SET OPERATIONS

#include <stdio.h>

#include <stdlib.h>

int a[20],b[20],c[20];

void set\_union(int a[],int b[],int m){

printf("after Union operation\n");

for(int i=0;i<m;i++){

c[i]=a[i]||b[i];

printf("%d\t",c[i]);

}

return;

}

void set\_intersection(int a[],int b[],int m){

printf("after intersection operation\n");

for(int i=0;i<m;i++){

c[i]=a[i]&&b[i];

printf("%d\t",c[i]);

}

return;

}

void set\_difference(int a[],int b[],int m){

printf("after Difference operation\n");

for(int i=0;i<m;i++){

c[i]=!b[i]&&a[i];

printf("%d\t",c[i]);

}

return;

}

void main(){

int m,n,p;

printf("enter the size of 1st set\n");

scanf("%d",&m);

printf("enter the zeros and ones based on condition\n");

for(int i=0;i<m;i++){

main:

scanf("%d",&p);

if (p==0 || p==1){

a[i]=p;

}

else{

printf("set only accept 0's and 1's please enter a valid number");

goto main;

}

}

printf("enter the size of 2nd set\n");

scanf("%d",&n);

printf("enter the zeros and ones based on condition\n");

for(int i=0;i<n;i++){

main2:

scanf("%d",&p);

if (p==0 || p==1){

b[i]=p;

}

else{

printf("set only accept 0's and 1's please enter a valid number");

goto main2;

}

}

while(1){

int x;

printf("\n---------------------SET MENU-----------------------\n");

printf("1. Union\n 2. Intersection\n 3. Difference\n 0. exit\n enter the option below\n");

scanf("%d",&x);

switch(x){

case 1: if(m==n)

set\_union(a,b,m);

else

printf("union perform only same size of array\n");

exit(1);

break;

case 2: if(m==n)

set\_intersection(a,b,m);

else

printf("intersection perform only same size of array\n");

exit(1);

break;

case 3: if(m==n)

set\_difference(a,b,m);

else

printf("difference perform only same size of array\n");

exit(1);

break;

case 0:exit(1);

default: printf("invalid option\n");

}

}

}