



KIET Group of Institutions, Ghaziabad

Department of Computer Applications

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Artificial Intelligence Lab

KCA 351: Session 2021-22

Experiment – No-6

Problem Statement : Check the following first order predicate logic (FOPL) for the following expression and mention the output:

```
kb1 = pl.KnowledgeBase("friendship")
```

```
kb1(["friend(krishna,sudama)", "friend(arjun, krishna)"])
```

1. kb1.query(pl.Expr("friend(sudama, arjun)"))
2. kb1.query(pl.Expr("friend(sudama, krishna)"))
3. kb1.query(pl.Expr("friend(krishna,sudama)"))



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Program:

```
pip install pytholog
import pytholog as pl
kb1 = pl.KnowledgeBase("friendship")
kb1(["friend(krishna,sudama)", "friend(arjun, krishna)"])
kb1.query(pl.Expr("friend(sudama, arjun)"))
kb1.query(pl.Expr("friend(sudama, krishna)"))
kb1.query(pl.Expr("friend(krishna,sudama)"))
```

Output :

```
[4] import pytholog as pl

[5] kb1 = pl.KnowledgeBase("friendship")

[6] kb1(["friend(krishna,sudama)", "friend(arjun, krishna)"])

[7] kb1.query(pl.Expr("friend(sudama, arjun)"))
    ['No']

[8] kb1.query(pl.Expr("friend(sudama, krishna)"))
    ['No']

[9] kb1.query(pl.Expr("friend(krishna,sudama)"))
    ['Yes']
```