

```

1 #include <stdio.h>
2 int main ()
3 {
4     int n = 0, i = 0, largest1 = 0, largest2 = 0, temp = 0;
5     printf ("Enter the size of the array\n");
6     scanf ("%d", &n);
7     int array[n];
8     printf ("Enter the elements\n");
9     for (i = 0; i < n; i++)
10     {
11         scanf ("%d", &array[i]);
12     }
13     printf ("The array elements are : \n");
14     for (i = 0; i < n; i++)
15     {
16         printf ("%d\t", array[i]);
17     }
18     printf ("\n");
19     largest1 = array[0];
20     largest2 = array[1];
21     if (largest1 < largest2)
22     {
23         temp = largest1;
24         largest1 = largest2;
25         largest2 = temp;
26     }
27     for (int i = 2; i < n; i++)
28     {
29         if (array[i] > largest1)
30         {
31             largest2 = largest1;
32             largest1 = array[i];
33         }
34         else if (array[i] > largest2 && array[i] != largest1)
35         {
36             largest2 = array[i];
37         }
38     }
39     printf ("The FIRST LARGEST = %d\n", largest1);
40     printf ("THE SECOND LARGEST = %d\n", largest2);
41     return 0;
42 }

```

Code + - [] ... x

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Enter the elements
2
4
5
8
8
7
The array elements are :
2    4    5    8    8    7
The FIRST LARGEST = 8
THE SECOND LARGEST = 7
PS C:\Users\Lakshmanan\AppData\Local\Temp>

```

```

1 #include <stdio.h>
2 void main ()
3 {
4     int number[30];
5     int i, j, a, n, counter, average;
6     printf("Enter the value of N\n");
7     scanf("%d", &n);
8     printf("Enter the numbers \n");
9     for (i = 0; i < n; ++i)
10         scanf("%d", &number[i]);
11     for (i = 0; i < n; ++i)
12     {
13         for (j = i + 1; j < n; ++j)
14             if (number[i] < number[j])
15             {
16                 a = number[i];
17                 number[i] = number[j];
18                 number[j] = a;
19             }
20     }
21
22     printf("The numbers arranged in descending order are given below \n");
23     for (i = 0; i < n; ++i)
24     {
25         printf("%d\n", number[i]);
26     }
27     printf("The 2nd largest number is = %d\n", number[1]);
28     printf("The 2nd smallest number is = %d\n", number[n - 2]);
29     average = (number[1] + number[n - 2]) / 2;
30     counter = 0;
31     for (i = 0; i < n; ++i)
32     {
33         if (average == number[i])
34         {
35             ++counter;
36         }
37     }
38
39     if (counter == 0 )
40         printf("The average of %d and %d is = %d is not in the array \n",
41

```

2
 4
 5
 The numbers arranged in descending order are given below
 5
 4
 3
 2
 1
 The 2nd largest number is = 4
 The 2nd smallest number is = 2
 The average of 4 and 2 in array is 3 is not in the array
 PS C:\Users\lakshmanan\AppData\Local\Temp>

```

1  #include <stdio.h>
2  int maximum_difference(int array[], int arr_size)
3  {
4      int max_diff = array[1] - array[0];
5      int i, j;
6      for (i = 0; i < arr_size; i++)
7      {
8          for (j = i + 1; j < arr_size; j++)
9          {
10             if (array[j] - array[i] > max_diff)
11                 max_diff = array[j] - array[i];
12             }
13         }
14     return max_diff;
15 }
16 int main()
17 {
18     int array[] = {10, 15, 90, 200, 110};
19     printf("Maximum difference is %d", maximum_difference(array, 5));
20     getchar();
21     return 0;
22 }

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```

PS C:\Users\lakshmanan> cd "C:\Users\LAKEESH-1\AppData\Local\Temp"
PS C:\Users\lakshmanan\AppData\Local\Temp> cd "C:\Users\LAKEESH-1\AppData\Local\Temp\" & if ($?) { gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } & if ($?) { .\tempCodeRunnerFile }
Maximum difference is 190

```

Code + - [] ... X

C #include <stdio.h> Untitled-1

C #include <stdio.h> Untitled-3

C #include <stdio.h> Untitled-2

C #include <stdio.h> Untitled-4

C #include <stdio.h> Untitled-5

C #include <stdio.h> Untitled-6

C ▶ □ ...

```
1 #include <stdio.h>
2 int main()
3 {
4     int Arr[5] = {12, 56, 34, 78, 100};
5     int largest = Arr[0];
6     for (int i = 1; i < 5; i++)
7     {
8         if (Arr[i] > largest)
9         {
10             largest = Arr[i];
11         }
12     }
13     printf("The largest element in the array is: %d\n", largest);
14     return 0;
15 }
16
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Code + □ □ ... ×

PS C:\Users\lakshmanan\AppData\Local\Temp> cd "C:\Users\LAISHM-1\AppData\Local\Temp\" ; if (\$?) { gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if (\$?) { .\tempCodeRunnerFile }

The largest element in the array is: 100

PS C:\Users\lakshmanan\AppData\Local\Temp>

```

2 #include <conio.h>
3 int main ()
4 {
5     // declare local variables
6     int arr[20], i, j, k, size;
7     printf (" Define the number of elements in an array: ");
8     scanf ("%d", &size);
9     printf (" \n Enter %d elements of an array: \n ", size);
10    // use for loop to enter the elements one by one in an array
11    for ( i = 0; i < size; i++)
12    {
13        scanf ("%d", &arr[i]);
14    }
15    // use nested for loop to find the duplicate elements in array
16    for ( i = 0; i < size; i++)
17    {
18        for ( j = i + 1; j < size; j++)
19        {
20            // use if statement to check duplicate element
21            if ( arr[i] == arr[j])
22            {
23                // delete the current position of the duplicate element
24                for ( k = j; k < size - 1; k++)
25                {
26                    arr[k] = arr [k + 1];
27                }
28                // decrease the size of array after removing duplicate element
29                size--;
30
31                // if the position of the elements is changes, don't increase the index j
32                j--;
33            }
34        }
35    }
36    /* display an array after deletion or removing of the duplicate elements */
37    printf (" \n Array elements after deletion of the duplicate elements: ");
38    // for loop to print the array
39    for ( i = 0; i < size; i++)
40    {
41        printf ("%d \t", arr[i]);
42    }
43    return 0;
44 }

```

Code + - [] ... x

```

Enter 8 elements of an array:
1
2
4
5
4
2
7
8

Array elements after deletion of the duplicate elements: 1 2 4 5 7
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```

```

1  #include <stdio.h>
2  void main()
3  {
4      long int ARR[10], OAR[10], EAR[10];
5      int i, j = 0, k = 0, n;
6      printf("Enter the size of array");
7      scanf("%d", &n);
8      printf("Enter the elements of the array");
9      for (i = 0; i < n; i++)
10     {
11         scanf("%ld", &ARR[i]);
12         fflush(stdin);
13     }
14     /* Copy odd and even elements into their respective arrays */
15
16     for (i = 0; i < n; i++)
17     {
18         if (ARR[i] % 2 == 0)
19         {
20             EAR[j] = ARR[i];
21             j++;
22         }
23         else
24         {
25             OAR[k] = ARR[i];
26             k++;
27         }
28     }
29     printf("The elements of OAR are ");
30     for (i = 0; i < k; i++)
31     {
32         printf("%ld ", OAR[i]);
33     }
34     printf("\nThe elements of EAR are ");
35     for (i = 0; i < j; i++)
36     {
37         printf("%ld ", EAR[i]);
38     }
39 }
40

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
 Enter the size of array?
 Enter the elements of the array!
 2
 3
 4
 5
 6
 7
 8
 9
 The elements of OAR are 1 3 5 7 9
 The elements of EAR are 2 4 6 8
 PS C:\Users\Lakshmanan\AppData\Local\Temp>

Code + - [] [] ...

```

1 #include <stdio.h>
2 void main()
3 {
4     int arr1[100], fr[100];
5     int n, i, j, ctr;
6
7     printf("\n\nCount frequency of each element of an array:\n");
8     printf("-----\n");
9
10    printf("Input the number of elements to be stored in the array :");
11    scanf("%d",&n);
12
13    printf("Input %d elements in the array :\n",n);
14    for(i=0;i<n;i++)
15    {
16        printf("element - %d : ",i);
17        scanf("%d",&arr1[i]);
18        fr[i] = -1;
19    }
20    for(i=0; i<n; i++)
21    {
22        ctr = 1;
23        for(j=i+1; j<n; j++)
24        {
25            if(arr1[i]==arr1[j])
26            {
27                ctr++;
28                fr[j] = 0;
29            }
30        }
31        if(fr[i]!=0)
32        {
33            fr[i] = ctr;
34        }
35    }
36    printf("\n\nThe frequency of all elements of array : \n");
37    for(i=0; i<n; i++)
38    {
39        if(fr[i]!=0)

```

Code + - ... X

```

Count frequency of each element of an array:
-----
Input the number of elements to be stored in the array :7
Input 7 elements in the array :
element - 0 : 5
element - 1 : 2
element - 2 : 7
element - 3 : 7
element - 4 : 5
element - 5 : 5
element - 6 : 2

The frequency of all elements of array :
5 occurs 3 times
2 occurs 2 times
7 occurs 2 times
PS C:\Users\lakshmanan\AppData\Local\Temp>

```

```

1  #include <stdio.h>
2  void main ()
3  {
4      int number[30];
5      int i, j, a, n;
6      printf("Enter the value of N\n");
7      scanf("%d", &n);
8      printf("Enter the numbers \n");
9      for (i = 0; i < n; ++i)
10         scanf("%d", &number[i]);
11
12     /* sorting begins ... */
13     for (i = 0; i < n; ++i)
14     {
15         for (j = i + 1; j < n; ++j)
16         {
17             if (number[i] < number[j])
18             {
19                 a = number[i];
20                 number[i] = number[j];
21                 number[j] = a;
22             }
23         }
24     }
25     printf("The numbers arranged in descending order are given below\n");
26     for (i = 0; i < n; ++i)
27     {
28         printf("%d\n", number[i]);
29     }
30

```

```

PS C:\Users\lakshmanan> cd "C:\Users\LAKEHM-1\AppData\Local\Temp"
PS C:\Users\lakshmanan\AppData\Local\Temp> cd "C:\Users\LAKEHM-1\AppData\Local\Temp" ; if ($?) { gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the value of N
5
Enter the numbers
224
780
120
90
56
The numbers arranged in descending order are given below
780
224
120
90
56
PS C:\Users\lakshmanan\AppData\Local\Temp>

```



```

1 #include <stdio.h>
2 int main()
3 {
4     int size;
5     printf("Enter size of the array: ");
6     scanf("%d",&size);
7     printf("Enter Array Elements: ");
8     int arr[size];
9
10    //Input array elements
11    for(int i=0;i<size;i++)
12        scanf("%d",&arr[i]);
13    printf("Entered Array is: ");
14    for(int i=0;i<size;i++)
15        printf("%d ",arr[i]);
16
17    //Start points at the first element and end points at the last element
18    int start=0,end=size-1;
19    while(start<end)
20    {
21        //Swapping elements
22        int temp=arr[start];
23        arr[start]=arr[end];
24        arr[end]=temp;
25
26        //Incrementing start and decrementing end
27        start++;
28        end--;
29    }
30
31    //Printing reversed array
32    printf("\nReversed array is: ");
33    for(int i=0;i<size;i++)
34        printf("%d ",arr[i]);
35    return 0;
36 }

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```

PS C:\Users\lakshmanan> cd "C:\Users\LAKESS-1\AppData\Local\Temp"
PS C:\Users\lakshmanan\AppData\Local\Temp> cd "C:\Users\LAKESS-1\AppData\Local\Temp\" ; if ($?) { gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter size of the array: 4
Enter Array Elements: 1
2
3
4
Entered Array is: 1 2 3 4
Reversed array is: 4 3 2 1
PS C:\Users\lakshmanan\AppData\Local\Temp>

```

h> Untitled-2 • C #include <stdio.h> Untitled-3 • C #include <stdio.h> Untitled-4 • C #include <stdio.h> Untitled-5 • C #include <stdio.h> Untitled-6 • C #include <stdio.h> Untitled-7 • C sum_of_digits.c x

C:\> Users > lakshmanan > programming in c > C sum_of_digits.c

```
1  #include <stdio.h>
2  int main()
3  {
4      int a,b,c,d,e,f,g,h,i,sum;
5      printf("\n enter the number");
6      scanf("%d",&a);
7      b=a/10;//1234
8      c=a%10;//5
9      d=b/10;//123
10     e=b%10;//4
11     f=d/10;//12
12     g=d%10;//3
13     h=f/10;//1
14     i=f%10;//2
15     sum=h+i+g+e+c;
16     printf("\nthe sum of digits=%d",sum);
17     return 0;
18 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Code + -

```
> cd "c:\Users\lakshmanan\programming in c\" ; if ($?) { gcc sum_of_digits.c -o sum_of_digits } ; if ($?) { .\sum_of_digits }
```

enter the number1234

the sum of digits=10

PS C:\Users\lakshmanan\programming in c> |