```
********************************C Language : 1-D Array Assignment
1***********************************
```

```
/****************************************************************************
 Q1:  Write a C program to find the sum of all the elements
        of an array.
OWNER: AKSHAY GANGARAM KADAM
BATCH: PPA9
****************************************************************************/
```

```c
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,sum=0,n;
        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
        int a[n];
    printf("ENTER ARRAY ELEMENT");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
        }

        for(i=0;i<n;i++)
        {
                sum=sum+a[i];
        }

        printf("THE TOTAL ARRAY ELEMENT SUM IS =%d",sum);
        getch();
}
```

```
****************************************************************************
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/****************************************************************************
  Q2.  An array consist of Integers. Write a C program to
        count the number of elements less than, greater than
        and equal to zero.
```

```c
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,n,l=0,g=0,z=0;
        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
        int a[n];
    printf("ENTER ARRAY ELEMENT\n");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
        }

        for(i=0;i<n;i++)
        {
            if(a[i]<0)
            {
                l++;
            }
            else if(a[i]>0)
            {
                g++;
            }
            else if(a[i]==0)
            {
                z++;
            }

        }

        printf("LESS THAN ZERO TOTAL NUMBER IS=%d\n",l);
        printf("GREATER THAN ZERO TOTAL NUMBER IS=%d\n",g);
        printf("NUMBER EQUAL TO ZERO TOTAL NUMBER IS=%d\n",z);

        getch();
}



*************************************************************


/***************************************************************************
 Q3 :  Write a C program that return the positions of the
        pallindrome element in array.
```

```c
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,n,rev,temp,rem;
        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
        int a[n];

    printf("ENTER ARRAY ELEMENT\n");

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

for(i=0;i<n;i++)
{       rev=0;
        temp=a[i];
    //  printf("%d",a[i]);
        while(a[i]!=0)
        {
            rem=a[i]%10;
            rev=rev*10+rem;
            a[i]=a[i]/10;
        }

        if(temp==rev)
        {

            printf("%d  : IS A palindrome NUMBER AND ARRAY INDEX IS=%d\n",rev,i);
        }
}
        getch();
}
```

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/***
Q 4.   Write a C program to sort first half of array in
       ascending order and second half of array in

```c
#include<stdio.h>
#include<conio.h>
void main()
{
        int i,n,inc,temp,j,p;
        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
        int a[n],b[n];

    printf("ENTER ARRAY ELEMENT\n");

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

        for(i=0;i<n;i++)
        {
            for(j=i+1;j<n;j++)
            {
                if(a[i]>a[j])
                {
                    temp=a[i];
                    a[i]=a[j];
                    a[j]=temp;
                }
            }

        }

        p=n/2;
        j=0;
        for(i=0;i<p;i++)
        {
            b[j]=a[i];
            j++;
        }


        for(i=n-1;i>=p;i--)
        {
            b[j]=a[i];
            j++;
    }
```

```c
        for(j=0;j<n;j++)
        {
                printf("%d\t",b[j]);
        }


        getch();
}




************************************************************



    /***********************************************************************
      Q5.    Write a C program to copy the elements of one array
             into another array.
             descending order.
    OWNER: AKSHAY GANGARAM KADAM
    BATCH: PPA9

********************************************************************************/


#include<stdio.h>

#include<conio.h>

void main()
{
    int i,n;


        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
    int a[n],b[n];

    printf("ENTER ARRAY ELEMENT\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    for(i=0;i<n;i++)
    {
        b[i]=a[i];
    }
```

```c
    printf("the copy array is =\n");

    for(i=0;i<n;i++)
    {
        printf("%d\n",b[i]);
    }
    getch();

}
```

```
***********************************************************************


    /***************************************************************************
        Q6 .Write a C program to sort only even numbers in given
            array.
             Eg.
             Input: 45 8 75 29 5 49 56 22 14 497 288 18 2
            Output: 45 2 75 29 5 49 8 14 18 497 22 56 288
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    BATCH: PPA9

***************************************************************************/
```

```c
#include<stdio.h>

#include<conio.h>

void main()
{
    int i,n,temp,j,k;


        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
    int a[n],b[n],c[n];

    printf("ENTER ARRAY ELEMENT\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }

    j=0;

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

```c
        if(a[i]%2==0)
        {
            b[j]=a[i];
            j++;

        }
    }

    for(i=0;i<j-1;i++)
    {
        for(k=i+1;k<j;k++)
        {
            if(b[i]>b[k])
            {
                temp=b[k];
                b[k]=b[i];
                b[i]=temp;
            }
        }
    }
    k=0;
    for(i=0;i<n;i++)
    {
        if(a[i]%2==0)
        {
            c[i]=b[k];
            k++;
        }
        else
            c[i]=a[i];
    }


    for(i=0;i<n;i++)
    {
        printf("%d\t",c[i]);
    }

    getch();

}
```

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```
/*************************************************************************
    Q7:  Write a program in C to separate odd and even
         integers in same array.
    OWNER: AKSHAY GANGARAM KADAM
    BATCH: PPA9

*************************************************************************/


#include<stdio.h>

#include<conio.h>

void main()
{
    int i,n,j;

        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
    int a[n],b[n];

    printf("ENTER ARRAY ELEMENT\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    j=0;
    for(i=0;i<n;i++)
    {
        if(a[i]%2==0)
        {
            b[j]=a[i];
            j++;
        }

    }

    for(i=0;i<n;i++)
    {
        if(a[i]%2!=0)
        {
            b[j]=a[i];
            j++;
        }

    }

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

```c
    }


    getch();

}




******************************************************************


   /**************************************************************************
      Q9. Write a program in C to print all unique elements in
        an array.
      OWNER: AKSHAY GANGARAM KADAM
      BATCH: PPA9

*************************************************************************/


#include<stdio.h>

#include<conio.h>

void main()

 {
    int i,n,j,p,m=0;

        printf("ENTER ARRAY SIZE :");
        scanf("%d",&n);
    int a[n];

    printf("ENTER ARRAY ELEMENT\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }


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

        p=0;

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

```c
        {

        if(a[i]==a[j])
        {
            p++;
        }
        }
        if(p==1)
        printf("the unique number in array is= %d\n",a[i]);
    }


    getch();

}
```

****

```c
/****************************************************************************
    Q 12. Write a program in C to find the maximum /
          minimum element in an array.
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    BATCH: PPA9

****************************************************************************/


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

void main()
{
        int i,max=0,n, min;
        printf("Enter Array Number :");
        scanf("%d",&n);
    int a[n];
        printf("Enter Array element");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
        }

        for(i=0;i<n;i++)
        {
                if(max<a[i])
                {
```

```
                        max=a[i];
                }

        }
        printf("the max number is %d\n",max);

        min=a[0];
                for(i=0;i<n;i++)
        {
                if(min>a[i])
                {
                        min=a[i];
                }

        }
        printf("the min number is %d",min);


        getch();

}



****************************************************************************
************



    /**************************************************************************
    Q13.  Write a program in C to find the second largest
          element in an array..
     OWNER: AKSHAY GANGARAM KADAM
     BATCH: PPA9

****************************************************************************
****************************************************************************/

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

void main()
{
        int i, max ,smax,n;
        printf("ENTER ARRAY SIZE YOU WANT");
        scanf("%d",&n);
        int a[n];
        printf("ENTER ARRAY ELEMENT:");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
        }
```

```c
        smax=max=a[0];

        for(i=1;i<n;i++)
        {
                if(a[i]>max)
                {
                        smax=max;
                        max=a[i];
                }
                else if(a[i]>smax)
                {
                        smax=a[i];
                }
        }
        printf("the max is :%d\n the second max is :%d",max,smax);


        getch();

}
```

****
****


```c
    /***************************************************************************
  14.   Write a C Program to Find the Number of Elements
        in an Array.
    OWNER: AKSHAY GANGARAM KADAM
    BATCH: PPA9

*****************************************************************************/

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

void main()
{
        int i, t,p,n;
        printf("ENTER ARRAY SIZE YOU WANT");
        scanf("%d",&n);
        int a[n];
        printf("ENTER ARRAY ELEMENT:");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
```

```c
        }

    p=sizeof(a);
    t=p/sizeof(int);

    printf("TOTAL ELEMENT IN ARRAY\n");
    printf("%d",t);

        getch();

}
```
   ****

   /***
    Q16.   Write a C Program to Print the Alternate Elements
            in an Array
    OWNER: AKSHAY GANGARAM KADAM
    BATCH: PPA9

***/

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

void main()
{
        int i, n;
        printf("ENTER ARRAY SIZE YOU WANT");
        scanf("%d",&n);
        int a[n];
        printf("ENTER ARRAY ELEMENT:");
        for(i=0;i<n;i++)
        {
            scanf("%d",&a[i]);
        }


        printf("Alternate elements of a given array \n");

        for (i = 0; i < n; i += 2)
        {
            printf( "%d\n", a[i]) ;
        }

        getch();

}
```

```
******************************************************************

    /*************************************************************************
    Q 17.    Write a C Program to Find 2 Elements in the Array
             such that Difference between them is Largest
    OWNER: AKSHAY GANGARAM KADAM
    BATCH: PPA9

*************************************************************************/

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

void main()
{
        int i,max=0,n, min;
        printf("Enter Array Number :");
        scanf("%d",&n);
    int a[n];
        printf("Enter Array element");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
        }

        for(i=0;i<n;i++)
        {
                if(max<a[i])
                {
                        max=a[i];
                }

        }

        min=a[0];
                for(i=0;i<n;i++)
        {
                if(min>a[i])
                {
                        min=a[i];
                }

        }
        printf("two Elements in the array such that Difference between them is
Largest 1) %d 2) %d",max ,min);
        getch();
```

```
}


    **********************************************************************


    /***************************************************************************
    19. Write a C program to store squares of the elements
       in the same array
    OWNER: AKSHAY GANGARAM KADAM
    BATCH: PPA9

**************************************************************************/

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

void main()
{
        int i,max=0,n, min;
        printf("Enter Array Number :");
        scanf("%d",&n);
    int a[n];
        printf("Enter Array element");
        for(i=0;i<n;i++)
        {
                scanf("%d",&a[i]);
        }

        for(i=0;i<n;i++)
        {
            a[i]=a[i]*a[i];
        }

        for(i=0;i<n;i++)
        {
                printf("%d\n",a[i]);
        }
        getch();

}
```