

## Question 2 – Value Iteration Agent Results

The value iteration agent implemented in Question 1 was tested against each of the rule-based agents provided (i.e., random, aggressive, and defensive) for 50 times. The results of these tests were as follows:

### Against random agent:

When Value iteration agent was X and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Value iteration agent was O and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Value iteration agent was X and started second:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Value iteration agent was O and started second:

Played: 14 Won: 12 Lost: 0 Draw: 0

Total: 50 Won: 50 Lost: 0 Draw: 0

### Against aggressive agent:

When Value iteration agent was X and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Value iteration agent was O and started first:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Value iteration agent was X and started second:

Played: 12 Won: 12 Lost: 0 Draw: 0

When Value iteration agent was O and started second:

Played: 14 Won: 12 Lost: 0 Draw: 0

Total: 50 Won: 50 Lost: 0 Draw: 0

**Against defensive agent:**

When Value iteration agent was X and started first:

Played: 12 Won: 10 Lost: 0 Draw: 2

When Value iteration agent was O and started first:

Played: 12 Won: 9 Lost: 0 Draw: 3

When Value iteration agent was X and started second:

Played: 12 Won: 9 Lost: 0 Draw: 3

When Value iteration agent was O and started second:

Played: 14 Won: 11 Lost: 0 Draw: 3

Total: 50 Won: 39 Lost: 0 Draw: 11