

Department of Computer Engineering

Academic Term: Jan-Apr 2022

Class : T.E Computer Sem -VII

Subject: Artificial Intelligence

Practical No:	7
Title:	Backward Chaining Algorithm
Date of Performance:	26/04/2022
Date of Submission:	26/04/2022
Roll No:	8940
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Evaluation:

Sr. No	Rubric	Grade
1	On time Completion & Submission(2)	
2	Output(3)	
3	Code Optimization(3)	
4	Knowledge of the topic(2)	
5	Total (10)	

Signature of the Teacher :

Practical- 07

Backward Chaining Algorithm

Problem Statement:

The law says that it is a crime for an American to sell weapons to hostile nations. The country Nono, an enemy of America, has some missiles, and all of its missiles were sold to it by Colonel West, who is American.

Prove that West is a criminal.

Code:

```
'''Implement backward chaining algorithm -

Use any problem statement of your choice like
The law says that it is a crime for an American to sell weapons to hostile nations. The country Nono, an enemy of America, has some missiles, and all of its missiles were sold to it by Colonel West, who is American.

Prove that West is a criminal.'''
x="" y="" z=""
def criminal(x):
    return american(x) and weapon(y)=='m' and sells(x,y,z) and hostile(z)
def american(x):    if x=="West":        print(x," is an American")
return True
def
weapon(y):
    print(missile(y)," is a weapon")
return missile(y)
def
missile(y):
    #print("Name of the missile: ",y)
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    #print("in missile")
return 'm'
def sells(x,y,z):    t =
missile(y)    r = owns(z,t)
if t=='m' and r=='Nono':
    print(x," sells ",t," to ",r)
return True
def
owns(z,y):
if y=='m':
    #print(z," owns ",y)
return 'Nono'
def
hostile(z):
    #print(z," is a hostile nation")
return enemy('Nono','America')
def enemy(x,y):    if x=='Nono'
and y=='America':    print(x," is
the enemy of ",y)    return True
print("***** BACKWARD CHAINING ALGORITHM
***
*****\n") if
criminal("West"):
    print("\nWEST IS A CRIMINAL") else:
    print("\nWEST IS NOT A CRIMINAL")

```

Output:

```

***** BACKWARD CHAINING ALGORITHM
*****

West  is an American

m  is a weapon

West  sells  m  to  Nono

Nono  is the enemy of  America

```

WEST IS A CRIMINAL