*C PROGRAMS*

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| 51 | **Write a program to find factorial of a number N**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int n,i,fact=1;  printf("enter the value for n:");  scanf("%d",&n);  for (i=1;i<=n;i++)  {  fact=fact\*i;  }  printf("factorial of %d is %d\n",n,fact);  }  **OUTPUT:**  enter the value for n:5  factorial of 5 is 120 |
| 52 | **Write a program to generate N Fibonacci series**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int first=-1,second=1,i,third,n;  printf("Enter the number of terms:");  scanf("%d",&n);  for(i=-1;i<=n;i++)  {  third=first+second;  printf("%d\n",third);  first=second;  second=third;  }  }  **OUTPUT:**  Enter the number of terms:5  0  1  1  2  3  5  8 |
| 53. | **Write a program to generate prime numbers within a range N**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a,i,n,c,count=0;  printf("Enter the range:");  scanf("%d",&n);  for(a=1;a<=n;a++)  {  for(i=1;i<=n;i++)  {  c=a%i;  if(c==0)  {  count=count+1;  }  }  if (count==2)  {  printf("%d\n",a);  }  count=0;  }  }  **OUTPUT:**  Enter the range:5  2  3  5 |
| 54. | **Write a program to check a number is composite or prime number.**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int n,i,c,count=0;  printf("Enter the number n:");  scanf("%d",&n);  for(i=1;i<=n;i++)  {  c=n%i;  if(c==0)  count=count+1;  }  if(count>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");  }  }  **OUTPUT:**  Enter the number n:2  The given number is prime number |
| 55. | **Write a program to check a number is Armstrong number or not**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int num,originalnum,rem,result=0;  printf("Enter the three digit number:");  scanf("%d",&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);  }  else  {  printf("%d is Not Armstrong Number",num);  }  }  **OUTPUT:**  Enter the three digit number:371  371 is Armstrong Number |
| 56. | **Write a C Program check whether a given number is perfect number or not.**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int n,div,i,result=0;  printf("Enter the number:");  scanf("%d",&n);  for(i=1;i<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);  }  }  **OUTPUT:**  Enter the number:5  5 is not perfect number |
| 57. | **Write a program to accept a 5 digit number from user and perform Sum of 5 digits**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int n,rem,result=0;  printf("Enter any 5 digit number:");  scanf("%d",&n);  while (n>0)  {  rem=n%10;  result=result+rem;  n=n/10;  }  printf("Sum of the given 5 digit number is:%d",result);  }  **OUTPUT:**  Enter any 5 digit number:12345  Sum of the given 5 digit number is:15 |
| 58. | **Write a program to Reverse a Number**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int n,rem,reverse=0;  printf("Enter the number:");  scanf("%d",&n);  while (n!=0)  {  rem=n%10;  reverse=reverse\*10+rem;  n=n/10;  }  printf("Reversed number is:%d",reverse);  }  **OUTPUT:**  Enter the number:345  Reversed number is:543 |
| 59. | **Square root of a number**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a;  float s;  printf("Enter the number:");  scanf("%d",&a);  s=sqrt(a);  printf("Square root of the given number:%f",s);  }  **OUTPUT:**  Enter the number:16  Square root of the given number:4.000000 |
| 60. | **Count the number of digits in a number**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a,b,c,count=0;  printf("Enter the number:");  scanf("%d",&a);  b=a;  while(b>0)  {  c=a%10;  b=b/10;  count++;  }  printf("No of digits are %d",count);  }  **OUTPUT:**  Enter the number:4536  No of digits are 4 |
| 61. | **Write a program to convert binary number to decimal**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int rem,num,dec=0,base=1;  printf("Enter the binary number:");  scanf("%d",&num);  while(num>0)  {  rem=num%10;  dec=dec+rem\*base;  num=num/10;  base=base\*2;  }  printf("Converted decimal value is:%d",dec);  }  **OUTPUT:**  Enter the binary number:0011  Converted decimal value is:3 |
| 62. | **Write a program to convert decimal number to binary**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int num,dec,rem,base=1,i,binno=0;  printf("Enter the decimal number:");  scanf("%d",&num);  for (i=0;i<=dec;i++)  {  rem=num%2;  num=num/2;  binno=binno+rem\*base;  base=base\*10;  }  printf("The binary num:%d",binno);  }  **OUTPUT:**  Enter the decimal number:3  The binary num:11 |
| 63. | **Write a program to find the roots of a quadratic equation using if-else**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  float a,b,c,r1,r2,det;  printf("Enter the coefficients a,b,c:");  scanf("%f %f %f",&a,&b,&c);  det=b\*b-(4\*a\*c);  if (det>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");  }  }  **OUTPUT:**  Enter the coefficients a,b,c:1 2 3  Roots are not equal |
| 64. | **Matrix addition**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[2][2],b[2][2],c[2][2],i,j;  printf("Enter the a matrix values:");  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  scanf("%d",&a[i][j]);  }  }  printf("Enter the b matrix values:");  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  scanf("%d",&b[i][j]);  }  }  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  c[i][j]=a[i][j]+b[i][j];  }  }  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  printf("%d\t",c[i][j]);  }  }  }  **OUTPUT:**  Enter the a matrix values:  1 2  3 4  Enter the b matrix values:  5 6  7 8  6 8 10 12 |
| 65. | **Matrix subtraction**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[2][2],b[2][2],c[2][2],i,j;  printf("Enter the a matrix values:");  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  scanf("%d",&a[i][j]);  }  }  printf("Enter the b matrix values:");  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  scanf("%d",&b[i][j]);  }  }  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  c[i][j]=a[i][j]-b[i][j];  }  }  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  printf("%d\t",c[i][j]);  }  }  }  **OUTPUT:**  Enter the a matrix values:  7 8  5 4  Enter the b matrix values:  6 2  4 3  1 6 1 1 |
| 66. | **Matrix multiplication**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  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<2;i++)  {  for(j=0;j<2;j++)  {  scanf("%d",&a[i][j]);  }  }  printf("Enter the b matrix values:");  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  scanf("%d",&b[i][j]);  }  }  for(i=0;i<2;i++)  {  for(j=0;j<2;j++)  {  c[i][j]=0;  for(k=0;k<2;k++)  {  c[i][j]=c[i][j]+a[i][k]\*b[k][j];  }  printf("%d\t",c[i][j]);  }  }  }  **OUTPUT:**  Enter the a matrix values:  1 2  3 4  Enter the b matrix values:  1 2  3 4  7 10 15 22 |
| 67. | **Bubble sort**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[5],i,j,n,temp;  printf("Enter the value for n:");  scanf("%d",&n);  printf("Enter the array values:");  for (i=0;i<n;i++)  {  scanf("%d",&a[i]);  }  for(i=0;i<n;i++)  {  for (j=0;j<n;j++)  {  if(a[j]>a[j+1])  {  temp=a[j+1];  a[j+1]=a[j];  a[j]=temp;  }  }  }  printf("The sorted array is:");  for (i=0;i<n;i++)  {  printf("%d\t",a[i]);  }  }  **OUTPUT:**  Enter the value for n:5  Enter the array values:30 20 50 10 40  The sorted array is:10 20 30 40 50 |
| 68. | **Insertion sort**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[5],i,j,n,temp;  printf("Enter the value for n:");  scanf("%d",&n);  printf("Enter the array values:");  for(i=0;i<n;i++)  {  scanf("%d",&a[i]);  }  for (i=1;i<n;i++)  {  j=j-1;  temp=a[i];  while (j>=0&&a[j]>temp)  {  a[j+1]=a[j];  j--;  }  a[j+1]=temp;  }  printf("The sorted array is:");  for(i=0;i<n;i++)  {  printf("%d\t",a[i]);  }  }  **OUTPUT:**  Enter the value for n:5  Enter the array values:50 10 30 40 20  The sorted array is:50 10 30 40 20 |
| 69. | **To input N numbers from the user and search an element -Linear Search**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[10],i,size,key,find=0;  printf("Enter the size:");  scanf("%d",&size);  printf("Enter the values of array a:");  for(i=0;i<5;i++)  {  scanf("%d",&a[i]);  }  printf("Enter the key value:");  scanf("%d",&key);  for (i=0;i<5;i++)  {  if(a[i]==key)  find=1;  }  if (find==1)  printf("Key value found");  else  printf("Key value not found");  }  **OUTPUT:**  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. | **HCF and LCM of two numbers**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int hcf,lcm,a,b,c,n1,n2;  printf("Enter any two numbers:");  scanf("%d %d",&n1,&n2);  a=n1;  b=n2;  while(b>0)  {  c=b;  b=a%b;  a=c;  }  printf("HCF is:%d\n",a);  lcm=(n1\*n2)/a;  printf("LCM is:%d",lcm);  }  **OUTPUT:**  Enter any two numbers:15 2  HCF is:1  LCM is:30 |
| 71. | **To input 10 numbers from the user and print the largest number**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[10],i,max;  printf("Enter the value for array a:");  for (i=0;i<10;i++)  {  scanf("%d",&a[i]);  }  max=a[0];  for (i=1;i<10;i++)  {  if(a[i]>max)  max=a[i];  }  printf("Largest element is:%d",max);  }  **OUTPUT:**  Enter the value for array a:10 20 30 40 50 60 70 80 90 100  Largest element is:100 |
| 72. | **To input 10 numbers from the user and print the smallest number**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {    int a[10],i,min;  printf("Enter the value for array a:");  for (i=0;i<10;i++)  {  scanf("%d",&a[i]);  }  min=a[0];  for (i=1;i<10;i++)  {  if(a[i]<min)  min=a[i];  }  printf("Smallest element is:%d",min);  }  **OUTPUT:**  Enter the value for array a:10 20 30 40 50 60 70 80 90 100  Smallest element is:10 |
| 73. | **To get 10 numbers from the user and print the odd and even numbers**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[10],n,i;  printf("Enter the value for n:");  scanf("%d",&n);  printf("Enter the array elements:");  for (i=0;i<n;i++)  {  scanf("%d",&a[i]);  }  printf("Even numbers in the array:");  for(i=0;i<n;i++)  {  if (a[i]%2==0)  printf("%d\t",a[i]);  }  printf("\nOdd numbers in the array:");  for (i=0;i<n;i++)  {  if (a[i]%2!=0)  printf("%d\t",a[i]);  }  }  **OUTPUT:**  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 79 |
| 74. | **Write a program in C to copy the elements of one array into another array**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int i,n,a[20],b[20];  printf("Enter the value for n:");  scanf("%d",&n);  printf("Enter the array elements:");  for (i=0;i<n;i++)  {  scanf("%d",&a[i]);  }  for (i=0;i<n;i++)  {  b[i]=a[i];  }  printf("Elements of first array:");  for (i=0;i<n;i++)  {  printf("%d\t",a[i]);  }  printf("\nElements of second array:");  for (i=0;i<n;i++)  {  printf("%d\t",b[i]);  }  }  **OUTPUT:**  Enter the value for n:5  Enter the array elements:10 20 30 40 50  Elements of first array:10 20 30 40 50  Elements of second array:10 20 30 40 50 |
| 75. | **Write a program in C to merge two arrays of same size**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[10],b[10],n1,n2,i,k,merge[20];  printf("Enter the value for n1:");  scanf("%d",&n1);  printf("Enter the array1 elements:");  for (i=0;i<n1;i++)  {  scanf("%d",&a[i]);  merge[i]=a[i];  }  k=i;  printf("\nEnter the value for n2:");  scanf("%d",&n2);  printf("Enter array 2 elements:");  for (i=0;i<n2;i++)  {  scanf("%d",&b[i]);  merge[k]=b[i];  k++;  }  printf("The merged array:");  for (i=0;i<k;i++)  {  printf("%d\t",merge[i]);  }  }  **OUTPUT:**  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 |
| 76. | **To input N numbers from the user and print the sum of all elements in array**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[10],n,i,sum=0;  printf("Enter the value for n:");  scanf("%d",&n);  printf("Enter the array elements:");  for (i=0;i<n;i++)  {  scanf("%d",&a[i]);  }  for (i=0;i<n;i++)  {  sum=sum+a[i];  }  printf("Sum of elements in the array:%d",sum);  }  **OUTPUT:**  Enter the value for n:5  Enter the array elements:1 2 3 4 5  Sum of elements in the array:15 |
| 77. | **Program to find transpose of a matrix**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[10][10],i,j,n,m;  printf("Enter the no of rows and columns:");  scanf("%d %d",&n,&m);  printf("Enter the matrix:");  for(i=0;i<n;i++)  {  for (j=0;j<m;j++)  {  scanf("%d",&a[i][j]);  }  }  for(i=0;i<m;i++)  {  for(j=0;j<n;j++)  {  printf("%d\t",a[j][i]);  }  printf("\n");  }  }  **OUTPUT:**  Enter the no of rows and columns:2 2  Enter the matrix:  1 2  3 4  1 3  2 4 |
| 78. | **Selection sort**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int a[50],n,i,j,temp;  printf("Enter the value of n:");  scanf("%d",&n);  printf("Enter the values:");  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;  }  }  }  for(i=0;i<n;i++)  {  printf("%d\t",a[i]);  }  }  **OUTPUT:**  Enter the value of n:4  Enter the values:56 78 34 89  34 56 78 89 |
| 79 | **To input a 2 dimensional array and print it in the matrix format**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int m,n,a[10][10],i,j;  printf("Enter the no of rows and columns:");  scanf("%d %d",&m,&n);  printf("Enter the values:");  for(i=0;i<m;i++)  {  for(j=0;j<n;j++)  {  scanf("%d",&a[i][j]);  printf("%d\t",a[i][j]);  }  printf("\n");  }  }  **OUTPUT:**  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 |
| 80. | **To find the length of a String without string function**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  char str[20];  int i,count=0;  printf("Enter a string:");  scanf("%s",str);  for(i=0;str[i]!='\0';i++)  {  count++;  }  printf("Length of the string:%d",count);  }  **OUTPUT:**  Enter a string:hello  Length of the string:5 |
| 81. | **Strlen, strcpy, strcat, strrev**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  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);  }  **OUTPUT:**  No of characters:5  Copied name:LILLY  Combined name:LILLYJANE  Reversed name:ENAJYLLIL |
| 82 | **To concatenate two strings without string function**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  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++;  }  for (j=0;str2[j] != '\0';j++,length++)  {  str1[length] = str2[j];  }  str1[length] ='\0';  printf("After concatenation: ");  puts(str1);  }  **OUTPUT:**  Enter the first string:wel  Enter the second string:come  After concatenation: welcome |
| 83. | **Write a C program to find the ASCII value of a character or a string.**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  char ch;  printf("Enter a character:");  scanf("%s",&ch);  printf("The ascii value is :%d",ch);  }  **OUTPUT:**  Enter a character:H  The ascii value is :72 |
| 84 | **To reverse a string without string function**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  char string[20],temp;  int i,length;  printf("Enter a String:");  scanf("%s",string);  length=strlen(string)-1;  for(i=0;i<strlen(string)/2;i++){  temp=string[i];  string[i]=string[length];  string[length--]=temp;  }  printf("Reverse string :%s",string);  }  **OUTPUT:**  Enter a String:HELLO  Reverse string :OLLEH |
| 85 | **Program to sort N names**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int i,j,n;  char str[100][100],s[100];  printf("Enter number of names:");  scanf("%d",&n);  printf("Enter names in any order:");  for(i=0;i<n;i++)  {  scanf("%s",str[i]);  }  for(i=0;i<n;i++)  {  for(j=i+1;j<n;j++)  {  if(strcmp(str[i],str[j])>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<n;i++)  {  printf("%s\n",str[i]);  }  }  **OUTPUT:**  Enter number of names:4  Enter names in any order:john abi ram lily  The sorted order of names are:  abi  john  lily  ram |
| 86 | **Program to count number of vowels in a string**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  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);  }  **OUTPUT:**  Input a string  hello  Number of vowels in the string: 2 |
| 87 | **Program to check a string is palindrome or not**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  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 < length ;i++)  {  if(string1[i] != string1[length-i-1])  {  flag = 1;  break;  }  }  if (flag==1)  {  printf("String is not a palindrome");  }  else  {  printf("String is a palindrome");  }  }  **OUTPUT:**  Enter a string:malayalam  String is a palindrome |
| 88. | **Program to remove all characters in a string except alphabet**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  #include <string.h>  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] >= 'a' && line[i] <= 'z') && !(line[i] >= 'A' && line[i] <= 'Z') && !(line[i] == '\0'))  {  for (j = i; line[j] != '\0'; ++j)  {  line[j] = line[j + 1];  }  line[j] = '\0';  }  }  printf("Output String: ");  puts(line);  }  **OUTPUT:**  Enter a string:h2el2l0o  Output String: hello |
| 89. | **To input N numbers from the user and search an element -Binary Search**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int i,low,high,mid,n,search,array[100];  printf("Enter number of elements:");  scanf("%d",&n);  printf("Enter %d integers:",n);  for(i=0;i<n;i++)  scanf("%d",&array[i]);  printf("Enter value to find:");  scanf("%d",&search);  low=0;  high=n-1;  mid=(low+high)/2;  while (low <= high)  {  if(array[mid]<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 > high)  printf("%d NOT FOUND",search);  }  **OUTPUT:**  Enter number of elements:4  Enter 4 integers:10 20 30 40  Enter value to find:20  20 FOUND |
| 90. | **Write a C program to display the following patterns**  **PROGRAM:**  #include <stdio.h>  #include <stdlib.h>  int main()  {  int i, j, k, N;  printf("Enter N: ");  scanf("%d", &N);  k = 1;  for(i=1; i<=N; i++)  {  for(j=1; j<=i; j++, k++)  {  printf("%3d", k);  }  printf("\n");  }  }  **OUTPUT:**  Enter N: 4  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 |