

1.Arithmetic Operations

```
#include <stdio.h>
int main() {
    int a, b;
    printf("Enter two integers: ");
    scanf("%d %d", &a, &b);
    printf("Addition: %d\n", a + b);
    printf("Subtraction: %d\n", a - b);
    printf("Multiplication: %d\n", a * b);
    printf("Division: %f\n", (float)a / (float)b);
    printf("Modulus: %d\n", a % b);
    return 0;
}
```

2.Average of 5 Numbers

```
#include <stdio.h>
int main() {
    int a, b, c, d, e; printf("Enter five integers: ");
    scanf("%d %d %d %d %d", &a, &b, &c, &d, &e);
    float average = (a + b + c + d + e) / 5.0;
    printf("Average: %f\n", average);
    return 0;
}
```

3.Area and Perimeter of rectangle

```
#include <stdio.h>
int main() {
    int l, b;
    printf("Enter the length and breadth:\n");
    scanf("%d", &l);
    scanf("%d", &b);
    int a = l * b;
    int p = 2 * (l + b);
    printf("Area = %d\n", a);
    printf("Perimeter = %d\n", p);

    return 0;
}
```

4.Compound interest

```
#include <stdio.h>
#include <math.h>
int main() {
    float p, rate, time;
    printf("Enter principal, rate of interest, and time period: ");
    scanf("%f %f %f", &p, &rate, &time);

    float amount = p * pow((1 + rate / 100), time);
    printf("Compound Interest: %f\n", amount - p);

    return 0;
}
```

5. Temperature Conversion

```
#include <stdio.h>
int main() {
    float c;
    printf("Enter temperature in Celsius: ");
    scanf("%f", &c);

    float f = (9.0 / 5) * c + 32;
    printf("Temperature in Fahrenheit: %f\n", f);

    return 0;
}
```

6.Swapping

```
#include <stdio.h>
int main() {
    int a, b;
    printf("Enter two integers: ");
    scanf("%d %d", &a, &b);
    a = a + b;
    b = a - b;
    a = a - b;
    printf("After swapping: a = %d, b = %d\n", a, b);
    return 0;
}
```

7.Sum of Digits

```
#include <stdio.h>
int main() {
    int num, sum = 0;
    printf("Enter a three-digit number: ");
    scanf("%d", &num);
    while (num != 0) {
        sum += num % 10;
        num /= 10;
    }
    printf("Sum of digits: %d\n", sum);
    return 0;
}
```

8.Hypotenuse

```
#include <stdio.h>
#include <math.h>
int main() {
    float a, b;
    printf("Enter the lengths of the two sides: ");
    scanf("%f %f", &a, &b);
    float hypo = sqrt(a * a + b * b);
    printf("Hypotenuse: %f\n", hypo);
    return 0;
}
```

9.Area of a circle

```
#include <stdio.h>
#define PI 3.14
int main() {
    float r;
    printf("Enter the radius of the circle: ");
    scanf("%f", &r);
    printf("Area: %f\n", PI * r * r);
    printf("Circumference: %f\n", 2 * PI * r);
    return 0;
}
```

10. Profit or loss

```
#include <stdio.h>
int main() {
    float cp, sp;
    printf("Enter cost price and selling price: ");
    scanf("%f %f", &cp, &sp);
    if (sp > cp) {
        printf("Profit: %f\n", sp - cp);
    } else if (sp < cp) {
        printf("Loss: %f\n", cp - sp);
    } else {
        printf("No profit, no loss.\n");
    }

    return 0;
}
```

11. Greatest number

```
#include <stdio.h>
int main() {
    int a, b;
    printf("Enter two integers: ");
    scanf("%d %d", &a, &b);
    if (a == b)
        printf("The numbers are equal\n");
    else if (a > b)
        printf("%d is greater than %d\n", a, b);
    else
        printf("%d is less than %d\n", a, b);

    return 0;
}
```

12. Vote

```
#include <stdio.h>
int main() {
    int age;
    printf("Enter age: ");
    scanf("%d", &age);
    if (age >= 18)
        printf("Eligible to vote.\n");
    else
        printf("Not eligible to vote.\n");

    return 0;
}
```

13.Sides of a triangle

```
#include <stdio.h>
int main() {
    int a, b, c;
    printf("Enter three sides of a triangle: ");
    scanf("%d %d %d", &a, &b, &c);
    if (a + b > c && a + c > b && b + c > a)
        printf("The triangle is valid.\n");
    else
        printf("The triangle is not valid.\n");
    return 0;
}
```

14.Mark comparison

```
#include <stdio.h>
int main() {
    int marks1, marks2;
    printf("Enter marks of two students: ");
    scanf("%d %d", &marks1, &marks2);
    if (marks1 > marks2)
        printf("Student 1 scored higher.\n");
    else if (marks1 < marks2)
        printf("Student 2 scored higher.\n");
    else
        printf("Both students scored the same.\n");
    return 0;
}
```

15.Largest

```
#include <stdio.h>
int main() {
    int a, b, c;
    printf("Enter three integers: ");
    scanf("%d %d %d", &a, &b, &c);
    if (a >= b && a >= c)
        printf("The largest number is %d.\n", a);
    else if (b >= a && b >= c)
        printf("The largest number is %d.\n", b);
    else
        printf("The largest number is %d.\n", c);
    return 0;
}
```

16.Leap Year

```
#include <stdio.h>
int main() {
    int year;
    printf("Enter a year: ");
    scanf("%d", &year);
    if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0))
        printf("It is a leap year.\n");
    else
        printf("It is not a leap year.\n");
    return 0;
}
```

17.Temperature

```
#include <stdio.h>
int main() {
    float temp, limit = 40.0;
    printf("Enter temperature: ");
    scanf("%f", &temp);
    if (temp > limit)
        printf("Alert: Temperature exceeds the threshold!\n");
    else
        printf("Temperature is within safe limits.\n");
    return 0;
}
```

18.Password

```
#include <stdio.h>
int main() {
    int length;
    printf("Enter password length: ");
    scanf("%d", &length);
    if (length >= 8)
        printf("Password is strong.\n");
    else
        printf("Password is weak. It must be at least 8 characters long.\n");
    return 0;
}
```

19.Divisibility

```
#include <stdio.h>
int main() {
    int num1, num2;
    printf("Enter two integers ");
    scanf("%d %d", &num1, &num2);
    if ( num1 % num2 == 0)
        printf("%d is divisible by %d\n", num1, num2);
    else
        printf("%d is not divisible by %d\n", num1, num2);
    return 0;
}
```

20.Admission

```
#include <stdio.h>
int main() {
    int age, marks;
    printf("Enter age and marks: ");
    scanf("%d %d", &age, &marks);
    if (age >= 18 && marks >= 50)
        printf("The student meets the admission criteria\n");
    else
        printf("The student does not meet the admission criteria\n");
    return 0;
}
```

Odd or even without % operator

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

```
int main()
{
    int a=28;
    if(a&1){
        printf("odd");
    }
    else{
        printf("even");
    }

    return 0;
}
```

Distance using Unsigned char

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

```
int main()
{
    unsigned char ac=50
    unsigned char cb=110
    unsigned char ab=ac+cb
    printf("%d",ab)

    return 0;
}
```


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