```
/*
Q 1. Write a program in C to delete an element at desired position from an array.
*/
#include<stdio.h>
void main()
{
	int i,j,flag,n,arr[10];
	i=0;
	while(i<10)
	{
		printf("Enter element at index %d : ",i);
		scanf("%d",&arr[i]);
		i++;
	}
	printf("Array =\t\t");
	i=0;
	while(i<10)
	{
		printf("%d\t",arr[i]);
		i++;
	}
	printf("\nEnter element which you want to delete from array : ");
	scanf("%d",&n);

	i=0;
	flag=0;
	while(i<10)
```

```
{
        if(arr[i] == n)
        {
                j=i+1;
                while(j<10)
                {
                        arr[i]=arr[j];
                        i++;
                        j++;
                }
                printf("Element %d is deleted from array.",n);
                flag=1;
                break;
        }
        i++;
}
if(flag==0)
        printf("Element %d is Not present in array.",n);

if(flag==1)
{
        printf("\nUpdated Array = ");
        i=0;
        while(i<10-1)
        {
                printf("%d\t",arr[i]);
                i++;
```

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                }
            }

}
```

```
/*
Q 2. Write a program in C to find the maximum / minimum element in an array.
*/
#include<stdio.h>
void main()
{
	int i,max,min,arr[10];
	printf("\n");
	for(i=0;i<10;i++)
	{
		printf("Enter a Element at index %d in Array = ",i);
		scanf("%d",&arr[i]);
	}
	printf("Array =");
	for(i=0;i<10;i++)
	{
		printf("\t%d",arr[i]);
	}
	max=arr[0];
	for(i=1;i<10;i++)
	{
		if(max<arr[i])
			max=arr[i];
	}
	printf("\nGreatest Number = %d",max);
	min=arr[0];
	for(i=1;i<10;i++)
```

```
        {
                if(min>arr[i])
                        min=arr[i];
        }
        printf("\nSmallest Number = %d",min);
}
```

```
/*
Q 3. Write a program in C to find the second largest element in an array.
*/
#include<stdio.h>
void main()
{
	int i,max,sec,min,arr[5];
	printf("\n");
	for(i=0;i<5;i++)
	{
		printf("Enter a Element at index %d in Array = ",i);
		scanf("%d",&arr[i]);
	}
	printf("Array =");
	for(i=0;i<5;i++)
	{
		printf("\t%d",arr[i]);
	}
	max=arr[0];
	for(i=1;i<5;i++)
	{
		if(max<arr[i])
		{
			max=arr[i];
		}
	}
	min=arr[0];
```

```
        for(i=1;i<5;i++)
        {
                if(min>arr[i])
                {
                        min=arr[i];
                }
        }
        sec=min;
        for(i=0;i<5;i++)
        {
                if(arr[i]!=max && sec<arr[i])
                {
                        sec=arr[i];
                }

        }
        printf("\nSecond Largest Number = %d",sec);
}
```

```
/*
Q 4. Write a C Program to Find the Number of Elements in an Array
*/

#include<stdio.h>
void main()
{
	int i,n,arr[10];
	n=10;
	printf("\n");
	for(i=0;i<10;i++)
	{
		printf("Enter a Element at index %d in Array = ",i);
		scanf("%d",&arr[i]);
	}
	printf("Array =");
	for(i=0;i<10;i++)
	{
		printf("\t%d",arr[i]);
	}
	printf("\nElements in Array = %d",n);
}
```

```
/*
Q 5. Write a C Program to Print the Alternate Elements in an Array
*/
#include<stdio.h>
void main()
{
	int i,arr[10];
	printf("\n");
	for(i=0;i<10;i++)
	{
		printf("Enter a Element at index %d in Array = ",i);
		scanf("%d",&arr[i]);
	}
	printf("Array =\t");
	for(i=0;i<10;i++)
	{
		printf("\t%d",arr[i]);
	}
	printf("\nAltered Array =");
	for(i=0;i<10;i++)
	{
		if(i%2==0)
			printf("\t%d",arr[i]);
	}
	printf("\nAltered Array =");
	for(i=0;i<10;i++)
	{
```

```
            if(i%2!=0)
                printf("\t%d",arr[i]);
        }
}
```

```
/*
Q 6. Write a C Program to Find 2 Elements in the Array such that Difference between them is Largest
*/
#include<stdio.h>
void main()
{
	int i,max,min,large,arr[10];
	printf("\n");
	for(i=0;i<10;i++)
	{
		printf("Enter a Element at index %d in Array = ",i);
		scanf("%d",&arr[i]);
	}
	printf("Array =");
	for(i=0;i<10;i++)
	{
		printf("\t%d",arr[i]);
	}
	max=arr[0];
	for(i=1;i<10;i++)
	{
		if(max<arr[i])
			max=arr[i];
	}

	min=arr[0];
```

```
	for(i=1;i<10;i++)
	{
		if(min>arr[i])
			min=arr[i];
	}

	large=max-min;
	printf("\nLargest Difference of %d and %d = %d",max,min,large);
}

/*
#include<stdio.h>
void main()
{
	int i,j,diff,large,n1,n2,t1,t2,arr[10];
	i=0;
	while(i<10)
	{
		printf("Enter element at index %d : ",i);
		scanf("%d",&arr[i]);
		i++;
	}
	printf("Array = ");
	i=0;
	while(i<10)
	{
		printf("%d\t",arr[i]);
```

```
        i++;
    }
    t1=arr[0];
    t2=arr[0];
    large=t1-t2;
    n1=t1;
    n2=t2;
    for(i=0;i<10;i++)
    {
        for(j=0;j<10;j++)
        {
            t1=arr[i];
            t2=arr[j];
            diff=t1-t2;
            if(large < diff)
            {
                large=diff;
                n1=t1;
                n2=t2;
            }
        }
    }
    printf("\nLargest Difference of %d and %d = %d",n1,n2,large);
}*/
```

```
/*
Q 8. Write a C program to store squares of the elements in the same array
*/
#include<stdio.h>
void main()
{
	int i,arr[10];
	i=0;
	while(i<10)
	{
		printf("Enter element at index %d : ",i);
		scanf("%d",&arr[i]);
		i++;
	}
	printf("Array = \t");
	i=0;
	while(i<10)
	{
		printf("%d\t",arr[i]);
		i++;
	}

	i=0;
	while(i<10)
	{
		arr[i]=arr[i]*arr[i];
		i++;
```

```
        }
        printf("\nSquare of Array = ");
        i=0;
        while(i<10)
        {
                printf("%d\t",arr[i]);
                i++;
        }
}
```

```
/*
Q 9. Write C Program to Find the two Elements such that their Sum is Closest to given number
*/
#include<stdio.h>
void main()
{
	int i,j,n,diff,newdiff,n1,n2,flag,a[10];
	for(i=0;i<10;i++)
	{
		printf("Enter element at index %d in a array : ",i);
		scanf("%d",&a[i]);
	}
	printf("Array =  ");
	for(i=0;i<10;i++)
		printf("%d\t",a[i]);
	printf("\nEnter number to find closest number = ");
	scanf("%d",&n);
	diff=n>(a[0]+a[0]) ? (n-(a[0]+a[0])):(a[0]+a[0]-n);
	n1=a[0];
	n2=a[0];
	flag=0;
	if(diff==0)
		flag=1;
	for(i=0;i<10&&flag==0;i++)
	{
		for(j=0;j<10;j++)
```

```
            {
                newdiff=n>(a[i]+a[j]) ? (n-(a[i]+a[j])):(a[i]+a[j]-n);
                if(newdiff < diff)
                {
                    diff=newdiff;
                    n1=a[i];
                    n2=a[j];
                    if(diff==0)
                    {
                        flag=1;
                        break;
                    }
                }
            }
        }
        printf("\nThe two numbers whose sum is closest to the given number are %d and %d with minimum difference %d.",n1,n2,diff);
}
```

```
/*
Q 10. Write C Program to Find Union & Intersection of 2 Arrays
*/
#include<stdio.h>
void main()
{
	int i,un,in,j,flag,a[10],b[10],uni[20],inter[10];
	i=0;
	printf("Insertion in 1st Array :\n");
	while(i<10)
	{
		printf("\tEnter element at index %d : ",i);
		scanf("%d",&a[i]);
		uni[i]=a[i];
		i++;
	}
	printf("Insertion in 2nd Array :\n");
	i=0;
	while(i<10)
	{
		printf("\tEnter element at index %d : ",i);
		scanf("%d",&b[i]);
		i++;
	}
	printf("1st Array =\t");
	i=0;
	while(i<10)
```

```
{
        printf("%d\t",a[i]);
        i++;
}
printf("\n2nd Array =\t");
i=0;
while(i<10)
{
        printf("%d\t",b[i]);
        i++;
}

// Union of two Arrays
un=10;
for(i=0;i<10;i++)
{
        flag=0;
        for(j=0;j<10;j++)
        {
                if(b[i] == a[j])
                {
                        flag=1;
                        break;
                }
        }
        if(flag == 0)
        {
```

```
                uni[un]=b[i];
                un++;
        }
}
printf("\nUnion =\t\t");
for(i=0; i < un ;i++)
{
        printf("%d\t",uni[i]);
}

// Intersection of two Arrays
in=0;
for(i=0;i<10;i++)
{
        for(j=0;j<10;j++)
        {
                if(a[i] == b[j])
                {
                        inter[in]=a[i];
                        in++;
                        break;
                }
        }
}
printf("\nIntersection =\t");
for(i=0; i < in ;i++)
{
```

```
            printf("%d\t",inter[i]);
        }
}
```

```
/*
Q 11. Write a C program to find the maximum sum of a subsequent numbers in given array.
*/
#include<stdio.h>
void main()
{
	int i,j,max,s1,s2,arr[10];
	printf("\n");
	for(i=0;i<10;i++)
	{
		printf("Enter a Element at index %d in Array = ",i);
		scanf("%d",&arr[i]);
	}
	printf("Array =");
	for(i=0;i<10;i++)
	{
		printf("\t%d",arr[i]);
	}
	j=0;
	max=arr[j];
	i=0;
	for(j=1;j<10;j++)
	{
		if(max<arr[j])
		{
			max=arr[j];
```

```
                        i=j;
                }
        }
        s1=-9999;
        s2=-9999;
        if(i != 0)
                s1=max+arr[i-1];
        if(i != 9)
                s2=max+arr[i+1];
        if(s1>=s2)
                printf("\nSubsequent Elements %d and %d with maximum sum =
%d",arr[i-1],arr[i],s1);
        else
                printf("\nSubsequent Elements %d and %d with maximum sum =
%d",arr[i],arr[i+1],s2);
}



/*
#include<stdio.h>
void main()
{
        int i,sum,max,t1,t2,n1,n2,arr[10];
        i=0;
        while(i<10)
        {
                printf("Enter element at index %d : ",i);
```

```
        scanf("%d",&arr[i]);
        i++;
}
printf("Array = ");
i=0;
while(i<10)
{
        printf("%d\t",arr[i]);
        i++;
}
t1=arr[0];
t2=arr[1];
max=t1+t2;
n1=t1;
n2=t2;
for(i=1;i<9;i++)
{
        t1=arr[i];
        t2=arr[i+1];
        sum=t1+t2;
        if(max < sum)
        {
                max=sum;
                n1=t1;
                n2=t2;
        }
}
```

```
        printf("\nMaximum Sum of elements %d and %d = %d",n1,n2,max);
}*/
```