

18. Implement Union, Intersection, Complement and Difference operations on fuzzy sets. Also create fuzzy relation by Cartesian product of any two fuzzy sets and perform max min composition on any two fuzzy relations

Program in MATLAB to perform Union, Intersection and Complement operations.

```
% Enter Data
u=input('Enter First Matrix');
v=input('Enter Second Matrix');
% To Perform Operations
w=max(u,v);
p=min(u,v);
q1=1-u;
q2=1-v;
% Output
display('Union Of Two Matrices');
display(w);
display('Intersection Of Two Matrices');
display(p);
display('Complement Of First Matrix');
display(q1);
display('Complement Of Second Matrix');
display(q2);
```

fuzzy_set.m		Vars	octave:7> source("fuzzy_set.m")
1	disp("GNIMT Fuzzy Set LAB Union Interaction Complement");	[1x2] ans	GNIMT Fuzzy Set LAB Union Interaction Complement
2	% Enter Fuzzy Data	[1x2] p	Enter First Matrix> [2 1]
3	u=input('Enter First Matrix');	[1x2] q1	Enter Second Matrix> [1 4]
4	v=input('Enter Second Matrix');	[1x2] q2	Union Of Two Matrices
5	% To Perform Operations	[1x2] u	w =
6	w=max(u,v);	[1x2] v	2 4
7	p=min(u,v);	[1x2] w	Intersection Of Two Matrices
8	q1=1-u;		p =
9	q2=1-v;		1 1
10	% Output		Complement Of First Matrix
11	display('Union Of Two Matrices');		q1 =
12	display(w);		-1 0
13	display('Intersection Of Two Matrices');		Complement Of Second Matrix
14	display(p);		q2 =
15	display('Complement Of First Matrix');		0 -3
16	display(q1);		
17	display('Complement Of Second Matrix');		
18	display(q2);		