\_ 1 1 3 3 3 1 3 \_ \_ 3 2 2 \_ \_ 3 3 2 3 3

1 1 3 1 3 \_ 1 3 \_ 3 3 \_ \_ 2 2 2 2 3 2 2

\_ 3 3 1 1 3 3 3 \_ \_ 3 \_ \_ 2 \_ \_ 3 3 \_ 2

3 3 \_ \_ \_ 1 1 1 1 \_ \_ 3 3 3 3 3 \_ 3 2 2

Game over! Tied between players: 1, 3

Final Score:

Player 1: 80

Player 2: 62

Player 3: 80

Player 4: 67

Player 1 win count: 1

Player 2 win count: 3

Player 3 win count: 2

Player 4 win count: 4

New Game 12

Current Board Layout:

1 1 \_ 1 \_ \_ 4 4 4 4 \_ \_ \_ 4 4 4 1 \_ 4 4

1 \_ 1 1 4 4 \_ \_ \_ \_ 4 4 4 \_ 4 \_ 1 4 4 \_

1 1 4 4 4 \_ \_ 4 \_ 4 \_ \_ 4 1 1 1 4 \_ 4 2

4 4 1 \_ \_ 4 4 4 \_ \_ \_ \_ 4 1 \_ 4 4 4 \_ 2

\_ 4 1 4 \_ 4 \_ \_ 4 4 4 4 \_ 1 4 \_ 4 2 2 2

4 4 1 4 4 \_ 4 \_ \_ \_ 4 1 1 4 4 2 2 1 1 \_

\_ 1 1 4 4 2 4 1 1 4 1 1 4 4 2 \_ 2 2 1 \_

1 3 \_ 1 2 2 4 1 1 4 4 4 1 2 2 2 \_ 2 1 1

1 3 \_ 1 2 4 4 1 \_ 4 2 2 1 1 1 2 1 1 \_ \_

1 3 1 1 1 2 1 4 4 1 1 1 2 2 2 1 2 1 1 2

1 3 3 \_ 2 1 1 1 1 3 3 1 1 2 2 \_ 2 2 1 2

\_ 1 1 3 2 \_ 2 2 2 2 3 2 2 1 1 1 1 1 \_ 2

\_ 1 1 3 2 2 3 \_ 3 2 3 2 1 2 2 2 2 3 3 2

\_ 3 3 3 \_ 3 3 \_ \_ 3 2 2 1 1 \_ 2 \_ 3 3 2

3 \_ \_ \_ 3 3 \_ 3 3 3 \_ 1 1 2 2 \_ 2 2 2 3

3 \_ \_ 3 \_ \_ \_ 3 \_ \_ 3 2 2 2 \_ \_ \_ 2 3 3

3 \_ 3 3 3 \_ \_ \_ \_ \_ 3 3 3 \_ 2 2 \_ 2 3 3

\_ 3 \_ 3 \_ \_ 3 3 3 \_ 3 \_ \_ 3 2 2 3 3 2 2

\_ 3 3 \_ \_ 3 \_ \_ 3 3 \_ \_ 3 3 3 3 \_ 3 \_ 2

3 3 \_ \_ 3 3 3 \_ \_ \_ 3 3 \_ \_ \_ \_ 3 3 2 2

Game over! The winner is: 1

Final Score:

Player 1: 77

Player 2: 73

Player 3: 73

Player 4: 66

Player 1 win count: 2

Player 2 win count: 3

Player 3 win count: 2

Player 4 win count: 4

New Game 13

Current Board Layout:

1 1 4 4 \_ \_ \_ 1 \_ \_ \_ \_ 2 2 2 \_ 2 \_ 4 4

1 \_ 4 \_ \_ 4 1 1 4 4 4 \_ 2 4 \_ 2 2 4 4 2

1 1 4 4 \_ 4 1 4 4 \_ \_ 4 4 4 2 4 2 4 \_ 2

4 4 1 \_ 4 4 4 1 1 4 \_ 4 \_ 1 4 4 4 2 2 \_

4 1 1 1 1 \_ \_ 4 \_ 1 1 \_ 4 1 2 4 2 2 \_ 2

4 \_ \_ \_ \_ 1 4 4 1 1 \_ 1 4 1 2 \_ 4 4 \_ 2

4 \_ 3 3 \_ 1 4 4 \_ 1 4 4 4 1 2 \_ \_ 4 4 2

1 1 3 3 1 1 1 3 3 3 1 1 1 \_ 2 1 1 4 \_ 2

1 1 3 1 3 3 3 1 1 1 3 3 1 1 2 1 4 2 2 \_

\_ 3 1 1 3 1 3 1 1 \_ 1 2 2 2 1 1 4 \_ 2 2

\_ 3 3 3 \_ 1 1 3 3 3 1 \_ 2 2 \_ \_ 4 4 \_ 2

1 1 1 3 \_ \_ 1 1 3 \_ 1 2 \_ \_ 2 2 4 \_ 2 \_

\_ 1 3 1 1 1 3 \_ 3 1 1 2 2 \_ 2 4 2 2 2 \_

\_ 3 3 3 3 1 3 3 1 3 2 2 \_ 3 2 4 2 4 4 4

3 \_ 1 1 1 3 3 \_ 1 3 \_ 3 3 3 2 4 4 \_ 4 \_

3 3 \_ \_ 3 \_ 1 1 1 3 3 2 2 2 4 2 2 2 2 4

3 \_ \_ 3 3 3 \_ 3 \_ \_ 3 \_ 2 4 4 \_ \_ 2 4 4

\_ \_ 3 \_ 3 \_ \_ 3 2 2 \_ 3 2 4 2 2 2 4 2 2

\_ 3 3 \_ \_ 3 3 3 \_ 2 2 2 \_ \_ 2 \_ \_ 4 \_ 2

3 3 \_ \_ \_ \_ \_ \_ 3 3 3 3 3 \_ 2 \_ \_ 4 2 2

Game over! The winner is: 1

Final Score:

Player 1: 79

Player 2: 74

Player 3: 69

Player 4: 74

Player 1 win count: 3

Player 2 win count: 3

Player 3 win count: 2

Player 4 win count: 4

New Game 14

Current Board Layout:

1 1 \_ 1 1 1 1 1 \_ 1 \_ \_ \_ \_ \_ 2 \_ \_ 4 4

1 \_ \_ 4 4 3 3 \_ 1 1 \_ 4 4 4 4 2 2 4 4 \_

1 1 4 4 4 3 3 \_ 1 4 4 \_ \_ \_ 4 2 4 \_ 4 \_

4 4 1 3 3 4 4 4 1 4 2 4 \_ 2 2 4 4 4 \_ \_

\_ 4 1 3 4 4 1 1 4 4 2 4 4 4 2 2 4 2 2 \_

4 4 1 3 \_ 1 1 \_ 1 \_ 2 4 2 2 4 4 2 4 2 2

\_ 1 1 3 \_ 1 \_ \_ 1 \_ 4 2 \_ 4 4 2 2 2 4 2

3 3 3 1 4 4 1 1 1 4 4 \_ \_ 4 2 \_ \_ 2 4 4

1 3 1 1 1 1 4 4 4 2 4 \_ \_ \_ 2 2 2 \_ 4 2

1 1 3 3 3 \_ 1 1 1 2 4 2 2 2 \_ \_ 2 \_ \_ 2

\_ 1 3 1 \_ \_ 1 1 \_ 2 2 4 2 2 4 4 4 4 4 2

1 \_ 3 1 1 1 \_ \_ 1 1 2 4 4 4 2 2 2 2 3 2

1 3 \_ \_ 1 \_ 3 1 \_ 1 \_ 2 2 2 4 4 2 3 3 2

1 3 3 1 \_ 3 3 3 \_ 1 1 2 \_ 4 4 3 3 2 2 3

1 3 3 1 3 \_ 3 \_ 3 \_ \_ 2 \_ 3 3 4 3 2 \_ 3

3 1 1 3 3 \_ 2 \_ 3 2 2 3 3 3 4 4 3 2 \_ 3

3 1 3 3 2 2 2 3 3 2 3 2 2 \_ 3 3 \_ 2 \_ 3

\_ 3 1 1 3 3 2 \_ 3 2 3 2 3 3 \_ 3 \_ 3 2 2

\_ 3 3 1 \_ 3 3 2 2 3 3 3 \_ 3 \_ 3 3 \_ \_ 2

3 3 \_ 1 \_ \_ \_ 2 2 \_ \_ \_ 3 3 \_ \_ \_ \_ 2 2

Game over! The winner is: 3

Final Score:

Player 1: 68

Player 2: 80

Player 3: 81

Player 4: 76

Player 1 win count: 3

Player 2 win count: 3

Player 3 win count: 3

Player 4 win count: 4

New Game 15

Current Board Layout:

1 1 \_ \_ \_ 1 \_ \_ 4 \_ \_ \_ \_ 4 4 4 \_ \_ 4 4

1 \_ \_ \_ \_ 1 \_ 4 \_ \_ 4 4 4 \_ 4 \_ \_ 4 4 \_

1 1 \_ 1 1 1 \_ 4 4 4 \_ \_ 4 4 \_ \_ 4 \_ 4 \_

\_ \_ 1 \_ \_ \_ \_ 4 1 \_ 4 \_ \_ \_ \_ 4 4 4 2 \_

\_ \_ 1 \_ \_ 1 1 \_ 1 1 4 4 \_ \_ 4 \_ 4 2 2 2

\_ \_ 1 \_ 1 1 \_ 1 \_ 1 4 \_ \_ 4 4 2 2 4 4 \_

\_ 1 1 \_ \_ 1 \_ 1 \_ 1 4 \_ 4 4 \_ 2 2 4 \_ \_

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1 \_ 1 1 1 1 \_ \_ \_ 4 4 4 2 \_ 2 2 4 2 2 2

1 1 \_ \_ \_ \_ 1 1 1 4 1 2 2 2 1 2 4 2 \_ \_

\_ 1 1 \_ \_ \_ 1 1 \_ 1 2 1 1 2 1 2 4 \_ 2 2

1 \_ \_ 3 3 3 \_ \_ 1 1 1 2 2 1 1 4 4 2 2 2

1 1 3 3 \_ \_ 3 1 \_ 1 \_ 2 3 2 2 2 2 4 4 4

3 1 \_ \_ \_ 3 3 1 1 3 2 2 3 3 \_ 2 3 3 3 4

3 3 3 \_ 3 3 \_ 3 3 3 \_ \_ 2 \_ 3 3 2 2 2 4

3 \_ \_ 3 \_ 2 2 3 2 2 \_ 2 2 \_ 3 3 4 2 4 \_

\_ \_ 3 3 3 \_ 2 2 3 \_ 2 2 3 \_ 3 \_ 4 2 4 4

\_ 3 \_ 3 2 2 3 3 3 3 \_ \_ \_ 3 2 2 2 4 2 2

\_ 3 3 \_ 2 3 2 2 2 2 3 3 3 3 2 \_ 4 4 \_ 2

3 3 \_ \_ 3 3 3 \_ 3 3 2 2 2 \_ 2 \_ 4 4 2 2

Game over! The winner is: 2

Final Score:

Player 1: 64

Player 2: 74

Player 3: 58

Player 4: 65

Player 1 win count: 3

Player 2 win count: 4

Player 3 win count: 3

Player 4 win count: 4

TOTAL REWARD:

CENTER CONTROL: 2,226 pts + 7 wins

CORNER CONTROL: 2,202 pts + 7 wins

----------------------------------------------

**CENTER CONTROL (P1) 8 WINS, GREEDY (P2) 1 WIN, RANDOM (P3) 0 WINS, CORNER CONTROL (P4) 6 WINS**

AI Fall 2020 Final Project

Blokus with AI

New Game 1

Current Board Layout:

1 1 \_ \_ 4 4 4 1 1 1 \_ \_ \_ \_ \_ 4 1 \_ 4 4

1 \_ \_ 4 \_ 1 1 4 1 4 1 1 4 4 4 1 1 4 4 \_

1 1 4 4 4 4 1 4 4 4 1 1 \_ 4 4 1 4 \_ 4 \_

4 4 1 \_ \_ \_ 4 \_ \_ 1 \_ 4 1 1 1 4 4 4 \_ \_

3 4 1 \_ 4 4 4 1 1 1 \_ 4 4 4 \_ \_ 4 \_ \_ \_

3 1 1 1 4 \_ 1 4 4 \_ 1 4 1 \_ 4 4 \_ 2 2 2

3 4 4 4 1 4 1 \_ 4 4 4 \_ 1 4 4 2 2 \_ 2 \_

\_ 3 4 \_ 1 4 1 1 \_ \_ \_ 4 1 4 \_ 4 4 4 2 \_

3 3 3 \_ 1 3 3 1 \_ 1 1 4 1 2 2 4 \_ 2 4 2

\_ \_ 3 1 1 3 \_ \_ 1 1 2 4 1 \_ 2 4 2 2 4 \_

3 3 1 3 3 1 1 \_ 1 \_ 2 4 4 1 2 2 4 2 4 2

\_ 3 1 3 3 1 1 1 \_ 1 2 1 1 1 4 4 4 2 4 2

\_ 3 3 \_ \_ \_ \_ \_ 1 1 2 1 2 2 2 2 2 \_ 2 2

\_ \_ \_ 3 3 3 \_ 1 3 1 1 2 1 1 1 1 \_ 1 2 \_

\_ \_ \_ 3 \_ \_ \_ 1 3 \_ \_ 2 \_ \_ 1 \_ 1 1 1 2

\_ 3 3 \_ \_ 3 \_ 1 3 \_ 1 2 2 2 \_ 2 2 1 2 2

\_ 3 3 \_ \_ 3 \_ 1 3 \_ 1 \_ \_ \_ 2 2 2 \_ \_ 2

3 \_ 3 \_ 3 3 \_ 3 1 1 1 2 \_ 2 \_ \_ \_ 2 2 \_

\_ 3 \_ \_ 3 \_ 3 3 2 2 2 2 \_ 2 2 \_ \_ \_ 2 2

3 3 3 3 \_ \_ 3 \_ 3 3 \_ \_ 2 2 \_ 2 2 2 \_ 2

Game over! The winner is: 1

Final Score:

Player 1: 109

Player 2: 64

Player 3: 50

Player 4: 76

Player 1 win count: 1

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 0

New Game 2

Current Board Layout:

1 1 4 4 4 \_ \_ 4 4 4 4 4 \_ \_ \_ 1 \_ \_ 4 4

1 \_ 4 \_ 4 1 1 \_ \_ 1 1 1 4 4 4 1 1 4 4 \_

1 1 \_ 4 \_ 1 1 4 4 4 4 1 \_ 4 4 1 4 \_ 4 2

\_ \_ 1 4 4 4 4 1 1 4 1 \_ 1 1 1 4 4 4 2 2

3 1 1 1 1 \_ 1 1 4 1 1 4 4 4 \_ \_ 4 \_ 2 \_

3 4 3 3 \_ 1 \_ \_ 4 \_ 4 4 2 \_ 4 4 2 2 4 2

3 4 3 3 \_ 1 \_ 4 4 4 1 2 2 4 4 2 4 4 4 2

3 4 3 4 3 1 4 \_ 1 2 2 1 1 4 \_ 2 4 \_ \_ 2

\_ 3 4 4 1 1 4 4 1 2 1 1 4 2 2 2 \_ 4 4 2

1 3 4 1 4 4 1 1 1 2 1 4 4 4 \_ \_ 2 4 4 2

1 3 1 1 1 3 3 \_ 2 1 4 1 1 1 1 1 2 2 2 \_

1 1 3 1 \_ 3 2 2 2 1 1 \_ 2 2 2 2 \_ 2 \_ 2

\_ 1 3 3 3 \_ 3 3 2 1 1 \_ \_ 1 2 \_ 2 \_ 2 2

\_ \_ 1 1 \_ 3 3 \_ 1 2 2 1 1 1 \_ 2 2 2 \_ 2

3 3 3 3 3 \_ \_ 3 1 \_ 2 \_ 1 \_ \_ 1 2 \_ 2 \_

\_ \_ \_ \_ \_ \_ \_ 3 1 2 2 \_ \_ 1 1 1 \_ 2 2 \_

\_ \_ \_ \_ 3 \_ 3 3 1 \_ \_ 2 2 2 \_ 1 2 2 1 2

\_ \_ \_ \_ 3 3 \_ 3 \_ \_ 2 2 \_ \_ 2 2 1 1 1 \_

3 3 3 3 \_ 3 \_ \_ 3 3 \_ \_ \_ 2 \_ 2 1 2 2 2

3 \_ \_ \_ \_ 3 \_ \_ 3 3 2 2 2 2 \_ 2 2 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 104

Player 2: 78

Player 3: 48

Player 4: 76

Player 1 win count: 2

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 0

New Game 3

Current Board Layout:

1 1 \_ \_ \_ \_ 1 1 1 \_ 1 1 \_ \_ 1 \_ \_ \_ 4 4

1 \_ \_ 4 4 4 4 4 1 \_ 1 1 \_ 4 1 1 \_ 4 4 \_

1 1 4 \_ 1 1 1 1 4 1 \_ 4 4 4 1 4 \_ 4 2 2

4 4 1 \_ 4 \_ 4 \_ 4 1 1 4 1 1 4 4 4 \_ 2 \_

4 4 1 \_ 4 4 4 \_ 4 1 4 1 \_ 4 1 4 \_ \_ 2 \_

3 \_ 1 \_ 1 1 1 4 4 1 4 1 1 4 1 1 4 4 2 \_

3 1 1 \_ 4 4 4 1 1 4 4 4 1 4 4 2 1 4 4 2

3 \_ \_ 1 4 2 1 1 \_ 1 \_ \_ 1 4 2 2 2 4 \_ 2

3 \_ \_ 1 4 2 1 2 2 1 \_ 2 2 2 4 4 2 \_ 2 2

3 \_ 1 1 1 2 2 1 1 1 2 2 4 4 4 \_ 4 2 \_ 2

\_ 3 3 \_ \_ 1 1 2 2 2 4 4 \_ 1 2 4 4 2 \_ \_

3 3 \_ 3 \_ 1 1 1 2 1 4 1 1 1 \_ 2 2 2 \_ 2

3 \_ 3 \_ 3 3 2 2 1 1 4 1 \_ \_ 2 4 4 4 2 2

\_ \_ 3 \_ 3 2 2 1 \_ 1 1 4 2 2 2 \_ \_ 2 4 \_

3 \_ \_ 3 2 3 3 1 \_ 3 3 4 2 4 4 4 2 2 4 4

3 \_ 3 3 2 3 \_ 1 3 \_ 3 2 4 2 4 4 2 2 \_ 4

3 \_ 3 3 2 3 3 1 3 \_ 3 2 4 2 2 2 4 4 4 \_

\_ 3 \_ 2 3 2 2 1 3 \_ \_ 2 4 2 \_ \_ 2 4 2 2

3 3 2 2 3 2 2 3 3 \_ \_ 2 4 \_ \_ 2 2 2 \_ 2

3 2 2 \_ 3 3 3 \_ \_ \_ \_ 2 \_ \_ \_ \_ 2 \_ 2 2

Game over! The winner is: 4

Final Score:

Player 1: 80

Player 2: 85

Player 3: 47

Player 4: 104

Player 1 win count: 2

Player 2 win count: 0

Player 3 win count: 0

Player 4 win count: 1

New Game 4

Current Board Layout:

1 1 4 \_ \_ 4 4 \_ 4 4 4 2 2 2 \_ 2 \_ \_ 4 4

1 \_ 4 4 \_ \_ \_ 4 \_ \_ \_ 2 4 \_ 4 2 2 4 4 \_

1 1 4 \_ 4 4 \_ 4 4 4 \_ 2 4 4 4 2 4 \_ 4 \_

4 4 1 \_ 4 \_ 4 \_ \_ 4 2 4 2 2 2 4 4 4 \_ \_

1 4 1 \_ 4 \_ 4 4 2 2 2 4 4 4 2 \_ 4 \_ \_ \_

1 4 1 \_ 4 1 4 2 \_ \_ 2 4 \_ \_ 4 4 \_ 4 4 \_

\_ 1 1 4 1 1 4 2 4 4 4 2 2 4 4 \_ \_ 4 4 \_

3 \_ \_ 1 \_ 2 2 4 4 \_ \_ \_ 2 4 2 \_ \_ \_ 4 2

3 3 1 1 1 1 2 1 \_ 1 1 1 2 2 \_ 2 2 4 \_ 2

3 \_ \_ \_ 2 2 1 1 1 2 2 1 1 \_ 2 2 2 4 4 2

\_ 3 3 \_ 2 2 1 \_ 2 2 1 2 2 1 1 4 4 2 4 2

\_ 3 \_ 3 3 3 \_ 1 1 1 \_ 2 1 1 1 4 2 2 2 \_

3 \_ 3 \_ \_ 3 1 \_ \_ 1 3 2 2 \_ \_ 1 1 2 \_ 1

3 \_ \_ \_ \_ 3 1 1 \_ 1 3 3 3 2 \_ 1 2 1 1 1

3 1 1 1 1 1 3 1 1 \_ 3 2 2 2 2 1 2 2 2 1

3 \_ \_ \_ \_ 3 3 3 \_ 3 \_ 3 3 3 \_ 2 1 2 \_ 2

3 \_ \_ 3 3 \_ 3 \_ \_ 3 3 \_ 2 2 2 2 1 1 1 2

\_ 3 3 \_ \_ 3 \_ \_ 3 3 \_ 2 1 1 1 1 \_ \_ 1 2

3 3 \_ \_ \_ 3 3 3 \_ \_ \_ 2 2 \_ 2 2 2 \_ \_ 2

3 \_ \_ \_ \_ \_ \_ \_ 3 3 3 3 2 2 \_ \_ 2 2 \_ 2

Game over! The winner is: 2

Final Score:

Player 1: 69

Player 2: 86

Player 3: 51

Player 4: 71

Player 1 win count: 2

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 1

New Game 5

Current Board Layout:

1 1 4 4 4 \_ \_ 4 4 4 \_ \_ \_ \_ 4 4 2 \_ 4 4

1 \_ \_ 4 \_ \_ \_ \_ 4 4 \_ \_ \_ 4 4 2 2 4 4 2

1 1 \_ \_ 4 4 4 \_ \_ \_ 4 \_ 4 \_ \_ 2 4 \_ 4 2

\_ \_ 1 \_ \_ \_ 4 4 \_ \_ 4 4 4 2 2 4 4 4 2 4

\_ 1 1 1 1 4 \_ \_ 4 4 \_ 2 2 2 4 2 4 2 2 4

\_ 4 4 4 4 1 3 3 4 \_ 4 1 \_ 4 4 2 2 4 4 4

1 3 1 1 4 1 3 4 4 \_ 4 1 4 4 2 2 \_ 2 2 2

1 3 1 1 \_ 1 3 \_ 1 \_ 4 4 1 1 4 4 4 \_ 4 2

1 3 3 3 1 1 3 \_ 1 \_ 4 \_ 1 2 1 4 \_ 4 4 2

1 \_ \_ 1 3 3 1 1 1 \_ \_ 1 \_ 2 2 4 2 2 2 4

\_ 1 1 1 3 1 \_ \_ \_ 1 \_ 1 1 1 2 2 1 2 \_ 4

1 \_ \_ 1 3 1 1 1 \_ 1 1 \_ \_ 1 \_ 1 1 2 4 4

1 \_ 3 3 \_ \_ 1 3 3 1 1 3 3 3 1 1 \_ 4 2 2

1 3 \_ 3 \_ 3 3 3 1 \_ 3 1 2 2 2 2 2 4 2 2

1 3 \_ 3 3 \_ 1 1 1 3 3 1 1 4 4 4 4 2 \_ 2

1 \_ 1 1 \_ 3 3 3 3 1 3 \_ 1 2 \_ \_ 2 2 2 \_

\_ 1 1 \_ 1 1 1 \_ 1 1 1 3 1 2 2 2 \_ 2 \_ \_

3 \_ 3 3 3 3 3 \_ 3 1 3 3 3 3 \_ 2 \_ \_ 2 2

\_ 3 \_ \_ \_ \_ \_ 3 3 3 \_ 2 2 2 2 \_ \_ \_ 2 \_

3 3 \_ \_ \_ \_ \_ \_ \_ 3 \_ 2 \_ \_ \_ 2 \_ \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 85

Player 2: 65

Player 3: 56

Player 4: 77

Player 1 win count: 3

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 1

New Game 6

Current Board Layout:

1 1 4 4 \_ 1 1 1 \_ 4 4 4 2 2 \_ \_ 2 \_ 4 4

1 \_ 4 \_ 4 \_ 4 1 \_ \_ 4 2 2 4 2 2 2 4 4 \_

1 1 4 4 \_ \_ 4 \_ 1 1 1 4 4 4 2 4 \_ 4 \_ \_

4 4 1 \_ 4 4 4 \_ 1 4 \_ 4 2 2 4 4 4 \_ \_ \_

4 \_ 1 4 \_ 1 \_ 4 1 4 4 \_ 2 2 2 4 2 2 2 2

4 \_ 1 4 4 1 \_ 4 4 1 4 2 \_ 1 \_ 2 4 4 \_ 2

4 1 1 4 4 1 1 4 1 1 4 2 \_ 1 2 2 2 4 4 \_

\_ 4 \_ 1 \_ \_ 1 4 1 4 1 2 2 1 \_ 2 \_ 4 2 2

\_ 4 1 1 1 1 \_ 1 \_ 4 4 4 \_ 1 2 \_ 2 2 \_ 2

\_ 4 4 3 3 3 1 1 1 4 1 1 \_ 1 2 1 1 2 2 \_

3 3 3 \_ 3 \_ 1 4 4 \_ 4 4 1 \_ 1 1 1 2 \_ 2

3 \_ \_ 1 1 1 4 1 1 1 4 1 1 \_ 2 \_ 2 1 1 2

3 1 1 3 1 3 4 4 1 \_ 1 1 \_ \_ 2 2 2 1 2 2

\_ 3 1 3 3 3 \_ 4 1 3 \_ 2 2 2 1 \_ 1 1 \_ 2

\_ 1 3 1 \_ \_ 3 3 \_ 3 \_ \_ 2 1 1 1 2 2 2 \_

3 1 3 1 3 3 \_ 3 \_ 3 3 \_ 2 \_ 1 \_ 2 \_ \_ 2

3 1 3 1 3 3 \_ 3 3 2 3 \_ \_ 2 2 \_ 2 \_ \_ 2

\_ 3 \_ 1 3 \_ 3 \_ \_ \_ 2 2 \_ \_ 2 2 \_ 2 \_ 2

\_ 3 3 \_ \_ 3 3 3 3 \_ \_ 2 2 2 \_ 2 \_ 2 \_ 2

3 3 \_ \_ \_ \_ \_ \_ \_ 3 3 3 3 3 \_ \_ \_ 2 \_ 2

Game over! The winner is: 1

Final Score:

Player 1: 85

Player 2: 77

Player 3: 50

Player 4: 73

Player 1 win count: 4

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 1

New Game 7

Current Board Layout:

1 1 4 4 \_ 4 4 4 \_ \_ \_ \_ \_ 4 4 4 4 \_ 4 4

1 \_ 4 4 \_ \_ \_ \_ 4 4 4 \_ \_ 4 \_ \_ \_ 4 4 1

1 1 4 \_ 4 4 4 \_ \_ \_ 4 \_ 4 \_ \_ 4 \_ 4 \_ 1

4 4 1 \_ \_ \_ 4 4 \_ \_ 4 \_ 4 \_ 4 4 4 \_ 1 \_

4 1 1 1 1 4 1 \_ 4 4 \_ \_ \_ 4 \_ 4 \_ 1 1 1

4 4 \_ 3 \_ 1 4 1 1 4 \_ 4 4 4 \_ 2 4 4 1 \_

\_ \_ 4 3 \_ 1 4 1 1 4 4 \_ \_ 4 \_ 2 2 4 4 1

3 4 4 3 \_ 1 4 \_ 1 \_ \_ 4 4 2 2 \_ 2 4 \_ 1

3 3 4 3 1 1 4 1 \_ 1 1 1 4 2 \_ \_ 4 2 2 1

3 \_ \_ 3 \_ \_ 1 1 1 \_ \_ 1 1 2 2 4 4 4 4 1

2 3 3 \_ 3 3 1 \_ 2 2 2 2 2 1 \_ 2 1 \_ \_ 1

2 3 3 \_ 3 1 3 1 1 1 \_ \_ 1 1 \_ 2 1 1 1 \_

2 2 3 1 1 1 3 3 \_ 1 \_ 1 1 2 2 2 1 \_ \_ \_

3 \_ 2 1 2 2 3 2 \_ 1 2 \_ \_ 1 1 1 2 2 2 2

3 \_ 2 3 3 2 3 \_ 2 2 2 \_ 2 1 2 2 1 1 2 \_

3 \_ 2 \_ 3 3 2 2 \_ 2 \_ 2 2 2 1 2 2 1 1 \_

3 \_ 2 2 3 \_ 2 2 2 \_ 3 3 2 1 1 1 2 \_ \_ 1

\_ 3 3 3 2 2 \_ \_ \_ 3 3 2 3 3 3 2 1 2 2 1

3 \_ \_ 3 3 2 2 2 3 \_ 2 2 3 \_ 3 2 1 1 2 1

3 \_ 3 \_ \_ 3 3 3 3 \_ \_ 2 \_ \_ 2 2 2 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 81

Player 2: 78

Player 3: 53

Player 4: 72

Player 1 win count: 5

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 1

New Game 8

Current Board Layout:

1 1 4 4 \_ 4 4 \_ 4 4 4 4 4 \_ \_ \_ \_ \_ 4 4

1 \_ 4 4 \_ \_ 4 \_ \_ \_ \_ \_ \_ 4 4 \_ \_ 4 4 \_

1 1 4 \_ 4 \_ \_ 4 4 4 4 \_ 4 \_ 4 4 \_ \_ 4 \_

4 4 1 \_ 4 4 \_ 4 \_ \_ \_ \_ 4 \_ \_ \_ 4 4 \_ \_

4 4 1 \_ 4 \_ 4 \_ \_ \_ 4 4 \_ \_ \_ 4 4 2 2 2

\_ 1 1 1 4 \_ 4 4 4 \_ 4 \_ \_ 4 \_ 4 \_ \_ \_ 2

3 3 4 4 1 3 4 1 \_ 4 4 \_ 4 4 4 \_ 4 4 4 2

\_ 3 1 4 1 3 1 1 \_ 1 \_ 4 \_ 4 \_ \_ 4 2 2 \_

3 1 1 4 1 3 1 \_ \_ 1 \_ 4 1 1 1 1 4 2 \_ 2

3 1 \_ 1 1 3 3 1 1 1 \_ 4 4 \_ 1 4 2 2 \_ 2

3 1 3 3 3 1 1 3 3 \_ 1 \_ 4 \_ \_ 1 4 4 2 \_

\_ 3 1 \_ 3 1 1 1 \_ 3 1 1 \_ 1 1 1 4 2 2 2

3 3 1 1 1 \_ 3 \_ 3 1 3 1 1 \_ 1 \_ 4 4 2 \_

\_ 3 \_ \_ 1 \_ 3 3 3 1 3 \_ \_ 1 \_ 2 2 2 \_ 2

\_ 3 1 1 \_ 3 \_ \_ 2 2 3 2 2 2 2 \_ \_ 2 2 \_

\_ 1 3 1 3 3 3 \_ 2 2 3 2 \_ \_ \_ 2 2 \_ \_ \_

1 1 3 3 1 3 \_ 3 \_ 2 3 \_ \_ \_ \_ \_ 2 \_ \_ \_

\_ 1 3 \_ 1 1 1 3 3 3 2 2 2 2 \_ 2 2 \_ \_ 2

3 3 \_ 3 3 \_ \_ \_ 2 3 \_ 2 \_ \_ \_ \_ \_ 2 2 2

3 3 3 \_ 3 3 \_ \_ 2 2 2 \_ 2 2 2 2 2 \_ \_ 2

Game over! The winner is: 4

Final Score:

Player 1: 68

Player 2: 57

Player 3: 56

Player 4: 78

Player 1 win count: 5

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 2

New Game 9

Current Board Layout:

1 1 \_ \_ \_ 1 \_ 2 2 2 \_ 2 2 2 2 \_ 2 \_ 4 4

1 \_ \_ \_ \_ 1 \_ 2 4 4 2 \_ 4 4 4 2 2 4 4 \_

1 1 \_ 1 1 1 \_ 4 4 4 2 2 4 2 \_ 2 4 2 4 2

\_ \_ 1 \_ 4 \_ 4 \_ 1 \_ 4 4 \_ 2 2 4 4 4 \_ 2

\_ \_ 1 \_ 4 4 4 1 1 1 \_ 4 4 4 2 2 4 2 2 2

\_ \_ 1 4 \_ 1 \_ 1 4 4 4 1 1 1 4 4 2 4 4 \_

\_ 1 1 4 1 1 4 4 1 1 1 \_ 1 4 4 \_ 2 4 \_ 2

1 \_ \_ 1 \_ 1 4 1 1 \_ \_ 4 \_ 4 \_ 2 4 4 2 2

1 1 \_ 1 \_ 1 \_ 4 \_ 1 1 4 4 \_ \_ 2 2 2 4 2

3 3 1 1 1 \_ 4 4 1 1 \_ 4 \_ 4 4 4 2 \_ 4 2

3 3 \_ \_ \_ 1 1 4 1 \_ 1 4 \_ \_ 4 \_ \_ 2 4 \_

1 \_ 3 3 3 1 1 1 4 1 \_ \_ 4 \_ 4 2 2 2 4 \_

1 1 3 1 1 3 3 3 4 1 2 \_ 4 \_ \_ 4 4 2 4 \_

\_ 1 \_ 1 3 1 1 3 4 1 2 2 4 2 2 2 4 4 2 \_

3 3 1 1 3 \_ 1 3 4 1 2 4 4 2 2 \_ 2 2 2 \_

\_ 3 \_ \_ 3 \_ 1 4 \_ 1 3 2 2 \_ \_ \_ 2 \_ \_ 2

\_ 3 3 \_ 3 \_ \_ 3 1 \_ 3 2 \_ 2 2 2 \_ \_ \_ 2

3 \_ \_ 3 \_ 3 3 3 1 3 \_ 2 \_ 2 \_ 2 \_ \_ \_ 2

\_ \_ \_ 3 3 \_ 3 \_ 3 3 \_ 2 3 \_ \_ \_ 2 2 \_ 2

3 3 3 \_ \_ \_ \_ 3 3 \_ 3 3 3 3 2 2 2 \_ \_ 2

Game over! The winner is: 4

Final Score:

Player 1: 73

Player 2: 77

Player 3: 46

Player 4: 80

Player 1 win count: 5

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 3

New Game 10

Current Board Layout:

1 1 \_ \_ \_ \_ 3 3 3 \_ \_ 3 \_ \_ \_ \_ \_ \_ 4 4

1 \_ \_ 4 4 \_ 3 4 \_ 3 3 3 4 4 4 \_ \_ 4 4 \_

1 1 4 4 \_ 4 3 4 4 4 4 3 \_ 4 4 \_ 4 \_ 4 \_

4 4 1 3 4 4 4 3 3 3 \_ 4 \_ \_ \_ 4 4 4 \_ \_

4 4 1 3 \_ 1 1 4 4 3 3 4 4 4 \_ \_ 4 \_ \_ \_

\_ \_ 1 3 \_ 1 \_ 4 3 \_ \_ 4 1 1 4 4 \_ 4 4 \_

\_ 1 1 3 1 1 3 1 3 1 1 1 \_ 4 4 1 \_ 4 \_ \_

3 3 \_ 1 3 3 3 1 3 3 \_ 1 1 4 1 1 4 4 \_ \_

3 \_ \_ 1 3 1 1 1 3 1 1 4 4 \_ 1 4 1 \_ 4 4

3 \_ 1 1 1 3 3 3 1 1 4 1 1 1 4 4 2 \_ \_ 4

3 \_ \_ 3 3 1 3 3 1 \_ 2 \_ 1 1 4 2 2 2 4 4

\_ 3 3 \_ \_ 1 1 1 \_ 1 2 1 \_ \_ 4 2 4 \_ 2 \_

3 3 \_ 3 2 \_ 1 2 1 1 2 1 \_ 4 2 4 4 4 4 \_

\_ \_ 3 3 2 \_ 2 2 2 1 2 1 1 4 2 2 \_ 2 \_ \_

3 3 \_ 3 2 2 \_ 2 \_ \_ 2 1 \_ 4 4 4 2 2 4 \_

\_ 3 3 \_ 3 2 3 \_ 2 2 \_ \_ 1 1 1 2 4 2 4 2

\_ 3 \_ \_ 3 \_ 3 3 2 \_ 2 2 1 2 2 2 4 2 4 2

3 2 2 2 3 3 \_ 2 2 \_ \_ 2 2 1 1 2 4 4 2 2

3 2 \_ 3 2 \_ 2 \_ \_ 2 2 1 2 1 1 \_ 2 \_ \_ \_

3 2 \_ \_ 2 2 2 \_ 2 2 2 1 1 2 2 \_ 2 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 72

Player 2: 70

Player 3: 65

Player 4: 80

Player 1 win count: 5

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 4

New Game 11

Current Board Layout:

1 1 3 3 1 \_ 1 4 4 4 4 \_ \_ 4 4 4 \_ \_ 4 4

1 3 3 \_ 1 \_ 1 1 1 \_ 4 \_ 4 \_ 4 \_ \_ 4 4 \_

1 1 3 1 1 1 4 4 4 4 \_ \_ 4 1 \_ \_ 4 \_ 4 \_

\_ \_ 1 3 4 \_ \_ 4 \_ \_ 4 4 4 1 1 4 4 4 \_ 4

\_ \_ 1 3 4 4 4 3 3 4 \_ 1 \_ 1 4 1 4 \_ \_ 4

3 \_ 1 3 4 3 3 3 \_ 4 4 1 1 4 4 1 1 4 4 \_

3 1 1 3 3 4 4 4 \_ \_ 4 \_ 4 4 \_ 4 1 4 \_ \_

3 3 \_ 1 \_ 3 3 4 4 \_ \_ 4 \_ 1 1 1 \_ 4 4 \_

3 \_ 1 1 1 1 3 1 \_ 4 4 4 1 \_ 1 1 2 2 1 1

\_ 3 \_ 3 3 3 1 1 1 4 2 1 1 2 2 \_ 1 2 1 1

3 3 3 \_ \_ \_ 1 2 2 2 1 1 2 2 1 \_ 1 1 2 \_

\_ 3 \_ \_ 3 3 \_ 1 1 1 2 2 1 1 1 2 \_ 1 2 \_

\_ \_ 3 \_ 3 3 2 2 \_ 1 2 2 1 \_ \_ 2 \_ 1 2 \_

\_ \_ 3 3 \_ 2 \_ 2 2 1 2 1 \_ \_ 2 2 2 \_ 2 \_

\_ \_ \_ 3 2 2 2 \_ 2 \_ 1 2 \_ 2 \_ \_ \_ \_ 2 \_

\_ 3 3 \_ 3 2 3 \_ \_ 2 1 2 2 2 \_ \_ 2 2 \_ \_

\_ \_ \_ 3 3 3 \_ \_ 2 2 2 1 1 1 1 1 \_ 2 \_ \_

\_ 3 3 \_ \_ \_ 3 \_ 2 \_ \_ \_ 2 2 2 2 \_ 2 2 \_

\_ 3 \_ \_ \_ \_ 3 \_ \_ 2 2 2 \_ \_ 2 \_ 2 \_ \_ \_

3 3 \_ \_ \_ \_ 3 3 2 2 \_ \_ 2 2 \_ \_ 2 2 2 2

Game over! The winner is: 1

Final Score:

Player 1: 77

Player 2: 68

Player 3: 55

Player 4: 61

Player 1 win count: 6

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 4

New Game 12

Current Board Layout:

1 1 \_ \_ \_ \_ \_ \_ \_ \_ 1 \_ \_ \_ \_ 2 2 \_ 4 4

1 \_ \_ 4 4 \_ \_ \_ 4 4 1 \_ 4 4 4 2 2 4 4 2

1 1 4 4 4 \_ 4 4 4 1 1 4 \_ 4 2 \_ 4 2 4 2

4 \_ 1 \_ \_ 4 \_ \_ 1 4 4 4 2 2 2 4 4 4 2 2

4 1 1 1 1 4 4 4 1 1 \_ 4 1 \_ 4 \_ 4 \_ \_ 2

4 4 4 \_ 4 1 \_ 4 1 \_ 4 1 1 4 4 \_ \_ \_ 2 \_

\_ 1 \_ 4 4 1 \_ \_ 4 1 4 1 4 4 \_ 4 2 2 2 \_

1 1 1 4 1 1 1 4 4 1 4 4 1 1 \_ 4 2 4 4 2

\_ 1 \_ 1 4 4 4 1 1 1 4 \_ 4 1 \_ 4 \_ 4 4 2

\_ \_ 1 1 1 3 1 \_ 3 3 1 1 4 1 1 4 4 2 2 2

\_ \_ 1 \_ \_ 3 1 3 3 \_ 3 1 1 \_ 4 \_ 2 4 4 \_

3 3 3 1 1 3 1 3 1 1 3 \_ 1 \_ 4 2 2 2 4 \_

\_ \_ 3 1 1 1 3 \_ \_ 1 1 1 \_ 2 4 \_ 2 4 4 \_

3 \_ 3 \_ \_ \_ 3 1 1 \_ \_ \_ 1 2 4 2 4 \_ \_ \_

\_ 3 \_ 3 3 \_ 3 3 1 \_ 2 1 2 2 4 2 2 \_ 2 2

3 3 \_ 3 3 \_ 3 \_ 1 \_ 2 1 2 \_ \_ \_ 2 2 \_ 2

\_ \_ \_ \_ \_ 3 \_ 3 1 2 2 2 \_ 2 2 2 \_ \_ 2 2

\_ \_ \_ \_ \_ 3 \_ 3 3 1 1 \_ 2 \_ 2 2 \_ \_ \_ \_

\_ 3 3 3 \_ 3 \_ 3 3 1 2 2 2 \_ \_ \_ 2 \_ \_ \_

3 3 \_ \_ 3 3 2 2 2 2 \_ 2 \_ 2 2 \_ 2 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 76

Player 2: 70

Player 3: 43

Player 4: 81

Player 1 win count: 6

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 5

New Game 13

Current Board Layout:

1 1 \_ \_ \_ \_ \_ \_ 1 1 1 4 4 1 1 \_ \_ \_ 4 4

1 \_ \_ 4 4 \_ \_ 4 \_ 4 \_ 1 1 4 1 1 \_ 4 4 \_

1 1 4 4 4 \_ \_ 4 4 4 \_ 1 4 4 \_ 4 \_ 4 \_ \_

\_ \_ 1 \_ \_ 4 \_ \_ \_ \_ 4 1 4 \_ 4 4 4 \_ 4 4

3 1 1 1 1 4 4 4 4 \_ 4 1 4 \_ \_ 4 \_ \_ 4 4

3 3 \_ \_ 4 1 \_ \_ \_ 4 4 4 1 1 1 \_ 4 4 \_ \_

3 \_ 3 4 4 1 4 4 4 \_ 1 1 \_ \_ 1 1 2 4 4 \_

\_ \_ 3 4 1 1 1 4 1 \_ 1 1 \_ 2 2 2 2 4 \_ \_

\_ \_ 3 1 \_ \_ 4 1 1 1 \_ 1 4 \_ \_ 4 4 2 2 2

3 \_ 3 1 4 4 4 1 2 2 1 4 4 4 4 \_ 4 \_ 2 \_

3 4 3 4 1 1 1 2 1 2 2 \_ \_ \_ \_ \_ 4 4 2 \_

3 4 4 3 \_ \_ 1 2 1 1 2 1 1 1 1 1 \_ 2 4 2

\_ 3 3 3 \_ \_ 1 \_ 2 1 1 2 \_ \_ 2 2 1 2 4 2

3 \_ \_ 1 1 1 \_ 2 2 2 \_ 1 2 2 \_ 2 1 2 4 2

3 1 1 \_ 1 3 3 \_ 2 1 1 1 2 \_ 2 2 1 2 4 2

3 1 3 3 \_ 3 3 1 1 2 \_ 2 2 \_ \_ \_ 1 2 4 \_

3 \_ 1 1 3 \_ \_ 1 2 2 2 \_ \_ \_ 2 2 2 \_ \_ \_

\_ 3 1 1 3 \_ 1 1 2 \_ \_ 2 \_ 2 2 \_ \_ 2 2 2

3 \_ 3 3 3 \_ 3 \_ \_ 2 2 2 2 \_ \_ 2 2 \_ \_ 2

3 3 \_ \_ \_ 3 3 3 3 \_ \_ \_ \_ \_ 2 2 2 \_ \_ 2

Game over! The winner is: 1

Final Score:

Player 1: 84

Player 2: 67

Player 3: 40

Player 4: 77

Player 1 win count: 7

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 5

New Game 14

Current Board Layout:

1 1 3 \_ 4 \_ 3 3 4 4 4 \_ \_ \_ \_ \_ \_ \_ 4 4

1 3 3 3 4 3 \_ 3 4 3 4 \_ 4 4 4 \_ \_ 4 4 \_

1 1 3 4 3 3 4 \_ 3 3 3 4 \_ 4 4 \_ \_ \_ 4 \_

3 3 1 4 4 3 4 4 4 4 3 4 \_ \_ \_ \_ 4 4 \_ \_

3 3 1 \_ 3 4 \_ 1 1 \_ 4 4 4 \_ \_ 4 4 \_ \_ 4

\_ \_ 1 3 3 4 4 1 \_ 4 1 \_ \_ 4 \_ 4 \_ 4 4 \_

3 1 1 3 \_ 4 1 1 \_ 4 1 \_ 4 4 4 \_ \_ 4 \_ \_

3 3 3 1 3 3 3 \_ 1 4 1 4 \_ 4 \_ \_ 4 4 \_ 4

2 \_ 1 1 1 1 3 3 1 4 1 4 \_ \_ \_ 4 \_ \_ \_ 4

2 2 3 \_ \_ 3 1 1 1 4 1 4 4 \_ \_ 4 \_ 4 4 4

2 3 2 2 2 3 3 3 4 1 2 2 4 1 1 4 4 1 1 \_

\_ 3 2 \_ 2 3 \_ \_ 4 1 1 2 1 1 1 4 1 2 2 2

\_ 3 \_ \_ 3 2 2 2 4 4 1 1 2 2 2 2 2 1 1 2

\_ \_ 3 2 3 2 2 \_ 2 2 4 4 1 \_ 1 1 1 2 1 2

\_ \_ 3 2 2 3 3 3 3 2 4 4 1 1 \_ 2 2 2 \_ \_

\_ 2 3 2 3 2 \_ 1 1 2 2 1 1 \_ 1 1 1 2 1 2

\_ 2 3 2 3 2 2 \_ 1 1 1 2 2 2 2 1 2 1 1 2

2 2 3 \_ 3 \_ 2 1 \_ 2 \_ 2 1 1 1 2 2 1 2 \_

3 3 2 3 3 \_ 2 1 2 2 2 \_ 1 \_ 2 2 \_ 2 2 \_

3 3 3 2 2 2 1 1 1 2 \_ \_ \_ 1 1 1 1 \_ 2 2

Game over! The winner is: 1

Final Score:

Player 1: 80

Player 2: 77

Player 3: 64

Player 4: 78

Player 1 win count: 8

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 5

New Game 15

Current Board Layout:

1 1 4 4 4 4 \_ \_ \_ \_ 2 2 \_ \_ \_ \_ \_ \_ 4 4

1 \_ 4 \_ \_ \_ 4 4 4 4 2 2 4 4 4 \_ \_ 4 4 2

1 1 \_ 4 \_ 4 \_ 4 1 2 4 \_ 4 4 \_ 4 \_ 4 2 \_

\_ \_ 1 4 4 4 1 1 1 2 4 4 \_ \_ 4 4 4 \_ 2 \_

\_ 1 1 1 1 \_ 4 4 4 1 2 4 \_ 4 \_ 4 2 2 2 \_

4 4 4 \_ 4 1 4 \_ \_ 1 2 4 \_ 4 \_ 2 4 4 \_ 2

\_ 4 \_ 4 4 1 4 1 1 1 2 2 4 4 4 2 2 4 4 2

\_ 1 1 4 1 1 1 4 4 4 1 1 2 2 2 4 2 4 2 2

\_ 1 4 \_ 4 4 4 1 1 1 \_ 1 1 4 4 4 \_ \_ 4 2

1 1 4 4 \_ \_ 4 1 1 \_ 3 1 \_ 4 \_ 2 2 \_ 2 \_

4 4 1 1 1 1 1 \_ 3 1 3 3 1 \_ 2 2 1 1 2 \_

4 4 \_ 3 3 \_ \_ 1 1 3 \_ 1 1 \_ 2 1 1 2 2 2

3 3 4 \_ 3 3 3 1 3 3 1 1 \_ 1 1 2 2 1 1 1

3 \_ 4 3 1 1 1 3 \_ 3 \_ 2 \_ 1 \_ 2 \_ 2 2 2

3 \_ \_ 3 3 1 3 3 3 2 2 2 \_ 1 \_ 2 2 \_ 2 2

\_ 3 3 \_ 3 \_ 1 3 \_ 2 3 3 2 1 2 \_ \_ 2 \_ \_

\_ \_ 3 3 \_ \_ 1 \_ 3 3 2 2 2 \_ 2 \_ 2 2 2 \_

\_ \_ 3 \_ 3 3 3 3 \_ 3 3 2 \_ 2 2 \_ \_ 2 \_ \_

3 3 \_ \_ \_ \_ \_ \_ \_ \_ 3 \_ \_ 2 \_ \_ 2 \_ \_ \_

3 3 \_ \_ \_ \_ \_ 3 3 3 \_ 3 3 3 3 3 2 2 2 2

Game over! The winner is: 4

Final Score:

Player 1: 71

Player 2: 73

Player 3: 54

Player 4: 80

Player 1 win count: 8

Player 2 win count: 1

Player 3 win count: 0

Player 4 win count: 6

TOTAL REWARD:

CENTER CONTROL: 1,214 pts + 8 wins

GREEDY: 1,092 pts + 1 wins

RANDOM: 778 pts + 0 wins

CORNER CONTROL: 1,164 pts + 6 wins

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FINAL SCORES:

RANDOM: 5,910 pts + 2 wins = 5,960

GREEDY: 7,406 pts + 24 wins = 8,006

CORNER CONTROL: 8,131 pts + 38 wins = 9,081  
CENTER CONTROL: 7,959 pts + 40 wins = 8,959