

Output
 (C:\Users\1\Documents\My Programs\Set Operations\SetOperations\main.cpp) [12:45 PM]
 Camlin Page 1 / 1
 MENU
 1. Input
 2. Union
 3. Intersection
 4. Difference
 enter choice
 1
 enter size of 1st set
 3
 enter elements
 2
 4
 7
 enter size of 2nd set
 2
 enter elements
 4
 7
 1st set
 010100100
 2nd set
 000100001

Program No: 9
 Program to implement Set Operations.
 Prgm
 #include <stdio.h>
 #include <conio.h>
 void input();
 void output();
 void setunion();
 void intersection();
 void difference();
 int a[] = {0, 0, 0, 0, 0, 0, 0}, b[] = {0, 0, 0, 0, 0, 0, 0};
 int main()
 {
 clrscr();
 do
 {
 printf("1. MENU\n");
 printf("1. Input\n 2. Union\n 3. Intersection\n 4. Difference\n");
 printf("enter choice\n");
 scanf("%d", &ch);
 switch (ch)
 {
 case 1 : input();
 break;

Do you wish to continue? (1/0)

MENU

1. Input
2. Union
3. Intersection
4. Difference

enter choice

2

010100101

Set is 12 4 7 9 0 8 3 5 7 2 6 1

Do you wish to continue? (1/0)

1

MENU

1. Input
2. Union
3. Intersection
4. Difference

enter choice

3

000100000

Set is 4

case 2 : intersection();
break;
case 3 : intersection();
break;
case 4 : difference();
break;

printf("Do you want to continue? (1/0)\n");
scanf("%d", &wish);

while(wish == 1);

void input()

{

int n, x, i;

printf("enter size of the 1st set \n");
scanf("%d", &n);

printf("enter elements\n");

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

{

scanf("%d", &x);

a[x-1] = 1;

}

printf("enter size of the 2nd set \n");
scanf("%d", &n);

printf("enter elements\n");

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

Do you wish to continue? (1/0)

MENU

1. Input

2. ~~Set~~ Union

3. Intersection

4. Difference

enter choice

4

010000100

Set is 2 7

Do you wish to continue? (1/0)

0

{ scanf ("%d", &x);

b[x-1] = 1;

}

printf ("In 1st set \n");

for (i=0; i<9; i++)

{

printf ("%d", a[i]); }

printf ("In 2nd set \n");

for (i=0; i<9; i++)

{ printf ("%d", b[i]); }

}

}

void output(int c[])

{

int i;

printf ("In set is ");

for (i=0; i<9; i++)

{ if (c[i] != 0)

printf ("%d", i+1); }

}

void setunion()

{ int i, c[10];

for (i=0; i<9; i++)

{ if (a[i] != b[i])

c[i] = 1;

else c[i] = a[i];
}

for (i = 0; i < 9; i++)
{

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

Output(c);

}

void intersection()

{

int i, c[10];

for (i = 0; i < 9; i++)

{ if (a[i] == b[i])

c[i] = a[i];

else c[i] = 0;

}

for (i = 0; i < 9; i++)

{

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

}

Output(c);

}

void difference()

{ int i, c[10];

for (i = 0; i < 9; i++)

{

if ($a[i] == 1 \text{ OR } b[i] == 0$)

$c[i] = 1;$

else $c[i] = 0;$

}

for ($i = 0; i < 9; i++$)

{

$\text{printf}("%d", c[i]);$

}

$\text{output}(c);$

}

10

15

20

25

MENU

1. Input

2. Union

3. Intersection

4. Difference

enter choice

1

enter size of the 1st set

3

enter elements

2

4

7

enter size of the 2nd set

2

enter elements

4

9

1st set

010100100

2nd set

000100001

Do you wish to continue ?(1/0)

1

1

____MENU____

- 1. Input
- 2. Union
- 3. Intersection
- 4. Difference

enter choice

2

010100101

Set is 2 4 7 9

Do you wish to continue ?(1/0)

1

____MENU____

- 1. Input
- 2. Union
- 3. Intersection
- 4. Difference

enter choice

3

000100000

Set is 4

Do you wish to continue ?(1/0)

1

1

_____MENU_____

- 1. Input**
- 2.Union**
- 3.Intersection**
- 4.Difference**

enter choice

3

000100000

Set is 4

Do you wish to continue ?(1/0)

1

_____MENU_____

- 1. Input**
- 2.Union**
- 3.Intersection**
- 4.Difference**

enter choice

4

010000100

Set is 2 7

Do you wish to continue ?(1/0)

0_