**NNFL EXPT-1**

**CODE:**

clc

close all

a=input('Enter Fuzzy set A in []: ');

b=input('Enter Fuzzy set B in []: ');

n=length(a);

choice=input('\nSelect a operation: \n1. Compliment \n2. Union \n3. Intersection \n4.De Morgans Law\n');

switch choice

case 1

i=1:n;

ca(i)=1-a(i);

cb(i)=1-b(i);

disp('Compliment of set A : ');

disp(ca)

disp('Compliment of set B : ');

disp(cb)

case 2

i=1:n;

aub(i)=max(a(i),b(i));

disp('Union of set A and set B : ');

disp(aub)

case 3

i=1:n;

anb(i)=min(a(i),b(i));

disp('Intersection of set A and set B : ');

disp(anb)

case 4

i=1:n;

ca(i)=1-a(i);

cb(i)=1-b(i);

aub(i)=max(a(i),b(i));

anb(i)=min(a(i),b(i));

disp('De Morgans Law : Compliment of Union of A and B = Intersection of Compliment of A and Compliment of B');

i=1:n;

caub(i)=1-aub(i);

cancb(i)=min(ca(i),cb(i));

disp('Compliment of Union of A and B')

disp(caub)

disp('Intersection of Compliment of A and Compliment of B')

disp(cancb)

if (caub==cancb)

disp('De Morgans Law is proved...')

end

end

**OUTPUT:**

Enter Fuzzy set A in []: [1 .3 .2 .8 0]

Enter Fuzzy set B in []: [.6 .9 .1 .3 .2]

Select a operation:

1. Compliment

2. Union

3. Intersection

4.De Morgans Law

4

De Morgans Law : Compliment of Union of A and B = Intersection of Compliment of A and Compliment of B

Compliment of Union of A and B

0 0.1000 0.8000 0.2000 0.8000

Intersection of Compliment of A and Compliment of B

0 0.1000 0.8000 0.2000 0.8000

De Morgans Law is proved...