

C Programs

Programs For Beginners :

1. Write a program to add two numbers
2. Write a program to check if the number is even or odd
3. Write a program to calculate simple interest.
4. Write a program to calculate the marks of four subject and percentage.
5. Write a program to check if the given year is leap year or not.
6. Write a program to find out the grade using if/else if statement.
7. Write a program to find out the greater number between two numbers.
8. Write a program to read base and height of a triangle and calculate the area.
9. Write a program to read marks obtained and find maximum marks of a student and its percentage.
10. Write a program to print even numbers up to n.
11. Write a program to print odd numbers up to n.
12. Write a program to print table of a number.

Write a program to add two numbers

```
// C program to add two numbers
#include <stdio.h>

int main()
{
    int A, B, sum = 0;

    // Ask user to enter the two numbers
    printf("Enter two numbers A and B : \n");

    // Read two numbers given by the user
    scanf("%d %d", &A, &B);

    // Calculate the addition of A and B
    // using '+' operator
    sum = A + B;

    // Print the sum
    printf("Sum of A and B is: %d", sum);

    return 0;
}
```

```
C:\Users\SABA\candcppnew>sumoftwonumbers_1
Enter two numbers A and B :
678
102
Sum of A and B is: 780
C:\Users\SABA\candcppnew>
```

Write a program to check if the number is even or odd

```
#include <stdio.h>
int main() {
    int num;
    printf("Enter an integer: ");
    scanf("%d", &num);

    // true if num is perfectly divisible by 2
    if(num % 2 == 0)
        printf("%d is even.", num);
    else
        printf("%d is odd.", num);

    return 0;
}
```

```
C:\Users\SABA\candcppnew>gcc evenodd_2.c
C:\Users\SABA\candcppnew>evenodd_2
Enter an integer: 89
89 is odd.
C:\Users\SABA\candcppnew>_
```

Write a program to calculate simple interest.

```
#include <stdio.h>

int main()
{
    float principle, rate, s_int;
    int time;

    printf("Enter Principle Amount, Rate %% per Annum and Time\n");
    scanf ("%f %f %d", &principle, &rate, &time);

    s_int = (principle * rate * time)/ 100.0;

    printf ("Principle Amount = %5.2f\n", principle);
    printf ("Rate %% per Annum    = %5.2f\n", rate);
}
```

```
printf ("Time    = %d years\n", time);  
printf ("Simple Interest = %5.2f\n", s_int);  
}
```

```
C:\Users\SABA\candcppnew>gcc simpleinterest.c  
  
C:\Users\SABA\candcppnew>simpleinterest  
Enter Principle Amount, Rate % per Annum and Time  
100000  
5  
2  
Principle Amount = 100000.00  
Rate % per Annum   = 5.00  
Time    = 2 years  
Simple Interest    = 10000.00
```

Write a program to calculate the marks of four subject and percentage

```
#include<stdio.h>  
#include<conio.h>  
  
void main()  
{  
    int mark[4], i;  
    float sum=0, perc, avg;  
    printf("Enter marks obtained in Physics, Chemistry, Maths, English :");  
    for(i=0; i<4; i++)  
    {  
        scanf("%d",&mark[i]);  
        sum=sum+mark[i];  
    }  
    avg=sum/4;  
    perc=(sum/400)*100;  
    printf("Total Marks: %.2f",sum);  
    printf("\nAverage Marks: %.2f",avg);  
    printf("\nPercentage: %.1f%%",perc);  
    getch();  
}
```

```
C:\Users\SABA\candcppnew>marks
Enter marks obtained in Physics, Chemistry, Maths, English :
78
67
89
90
Total Marks: 324.00
Average Marks: 81.00
Percentage: 81.0%
C:\Users\SABA\candcppnew>_
```

Write a program to check if the given year is leap year or not.

```
#include <stdio.h>
int main() {
    int year;
    printf("Enter a year: ");
    scanf("%d", &year);

    // leap year if perfectly divisible by 400
    if (year % 400 == 0) {
        printf("%d is a leap year.", year);
    }
    // not a leap year if divisible by 100
    // but not divisible by 400
    else if (year % 100 == 0) {
        printf("%d is not a leap year.", year);
    }
    // leap year if not divisible by 100
    // but divisible by 4
    else if (year % 4 == 0) {
        printf("%d is a leap year.", year);
    }
    // all other years are not leap years
    else {
        printf("%d is not a leap year.", year);
    }

    return 0;
}
```

```
C:\Users\SABA\candcppnew>gcc leapyear.c

C:\Users\SABA\candcppnew>leapyear
Enter a year: 1700
1700 is not a leap year.
C:\Users\SABA\candcppnew>leapyear
Enter a year: 2000
2000 is a leap year.
C:\Users\SABA\candcppnew>leapyear
Enter a year: 1023
1023 is not a leap year.
```

Write a program to find out the grade using if/else if statement

```
#include<stdio.h>
void main()
{
    int marks;
    printf("Enter your marks ");
    scanf("%d",&marks);
    if(marks<0 || marks>100)
    {
        printf("Wrong Entry");
    }
    else if(marks<50)
    {
        printf("Grade F");
    }
    else if(marks>=50 && marks<60)
    {
        printf("Grade D");
    }
    else if(marks>=60 && marks<70)
    {
        printf("Grade C");
    }
    else if(marks>=70 && marks<80)
    {
        printf("Grade B");
    }
    else if(marks>=80 && marks<90)
    {
        printf("Grade A");
    }
    else
    {
        printf("Grade A+");
    }
}
```

```
C:\Users\SABA\candcppnew>gcc findgrade.c

C:\Users\SABA\candcppnew>findgrade
Enter your marks 89
Grade A
C:\Users\SABA\candcppnew>findgrade
Enter your marks 50
Grade D
C:\Users\SABA\candcppnew>findgrade
Enter your marks 99
Grade A+
C:\Users\SABA\candcppnew>_
```

Write a program to find out the greater number between two numbers

```
#include <stdio.h>
int main ()
{
    int num1, num2, temp;
    printf("Enter first number: ");
    scanf("%d", &num1);
    printf("Enter second number: ");
    scanf("%d", &num2);
    if(num1 == num2)
        printf("Both are Equal\n");
    else{
        temp = num1 > num2 ? num1 : num2;
        printf("%d is bigger",temp);
    }

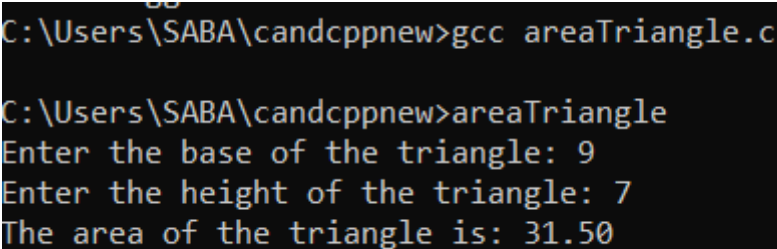
    return 0;
}
```

```
C:\Users\SABA\candcppnew>gcc comparenum.c

C:\Users\SABA\candcppnew>comparenum
Enter first number: 67
Enter second number: 45
67 is bigger
C:\Users\SABA\candcppnew>
```

Write a program to read base and height of a triangle and calculate the area.

```
#include <stdio.h>
int main() {
    float base, height, area;
    printf("Enter the base of the triangle: ");
    scanf("%f", &base);
    printf("Enter the height of the triangle: ");
    scanf("%f", &height);
    area = (base * height) / 2;
    printf("The area of the triangle is: %.2f\n", area);
    return 0;
}
```



```
C:\Users\SABA\candcppnew>gcc areaTriangle.c
C:\Users\SABA\candcppnew>areaTriangle
Enter the base of the triangle: 9
Enter the height of the triangle: 7
The area of the triangle is: 31.50
```

Write a program to read marks obtained and find maximum marks of a student and its percentage.

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

void main()
{
    int mark[4], i;
    float sum=0, perc, avg;
    printf("Enter marks obtained in Physics, Chemistry, Maths, English :");
    for(i=0; i<4; i++)
    {
        scanf("%d",&mark[i]);
        sum=sum+mark[i];
    }

    if (mark[0]>mark[1] && mark[0]>mark[2] && mark[0]>mark[3]){printf(" Highest
marks %d",mark[0]); }
    else if (mark[1]>mark[0] && mark[1]>mark[2] && mark[1]>mark[3]){printf("
Highest marks %d",mark[1]); }
    else if (mark[2]>mark[0] && mark[2]>mark[1] && mark[2]>mark[3]){printf("
Highest marks %d",mark[2]); }
    else {printf("Highest marks",mark[3]); }
    avg=sum/4;
    perc=(sum/400)*100;
    printf("\nTotal Marks: %.2f",sum);
    printf("\nAverage Marks: %.2f",avg);
}
```

```
printf("\nPercentage: %.1f%%",perc);
getch();
}
```

```
C:\Users\SABA\candcppnew>gcc markshighest.c

C:\Users\SABA\candcppnew>markshighest
Enter marks obtained in Physics, Chemistry, Maths, English :56
67
99
58
: Highest marks 99
Total Marks: 280.00
Average Marks: 70.00
Percentage: 70.0%
C:\Users\SABA\candcppnew>_
```

Write a program to print even numbers up to n.

```
/**
 * C program to print all even numbers from 1 to n
 */

#include <stdio.h>

int main()
{
    int i, n;

    /* Input upper limit of even number from user */
    printf("Print all even numbers till: ");
    scanf("%d", &n);

    printf("Even numbers from 1 to %d are: \n", n);

    /*
     * Start loop counter from 1, increment it by 1,
     * will iterate till n
     */
    for(i=1; i<=n; i++)
    {
        /* Check even condition before printing */
        if(i%2 == 0)
        {
            printf("%d\n", i);
        }
    }

    return 0;
}
```



```
C:\Users\SABA\candcppnew>gcc evennum.c

C:\Users\SABA\candcppnew>evennum
Print all even numbers till: 20
Even numbers from 1 to 20 are:
2
4
6
8
10
12
14
16
18
20

C:\Users\SABA\candcppnew>
```

Write a program to print odd numbers up to n.

```
#include <stdio.h>

int main()
{
    int i, n;

    /* Input upper limit of odd numbers from user */
    printf("Print all odd numbers till: ");
    scanf("%d", &n);

    printf("Odd numbers from 1 to %d are: \n", n);

    /*
     * Start loop counter from 1, increment it by 1,
     * will iterate till n
     */
    for(i=1; i<=n; i++)
    {
        /* Check odd condition before printing */
        if(i%2 != 0)
        {
            printf("%d\n", i);
        }
    }

    return 0;
}
```

```
C:\Users\SABA\candcppnew>gcc oddnums.c

C:\Users\SABA\candcppnew>oddnums
Print all odd numbers till: 15
Odd numbers from 1 to 15 are:
1
3
5
7
9
11
13
15

C:\Users\SABA\candcppnew>
```

Write a program to print table of a number.

```
#include <stdio.h>
int main() {
    int n;
    printf("Enter an integer: ");
    scanf("%d", &n);

    for (int i = 1; i <= 10; ++i) {
        printf("%d * %d = %d \n", n, i, n * i);
    }
    return 0;
}
```

```
C:\Users\SABA\candcppnew>gcc tableofnum.c

C:\Users\SABA\candcppnew>tableofnum
Enter an integer: 6
6 * 1 = 6
6 * 2 = 12
6 * 3 = 18
6 * 4 = 24
6 * 5 = 30
6 * 6 = 36
6 * 7 = 42
6 * 8 = 48
6 * 9 = 54
6 * 10 = 60

C:\Users\SABA\candcppnew>
```