

**Academic Year: 2024-2025****Semester: V****Class / Branch: TE/CSE-DS****Subject: Artificial Intelligence Lab****Name of Instructor: Prof. Sarala Mary****Name of Student: Gauri Iyer****Student ID: 22107030****Date Of Performance: 1/10/24****Date Of Submission: 1/10/24**

Experiment No.07

Aim:- To implement forward chaining algorithm using python.

Program:

1. Write a program to using forward chain Algorithm for the given case study.

Prove that It is a Frog or Canary. The data in the database are Croaks, Eat Flies, Shrimps and Sings. The data in knowledge base are Frog, Canary, Green, Yellow.

```
database=["croaks","eat flies","shrimps","sings"]
knowbase = ["frog","canary","green","yellow"]

def display():
    print("\n x is \n1.croaks \n2.eat flies \n3.shrimps \n4.sings",end="")
    print("\n select one",end="")

def main():
    print("*-----forward--chaining-----*", end="")
    display()
    x=int(input())
    print("\n",end="")
    if x==1 or x==2:
        print("chance of frog",end="")
    elif x==3 or x==4:
        print("chance of canary",end="")
    else:
        print("\n----- invalid option select -----",end="")
    if x>=1 and x<=4:
        print("\n x is",end="")
```



```
print(database[x-1],end="")
print("\n color is 1.green 2.yellow',end="")
print("\n select one",end="")
k=int(input())
if k ==1 and (x==1 or x==2):
    print("yes it is ", end="")
    print(knowbase[0],end="")
    print("and color is",end="")
    print(knowbase[2],end="")
elif k==2 and (x==3 or x==4):
    print("yes it is ", end="")
    print(knowbase[1],end="")
    print("and color is",end="")
    print(knowbase[3],end="")
else:
    print("\n----- invalid option select -----",end="")
main()
```

```
*-----forward--chaining-----*
x is
1.croaks
2.eat flies
3.shrimps
4.sings
select one1

chance of frog
x iscroaks
color is 1.green 2.yellow
select one2

----- invalid option select -----
```

Conclusion: Thus we have performed forward chaining algorithm using python.



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