**AI FOR LLM- CSA1704**

**20. Write a Prolog Program for PLANETS DB.**

**CODE:**

# Database: list of tuples (Student, Teacher, SubjectCode)

database = [

("John", "Smith", "CS101"),

("Mary", "Smith", "CS101"),

("Alex", "David", "MA102"),

("Sophia", "David", "MA102"),

("David", "Williams", "PH103"),

("Rose", "Williams", "PH103"),

("Kavya", "Priya", "CH104"),

]

# Function to get teacher of a student

def get\_teacher(student):

for s, t, sub in database:

if s == student:

return t

return "Student not found"

# Function to get subject code of a student

def get\_subject(student):

for s, t, sub in database:

if s == student:

return sub

return "Student not found"

# Function to get all students taught by a teacher

def get\_students(teacher):

return [s for s, t, sub in database if t == teacher]

# Function to get all records for a subject code

def get\_subject\_info(subcode):

return [(s, t) for s, t, sub in database if sub == subcode]

# Example usage

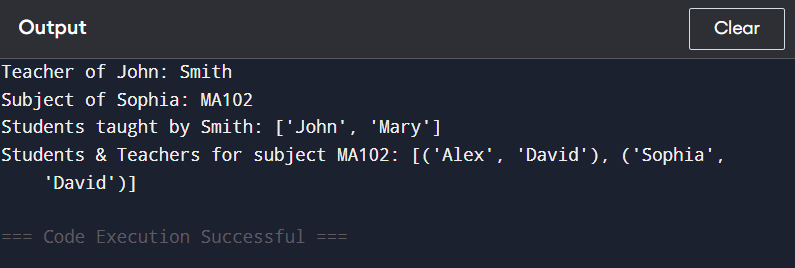
print("Teacher of John:", get\_teacher("John"))

print("Subject of Sophia:", get\_subject("Sophia"))

print("Students taught by Smith:", get\_students("Smith"))

print("Students & Teachers for subject MA102:", get\_subject\_info("MA102"))

**OUTPUT:**

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