```
QNI WILL I Program that takes two or more
    sate as inputs and produced set operations like
   union, intersections difference and symmetric
   difference as its output.
 > # Private 2:054 ream >
     Using name space std,
     Void Unin ( int all [10]) &
      cout <<" ;"
      For ( "nt "=0; iz10; "41) &
       BUT +1 20 =0
       For lint ) = i+1; ; 210 ; j++) &
        " | [i] " = = = " [i] " | [i]
        21128 = 1;
          break ;
        if (100 ==0)
          ( no t < < " < < an [i];
        but cc"&" ecendl;
       void intersection lint an [20]) &
         love 22" &"
          For (int ) = 0", 1210; 1++) &
          For (int j= i+1; ) <10; j+1)
           くっ トリ ロッコーニョルロリコをはいか
             E LOUL CC" ZZ ANTI]
                3
             (outer" 3" cc endl;
```

```
love ex " Enter for elements of B: "end );
tor (Pn E i = 0; b) < [ ; +4) &
  love co" for element " ex jit ? ce":";
   ゼハ >> トレリン;
   B
 Syst em ( ' C18');
  love 'ze "set A is! "zzenddzz" f".
  tor (int "= 0', 121 ) 141) {
    loot 22" " 22 a [i];
    3
   loutec" 3" exend 1.
   love ce" set 13 is: "Leend/ ex " &";
   For (9n+; =0; i < 5; i++) &
    love ec" "Leb Cj];
     3
    lout ec" 2" exend);
    For (int i = 0; iz (; i++) &
      all Ci] = a [i];
     3
    For line 1 = 0; 1 6; it+) &
     タルイプトイプコレビラゴ、
    Cout ce" AUB is: "ccendl;
    union ( =11);
     lout cc' Ants is: "ccende;
    intersection (all);
    work LL "A-13 is " "cerend!
    difference (916);
     lour < 2" A" ex char (BO) <2" 13 is: " exend!;
      sydifference (all);
       redum oi
        3
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```
QN-2 Write 3 Trogram that takes two or more sets
    as inputs and produces their cartesian products
    as output.
=> # include < iostream>
     Using namestace std
     int main () &
     ind a [s], b [s], n, m;
     (out 22" Enter no. If elements for set A: ");
      cin>>n!
      love < 2" Enter for Set A: " < Kendl;
      For ("nt "=0", izn; "+1) &
       lort ke" for element " exita ee"; "
       ピリンフ へにり;
      \mathcal{F}
     lout cz" Enter no. of elements for set B:";
     Cin 77 m;
      Cout 22" Enter for set B: " 22 and );
      for (int j= 0; j < m; j+t) &
      (out 20" for element' < < 1 + 3 22" !";
       cin >> b[i];
       3
     (ort <<" cartesian Product!";
      cout < 2" 5";
      for (int "= 0', i < n', P++) &
       for line) = 0 ;; < m; "1+) &
         (out <<" (" << ac ) ] <<"," << b []] <<" )" <<" ," ;
         Cout L' 3";
           return o;
```

```
QNJ WAP + not takes rai no. and produce is calling
     and floor integers as output.
 > #include clostroam>
    using name space std;
      Ardat a:
      int b;
     loot ce" Enter integer vaire";
      (in >>a;
      b=a;
      Pf (aco) &
      but ce "floor value of " Leace" is : " ccb-sec end!
       love ze" caling mire of "coace" 95: "coberadi)
      it (a! = p & & a> 0) &
      couter"floor value of integer "chace" is: "checend!
      lout 22" ceiling valve of " < caze" is: " < < b+ = cende;
      Pf (a==b) {
      cortec" floor water of "caace" is: "ce becands;
       lout ce' ceiling value of "ce acc'is: "ce becend !
```

neturn o'

20

```
QNY NAP that takes name and age of a r persons
    as an input and gives the degree of membership
    of the terson as its outfut according to following using
    Membership functions.
  a) Degree of membership = 1
                                         if age = 20
     Degree of membership = (30 rage)110
                                         if agerrol (=30
     Degree of membership = 0
                                         if age >30
  b) Degree of membership - I
                                     of age call
     Degree of membership = (31 - 9) 120
                                     if oge NT & C-75
     Degree of membership 20
                                      ogerst
   Perform Set operations according to well of fuzzy seas
   on these two sects.
 # include crostream>
  using namespace Btd,
    int main cla
      string name [5];
     double age [5], membership [7], = ges [7], membership [7];
      Lout ce " Enter names!" " exend);
       for (in + i=0;icr;iH) &
       (out ce" name of "cc itzee" person:")
       On MATT name [1];
     out exend les "enter age! "exend!
     For (int =0; ics; i+1) &
       3/ (~gdE:). = 20) &
        Coul << =" Degree of mambership of " << name [i]
         LL" =" ZZ I ZZ end o;
         membership [1]=1;
```

1640-11) > 50 pg ade(1) 5=2416

```
if (age (i) > 20 bd age (i) ] <= 30) {
 lout ce' degree of membership of "coname Ci) ce" = "cc
                                          1 30 resetis loccends,
  memership (i) = (30 - age Ci))10;
   if (=9e (17730/e
      love a 2" Degree of man buship of "con ame [i] <2"="coccerd)
      membership Cij = 0;
    (out 20" Enter ege for anotherset " 20 end);
     For ( int = 0 ; 125; 141) &
     lou 22" alge of "caname ["] 22":";
      cin >> - ge 1[i]
      for (int 1 = 0; izs ; int) &
      9 ages (i) <=1518
      lout cz's egree of membership of "caname [i]
          ec" = " < c ] < c end ];
        membership I [i]=1;
       if 1 ege 2 [i]> 15 44 ege 2 [i] <= 35) &
       lout 20 Degree of membership of " coname[i] = "ex
         (35-ge ] [i)) 12 26 end );
        membership][i]=(35-ege[i])/20)
         if leset[1]> 35) {
         lout 22" Degree of membership of recnametizee: "eco;
         membership I [1]=0"
```

```
- - Ji -- Ce ( MI acc), into [1]) &
loutes " &" !
Forling 1=0; iz ( ; HA) &
int 1129 =0;
tr (1019=0; 120; 141) &
 "H lacid = = begale
     4100 = 2;
     preak !
(00155 " " 55 dE1];
 3
 lost ce" ?" zz end);
 3
void sydifference (int in [20])&
  lout 22 " &";
   For lint 1=0', i210; i4) {
  int flag =01
   for (int; = 0; j210; j++) &
    ? + (an ci) == ancj) bbi != j) &
       freq = 3;
         break '
      if (109=20) K
        (out 2 2" ",
        in main () 4
         int a [ 17, 6[ 10], a11010];
         touter set A ! " ecendl)
         parcine i=olicr; ind) q
            love ce" for element "ce "++ ce";")
               レシアア へにづけ
```

```
lost a "union of two fozey set is " and I ce's";
forcine 1 = 0; 1 ¿c; i+1) &
If Imambership 1115 membership (1971) &
 lout is membership [i] ez" 1' ez name [i] ez" "
 3
 else &
     cout comembership & Cile " " echame Cile".";
  3
 but ex" 3" exend!
 love ex" Interection of two fuzzy set is "exend te" ";
 For l'al 1 =0', ics ', HAI &
  if (membership[i] = = membership([i]) &
    to ut exmembership (1) << "1" < crame [1] <<","
  3
 (out ce" 3" exends!
  love zz" compliment of 1st Juzzy set is "exend ! cz &";
 for ( ne i= 0; i < c; i++) &
   lout cc(1-membership (i) ) cc"1" coname [i] cc"!
   3
  lout ce" 3" exend 1;
  but ce" compliment of and fuzzy set is "endke" s";
  for (int i=0; i < 1; it) ?
  (out CC(I- membership I [i] ) 22"1"22 name [i] 22"
   COUL < 2" 3"
   return o;
    3
```