

# C PROGRAMS

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Sec:A

51	<p><b>Write a program to find factorial of a number N</b></p> <p><b>PROGRAM:</b></p> <pre>#include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int n,i,fact=1;     printf("enter the value for n:");     scanf("%d",&amp;n);     for (i=1;i&lt;=n;i++)     {         fact=fact*i;     }     printf("factorial of %d is %d\n",n,fact); }</pre> <p><b>OUTPUT:</b></p> <pre>enter the value for n:5 factorial of 5 is 120</pre>
52	<p><b>Write a program to generate N Fibonacci series</b></p> <p><b>PROGRAM:</b></p> <pre>#include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int first=-1,second=1,i,third,n;     printf("Enter the number of terms:");     scanf("%d",&amp;n);     for(i=-1;i&lt;=n;i++)     {         third=first+second;         printf("%d\n",third);         first=second;         second=third;     } }</pre> <p><b>OUTPUT:</b></p> <pre>Enter the number of terms:5 0</pre>

	1 1 2 3 5 8
53.	<p><b>Write a program to generate prime numbers within a range N</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a,i,n,c,count=0;     printf("Enter the range:");     scanf("%d",&amp;n);     for(a=1;a&lt;=n;a++)     {         for(i=1;i&lt;=n;i++)         {             c=a%i;             if(c==0)             {                 count=count+1;             }         }         if (count==2)         {             printf("%d\n",a);          }         count=0;     } } </pre> <p><b>OUTPUT:</b></p> <pre> Enter the range:5 2 3 5 </pre>
54.	<p><b>Write a program to check a number is composite or prime number.</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int n,i,c,count=0;     printf("Enter the number n:"); </pre>

	<pre> scanf("%d",&amp;n); for(i=1;i&lt;=n;i++) {     c=n%i;     if(c==0)         count=count+1; } if(count&gt;2) {     printf("The given number is composite number"); } else if(n==0) {     printf("The given number is neither prime nor composite"); } else if(n==1) {     printf("The given number is neither prime nor composite"); } else {     printf("The given number is prime number"); } } </pre> <p><b>OUTPUT:</b></p> <p>Enter the number n:2 The given number is prime number</p>
55.	<p><b>Write a program to check a number is Armstrong number or not</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int num,originalnum,rem,result=0;     printf("Enter the three digit number:");     scanf("%d",&amp;num);     originalnum=num;     while (originalnum!=0)     {         rem=originalnum%10;         result=result+(rem*rem*rem);         originalnum=originalnum/10;     }     if (num==result)     {         printf("%d is Armstrong Number",num);     } } </pre>

	<pre> else {     printf("%d is Not Armstrong Number",num); } } </pre> <p><b>OUTPUT:</b> Enter the three digit number:371 371 is Armstrong Number</p>
56.	<p><b>Write a C Program check whether a given number is perfect number or not.</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int n,div,i,result=0;     printf("Enter the number:");     scanf("%d",&amp;n);     for(i=1;i&lt;n;i++);     {         div=n%i;         if(div==0)         {             result=result+div;         }     }     if (result==n)     {         printf("%d is perfect number",n);     }      else     {         printf("%d is not perfect number",n);     } } </pre> <p><b>OUTPUT:</b> Enter the number:5 5 is not perfect number</p>
57.	<p><b>Write a program to accept a 5 digit number from user and perform Sum of 5 digits</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int n,rem,result=0;     printf("Enter any 5 digit number:"); </pre>

	<pre>scanf("%d",&amp;n); while (n&gt;0) {     rem=n%10;     result=result+rem;     n=n/10; } printf("Sum of the given 5 digit number is:%d",result); }</pre> <p><b>OUTPUT:</b> Enter any 5 digit number:12345 Sum of the given 5 digit number is:15</p>
58.	<p><b>Write a program to Reverse a Number</b></p> <p><b>PROGRAM:</b></p> <pre>#include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int n,rem,reverse=0;     printf("Enter the number:");     scanf("%d",&amp;n);     while (n!=0)     {         rem=n%10;         reverse=reverse*10+rem;         n=n/10;     }     printf("Reversed number is:%d",reverse); }</pre> <p><b>OUTPUT:</b> Enter the number:345 Reversed number is:543</p>
59.	<p><b>Square root of a number</b></p> <p><b>PROGRAM:</b></p> <pre>#include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a;     float s;     printf("Enter the number:");     scanf("%d",&amp;a);     s=sqrt(a);     printf("Square root of the given number:%f",s); }</pre> <p><b>OUTPUT:</b> Enter the number:16 Square root of the given number:4.000000</p>
60.	<p><b>Count the number of digits in a number</b></p>

	<p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a,b,c,count=0;     printf("Enter the number:");     scanf("%d",&amp;a);     b=a;     while(b&gt;0)     {         c=a%10;         b=b/10;         count++;     }     printf("No of digits are %d",count); } </pre> <p><b>OUTPUT:</b></p> <p>Enter the number:4536 No of digits are 4</p>
61.	<p><b>Write a program to convert binary number to decimal</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int rem,num,dec=0,base=1;     printf("Enter the binary number:");     scanf("%d",&amp;num);     while(num&gt;0)     {         rem=num%10;         dec=dec+rem*base;         num=num/10;         base=base*2;     }     printf("Converted decimal value is:%d",dec); } </pre> <p><b>OUTPUT:</b></p> <p>Enter the binary number:0011 Converted decimal value is:3</p>
62.	<p><b>Write a program to convert decimal number to binary</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() { </pre>

	<pre> int num,dec,rem,base=1,i,binno=0; printf("Enter the decimal number:"); scanf("%d",&amp;num); for (i=0;i&lt;=dec;i++) {     rem=num%2;      num=num/2;      binno=binno+rem*base;      base=base*10;  } printf("The binary num:%d",binno); } </pre> <p><b>OUTPUT:</b></p> <p>Enter the decimal number:3 The binary num:11</p>
63.	<p><b>Write a program to find the roots of a quadratic equation using if-else</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     float a,b,c,r1,r2,det;     printf("Enter the coefficients a,b,c:");     scanf("%f %f %f",&amp;a,&amp;b,&amp;c);     det=b*b-(4*a*c);     if (det&gt;0)     {         r1=(-b+sqrt(det))/2*a;         r2=(-b-sqrt(det))/2*a;         printf("Roots are real");         printf("value r1:%f and value of r2:%f",r1,r2);     }     else if (det==0)     {         printf("Roots are equal");         printf("\n value of r1:%f and value of r2:%f");     }     else     {         printf("Roots are not equal");     } } </pre> <p><b>OUTPUT:</b></p> <p>Enter the coefficients a,b,c:1 2 3 Roots are not equal</p>

64.	<p><b>Matrix addition</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[2][2],b[2][2],c[2][2],i,j;     printf("Enter the a matrix values:");     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             scanf("%d",&amp;a[i][j]);         }     }     printf("Enter the b matrix values:");     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             scanf("%d",&amp;b[i][j]);         }     }     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             c[i][j]=a[i][j]+b[i][j];         }     }     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             printf("%d\t",c[i][j]);         }     } } </pre> <p><b>OUTPUT:</b></p> <pre> Enter the a matrix values: 1 2 3 4 Enter the b matrix values: 5 6 </pre>



	<pre> 7 8 6  8  10  12 </pre>
65.	<p><b>Matrix subtraction</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[2][2],b[2][2],c[2][2],i,j;     printf("Enter the a matrix values:");     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             scanf("%d",&amp;a[i][j]);         }     }     printf("Enter the b matrix values:");     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             scanf("%d",&amp;b[i][j]);         }     }     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             c[i][j]=a[i][j]-b[i][j];         }     }     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             printf("%d\t",c[i][j]);         }     } } </pre> <p><b>OUTPUT:</b></p> <pre> Enter the a matrix values: 7 8 5 4 Enter the b matrix values: 6 2 4 3 1  6  1  1 </pre>

66.	<p><b>Matrix multiplication</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[2][2],b[2][2],c[2][2],i,j,k;     printf("Enter the a matrix values:");     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             scanf("%d",&amp;a[i][j]);         }     }     printf("Enter the b matrix values:");     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             scanf("%d",&amp;b[i][j]);         }     }     for(i=0;i&lt;2;i++)     {         for(j=0;j&lt;2;j++)         {             c[i][j]=0;             for(k=0;k&lt;2;k++)             {                 c[i][j]=c[i][j]+a[i][k]*b[k][j];             }             printf("%d\t",c[i][j]);         }     } } </pre> <p><b>OUTPUT:</b></p> <pre> Enter the a matrix values: 1 2 3 4 Enter the b matrix values: 1 2 3 4 7 10 15 22 </pre>
67.	<b>Bubble sort</b>

	<p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[5],i,j,n,temp;     printf("Enter the value for n:");     scanf("%d",&amp;n);     printf("Enter the array values:");     for (i=0;i&lt;n;i++)     {         scanf("%d",&amp;a[i]);     }     for(i=0;i&lt;n;i++)     {         for (j=0;j&lt;n;j++)         {             if(a[j]&gt;a[j+1])             {                 temp=a[j+1];                 a[j+1]=a[j];                 a[j]=temp;             }         }     }     printf("The sorted array is:");     for (i=0;i&lt;n;i++)     {         printf("%d\t",a[i]);     } } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for n:5  Enter the array values:30 20 50 10 40  The sorted array is:10 20 30 40 50</p>
68.	<p><b>Insertion sort</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[5],i,j,n,temp;     printf("Enter the value for n:");     scanf("%d",&amp;n);     printf("Enter the array values:");     for(i=0;i&lt;n;i++)     {         scanf("%d",&amp;a[i]);     } } </pre>

	<pre> for (i=1;i&lt;n;i++) {     j=j-1;     temp=a[i];     while (j&gt;=0&amp;&amp; a[j]&gt;temp)     {         a[j+1]=a[j];         j--;     }     a[j+1]=temp; } printf("The sorted array is:"); for(i=0;i&lt;n;i++) {     printf("%d\t",a[i]); } } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for n:5  Enter the array values:50 10 30 40 20  The sorted array is:50 10 30 40 20</p>
69.	<p><b>To input N numbers from the user and search an element -Linear Search</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[10],i,size,key,find=0;     printf("Enter the size:");     scanf("%d",&amp;size);     printf("Enter the values of array a:");     for(i=0;i&lt;size;i++)     {         scanf("%d",&amp;a[i]);     }     printf("Enter the key value:");     scanf("%d",&amp;key);      for (i=0;i&lt;size;i++)     {         if(a[i]==key)             find=1;     }     if (find==1)         printf("Key value found");     else         printf("Key value not found"); } </pre>

	<b>OUTPUT:</b> Enter the size:5 Enter the values of array a:20 50 60 80 40 Enter the key value:10 Key value not found
70.	<b>HCF and LCM of two numbers</b> <b>PROGRAM:</b> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int hcf,lcm,a,b,c,n1,n2;     printf("Enter any two numbers:");     scanf("%d %d",&amp;n1,&amp;n2);     a=n1;     b=n2;     while(b&gt;0)     {         c=b;         b=a%b;         a=c;     }     printf("HCF is:%d\n",a);     lcm=(n1*n2)/a;     printf("LCM is:%d",lcm);  } </pre> <b>OUTPUT:</b> Enter any two numbers:15 2 HCF is:1 LCM is:30

71.	<p><b>To input 10 numbers from the user and print the largest number</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[10],i,max;     printf("Enter the value for array a:");     for (i=0;i&lt;10;i++)     {         scanf("%d",&amp;a[i]);     }     max=a[0];     for (i=1;i&lt;10;i++)     {         if(a[i]&gt;max)             max=a[i];     }     printf("Largest element is:%d",max); } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for array a:10 20 30 40 50 60 70 80 90 100 Largest element is:100</p>
72.	<p><b>To input 10 numbers from the user and print the smallest number</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {      int a[10],i,min;     printf("Enter the value for array a:");     for (i=0;i&lt;10;i++)     {         scanf("%d",&amp;a[i]);     }     min=a[0];     for (i=1;i&lt;10;i++)     {         if(a[i]&lt;min)             min=a[i];     }     printf("Smallest element is:%d",min); } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for array a:10 20 30 40 50 60 70 80 90 100 Smallest element is:10</p>

73.	<p><b>To get 10 numbers from the user and print the odd and even numbers</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[10],n,i;     printf("Enter the value for n:");     scanf("%d",&amp;n);     printf("Enter the array elements:");     for (i=0;i&lt;n;i++)     {         scanf("%d",&amp;a[i]);     }     printf("Even numbers in the array:");     for(i=0;i&lt;n;i++)     {         if (a[i]%2==0)             printf("%d\t",a[i]);     }     printf("\nOdd numbers in the array:");     for (i=0;i&lt;n;i++)     {         if (a[i]%2!=0)             printf("%d\t",a[i]);     } } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for n:10  Enter the array elements:1 2 3 4 5 6 7 8 9 10  Even numbers in the array:2    4    6    8    10  Odd numbers in the array:1    3    5    7    9</p>
74.	<p><b>Write a program in C to copy the elements of one array into another array</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int i,n,a[20],b[20];     printf("Enter the value for n:");     scanf("%d",&amp;n);     printf("Enter the array elements:");     for (i=0;i&lt;n;i++)     {         scanf("%d",&amp;a[i]);     } } </pre>

	<pre>     }     for (i=0;i&lt;n;i++)     {         b[i]=a[i];     }     printf("Elements of first array:");     for (i=0;i&lt;n;i++)     {         printf("%d\t",a[i]);     }     printf("\nElements of second array:");     for (i=0;i&lt;n;i++)     {         printf("%d\t",b[i]);     } } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for n:5</p> <p>Enter the array elements:10 20 30 40 50</p> <p>Elements of first array:10    20    30    40    50</p> <p>Elements of second array:10    20    30    40    50</p>
75.	<p><b>Write a program in C to merge two arrays of same size</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[10],b[10],n1,n2,i,k,merge[20];     printf("Enter the value for n1:");     scanf("%d",&amp;n1);     printf("Enter the array1 elements:");     for (i=0;i&lt;n1;i++)     {         scanf("%d",&amp;a[i]);         merge[i]=a[i];     }     k=i;     printf("\nEnter the value for n2:");     scanf("%d",&amp;n2);     printf("Enter array 2 elements:");     for (i=0;i&lt;n2;i++)     {         scanf("%d",&amp;b[i]);         merge[k]=b[i];         k++;     }     printf("The merged array:");     for (i=0;i&lt;k;i++)     { </pre>



	<pre>         printf("%d\t",merge[i]);     }  } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for n1:5  Enter the array1 elements:1 2 3 4 5  Enter the value for n2:5  Enter array 2 elements:6 7 8 9 10  The merged array:1    2    3    4    5    6    7    8    9    10</p>
76.	<p><b>To input N numbers from the user and print the sum of all elements in array</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[10],n,i,sum=0;     printf("Enter the value for n:");     scanf("%d",&amp;n);     printf("Enter the array elements:");     for (i=0;i&lt;n;i++)     {         scanf("%d",&amp;a[i]);     }     for (i=0;i&lt;n;i++)     {         sum=sum+a[i];     }      printf("Sum of elements in the array:%d",sum);  } </pre> <p><b>OUTPUT:</b></p> <p>Enter the value for n:5  Enter the array elements:1 2 3 4 5  Sum of elements in the array:15</p>
77.	<p><b>Program to find transpose of a matrix</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[10][10],i,j,n,m;     printf("Enter the no of rows and columns:");     scanf("%d %d",&amp;n,&amp;m);     printf("Enter the matrix:");     for(i=0;i&lt;n;i++) </pre>

	<pre>         {             for (j=0;j&lt;m;j++)                  {                     scanf("%d",&amp;a[i][j]);                 }         }         for(i=0;i&lt;m;i++)         {             for(j=0;j&lt;n;j++)             {                 printf("%d\t",a[j][i]);             }             printf("\n");         }      } </pre> <p><b>OUTPUT:</b></p> <p>Enter the no of rows and columns:2 2</p> <p>Enter the matrix:</p> <pre> 1 2 3 4 1   3 2   4 </pre>
78.	<p><b>Selection sort</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int a[50],n,i,j,temp;     printf("Enter the value of n:");     scanf("%d",&amp;n);     printf("Enter the values:");     for(i=0;i&lt;n;i++)     {         scanf("%d",&amp;a[i]);     }     for(i=0;i&lt;n;i++)     {         for(j=i+1;j&lt;n;j++)         {             if(a[i]&gt;a[j])             {                 temp=a[i];                 a[i]=a[j];                 a[j]=temp;             }         }     } } </pre>

	<pre>         }     } } for(i=0;i&lt;n;i++) {     printf("%d\t",a[i]); } } </pre> <p><b>OUTPUT:</b>  Enter the value of n:4  Enter the values:56 78 34 89  34    56    78    89</p>
79	<p><b>To input a 2 dimensional array and print it in the matrix format</b></p> <p><b>PROGRAM:</b>  #include &lt;stdio.h&gt;  #include &lt;stdlib.h&gt;</p> <pre> int main() {     int m,n,a[10][10],i,j;     printf("Enter the no of rows and columns:");     scanf("%d %d",&amp;m,&amp;n);     printf("Enter the values:");     for(i=0;i&lt;m;i++)     {         for(j=0;j&lt;n;j++)         {             scanf("%d",&amp;a[i][j]);             printf("%d\t",a[i][j]);         }         printf("\n");     } } </pre> <p><b>OUTPUT:</b>  Enter the no of rows and columns:3 3  Enter the values:1 2 3 4 5 6 7 8 9  1    2    3  4    5    6  7    8    9</p>
80.	<p><b>To find the length of a String without string function</b></p> <p><b>PROGRAM:</b>  #include &lt;stdio.h&gt;  #include &lt;stdlib.h&gt;</p> <pre> int main() {     char str[20];     int i,count=0;     printf("Enter a string:");     scanf("%s",str); </pre>

	<pre> for(i=0;str[i]!='\0';i++) {     count++; } printf("Length of the string:%d",count); } </pre> <p><b>OUTPUT:</b>  Enter a string:hello  Length of the string:5</p>
81.	<p><b>Strlen, strcpy, strcat, strrev</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     char name[10]="LILLY";     int num;     num=strlen(name);     printf("No of characters:%d",num);     strcpy(name,"LILLY");     printf("\nCopied name:%s",name);     strcat(name,"JANE");     printf("\nCombined name:%s",name);     strrev(name);     printf("\nReversed name:%s",name); } </pre> <p><b>OUTPUT:</b>  No of characters:5  Copied name:LILLY  Combined name:LILLYJANE  Reversed name:ENAJYLLIL</p>
82	<p><b>To concatenate two strings without string function</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     char str1[20],str2[20];     int length,j;     printf("Enter the first string:");     scanf("%s",str1);     printf("Enter the second string:");     scanf("%s",str2);     length = 0;     while (str1[length] != '\0')     {         length++;     } } </pre>

	<pre> for (j=0;str2[j] != '\0';j++,length++) {     str1[length] = str2[j]; }  str1[length] = '\0'; printf("After concatenation: "); puts(str1);  } </pre> <p><b>OUTPUT:</b>  Enter the first string:wel  Enter the second string:come  After concatenation: welcome</p>
83.	<p><b>Write a C program to find the ASCII value of a character or a string.</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt;  #include &lt;stdlib.h&gt;  int main() {     char ch;      printf("Enter a character:");      scanf("%s",&amp;ch);      printf("The ascii value is :%d",ch);  } </pre> <p><b>OUTPUT:</b></p> <p>Enter a character:H</p> <p>The ascii value is :72</p>
84	<p><b>To reverse a string without string function</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     char string[20],temp;     int i,length;     printf("Enter a String:");     scanf("%s",string);     length=strlen(string)-1; </pre>

	<pre> for(i=0;i&lt;strlen(string)/2;i++){     temp=string[i];     string[i]=string[length];     string[length--]=temp; } printf("Reverse string :%s",string); } </pre> <p><b>OUTPUT:</b>  Enter a String:HELLO  Reverse string :OLLEH</p>
85	<p><b>Program to sort N names</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int i,j,n;     char str[100][100],s[100];     printf("Enter number of names:");     scanf("%d",&amp;n);     printf("Enter names in any order:");     for(i=0;i&lt;n;i++)     {         scanf("%s",str[i]);     }     for(i=0;i&lt;n;i++)     {         for(j=i+1;j&lt;n;j++)         {             if(strcmp(str[i],str[j])&gt;0)             {                 strcpy(s,str[i]);                 strcpy(str[i],str[j]);                 strcpy(str[j],s);             }         }     }     printf("The sorted order of names are:\n");     for(i=0;i&lt;n;i++)     {         printf("%s\n",str[i]);     } } </pre> <p><b>OUTPUT:</b>  Enter number of names:4  Enter names in any order:john abi ram lily  The sorted order of names are:  abi  john  lily</p>

	ram
86	<p><b>Program to count number of vowels in a string</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int c = 0, count = 0;     char s[100];     printf("Input a string\n");     gets(s);     while (s[c] != '\0')     {         if (s[c] == 'a'    s[c] == 'A'    s[c] == 'e'    s[c] == 'E'    s[c] == 'i'    s[c] == 'I'    s[c] == 'o'    s[c] == 'O'    s[c] == 'u'    s[c] == 'U')             count++;         c++;     }     printf("Number of vowels in the string: %d", count); } </pre> <p><b>OUTPUT:</b></p> <p>Input a string hello Number of vowels in the string: 2</p>
87	<p><b>Program to check a string is palindrome or not</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt; int main() {     char string1[20];     int i, length;     int flag = 0;     printf("Enter a string:");     scanf("%s", string1);     length = strlen(string1);     for(i=0; i &lt; length ; i++)     {         if(string1[i] != string1[length-i-1])         {             flag = 1;             break;         }     }     if (flag==1)     {         printf("String is not a palindrome");     }     else </pre>

	<pre> {     printf("String is a palindrome"); } } </pre> <p><b>OUTPUT:</b> Enter a string:malayalam String is a palindrome</p>
88.	<p><b>Program to remove all characters in a string except alphabet</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt; #include &lt;string.h&gt;  int main() {     char line[150];     printf("Enter a string:");     fgets(line,sizeof(line),stdin);     for (int i=0;j;line[i]!='\0';i++)     {         while (!(line[i] &gt;= 'a' &amp;&amp; line[i] &lt;= 'z') &amp;&amp; !(line[i] &gt;= 'A' &amp;&amp; line[i] &lt;= 'Z') &amp;&amp; !(line[i] == '\0'))         {             for (j = i; line[j] != '\0'; ++j)             {                 line[j] = line[j + 1];             }             line[j] = '\0';         }     }     printf("Output String: ");     puts(line); } </pre> <p><b>OUTPUT:</b> Enter a string:h2el2l0o Output String: hello</p>
89.	<p><b>To input N numbers from the user and search an element -Binary Search</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() {     int i,low,high,mid,n,search,array[100];     printf("Enter number of elements:");     scanf("%d",&amp;n);     printf("Enter %d integers:",n);     for(i=0;i&lt;n;i++)         scanf("%d",&amp;array[i]);     printf("Enter value to find:");     scanf("%d",&amp;search); } </pre>



	<pre> low=0; high=n-1; mid=(low+high)/2; while (low &lt;= high) { if(array[mid]&lt;search) { low = mid + 1; } else if (array[mid]==search) { printf("%d FOUND",search,mid+1); break; } else { high=mid-1; mid=(low+high)/2; } } if(low &gt; high) printf("%d NOT FOUND",search); } </pre> <p><b>OUTPUT:</b>  Enter number of elements:4  Enter 4 integers:10 20 30 40  Enter value to find:20  20 FOUND</p>
90.	<p><b>Write a C program to display the following patterns</b></p> <p><b>PROGRAM:</b></p> <pre> #include &lt;stdio.h&gt; #include &lt;stdlib.h&gt;  int main() { int i, j, k, N; printf("Enter N: "); scanf("%d", &amp;N); k = 1; for(i=1; i&lt;=N; i++) { for(j=1; j&lt;=i; j++, k++) { printf("%3d", k); } printf("\n"); } } </pre> <p><b>OUTPUT:</b>  Enter N: 4</p>

1  
2 3  
4 5 6  
7 8 9 10

**PROGRAM:**

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

```
int main()
{
    int i,j,k;
    k=1;
    for(i=1;i<=5;i+=2)
    {
        for(j=5;j>=1;j--)
        {
            if(j>i)
                printf(" ");
            else
                printf("%d ",k++);
        }
        printf("\n");
    }
}
```

**OUTPUT:**

1  
2 3 4  
5 6 7 8 9