

AI LAB TEST-2

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1. Unification

noPred = 0

noArg = [None for i in range(10)]

noUse = ''

predicate = [None for i in range(10)]

argument = [[None for i in range(10)] for i
in range(10)]

def main():

global noPred

while (char == 'y'):

print ("*** Program for unification ***")

noPred = int(input("Enter number of
predicates: "))

for i in range(noPred):

print("Enter predicate", (i+1), " : ")

predicate[i] = input()

print("Enter no. of Arguments
for predicate", predicate[i], " : ")

noArg[i] = int(input())

for j in range(noArg[i]):

print("Enter argument", j+1, " : ")

argument[i][j] = input()

print(predicate)

check-arg-pred()

char = input("Do you want to
continue (y/n) : ")

```
def printPredicate():
    print("*** predicates are ***")
    for i in range(noPred):
        print(predicate[i], "(", end=" ")
        for j in range(noArg[i]):
            print print(argument[i][j], end=" ")
            if (j != noArg[i] - 1):
                print(", ", end=" ")
        print(") ")
```

```
def unify():
    flag = 0
    for i in range(noPred - 1):
        for j in range(noArg[i]):
            if (argument[i][j] != argument[i+1][j]):
                flag = 0
                if (flag == 0):
                    print("*** substitution is ***")
                    print(argument[i+1][j],
                          " / ", argument[i][j])
                    flag += 1
        if (flag == 0):
            print("Arguments are identical")
            print("No need of substitution")
            flag += 1
```

def check_arg_pred():

predflag = 0

argflag = 0

for i in range(nopred-1):

if (predicate[i] != predicate[i+1]):

print("Predicates are not same")

print("Unification cannot progress")

predflag = 1

break

if (predflag != 1):

ind = 0

key = noArg[ind]

length = len(noArg)

for i in range(0, key-1):

if i >= key:

continue

if ind != length-1:

ind += 1

key = noArg[ind]

if (noArg[i] != noArg[i+1]):

print("No of arguments
are not same")

print("Unification
cannot progress")

argflag = 1

break

if (argflag == 0 and predflag != 1):

unify()

main()

—X—

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