

### 11. Program to accept three numbers from user and print them in ascending and descending order.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a,b,c;
    clrscr();
    printf("Enter numbers:");
    scanf("%d %d %d",&a,&b,&c);

    if((a>=b)&&(a>=c))
    {
        if(b>=c)
        {
            printf("\nDescending : %d %d %d",a,b,c);
            printf("\nAscending : %d %d %d",c,b,a);
        }
        else
        {
            printf("\nDescending : %d %d %d",a,c,b);
            printf("\nAscending : %d %d %d",b,c,a);
        }
    }
    else if((b>=a)&&(b>=c))
    {
        if(a>=c)
        {
            printf("\nDescending : %d %d %d",b,a,c);
        }
    }
    else
    {
        if(b>=a)
        {
            printf("\nDescending : %d %d %d",c,b,a);
            printf("\nAscending : %d %d %d",a,b,c);
        }
        else
        {
            printf("\nDescending : %d %d %d",c,a,b);
            printf("\nAscending : %d %d %d",b,a,c);
        }
    }
    getch();
}
```

### 12. Program to find the roots of a quadratic equation.

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

void main()
{
    float a, b, c, discriminant, real;
    double r1, r2, imag;

    printf("Enter coefficients a, b and c: ");
    scanf("%f%f%f", &a, &b, &c);

    discriminant = b * b - 4 * a * c;
```

```

if (discriminant > 0)
{
    r1 = (-b + sqrt(discriminant)) / (2 * a);
    r2 = (-b - sqrt(discriminant)) / (2 * a);
    printf("Roots are: %.2f and %.2f", r1, r2);
}
else if (discriminant == 0)
{
    r1 = r2 = -b / (2 * a);
    printf("Roots are: %.2f and %.2f", r1, r2);
}
else
{
    real = -b / (2 * a);
    imag = sqrt(-discriminant) / (2 * a);
    printf("Roots : %.2f+%.2fi and %.2f-%.2fi", real, imag, real, imag);
}
getch();
}

```

### 13. Program to accept roll number and marks of three subjects from user and print total marks, average and grade.

```

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

void main()
{
    int RollNum, m1, m2, m3, total;
    float avg;
    clrscr();

    printf("Enter Roll Number : ");
    scanf("%d",&RollNum);

    printf("Enter marks for three subjects : ");
    scanf("%d %d %d", &m1, &m2, &m3);

    total = m1 + m2 + m3;
    avg = total / 3.0;

    printf("\nTotal is : %d", total);
    printf("\nAverage is : %5.2f", avg);

    if(avg>80)
        printf("\nGrade : A");
    else if((avg>60)&&(avg<=80))
        printf("\nGrade : B");
    else if((avg>40)&&(avg<=60))
        printf("\nGrade : C");
    else if((avg>=33)&&(avg<=40))
        printf("\nGrade : D");
    else
        printf("\nGrade : Fail");

    getch();
}

```

### 14. Program to print numbers from 1 to n using while loop.

```

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

```

```

void main()
{
    int i=1, n;
    clrscr();

    printf("Enter n : ");
    scanf("%d", &n);

    while(i<=n)
    {
        printf("%d\t",i);
        i++;
    }
    getch();
}

```

#### 15. Program to print numbers from n to 1 using Do While loop.

```

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

void main()
{
    int i=1, n;
    clrscr();

    printf("Enter n : ");
    scanf("%d", &n);

    i=n;

    do
    {
        printf("%d\t",i);
        i--;
    } while (i >= 1);

    getch();
}

```

#### 16. Program to print first n even numbers.

```

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

void main()
{
    int i = 2, n;
    //to print odd numbers set variable i = 1
    clrscr();

    printf("Enter n : ");
    scanf("%d", &n);

    while(i<=n)
    {
        printf("%d\t", i);
        i = i + 2;
    }
    getch();
}

```

**17. Program to accept a number and print that number in reverse order.**

**Ex:- 1024**

**Output:- 4201**

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

void main()
{
    int reminder, n;
    clrscr();

    printf("Enter n : ");
    scanf("%d", &n);

    while(n>0)
    {
        reminder=n%10;
        printf("%d", reminder);
        n=n/10;
    }
    getch();
}
```

**18. Program to accept a number and print sum of it's digits.**

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int reminder, sum=0, n;
    clrscr();
    printf("Enter n : ");
    scanf("%d", &n);
    while(n>0)
    {
        reminder=n%10;
        sum=sum+reminder;
        n=n/10;
    }
    printf("Sum of digits : %d",sum);
    getch();
}
```

**19. Program to take a number from user and check whether it is Armstrong number or not.**

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i=2, temp, rem, sum=0, n;
    clrscr();
    printf("Enter n : ");
    scanf("%d", &n);
    temp = n;

    while(n>0)
    {
        rem = n%10;
        sum = sum+(rem*rem*rem);
        n = n/10;
    }

    if(temp==sum)
        printf("Entered number is an Armstrong Number");
    else
        printf("Entered number is not an Armstrong Number");
    getch();
}
```

**20. Program to take number from user and print table of that number.**

```
#include<stdio.h>
#include<conio.h>
void main()
{
int i, n;
clrscr();
printf("Enter number : ");
scanf("%d", &n);
for(i=1; i<=10; i++)
printf("%d × %d = %d\n", n, i, n*i);
getch();
}
```

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