

```
IDLE Shell 3.13.7
File Edit Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bcee1c3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
===== RESTART: C:/ayushsr/AI/lab 10.py =====
(alpha, beta):  5 15
Result:  5
Times pruned:  1
>>>
```

Alpha beta pruning

```
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Python 3.13.7 (tags/v3.13.7:bcee1c3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
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>>>
===== RESTART: C:/ayushsr/AI/lab 11.py =====
NAND(0, 1) = 1
NAND(1, 1) = 0
NAND(0, 0) = 1
NAND(1, 0) = 1
>>> |
```

Perceptrorn

```
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Python 3.13.7 (tags/v3.13.7:bcee1c3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
===== RESTART: C:/ayushsr/AI/lab 12.py =====
Coloring solution found:
WA: Red
NT: Green
SA: Blue
Q: Red
NSW: Green
V: Red
>>> |
```

Constraint

```
Python 3.13.7 (tags/v3.13.7:bcee1c3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

>>> ===== RESTART: C:/ayushsr/AI/lab 13.py =====
Tic-Tac-Toe Game
Player 1 [X] --- Player 2 [O]

Please Wait...

  | | 
--|_|
  | | 
--|_|
  | | 

Player 1's Turn [X]
Enter the position between [1-9] where you want to mark: 1
X | | 
--|_|
  | | 
--|_|
  | | 

Player 2's Turn [O]
Enter the position between [1-9] where you want to mark: 2
X | O | 
--|_|
  | | 
--|_|
  | | 

Player 1's Turn [X]
Enter the position between [1-9] where you want to mark: 5
X | O | 
--|_|
  | X | 
--|_|
  | | 

Player 2's Turn [O]
Enter the position between [1-9] where you want to mark: 3
X | O | O
--|_|
  | X | 
--|_|
  | | 

Player 1's Turn [X]
Enter the position between [1-9] where you want to mark: 9
X | O | O
--|_|
  | X | 
--|_|
  | | X

Player 1 Won

Press Enter to exit...|
```

Tic tca toe