

ROSHNI

B.TECH-CSE

ROLL NO. 2215001497(52)

SECTION-G2

```

1 //Copy Array Using Pointers
2 #include <stdio.h>
3 #define MAX_SIZE 100 // Maximum array size
4 void printArray(int arr[], int size); //Function declaration to print array
5
6 int main()
7 {
8     int source_arr[MAX_SIZE], dest_arr[MAX_SIZE];
9     int size, i;
10    int *source_ptr = source_arr; // Pointer to source_arr
11    int *dest_ptr = dest_arr; // Pointer to dest_arr
12    int *end_ptr;
13    printf("Enter size of array: "); //Input size and elements in source array
14    scanf("%d", &size);
15    for (i = 0; i < size; i++)
16        scanf("%d", &(source_ptr + i));
17
18    end_ptr = &source_arr[size - 1]; // Pointer to last element of source_arr
19    printf("\nSource array before copying: "); //Print source and destination array before copying
20    printArray(source_arr, size);
21    printf("\nDestination array before copying: ");
22    printArray(dest_arr, size);
23    while (source_ptr <= end_ptr) //Run loop till source_ptr exists in source_arr
24    {
25        *dest_ptr = *source_ptr; // memory range.
26        source_ptr++; //Increment source_ptr and dest_ptr
27        dest_ptr++;
28    }
29    printf("\nSource array after copying: "); // Print source and destination array after copying
30    printArray(source_arr, size);
31    printf("\nDestination array after copying: ");
32    printArray(dest_arr, size);
33    return 0;
34 }
35 void printArray(int *arr, int size){ //Function to print array elements.
36     int i;
37     for (i = 0; i < size; i++) //@arr Integer array to print.
38         printf("%d", *(arr + i));
39 }

```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Shorten compiler paths

Row 1 Col 1 Sel 0 Lines: 38 Length: 1609 Insert Done parsing in 0 seconds

Enter size of array: 3
 Enter elements in array: 1 2 3

Source array before copying: 1, 2, 3,
 Destination array before copying: 1325400143, 2097251, 7536737,

Source array after copying: 1, 2, 3,
 Destination array after copying: 1, 2, 3,

Process exited after 4.917 seconds with return value 0
 Press any key to continue . . .

```

49(b).SwapTwoNo.UsingCallByReference.cpp
1 //Swap Two No. Using Call By Reference
2 #include <stdio.h>
3 void swap(int * num1, int * num2); //Swap function declaration
4
5 int main(){
6     int num1, num2;
7     printf("Enter two numbers: "); //Input numbers
8     scanf("%d%d", &num1, &num2);
9     printf("Before swapping in main \n"); //Print original values of num1 and num2
10    printf("Value of num1 = %d \n", num1);
11    printf("Value of num2 = %d \n", num2);
12    swap(&num1, &num2); //Pass the addresses of num1 and num2
13    printf("After swapping in main \n"); //Print the swapped values of
14    printf("Value of num1 = %d \n", num1);
15    printf("Value of num2 = %d \n", num2);
16    return 0;
17 }
18 void swap(int * num1, int * num2){ // Function to swap two numbers
19     int temp;
20     temp = *num1; // Copy the value of num1 to some temp variable
21     *num1 = *num2; // Copy the value of num2 to num1
22     *num2 = temp; // Copy the value of num1 stored in temp to num2
23     printf("After swapping in swap function \n");
24     printf("Value of num1 = %d \n", *num1);
25     printf("Value of num2 = %d \n", *num2);
26 }

```

Compiler Resources Compile Log Debug Find Results Close

49(a).SwapTwoNo.UsingCallByValue.cpp

1 //Call by Value Example - Swapping 2 numbers using Call by Value
2 #include <stdio.h>
3 void swap(int, int);
4
5 int main(){
6 int x, y;
7 printf("Enter the value of x and y\n");
8 scanf("%d%d", &x, &y);
9 printf("Before Swapping\nx = %d\ny = %d\n", x, y);
10 swap(x, y);
11 printf("After Swapping\nx = %d\ny = %d\n", x, y);
12 return 0;
13 }
14 void swap(int a, int b){
15 int temp;
16 temp = b;
17 b = a;
18 a = temp;
19 printf("Values of a and b is %d %d\n", a, b);
20 }

3
 Before swapping in main nValue of num1 = 2
 Value of num2 = 3

After swapping in swap function nValue of num1 = 3
 Value of num2 = 2

After swapping in main nValue of num1 = 3
 Value of num2 = 2

Process exited after 4.992 seconds with return value 0
 Press any key to continue . . .

```

1 //Call by Value Example - Swapping 2 numbers using Call by Value
2 #include <stdio.h>
3 void swap(int, int);
4
5 int main(){
6     int x, y;
7     printf("Enter the value of x and y\n");
8     scanf("%d%d", &x, &y);
9     printf("Before Swapping\nx = %d\ny = %d\n", x, y);
10    swap(x, y);
11    printf("After Swapping\nx = %d\ny = %d\n", x, y);
12    return 0;
13 }
14 void swap(int a, int b){
15     int temp;
16     temp = b;
17     b = a;
18     a = temp;
19     printf("Values of a and b is %d %d\n", a, b);
20 }
```

Enter the value of x and y
 2
 3
 Before Swapping
 x = 2
 y = 3
 Values of a and b is 3 2
 After Swapping
 x = 2
 y = 3

Process exited after 3.727 seconds with return value 0

48.Add Two No. Using Pointers.cpp

```

1 //Add Two No. Using Pointers
2 #include<stdio.h>
3 int main(){
4     int *p,*q,a,b,r;
5     printf("Enter the num1: ");
6     scanf("%d",&a);
7     printf("Enter the num2: ");
8     scanf("%d",&b);
9     p=&a; //Giving address of var
10    q=&b;
11    r=*p+*q;
12    printf("The sum of no.: %d",r);
13 //    printf("The sum of no. %d & %d is: %d.",a,b,*r);
14    return 0;
15 }

```

```

Enter the num1: 1
Enter the num2: 23
The sum of no.: 24
-----
Process exited after 3.741 seconds with return value
0
Press any key to continue . . .

```

47.No.Prime,Armstrong_PerfectOrNot.cpp

```

1 //Program To Check A No. Is Armstrong, Perfect, And Prime Or not
2 #include <stdio.h>
3 #include <math.h>
4 int isPrime(int num); //Function declarations
5 int isArmstrong(int num);
6 int isPerfect(int num);
7 int main(){
8     int num;
9     printf("Enter any number: ");
10    scanf("%d", &num);
11    if(isPrime(num)){ // Call isPrime() functions
12        printf("%d is Prime number.\n", num);
13    }
14    else{
15        printf("%d is not Prime number.\n", num);
16    }
17    if(isArmstrong(num)){ // Call isArmstrong() Function
18        printf("%d is Armstrong number.\n", num);
19    }
20    else{
21        printf("%d is not Armstrong number.\n", num);
22    }
23    if(isPerfect(num)){ // Call isPerfect() Function
24        printf("%d is Perfect number.\n", num);
25    }
26    else{
27        printf("%d is not Perfect number.\n", num);
28    }
29    return 0;
30 }
31 int isPrime(int num){ // check whether a number is prime or not.
32     if(num == 1){ // Returns 1 if the number is prime otherwise 0.
33         for(int i=2; i<num/2; i++){
34             if(num% i == 0){
35                 return 0;
36             }
37         }
38     }

```

```

Enter any number: 23
23 is Prime number.
23 is not Armstrong number.
23 is not Perfect number.
-----
Process exited after 4.795 seconds with return value 0
Press any key to continue . . .

```

46.ProgramToFindDiameterAreaCircumferenceOfGivenRadius.cpp

```

1 //Program To Find Diameter, Area&Circumference Of A Circle Given Radius
2 #include <stdio.h>
3 #include <math.h> // Used for constant PI referred as M_PI
4 double getDiameter(double radius); //Function declaration
5 double getCircumference(double radius);
6 double getArea(double radius);
7 int main(){
8     float radius, dia, circ, area;
9     printf("Enter radius of circle: "); //Taking Radius Of A Circle
10    scanf("%f", &radius);
11    dia = getDiameter(radius); // Call getDiameter function
12    circ = getCircumference(radius); // Call getCircumference fun
13    area = getArea(radius); // Call getArea function
14    printf("Diameter of the circle = %2f units\n", dia);
15    printf("Circumference of the circle = %2f units\n", circ);
16    printf("Area of the circle = %2f sq. units", area);
17
18 }
19 double getDiameter(double radius){
20     return (2 * radius);
21 }
22 double getCircumference(double radius) {
23     return (2 * M_PI * radius);
24 }
25 double getArea(double radius){
26     return (M_PI * radius * radius);
27 }

```

```

Enter radius of circle: 3
Diameter of the circle = 6.00 units
Circumference of the circle = 18.85 units
Area of the circle = 28.27 sq. units
Process exited after 1.688 seconds with return value 0
Press any key to continue . . .

```

```
1 //Count Frequency Of A Given String
2 #include<stdio.h>
3 int main(){
4     char str[20], a;
5     int c=0, i;
6     printf("Enter a string: ");
7     gets(str);
8     printf("Enter a character to count its frequency: ");
9     scanf("%c", &a);
10    for(i=0;str[i]!='\0'; i++){
11        if(a==str[i]){
12            c++;
13        }
14    }
15    printf("%c occur %d times.", a, c);
16    return 0;
17 }
```

```
C:\Users\subha\Documents\c Enter a string: aa
Enter a character to count its frequency: a
a occur 2 times.

Process exited after 7.745 seconds with return value 0
Press any key to continue . . .
```

```
1 //Checking A String Is Palindrom Or Not.....Without Using String Functions
2 #include<stdio.h>
3 #include<string.h>
4 int main(){
5     char str[100];
6     int i, flag=0, len;
7     printf("Enter the string to check palindrome or not: ");
8     gets(str);
9     len=strlen(str);
10    for(i=0; i<len; i++){
11        if(str[i]!=str[len-i-1]){
12            flag=1;
13            break;
14        }
15    }
16    if(flag==0)
17        printf(" PALINDROME!! ");
18    else
19        printf(" NOT A PALINDROME!! ");
20 }
```

```
C:\Users\subha\Documents\c Enter the string to check palindrome or not: 141
PALINDROME!!

Process exited after 4.468 seconds with return value 0
Press any key to continue . . .
```

```
1 //All String Operations
2 #include <stdio.h>
3 #include <string.h>
4 int main(){
5     char str1[40], str2[40] ;
6     printf("Enter the first string : ") ;
7     gets(str1) ;
8     printf("Enter the second string : ") ;
9     gets(str2) ;
10    printf("\nString 1 = %s & String 2 = %s ", str1, str2) ;
11    printf("\nUppercase is : %s and %s",strupr(str1),strupr(str2));
12    printf("\nLowercase is : %s and %s",strlwr(str1),strlwr(str2));
13    printf("\nReverse is : %s and %s",strrev(str1),strrev(str2)) ;
14    printf("\nString copy is : %s ", strcpy(str1,str2));
15    printf("\nConcatenation is : %s ", strcat(str1,str2));
16 }
```

```
C:\Users\subha\Documents\c Enter the first string : aa
Enter the second string : bb

String 1 = aa & String 2 = bb
Uppercase is : AA and BB
Lowercase is : aa and bb
Reverse is : aa and bb
String copy is : bb
Concatenation is : bbbb

Process exited after 9.263 seconds with return value 0
Press any key to continue . . .
```

```
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
- Warnings: 0
- Output Filename: C:\Users\subha\Documents\c
- Output Size: 129.9814453125 KiB
- Compilation Time: 0.19s

Shorten compiler paths
```

42.MergingOfTwoArrays.cpp

```

1 // Merging Of Two Arrays
2 #include<stdio.h>
3 #include<conio.h>
4 int main(){
5     int arr1[50], arr2[50], size1, size2, i, k, merge[100];
6     printf("Enter Array 1 Size: ");
7     scanf("%d", &size1);
8     for(i=0; i<size1; i++){
9         scanf("%d", &arr1[i]);
10        merge[i] = arr1[i];
11    }
12    k = i;
13    printf("\nEnter Array 2 Size: ");
14    scanf("%d", &size2);
15    printf("Enter Array 2 Elements: ");
16    for(i=0; i<size2; i++){
17        scanf("%d", &arr2[i]);
18        merge[k] = arr2[i];
19        k++;
20    }
21    printf("\nThe new array after merging is:\n");
22    for(i=0; i<k; i++)
23        printf("%d ", merge[i]);
24    return 0;
25 }
```

```

C:\Users\subha\Documents\c> Enter Array 1 Size: 4
Enter Array 1 Elements: 1
2
3
4

Enter Array 2 Size: 3
Enter Array 2 Elements: 2
3

The new array after merging is:
1 2 3 4 2 3 3
-----
Process exited after 23.55 seconds with return value 0
Press any key to continue . . .

```

41.IdentityMatrixOrNot.cpp

```

1 // Check Whether A Matrix Is Identity Matrix Or Not
2 #include<stdio.h>
3 int main(){
4     int a[2][2], i, j, flag=0;
5     for(i=0; i<2; i++){
6         for(j=0; j<2; j++){
7             printf("Enter the value of index%d%d of Matrix1: ", i, j);
8             scanf("%d", &a[i][j]);
9         }
10    for(i=0; i<2; i++){
11        for(j=0; j<2; j++){
12            if(i==j && a[i][j]==1){
13                flag=1;
14            }
15            else if(i!=j && a[i][j]!=1)
16                flag=0;
17        }
18    }
19    if(flag==1){
20        printf("IDENTITY MATRIX!!!");
21    }
22    else{
23        printf("NOT A IDENTITY MATRIX!!!");
24    }
25 }
```

```

C:\Users\subha\Documents\c> Enter the value of index00 of Matrix1: 1
Enter the value of index01 of Matrix1: 2
Enter the value of index10 of Matrix1: 3
Enter the value of index11 of Matrix1: 4
NOT A IDENTITY MATRIX!!
-----
Process exited after 7.9 seconds with return value 0
Press any key to continue . . .

```

40(b).SparseMatrixOrNot.cpp

```

1 // Sparse Matrix Or Not
2 #include<stdio.h>
3 int main(){
4     int n, m, i, j, count=0;
5     printf("Enter the size of rows: ");           //Taking Size Of Rows
6     scanf("%d", &n);
7     printf("Enter the size of column: ");          //Taking Size Of Column
8     scanf("%d", &m);
9     int a[n][m];                                //Declaring 2DArray
10    for(i=0; i<n; i++){
11        for(j=0; j<m; j++){                      //Taking Values Of Element
12            printf("Enter the values of index%d%d: ", i, j);
13            scanf("%d", &a[i][j]);
14        }
15    for(i=0; i<n; i++){
16        for(j=0; j<m; j++){
17            printf("%d ", a[i][j]);               //Printing The Output
18            if(a[i][j]==0)                      //Checking Each Element For zero
19                count++;
20        }
21    printf("\n");
22    if(count>m*n/2)
23        printf("sparse matrix!!!");
24    else
25        printf("NOT A SPARSE MATRIX!!!");
26    return 0;
27 }
```

```

C:\Users\subha\Documents\c> Enter the size of rows: 3
Enter the size of column: 3
Enter the values of index00: 12
Enter the values of index01: 23
Enter the values of index02: 3
Enter the values of index10: 4
Enter the values of index11: 5
Enter the values of index12: 67
Enter the values of index20: 7
Enter the values of index21: 4
Enter the values of index22: 3
12 23 3
4 5 67
7 4 3
NOT A SPARSE MATRIX!!
-----
Process exited after 12.14 seconds with return value 0
Press any key to continue . . .

```

```

1 //Find Out Transpose Of A Matrix
2 #include<stdio.h>
3 int main(){
4     int n,m,i,j;
5     printf("Enter the size of rows: ");           //Taking Size Of
6     scanf("%d",&n);
7     printf("Enter the size of column: ");
8     scanf("%d",&m);
9     int a[n][m];
10    for(i=0;i<n;i++){                           //Inputting Values Of Elements
11        for(j=0;j<m;j++){
12            printf("Enter the value of index%d%d: ",i,j);
13            scanf("%d",&a[i][j]);
14        }
15    }
16    for(i=0;i<n;i++){
17        for(j=0;j<m;j++){
18            printf("%d ",a[i][j]);
19        }
20        printf("\n");
21    }
22    printf("Array Transpose Are!!\n");
23    for(i=0;i<m;i++){
24        for(j=0;j<n;j++){
25            printf("%d ",a[j][i]);
26        }
27        printf("\n");
28    }
29 }

```

Enter the value of index00: 1
Enter the value of index01: 2
Enter the value of index02: 3
Enter the value of index10: 4
Enter the value of index11: 5
Enter the value of index12: 6
Enter the value of index20: 7
Enter the value of index21: 3
Enter the value of index22: 9
1 2 3
4 5 6
7 3 9
Array Transpose Are!!
1 4 7
2 5 3
3 6 9

Process exited after 15.04 seconds with return value 0
Press any key to continue . . . |

```

38.ScalarMatrixMultiplications.cpp
1 //Scalar Matrix Multiplication
2 #include <stdio.h>
3 #define SIZE 3 // Maximum size of the array
4 int main(){
5     int num,n,i,j;
6     printf("Enter the size of array: ");
7     scanf("%d",&n);
8     int A[n][n];
9     for(i=0;i<n;i++){
10        for(j=0;j<n;j++){
11            printf("Enter the value of index%d%d: ",i,j);
12            scanf("%d",&A[i][j]);
13        }
14    }
15    printf("Enter any number to multiply with matrix A: ");
16    scanf("%d",&num);
17    for(i=0;i<n;i++){
18        for(j=0;j<n;j++){
19            A[i][j]=num*A[i][j];
20        }
21    }
22    printf("\nResultant matrix c.A = \n");
23    for(i=0;i<n;i++){
24        for(j=0;j<n;j++){
25            printf("%d ",A[i][j]);
26        }
27        printf("\n");
28    }
29    return 0;
30 }

```

Enter the size of array: 3
Enter the value of index00: 1
Enter the value of index01: 2
Enter the value of index02: 3
Enter the value of index10: 4
Enter the value of index11: 5
Enter the value of index12: 6
Enter the value of index20: 7
Enter the value of index21: 8
Enter the value of index22: 9
Enter any number to multiply with matrix A: 4
Resultant matrix c.A =
4 8 12
16 20 24
28 32 36

Process exited after 15.22 seconds with return value 0
Press any key to continue . . . |

```

37.ProgramToDeleteDuplicateElementInAnArray.cpp
1 //Program To Remove Duplicate Element In An Array
2 #include <stdio.h>
3 #define MAX_SIZE 100 // Maximum array size
4 int main()
5 {
6     int arr[MAX_SIZE];
7     int i, j, size, count = 0;
8     printf("Enter size of the array : ");      //Taking Size Of AN Array
9     scanf("%d",&size);
10    for(i=0;i<size;i++){                     //Taking Value Of Element IN An Array
11        printf("Enter the value of index%d: ",i);
12        scanf("%d",&arr[i]);
13    }
14    for(i=0; i < size; i++){
15        for(j=i+1; j < size; j++){           //Checkm For Duplicate Element
16            if(arr[i] == arr[j]){
17                count++;
18                break;
19            }
20        }
21    }
22    printf("\nTotal number of duplicate elements found in array = %d", count);
23    return 0;
24 }

```

Enter size of the array : 4
Enter the value of index0: 1
Enter the value of index1: 2
Enter the value of index2: 3
Enter the value of index3: 4
Total number of duplicate elements found in array = 0

Process exited after 5.785 seconds with return value 0
Press any key to continue . . . |

Abort Compilation
- Warnings: 0
- Output Filename: C:\Users\subha\Documents\c\ProgramToDeleteDuplicateElementInAnArray.exe
- Output Size: 128.6484378
- Compilation Time: 0.19s
Shorten compiler paths

line: 1 Col: 1 Sel: 0 Lines: 24 Length:
1 2 3 4

Process exited after 5.785 seconds with return value 0
Press any key to continue . . . |

36(a).SecondLargestNo.cpp

```

1 //Program To Find Second Largest No.
2 #include <stdio.h>
3 int main(){
4     int i,j,a,n,counter,ave,number[30];
5     printf ("Enter the limit: ");
6     scanf ("%d",&n);
7
8     for (i=0; i<n; ++i){
9         printf ("Enter the value of index%d: ");
10        scanf ("%d",&number[i]);
11        for (j=i+1; j<n; ++j){
12            if (number[i] < number[j]){
13                int temp=number[i];
14                number[i]=number[j];
15                number[j]=temp;
16            }
17        }
18    }
19
20    printf ("The numbers arranged in descending order are:\n");
21    for (i=0; i<n; ++i)
22        printf ("%d",number[i]);
23    printf ("\nThe 2nd largest number is = %d", number[1]);
24    printf ("\nThe 2nd smallest number is = %d", number[n-2]);
25    ave = (number[1]+number[n-2])/2;
26    counter = 0;
27    for (i=0; i<n; ++i){
28        if (ave==number[i])
29            ++counter;
30    }
31    if (counter==0)
32        printf ("\nthe average of 2nd largest & 2nd smallest is not in the array");
33    else
34        printf ("\nthe average of 2nd largest & 2nd smallest in array is %d in numbers", counter);
35 }

```

```

C:\Users\subha\Documents\c X + - □ ×
Enter the value of index1847233024: 1
Enter the value of index1847233024: 2
Enter the value of index1847233024: 3
Enter the value of index1847233024: 4
Enter the value of index1847233024: 5
The numbers arranged in descending order are:
      5      4      3      2      1
The 2nd largest number is = 4
The 2nd smallest number is = 2
The average of 2nd largest & 2nd smallest in array is 1 in numbers
-----
Process exited after 7.01 seconds with return value 0
Press any key to continue . . .

```

35.LinearSearchProgram.cpp

```

1 //Linear Search Program
2 #include <stdio.h>
3 int main(){
4     int array[100], search, c, n;
5     printf("Enter the size of an array\n");
6     scanf("%d", &n);
7     printf("Enter %d integer(s)\n", n);
8     for (c=0; c<n; c++) //Taking Value Of Indexes
9         scanf("%d", &array[c]);
10    printf("Enter a number to search\n");
11    scanf("%d", &search);
12    for (c = 0; c < n; c++){
13        if (array[c] == search){ /* If required element is found */
14            printf("%d is present at location %d.\n", search, c+1);
15            break;
16        }
17    }
18    if (c == n)
19        printf("%d isn't present in the array.\n", search);
20    return 0;
21 }

```

```

C:\Users\subha\Documents\c X + - □ ×
Enter the size of an array
5
Enter 5 integer(s)

1
2
3
4
5
Enter a number to search
4
4 is present at location 4.

```

34.ProgramToDeleteElementAtSpecifiedPosit.cpp

```

1 //Program To Delete An Element In Array At Specified Position
2 #include <stdio.h>
3 #define MAX_SIZE 100
4 int main(){
5     int arr[MAX_SIZE];
6     int i, size, pos;
7     printf("Enter size of the array : "); //Input size and element in array
8     scanf("%d", &size);
9     for(i=0; i<size; i++){
10         printf("Enter the value of index[%d]: ", i);
11         scanf("%d", &arr[i]);
12     }
13     printf("Enter the element position to delete : "); //Input element position to delete
14     scanf("%d", &pos);
15     public int __cdecl scan(const char* __restrict__ _Format,...) valid delete position
16     printf( Invalid position Please enter position between 1 to %d , size);
17     else{ //Copy next element value to current element
18         for(i=pos-1; i<size-1; i++){
19             arr[i] = arr[i + 1];
20         }
21         size--;
22         printf("\nElements of array after delete are : "); //Print array after deletion
23         for(i=0; i<size; i++){
24             printf("%d ", arr[i]);
25         }
26     }
27     return 0;
28 }

```

```

C:\Users\subha\Documents\c X + - □ ×
Enter size of the array : 3
Enter the value of index[0]: 1
Enter the value of index[1]: 2
Enter the value of index[2]: 3
Enter the element position to delete :
Elements of array after delete are : 2 3
-----
tSpecifiedPosit.exe

```

33.InsertElementAtGivenPOINT.cpp

```

1 //V/INSERTING AN ELEMENT AT ANY GIVEN INDEX
2 //Program To Insert Any Element At Any Given Point
3 #include<stdio.h>
4 int main(){
5     int n,i,value,pos;
6     printf("Enter the size of an array: ");      //Taking Size Of An Array
7     scanf("%d",&n);
8     int a[n+1];                                //EXTRA BLOCK FOR INSERTION
9     for(i=0;i<n;i++){                         //Taking Value Of Elements
10        printf("Enter the value for index%d: ",i);
11        scanf("%d",&a[i]);
12    }
13    printf("Enter the INDEX to insert an element: ");
14    scanf("%d",&pos);
15    printf("Enter the value of an element: ");
16    scanf("%d",&value);
17    for(i=n;i>pos;i--){
18        a[i]=a[i-1];
19    }
20    a[pos]=value;
21    printf("UPDATED ARRAY!!!");
22    for(i=0;i<=n;i++)
23        printf("%d",a[i]);
24    return 0;
25 }
```

C:\Users\subha\Documents\c .. + X - □ ×

```

Enter the size of an array: 3
Enter the value for index0: 1
Enter the value for index1: 2
Enter the value for index2: 3
Enter the INDEX to insert an element: 2
Enter the value of an element: 5
UPDATED ARRAY!!1235
-----
Process exited after 11.3 seconds with return value 0
Press any key to continue . . .

```

32.CopyingOneArrayElementsTwoAnotherArray.cpp

```

1 //Program To Copy One Array Elements To Another Array
2 #include<stdio.h>
3 int main(){
4     int n,j,i,sum=0;
5     printf("Enter the size of an array: ");      //Taking Size Of An Array
6     scanf("%d",&n);
7     int a[n],b[n];
8     for(i=0;i<n;i++){                         //Taking Value Of Elements
9         printf("Enter the value for index%d: ",i);
10        scanf("%d",&a[i]);
11    }
12    printf("You Entered:....");
13    for(i=0;i<n;i++){
14        printf(" %d ",a[i]);
15        b[i]=a[i];
16    }
17    printf("\nArray after copying:....");
18    for(i=0;i<n;i++){
19        printf(" %d ",b[i]);
20    }
21    return 0;
22 }
```

C:\Users\subha\Documents\c .. + X - □ ×

```

Enter the value for index0: 1
Enter the value for index1: 3
Enter the value for index2: 4
You Entered:....1 3 4
Array after copying:....1 3 4
-----
Process exited after 11.86 seconds with return value 0
Press any key to continue . . .

```

31.SumOfAnArrayElements.cpp

```

1 //SUM OF AN ARRAY ELEMENTS
2
3 #include<stdio.h>
4 int main(){
5     int n,i,sum=0;
6     printf("Enter the size of an array: ");      //Taking Size Of An Array
7     scanf("%d",&n);
8     int a[n];
9     for(i=0;i<n;i++){                         //Taking Value Of Elements
10        printf("Enter the value for index%d: ",i);
11        scanf("%d",&a[i]);
12    }
13    for(i=0;i<n;i++){
14        sum=sum+a[i];
15    }
16    printf("The sum of elements of an array are:%d ",sum);
17 }
```

C:\Users\subha\Documents\c .. + X - □ ×

```

Enter the size of an array: 4
Enter the value for index0: 1
Enter the value for index1: 2
Enter the value for index2: 3
Enter the value for index3: 4
The sum of elements of an array are:10
-----
Process exited after 5.196 seconds with return value 0
Press any key to continue . . .

```

```

30.Pascal's Triangle.cpp
1 /*Pascal's Triangle Printing
2          1      1
3          1      2      1
4          1      3      3      1
5          1      4      6      4      1 */
6 #include<stdio.h>
7
8 int main(){
9     int row,i,j,space,coef=0;
10    printf("Enter the size of rows: ");
11    scanf("%d",&row);
12    for(i=0;i<row;i++){           //For Space Printing
13        for(space=1;space<=row-i;space++) {
14            printf(" ");}
15        for(j=0;j<=i;j++){
16            if(j==0 || i==0)
17                coef=1;
18            else
19                coef=coef*(i-j+1)/j;
20            printf(" %d",coef);
21        }
22        printf("\n");           //For New Line
23    }
24    return 0;
25 }

[*] 29.ProgramToPrintASCIIvalueOfAGivenNo..cpp

```

Output window:

```

C:\Users\subha\Documents\c - Minimize + X
Enter the size of rows: 4
1
1 1
1 2 1
1 3 3 1
-----
Process exited after 1.796 seconds with return value 0
Press any key to continue . . .

```



```

1 //ASCII VALUE FINDING
2 #include <stdio.h>
3 int main(){
4     int n;
5     printf("Enter a character.: ");
6     scanf("%c", &n);
7     printf(" %d", n);
8
9 }

```

Output window:

```

C:\Users\subha\Documents\c - Minimize + X
Enter a no.: a
97
-----
Process exited after 2.195 seconds with return value 0
Press any key to continue . . .

```

```

1 //POWER OF ANY NO.
2 #include <stdio.h>
3 #include<math.h>
4 int main(){
5     int a, b, power;
6     printf("Enter the value: ");
7     scanf("%d", &a);
8     printf("Enter the base value: ");
9     scanf("%d", &b);
10    power=pow(a, b);
11    printf("The power of %d is: %d", a, power);
12 }
13

```

```

C:\Users\subha\Documents\c
Enter the value: 33
Enter the base value: 3
The power of 33 is: 35937
-----
Process exited after 7.601 seconds with return value 0
Press any key to continue . . .

```

```

27.PerfectNo.OrNot.cpp
1 //PERFECT NO. OR NOT
2 #include <stdio.h>
3 int main(){
4     int n,i,sum=0;
5     printf("Enter a no. for checking PERFECT NUM OR NOT: ");
6     scanf("%d", &n);
7     for(i=1;i<=n/2;i++){
8         if(n%i==0){
9             sum=sum+i;
10        }
11    }
12    if(n==sum)
13        printf("PERFECT NO.");
14    else
15        printf("NOT A PERFECT NO.");
16 }
17

```

```

C:\Users\subha\Documents\c
Enter a no. for checking PERFECT NUM OR NOT: 234
NOT A PERFECT NO.
-----
Process exited after 3.834 seconds with return value 0
Press any key to continue . . .

```

```

26.ArmstrongOrNot.cpp
1 //ARMSTRONG NUM OR NOT
2 #include <stdio.h>
3 int main(){
4     int n,temp,rem,c,sum=0;
5     printf("Enter the no. to check whether armstrong or not: ");
6     scanf("%d", &n);
7     temp=n;
8     while(n>0){
9         rem=n%10;
10        c=rem*rem*rem;
11        sum=sum+c;
12        n=n/10;
13    }
14    n=temp;
15    if(n==sum){
16        printf("ARMSTRONG");
17    }
18    else{
19        printf("NOT AN ARMSTRONG");
20    }
21
22 }
23

```

```

C:\Users\subha\Documents\c
Enter the no. to check whether armstrong or not: 141
NOT AN ARMSTRONG
-----
Process exited after 3.522 seconds with return value 0
Press any key to continue . . .

```

```
25.FibonacciSeriesPrinting.cpp
1 //FIBONACCO SERIES
2 #include<stdio.h>
3 int main(){
4     int n,i,a=0,b=1,c;
5     printf("Enter the limit to find fabinacco series: ");
6     scanf("%d", &n);
7     for(i=1;i<=n;i++){
8         printf(" %d\n", a);
9         c=a+b;
10        a=b;
11        b=c;
12    }
13 }
```

```
C:\Users\subha\Documents\c % + | x
Enter the limit to find fabinacco series: 8
0
1
1
2
3
5
8
13
```

```
24.StrongNoOrRobinsonNoOrNot.cpp
1 //KRISHNAMURTI NUM OR ROBINSON NO OR STRONG NO.
2 #include<stdio.h>
3 int main(){
4     int n,temp,rem,fact,sum=0;
5     printf("Enter a no. for checking whether km or not: ");
6     scanf("%d", &n);
7     temp=n;
8     while(n>0){
9         rem=n%10;
10        fact=1;
11        while(rem>0){
12            fact=fact*rem;
13            rem--;
14        }
15        sum=sum+fact;
16        n=n/10;
17    }
18    //temp=n;
19    if(temp==sum)
20        printf("STRONG NO.");
21    else
22        printf("NOT A STRONG NO.");
23 }
```

```
C:\Users\subha\Documents\c % + | x
Enter a no. for checking whether km or not: 234
NOT A STRONG NO.

Process exited after 2.756 seconds with return value 0
Press any key to continue . . . |
```

```
23.ProgramToCheckNoIsPrimeOrNot.cpp
1 //PRIME no. or not
2 #include <stdio.h>
3 int main(){
4     int n,i,count=0;
5     printf("Enter a no. to check whether PRIME no. or not: ");
6     scanf("%d", &n);
7     for(i=1;i<=n;i++){
8         if(n%i==0){
9             count=count+1;
10        }
11    }
12    if(count==2)
13        printf("PRIME NO.");
14    else
15        printf("NOT PRIME NO.");
16 }
17 }
```

```
C:\Users\subha\Documents\c % + | x
Enter a no. to check whether PRIME no. or not:
34
NOT PRIME NO.

Process exited after 6.288 seconds with return value 0
Press any key to continue . . . |
```

```
22.ProgramToFindLCM_HCF.cpp
1 //Program To Find LCM[Lowest Common Factors] & HCF[Highest C.M] Of To Two Integers
2 #include<stdio.h>
3 int main(){
4     int n,a,b,max,fact=1;
5     printf("Enter first no.: "); //Taking Two No.
6     scanf("%d", &a);
7     printf("Enter second no.: ");
8     scanf("%d", &b);
9     printf("Press 1 for LCM or Press 2 for HCF: "); //Taking Operation Type
10    scanf("%d", &n);
11    max=(a>b)?a:b;
12    if(n==1){ //For LCM
13        while(fact){
14            if(max*a==0 && max*b==0){
15                printf("LCM of %d & %d is: %d\n", a, b, max); //Printing LCM
16                fact=0;
17            }
18            max++;
19        }
20    }else if(n==2){ //For HCF
21        for(max; max>=1; max--){
22            if(a%max==0 && b%max==0){
23                break;
24            }
25        }
26        printf("HCF of %d & %d is: %d", a, b, max); //Printing HCF
27    }
28    else{ //For Inputting Value Other Then 1&2
29        printf("Invalid Operations!!!");
30    }
31 }
```

```
C:\Users\subha\Documents\c % + | x
Enter first no.: 123
Enter second no.: 128
Press 1 for LCM or Press 2 for HCF: 1
LCM of 123 & 128 is: 15744

Process exited after 15.58 seconds with return value 0
Press any key to continue . . . |
```

```

21.CountfrequencyOfAGivenNo.cpp
1 //COUNT FREQUENCY OF A GIVEN ARRAY
2 #include<stdio.h>
3 int main(){
4     int n,i,key,count=0;
5     printf("Enter the size of an array: ");      //Taking Size Of An Array
6     scanf("%d",&n);
7     int a[n];
8     for(i=0;i<n;i++){                         //Taking Value Of Elements
9         printf("Enter the value for index%d: ",i);
10        scanf("%d",&a[i]);
11    }
12    printf("Enter the element to count its frequency: ");
13    scanf("%d",&key);
14    for(i=0;i<n;i++){
15        if(a[i]==key){
16            count++;
17        }
18    }
19    printf("The element occur %d times!!",count);
20 }

```

```

C:\Users\subha\Documents\c % + | x
Enter the size of an array: 5
Enter the value for index0: 1
Enter the value for index1: 2
Enter the value for index2: 2
Enter the value for index3: 2
Enter the value for index4: 3
Enter the element to count its frequency: 2
The element occur 3 times!!

Process exited after 14.94 seconds with return value 0
Press any key to continue . . .

```

```

1 //PALINDROME NO.
2 #include<stdio.h>
3 int main(){
4     int n,temp,rem,sum=0;
5     printf("Enter a no. to check whether PALINDROME or not: ");
6     scanf("%d",&n);
7     temp=n;
8     while(n>0){
9         rem=n%10;
10        sum=(sum*10)+rem;
11        n=n/10;
12    }
13    n=temp;
14    if(n==sum)
15        printf(" PALINDROME NO.");
16    else
17        printf(" NOT A PALINFROME NO.");
18 }
19
20
21
22

```

```

C:\Users\subha\Documents\c % + | x
Enter a no. to check whether PALINDROME or not: 121
PALINDROME NO.

Process exited after 8.119 seconds with return value 0
Press any key to continue . . .

```

```

1 //FACTORIAL FINDING
2 #include <stdio.h>
3 int main(){
4     int n,fact=1;
5     printf("Enter a no to find its factorial: ");
6     scanf("%d",&n);
7     while(n>0){
8         fact=fact*n;
9         n=n-1;
10    }
11    printf(" %d", fact);
12 }
13
14
15
16
17
18
19
20
21
22

```

```

C:\Users\subha\Documents\c % + | x
Enter a no to find its factorial: 5
120

Process exited after 4.194 seconds with return value 0
Press any key to continue . . .

```

```

1 //TABLE USING FOR LOOP
2 #include <stdio.h>
3 int main(){
4     int n,i;
5     printf("Enter a num to find its table: ");
6     scanf("%d",&n);
7     for(i=1;i<=10;i++){
8         printf(" %d*%d=%d\n",n,i,n*i);
9     }
10
11

```

```

C:\Users\subha\Documents\c % + | x
4*1=4
4*2=8
4*3=12
4*4=16
4*5=20
4*6=24
4*7=28
4*8=32
4*9=36
4*10=40

Process exited after 2.827 seconds with return value 0
Press any key to continue . . .

```

```

1 //CHECKING NO. IS EVEN OR ODD
2 #include <stdio.h>
3 int main(){
4     int n, c=0, i;
5     printf("Enter the limit: ");
6     scanf("%d", &n);
7     for(i=1; i < n; i++){
8         if(i %2==0){
9             printf("\n%d", i);
10            c=c+i;
11        }
12    }
13    printf("\nThe sum of even no. till end is: %d", c);
14    return 0;
15 }

```

V/PROGRAM TO PRINT NATURAL NO. AND FIND ITS SUM

```

1 V/PROGRAM TO PRINT NATURAL NO. AND FIND ITS SUM
2 #include <stdio.h>
3 int main(){
4     int n,i,c=0;
5     printf("Enter the limit: ");
6     scanf("%d", &n);
7     for(i=1; i <=n; i++){
8         printf("%d\n", i);
9         c=c+i;
10    }
11    printf("\nThe sum no. till end is: %d", c);
12    return 0;
13 }

```

```

6
7
8
9
10
The sum no. till end is: 55
-----
Process exited after 3.448 seconds with return value 0
Press any key to continue . . .

```

//Program To Check A Triangle Is Equilateral, Isosceles Or Scalene Triangle

```

1 //Program To Check A Triangle Is Equilateral, Isosceles Or Scalene Triangle
2 #include<stdio.h>
3 int main(){
4     int a,b,c;
5     printf("Enter first side of triangle: ");
6     scanf("%d", &a);
7     printf("Enter second side of triangle: ");
8     scanf("%d", &b);
9     printf("Enter third side of triangle: ");
10    scanf("%d", &c);
11    if(a==b && b==c){
12        printf("\nTriangle is Equilateral");
13    }
14    else if(a==b||b==c||c==a){
15        printf("\nTriangle is Isosceles");
16    }
17    else{
18        printf("\nTriangle is Scalene");
19    }
20    return 0;
21 }

```

```

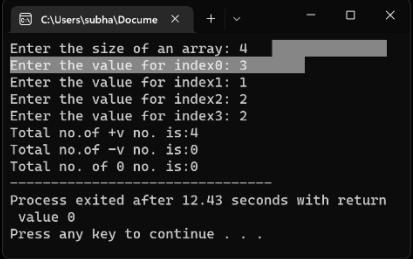
Enter third side of triangle: 4
Triangle is Scalene
-----
Process exited after 9.135 seconds with return value
0
Press any key to continue . . .

```

```

14.Program io\count+ve,-ve\elements.cpp
1 // COUNT +V , -V, Zero
2 #include<stdio.h>
3 int main(){
4     int n,i,count=0,flag=0,red=0;
5     printf("Enter the size of an array: ");      //Taking Size Of An Array
6     scanf("%d",&n);
7     int a[n];
8     for(i=0;i<n;i++){                         //Taking Value Of Elements
9         printf("Enter the value for index%d: ",i);
10        scanf("%d",&a[i]);
11    }
12    for(i=0;i<n;i++){
13        if(a[i]>0){
14            count++;
15        }
16        else if(a[i]<0){
17            flag++;
18        }
19        else {
20            red++;
21        }
22    }
23    printf("Total no.of +v no. is:%d\nTotal no.of -v no. is:%d\nTotal no. of 0 no. is:%d",count,flag,red);
24 } public int __cdecl printf(const char * __restrict__ __format,...)

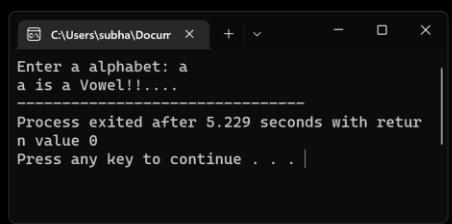
```



```

13.Program ToCheckVowelOrConsonants.cpp
1 V/Program To Check Vowel Or Consonants Using Switch Case
2 #include<stdio.h>
3 int main(){
4     char ch;
5     printf("Enter a alphabet: ");
6     scanf("%c",&ch);
7     if((ch>='A' && ch<='Z')||(ch>='a' && ch<='z')){
8         switch(ch){
9             case 'A':
10                 case 'E':
11                     case 'I':
12                         case 'O':
13                             case 'U':
14                             case 'a':
15                                 case 'e':
16                                     case 'i':
17                                         case 'o':
18                                             case 'u':
19                                                 printf("%c is a Vowel!!....",ch);
20                                                 break;
21                                             default:
22                                                 printf("%c is a Consonant!!....",ch);
23                                         }
24         }
25     else
26         printf("\n %c is not an alphabet!! ",ch);
27     return 0;
28 }

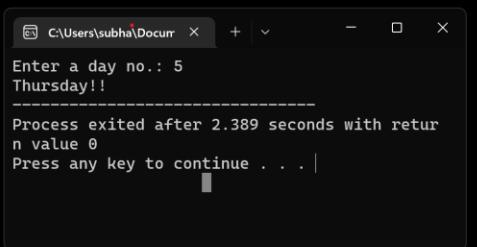
```



```

1 V/Program To Create Days Of Week Using Switch Case
2 #include<stdio.h>
3 int main(){
4     int a;
5     printf("Enter a day no.: ");
6     scanf("%d",&a);
7     switch(a){
8         case 1:printf("Sunday!!");
9             break;
10        case 2:printf("Monday!!");
11            break;
12        case 3:printf("Tuesday!!");
13            break;
14        case 4:printf("Wednesday!!");
15            break;
16        case 5:printf("Thursday!!");
17            break;
18        case 6:printf("Friday!!");
19            break;
20        case 7:printf("Saturday!!");
21            break;
22        default :printf("Invalid Day!!");
23            break;
24     }
25     return 0;
26 }

```



12(b).ProgramToCreateDaysOfWeeksUsingSwitchCase.cpp

```

1 //Program To Create Days Of Week Using Switch Case
2 #include<stdio.h>
3 int main(){
4     int a;
5     printf("Enter a day no.: ");
6     scanf("%d", &a);
7     switch(a){
8         case 1:printf("Sunday!!!");
9             break;
10        case 2:printf("Monday!!!");
11            break;
12        case 3:printf("Tuesday!!!");
13            break;
14        case 4:printf("Wednesday!!!");
15            break;
16        case 5:printf("Thursday!!!");
17            break;
18        case 6:printf("Friday!!!");
19            break;
20        case 7:printf("Saturday!!!");
21            break;
22        default :printf("Invalid Day!!!");
23            break;
24    }
25    return 0;
26 }
```

C:\Users\subha\Documents\c % + - x

Enter a day no.: 7
Saturday!

Process exited after 5.468 seconds with return value 0
Press any key to continue . . . |

11.CalculateTotalElectricityBill.cpp

```

1 //Calculate Electricity Bill
2 #include<stdio.h>
3 int main(){
4     int unit;
5     float total;
6     printf("Enter your electricity unit consumption: ");
7     scanf("%d", &unit);
8     if(unit <= 50)
9         total=unit*0.5;
10    else if(unit <=150)
11        total=(50*0.5)+((unit-50)*0.75);
12    else if(unit <=250)
13        total=(50*0.5)+(100*0.75)+(100*1.2)+((unit-250)*1.5);
14    printf("Your total bill is: Rs.%f",total);
15    return 0;
16 }
```

C:\Users\subha\Documents\c % + - x

Enter your electricity unit consumption: 73
Your total bill is: Rs.42.250000

Process exited after 15.09 seconds with return value 0
Press any key to continue . . . |

10.ProgramToCountAlphabetsDigits_SpecialCharacters.cpp

```

1 //Program To Count Alphabet, Digits & Special Character Using Conditional Operator
2 #include<stdio.h>
3 int main(){
4     char str[20];
5     int i,c1=0,c2=0,c3=0,c4=0;
6     printf("Enter string: ");
7     gets(str);
8     for(i=0;str[i]!='\0';i++){
9         if(str[i]>='A' && str[i]<='Z')
10             c1++;
11         else if(str[i]>='a' && str[i]<='z')
12             c2++;
13         else if(str[i]>='0' && str[i]<='9')
14             c3++;
15         else
16             c4++;
17     }
18     printf("Capital alphabets=%d\nSmall alphabets=%d\nDigits=%d\nSpecial character=%d", c1, c2, c3, c4);
19     return 0;
20 }
```

C:\Users\subha\Documents\c % + - x

Enter string: @I love you 3000#ironman
Capital alphabets=1
Small alphabets=14
Digits=4
Special character=5

Process exited after 59.69 seconds with return value 0
Press any key to continue . . . |

```
9.ProgramToFindMaxNo.UsingTernaryOperator.cpp
1 //Program To Find Max No. Using ternary Operator
2 #include<stdio.h>
3 int main(){
4     int a, b, c, max;
5     printf("Enter first number: ");
6     scanf("%d", &a);
7     printf("Enter second number: ");
8     scanf("%d", &b);
9     printf("Enter third number: ");
10    scanf("%d", &c);
11    max=(a>b && a>c)?(a):((b>c)?(b):(c));
12    printf("Max No. is: %d", max);
13    return 0;
14 }
```

```
Enter first number: 63
Enter second number: 87
Enter third number: 72
Max No. is: 87
-----
Process exited after 25.24 seconds with return value 0
Press any key to continue . . . |
```

```
8(b).SwapTwoNo.ByUsingThirdVariable.cpp
1 //Program To Swap Two No. By Using Third Variable
2 #include<stdio.h>
3 int main(){
4     int a, b, temp;
5     printf("Enter first number value: ");
6     scanf("%d", &a);
7     printf("Enter second number value: ");
8     scanf("%d", &b);
9     printf("a=%d\nb=%d", a, b);
10    temp=a;
11    a=b;
12    b=temp;
13    printf("\nAfter Swapping!!.....");
14    printf("\na=%d\nb=%d", a, b);
15    return 0;
16 }
```

```
Enter first number value: 63
Enter second number value: 64
a=63
b=64
After Swapping!!.....
a=64
b=63
-----
Process exited after 11.36 seconds with return value 0
Press any key to continue . . . |
```

```
8(a).SwapTwoNo.WithoutUsingThirdVariable.cpp
1 //Program To Swap Two No. Without Using Third Variable
2 #include<stdio.h>
3 int main(){
4     int a, b;
5     printf("Enter first number value: ");
6     scanf("%d", &a);
7     printf("Enter second number value: ");
8     scanf("%d", &b);
9     printf("a=%d\nb=%d", a, b);
10    a=a+b;
11    b=a-b;
12    a=a-b;
13    printf("\nAfter Swapping!!.....");
14    printf("\na=%d\nb=%d", a, b);
15    return 0;
16 }
```

```
Enter first number value: 2
Enter second number value: 3
a=2
b=3
After Swapping!!.....
a=3
b=2
-----
Process exited after 6.037 seconds with return value 0
Press any key to continue . . . |
```

```
7(b).ProgramToFindLSB_MSB.cpp
1 //Program To Check MSB
2 #include<stdio.h>
3 #define BITS sizeof(int)*8
4 int main(){
5     int num, msb;
6     printf("Enter the number: ");
7     scanf("%d", &num);
8     msb=1<<(BITS-1);
9     if(num & 1)
10         printf("MSB of %d is set(1).", num);
11     else
12         printf("MSB of %d is unset(0).", num);
13     return 0;
14 }
15
```

Enter the number: 5
MSB of 5 is set(1).

Process exited after 3.013 seconds with return value 0
Press any key to continue . . . |

```
7(a).ProgramToFindLSB_MSB.cpp
1 //Program To Check LSB
2 #include<stdio.h>
3 int main(){
4     int num;
5     printf("Enter the number: ");
6     scanf("%d", &num);
7     if(num & 1)
8         printf("LSB of %d is set(1).", num);
9     else
10        printf("LSB of %d is unset(0).", num);
11    return 0;
12 }
13
```

Enter the number: 10
LSB of 10 is unset(0).

Process exited after 16.66 seconds with return value 0
Press any key to continue . . . |

```
5.Power_SqrtOfGivenNum.cpp 6.ProgramToFindTotalAvgPercentage_Grade.cpp
1 //Program To Find Total, Average, Percentage & Grade Of Five Subjects Marks
2 #include<stdio.h>
3 int main(){
4     int a,b,c,d,e,total,avg,p;
5     printf("Enter marks of first subject: ");
6     scanf("%d", &a);
7     printf("Enter marks of second subject: ");
8     scanf("%d", &b);
9     printf("Enter marks of third subject: ");
10    scanf("%d", &c);
11    printf("Enter marks of fourth subject: ");
12    scanf("%d", &d);
13    printf("Enter marks of fifth subject: ");
14    scanf("%d", &e);
15    total=a+b+c+d+e;
16    avg=total/5;
17    p=total/5;
18    printf("Total=%d\nAverage=%d\nPercentage=%d%", total, avg, p, 37);
19    if(p<100 && p>=90){
20        printf("Grade=A!!");
21    }
22    else if(p<89 && p>=80){
23        printf("Grade=B!!");
24    }
25    else if(p<=79 && p>=60){
26        printf("Grade=C!!");
27    }
28    else if(p<59 && p>=40){
29        printf("Grade= D!!");
30    }
31    else if(p<39 && p>=27){
32        printf("Grade=E!!");
33    }
34    else
35        printf("Better Luck Next Time!!");
36    return 0;
37 }
38
39
```

Enter marks of first subject: 72
Enter marks of second subject: 61
Enter marks of third subject: 56
Enter marks of fourth subject: 90
Enter marks of fifth subject: 76
Total=355
Average=71
Percentage=71%Grade=C!!

Process exited after 93.21 seconds with return value 0
Press any key to continue . . . |

```
1 //Program To Find Power & Square Root Of Any No.
2 #include<stdio.h>
3 #include<math.h>
4 int main(){
5     int a,expo,c,i,d;
6     printf("Enter a no.: ");
7     scanf("%d",&a);
8     d=sqrt(a);
9     printf("The square root of given no. is: %d",d);
10    printf("\nEnter a exponential power for finding power of given num: ");
11    scanf("%d",&expo);
12    for(i=0;i<expo;i++){
13        c=a*a;
14    }
15    printf("The power of given no. is: %d",c);
16    return 0;
17 }
```

```
-----  
- Errors: 0  
- Warnings: 0
```

```
C:\Users\subha\Documents\c  
Enter a no.: 25
The square root of given no. is: 5
Enter a exponential power for finding power of given num
: 4
The power of given no. is: 625
-----  
Process exited after 11.2 seconds with return value 0
Press any key to continue . . . |
```

```
1 //Program To Convert Days Into Year Weeks & Days
2 #include<stdio.h>
3 int main(){
4     int a,years,weeks,days;
5     printf("Enter the total days: ");
6     scanf("%d",&a);
7     years=a/365;
8     weeks=(a%365)/7;
9     days=a-((years*365)+(weeks*7));
10    printf("%d = %d years, %d weeks, %d days\n",a,years,weeks,days);
11 }
12
```

```
C:\Users\subha\Documents\c  
Enter the total days: 400
400 = 1 years, 5 weeks, 0 days
-----  
Process exited after 27.33 seconds with return value 0
Press any key to continue . . . |
```

```

1 //Program To Find Third Angle Of A Triangle
2 #include<stdio.h>
3 int main(){
4     int a,b,c;
5     printf("Enter First Angle: ");
6     scanf("%d",&a);
7     printf("Enter Second Angle: ");
8     scanf("%d",&b);
9     c=180-a-b;           //Sum Of all angle of triangle is 180.
10    printf("The third angle is: %d",c);
11    return 0;
12 }


```

```

C:\Users\subha\Documents\c x + - □ ×
Enter First Angle: 30
Enter Second Angle: 60
The third angle is: 90
-----
Process exited after 27.62 seconds with return value
0
Press any key to continue . . .

```



```

1.PerformAllArithmeticOperations.cpp 2.AreaOfTriangle.cpp
1 //Program To Find Area Of A Triangle When Height And Base Are Given
2 #include<stdio.h>
3 int main(){
4     float a,b,area;
5     printf("Enter Height Of Triangle: ");
6     scanf("%f",&a);
7     printf("Enter Base Of Triangle: ");
8     scanf("%f",&b);
9     area=0.5*a*b;
10    printf("The Area of triangle is: %f unit^2",area);
11    return 0;
12 }


```

```

C:\Users\subha\Documents\c x + - □ ×
Enter Height Of Triangle: 7
Enter Base Of Triangle: 4
The Area of triangle is: 14.000000 unit^2
-----
Process exited after 5.575 seconds with return value
0
Press any key to continue . . .

```

PATTERNS

```

1 //Program To Print Square Star Pattern
2 #include<stdio.h>
3 int main(){
4     int n,i,j;
5     printf("Enter the no. of rows: ");           //Taking Limit Input
6     scanf("%d",&n);
7     for(i=1;i <=n; i++){                      //For Rows
8         for(j=1;j <=n; j++){                  //For Columns
9             printf("* ");
10        }
11        printf("\n");                         //For New Line
12    }
13    return 0;
14 }


```

```

C:\Users\subha\OneDrive\Desktop\c x + - □ ×
Enter the no. of rows: 5
* * * *
* * * *
* * * *
* * * *
* * * *

-----
Process exited after 9.7 seconds with return value
0
Press any key to continue . . .

```

```
1 //Program To Print Hollow Square Star Pattern
2 #include<stdio.h>
3 int main(){
4     int n,i,j;
5     printf("Enter the no. of rows: ");           //Taking Limit Input
6     scanf("%d",&n);
7     for(i=1;i<=n;i++){                         //For Rows
8         for(j=1;j<=n;j++){                     //For Columns
9             if(i==1 || i==n || j==1 || j==n){
10                 printf(" *");
11             }
12             else{
13                 printf("  ");
14             }
15         }
16         printf("\n");
17     }
18 }
```

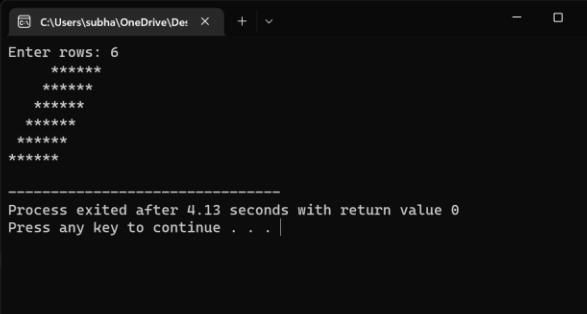
```
Enter the no. of rows: 5
*****
*   *
*   *
*   *
*****
-----
Process exited after 29.32 seconds with return value
0
Press any key to continue . . . |
```



```
1 //Program To Print Hollow Diagonal Square Star Pattern
2 #include<stdio.h>
3 int main(){
4     int n,i,j;
5     printf("Enter the no. of rows: ");           //Taking Limit Input
6     scanf("%d",&n);
7     for(i=1;i<=n;i++){                         //For Rows
8         for(j=1;j<=n;j++){                     //For Columns
9             if(i==1 || i==n || j==1 || j==n || i==j || j==n+i-1){
10                 printf(" *");
11             }
12             else{
13                 printf("  ");
14             }
15         }
16         printf("\n");
17     }
18 }
```

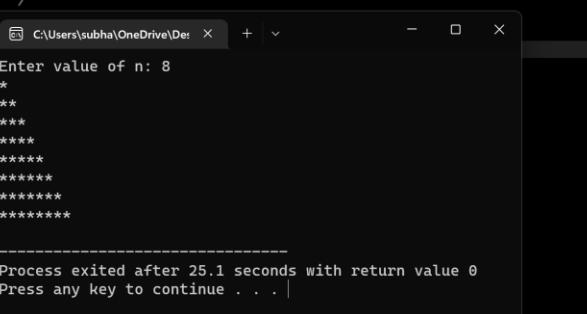
```
Enter the no. of rows: 9
*****
**   *
* *   *
*   * *
*   * *
*   * *
*   ** 
*****
-----
Process exited after 5.268 seconds with return value
0
Press any key to continue . . . |
```

```
1 //Program To Print Rhombus Star Pattern
2 #include <stdio.h>
3 int main(){
4     int i, j, rows;
5     /* Input number of rows from user */
6     printf("Enter rows: ");
7     scanf("%d", &rows);
8     for(i = 1; i <=rows; i++){
9         /* Print trailing spaces */
10        for(j = 1; j <=rows - i; j++)
11        {
12            printf(" ");
13        }
14        /* Print stars after spaces */
15        for(j = 1; j <=rows; j++)
16        {
17            printf("*");
18        }
19        /* Move to the next line */
20        printf("\n");
21    }
22    return 0;
23 }
```



```
Enter rows: 6
*****
*****
*****
*****
*****
-----
Process exited after 4.13 seconds with return value 0
Press any key to continue . . .
```

```
1 //Program To Print Right Triangle Star Pattern
2 #include <stdio.h>
3 int main(){
4     int i, j, n;
5     printf("Enter value of n: ");           // Input number of rows from user
6     scanf("%d", &n);
7     for(i = 1; i <=n; i++){
8         for(j = 1; j <=i; j++) {          /* Print i number of stars */
9             printf("*");
10        }
11        printf("\n");                  /* Move to next line */
12    }
13    return 0;
14 }
```



```
Enter value of n: 8
*
**
***
****
*****
*****
*****
-----
Process exited after 25.1 seconds with return value 0
Press any key to continue . . .
```