

```

/*
    Que.1 Write a C program to find the sum of all the
    elements of an array.    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

//solution

#include<stdio.h>
#include<conio.h>

void main() {
    int a[10];    //size of array
    int i,n,sum=0;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);
    printf("Please Enter Elements: \n");
    //iterate until condition remains true
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    }

    for(i=0; i<n; i++)
    {
        sum=sum+a[i];    //equation to add elements
    }

    printf("Sum Of All Elements Of An Array: %d",sum);
    //display sum of all elements
    getch();
}    //end of main

/*

```

Que.2 An Array consist of Integers. Write a C program to count the Number of elements less than, greater than and equal to zero.

Owner: Nikhil Kisan Khond

Batch: PPA9

*/

//solution

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int a[10];
```

```
    int i,n,count1=0,count2=0,count3=0;
```

```
printf("How Many Elements You Want: ");
```

```
    scanf("%d",&n);
```

```
printf("Please Enter Elements: \n");
```

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

```
{
```

```
    scanf("%d",&a[i]); //take Elements from user
```

```
} //end of first for
```

```
//to iterate until condition remains true
```

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

```
{
```

```
if(a[i]<0) //condition to check number is less than zero
```

```
{
```

```
    count1++;
```

```
}
```

```
    else if(a[i]>0) //condition to check number is  
greater than zero
```

```
{
```

```
    count2++;
```

```
}
```

```

        else
        {
            count3++;
        }
    } //end of second for

    printf("Less Than Zero Elements Are: %d\nGreater Than
Zero Elements Are: %d\nEqual To Zero Elements Are:
%d\n",count1,count2,count3); //Display Number Of Elements
    getch();
} //end of main

```

```

/*
    Que.3 Write a C program that return the positions of the
    palindrome element in array.   Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

```

//solution

```

```

#include<stdio.h>
#include<conio.h>

void main() {
    int a[10],b[10];
    int i,n,j,rev,temp;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    printf("Please Enter Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    } //end of 1st for loop

    //to iterate until condition remains true

```

```

        for(i=0; i<n; i++)
        {
            temp=a[i];
            j=0;
            rev=0;
            while(a[i]>0)
            {
                j=a[i] % 10;
                rev= rev*10+ j;
                a[i]= a[i]/10;
            } //end of while

            if(temp==rev)    //condition to check number is palindrome
or not
            {
                printf("%d is the palindrome no in array at
position: %d\n",temp,i+1);    //Display Palindrome element
            }
        } //end of 2nd for loop
        getch();
    }    //end of main

```

```

/*
    Que.4 Write a C program to sort first half of array in
ascending order and second half of array in descending.
    Owner: Nikhil Kisan Khond
    Batch:PPA9
*/

```

```

//solution

```

```

#include<stdio.h>
#include<conio.h>

```

```

void main()

```

```

{
    int a[10]; int
    i,j,n,temp,temp1;
    printf("How Many Elements You Want: "); scanf("%d",&n);

    //to take elements from user
    printf("Please Enter Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    } //end of loop

    printf("Array Elements In Ascending Order Are: \n");
    //to iterate until condition remains true
    for(i=0; i<n/2; i++)
    {
        //to iterate until condition remains true
        for(j=i+1; j<n/2; j++)
        {
            if(a[i]>a[j]) //condition for ascending
order
            {
                temp=a[i];
                a[i]=a[j];
                a[j]=temp;
            }
        } //end of for loop
        printf("%d\n",a[i]); //display elements in
ascending order
    }
    printf("Array Elements In Descending Order Are: \n");
    //to iterate until condition remains true
    for(i=n/2; i<n-1; i++)
    {
        //to iterate until condition remains true
        for(j=n/2; j<n-1; j++)

```

```

        {
            if(a[j]<a[j+1])    //condition for descending
order
            {
                temp1=a[j];
                a[j]=a[j+1];
                a[j+1]=temp1;
            }
        } //end of for loop
    } //end of for loop

    for(i=n/2; i<n; i++)
    {
        printf("%d\n",a[i]);    //display elements in
descending order
    }    //end of loop
    getch();
}    //end of main

```

```

/*
    Que.5 Write a C program to copy the elements of one array
into another array.
    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

//solution

```

#include<stdio.h>
#include<conio.h>

void main() {
    int a[10],b[10];
    int i,n;
    printf("How Many Elements You Want: "); scanf("%d",&n);

```

```

    printf("Please Enter Elements: \n"); for(i=0;
    i<n; i++)
    {
        scanf("%d",&a[i]);
    } //end of 1st for
    printf("Copied Array Elements: \n");
    for(i=0; i<n; i++)
    {
        b[i]=a[i]; //condition to copy elements into another
array
        printf("%d\n",b[i]); //display copied array
    } //end of 2nd for loop

    getch();
} //end of main

```

```

/*
    Que.6 Write a C program to sort only even numbers in given
array.
    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

```

//solution

```

```

#include<stdio.h>
#include<conio.h>

void main()
{
    int a[20];
    int n,i,j,temp;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    //take elements from user
    printf("Please Enter Your Elements: \n");

```

```

for(i=0; i<n; i++)
{
    scanf("%d",&a[i]);
} //end of loop

printf("Sorted Only Even Numbers in Given Array: \n");
//to iterate until condition remains true
for(i=0; i<n; i++)
{
    for(j=i+1; j<n; j++)
    {
        if(a[i]%2==0) //condition for even numbers
        {
            if(a[j]%2==1) //condition for ascending
order
            {
                temp = a[i];
                a[i] = a[j];
                a[j] = temp;
            }
        }

    } //end of second for loop
    printf("%d\n",a[i]); //Display Only Even Numbers in
ascending Order

} //end of First for loop
getch();
} //end of main

```

```

/*
Que.7 Write a C program in C to seperate odd and even
integers in same array Owner: Nikhil Kisan Khond
Batch: PPA9
*/

```



```

//solution

#include<stdio.h>
#include<conio.h>
void
main()
{
    int a[20];
int n,i,j,temp;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    //take elements from user
printf("Please Enter Your Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    } //end of loop

    printf("Array Elements are: \n");
    for(i=0; i<n; i++)
    {
        printf("%d\n",a[i]);
    }
    printf("Sorted Array Elements Are: \n");
    //to iterate until condition remains true
    for(i=0; i<n; i++)
    {
        //to iterate until condition remains true
        for(j=i+1; j<n; j++)
        {
            if(a[i]%2==0 && a[j]%2==1)
            {
                temp=a[i];
                a[i]=a[j];
a[j]=temp;
            }
        }
    }
}

```

```

        } //end of for loop
    } //end of for loop

    for(i=0; i<n; i++)
    {
        printf("%d\n",a[i]);    //Display Sorted Even and odd
        Elements
    } //end of First for loop
    getch();
} //end of main

```

```

/*
    Que.8 Write a C program to count the frequency of each
    element of an array
    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

//Solution

```

#include<stdio.h>
#include<conio.h>

void main() {
    int a[20], b[20];
    int n,i,j,count;
    printf("How    Many    Elements    You    Want:    ");
    scanf("%d",&n);
    printf("Please Enter Your Elements: \n");
    //for to take elements from user
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    }

    //to iterate until condition remains true for(i=0;
    i<n; i++)

```

```

{
    count=1;
    if(a[i]!=0)
    {
        //to iterate until condition remains true
        for(j=i+1; j<n; j++)
        {
            if(a[i]==a[j])
            {
                count++;
                a[j]=0;
            }
        } //end of for loop
    }
    b[i]=count;
} //end of nested for loop
printf("Frequency Of All Elements Of Array is: \n");
for(i=0; i<n; i++)
{
    if(a[i]!=0)
    {
        printf("Frequency of %d is: %d\n",a[i],b[i]);
//Display Frequency of all elements
    }
} //end of loop
getch();
} //end of main

```

/*

Que.9 Write a C program to print all unique elements in an array.

Owner: Nikhil Kisan Khond

Batch:PPA9

*/

```

//solution

#include<stdio.h>
#include<conio.h>
void main() {
int a[10],b[10];
int n,i,j,count;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    //to take elements from user
printf("Please Enter Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
b[i]=1;
    } //end of loop
    printf("Unique Elements are: \n"); //to
iterate until condition remains true
    for(i=0; i<n; i++)
    {
        count=1;
        //to iterate until condition remains true
        for(j=i+1; j<n; j++)
        {
            if(a[i]==a[j])
            {
                count++;
            }
            b[j]=0;
        } //end of for loop
        if(b[i]!=0)
        {
            b[i]=count;
        }
    } //end of for loop
    for(i=0; i<n; i++)

```

```

        {
            if(b[i]==1)
            {
                printf("%d\n",a[i]);    //display unique
element of array
            }
        }    //end of loop
    getch();
}    //end of main

```

```

/*
    Que.10 Write a C program to Insert New value in the array
    (Sorted List).
    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

//solution

```

#include<stdio.h>
#include<conio.h>

void main()
{
    int a[10];    int
n,i,new_value;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    //enter elements from user using n
    printf("Please Enter Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    }    //end of for

```

```

    printf("Please Enter New Value to be inserted: ");
    scanf("%d",&new_value);    //enter new value from user
    printf("After Insertion New Array is: \n");    i=n-1;
    //iterate until condition remains true
    while(new_value<a[i] && i>=0)
    {
        a[i+1]=a[i];
        i--;
    }    //end of while loop

    n++;
    a[i+1]=new_value;

    for(i=0; i<n; i++)
    {
        printf("%d\n",a[i]);    //Display New Value
    }
    getch();
}    //end of main

```

```

/*
    Que.11 Write a C program to delete an element at desired
    position from an array.    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

//solution

```

#include<stdio.h>
#include<conio.h>

void main()
{ int a[10]; int
  n,i,pos;
  printf("How Many Elements You Want: "); scanf("%d",&n);
  printf("Please Enter Elements: \n");

```

```

    //for loop to take elements from user
for(i=0; i<n; i++)
{
    scanf("%d",&a[i]);
}

    printf("Enter The Position Where to delete element: ");
{
    scanf("%d",&pos);
}
i=0;
while(i!=pos-1)
{
    i++;
} //end of 1st while

while(i<n)
{
    a[i]=a[i+1];
    i++;
} //end of 2nd while
n--;
printf("The New Array is: \n");
for(i=0; i<n; i++)
{
    printf("%d\n",a[i]); //display elements without deleted
element
} //end of 2nd for loop
getch();
} //end of main

```

/*

Que.12 Write a C program to find the Maximum / Minimum
element in an array. Owner: Nikhil Kisan Khond
Batch: PPA9

```

*/

//solution

#include<stdio.h>
#include<conio.h>

void main()
{
    int a[10];    int
i=0,n,max=0,min;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    //to take elements from user
    printf("Please Enter Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    } //end of loop

    //to iterate until condition remains true
    for(i=0; i<n; i++)
    {
        if(a[i]>max)    //condition to check array is maximum
        {
            max=a[i];
        }
    } //end of for loop

    min=a[0];
    for(i=0; i<n; i++)
    {
        if(a[i]<min)    //condition to check array is minimum
        {
            min=a[i];

```



```

    }
} //end of for loop
printf("Minimum Element is: %d\n",min); //display
minimum elements
printf("Maximum Element is: %d\n",max); // display
maximum elements
getch();
} //end of main

```

```

/*
Que.13 Write a C program to find Second Largest Element in
an array.
Owner: Nikhil Kisan Khond
Batch:PPA9
*/

```

```

//solution

```

```

#include<stdio.h>
#include<conio.h>

void main()
{
    int a[10];    int
n,i,max=0,sec_max;
    printf("How Many Elements You Want: ");
    scanf("%d",&n);

    //to take elements from user
printf("Please Enter Elements: \n");
    for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]); }
    //end of for

```

```

    //to iterate until condition remains true for(i=0;
    i<n; i++)
    {
        if(max<a[i]) //condition for max element
        {
            sec_max = max;
            max = a[i];
        }

        else if(a[i]>sec_max) //condition for second max element
        {
            sec_max = a[i];
        }
    } //end of for loop
    printf("Second Largest Number is %d: ",sec_max);
//display second largest number
    getch();
} //end of main

```

```

/*
    Que.14 Write a C program to Find the Number Of Elements in
    an Array.
    Owner: Nikhil Kisan Khond
    Batch: PPA9
*/

```

```

//solution

```

```

#include<stdio.h>
#include<conio.h>

```

```

void main()
{ int a[10]; int
  n,i,j,count;
  printf("How Many Elements You Want: "); scanf("%d",&n);

```

```

    //to take elements from user printf("Please
    Enter Elements: \n"); for(i=0; i<n; i++)
    {
        scanf("%d",&a[i]);
    } //end of for

    //to iterate until condition remains true
    for(i=0; i<n; i++)
    {
        for(j=0; j<n; j++)
        {
            count=sizeof(a[j])/sizeof(int);
        } //end of for
    count=count+i;
    } //end of for loop

    printf("Number Of Elements In Array: %d",count);
    //display number of elements in array
    getch();
} //end of main

```

/*
 Que.16 Write a C program to print the Alternate Elements
 in an Array.

Owner: Nikhil Kisan Khond

Batch:PPA9

*/

//solution

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{ int a[20];
```

```
int n,i;
```

```

printf("How Many Number You Want: "); scanf("%d",&n);

//to take elements from user
printf("Please Enter Elements: \n");
for(i=0; i<n; i++)
{
    scanf("%d\n",&a[i]);
} //end of for

printf("Alternate Elements In An Array: \n");
for(i=0; i<n; i+=2)
{
    printf("%d\n",a[i]); //display alternate elements
} //end of loop
getch();
} //end of main

```

/*
 Que.19 Write a C program to store squares of the elements
 in the same array.

Owner: Nikhil Kisan Khond

Batch: PPA9

*/

//solution

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{ int a[10];
```

```
    int n,i,sq;
```

```
    printf("How Many Elements You Want: "); scanf("%d",&n);
```

```
    //to take elements from user printf("Please
```

```
Enter Elements: \n"); for(i=0; i<n; i++)
```

```
{
```

```
        scanf("%d",&a[i]);
    } //end of for
    printf("Store Squares Of The Elements In The Array:
\n");
    //to iterate until condition remains true
    for(i=0; i<n; i++)
    {
        sq=a[i]*a[i];        //formula to find square
        printf("%d\n",sq);    //display square of elements of array
    } //end of for loop
    getch();
} //end of main
```