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...
```