**CO2**

**Bit String**

**Code :**

#include<stdio.h>

int x,y,z,a[10],b[10],b1[10],b2[10],b2c[10],u[10],d=0,o=1;

void Union() {

printf("\nA Union B : ");

for (int i=0;i<10;i++) {

printf("%d",b1[i] | b2[i]);

}

}

void Intersection() {

printf("\nA Intersection B : ");

for (int i=0;i<10;i++) {

printf("%d",b1[i] \* b2[i]);

}

}

void Diff() {

for (int i=0;i<10;i++) {

if(b2[i]==0) {

b2c[i]=1;

} else {

b2c[i]=0;

}

}

printf("\nA - B : ");

for (int i=0;i<10;i++) {

printf("%d",b1[i] \* b2c[i]);

}

}

void main() {

printf("Enter the number of elements in set U\n");

scanf("%d",&x);

printf("Enter the elements in set U\n");

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

scanf("%d",&u[i]);

}

printf("Enter the number of elements in set A\n");

scanf("%d",&y);

printf("Enter the elements in set A\n");

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

scanf("%d",&a[i]);

}

printf("Enter the number of elements in set B\n");

scanf("%d",&z);

printf("Enter the elements in set B\n");

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

scanf("%d",&b[i]);

}

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

for (int j=0;j<y;j++) {

if(a[j]==u[i]) {

b1[i]=1;

break;

} else {

b1[i]=0;

}

}

}

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

for (int j=0;j<z;j++) {

if(b[j]==u[i]) {

b2[i]=1;

break;

} else {

b2[i]=0;

}

}

}

printf("\nA : ");

for (int i=0;i<10;i++) {

printf("%d",b1[i]);

}

printf("\nB : ");

for (int i=0;i<10;i++) {

printf("%d",b2[i]);

}

while(o==1) {

printf("\nEnter any option \n1.Union\n2.Intersection\n3.Difference\n");

scanf("%d",&d);

switch(d) {

case 1 : Union();

printf("\n");

break;

case 2 : Intersection();

printf("\n");

break;

case 3 : Diff();

printf("\n");

break;

}

printf("Continue(0/1)");

scanf("%d",&o);

}

}

Text

Description automatically generated