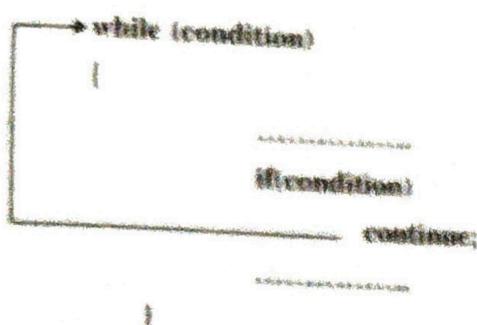


Continue

The Continue as the name implies, causes the loop to be continued with the next iteration after skipping any statements in between. The Continue statement tells the compiler, "Skip the Following statements and Continue with the Next Iteration".

**Example:**

```

#include<stdio.h>
void main()
{
    int a=10;
    clrscr();
    while(1)
    {
        a--;
        if(a==0)
            break;
        if(a%2==0)
            continue;
        printf("%d ",a);
    }
}

```

Output:

```
8 6 4 2
```

The above example displays even numbers < 10. It checks for every number greater than 0. If number is odd, then continue statement executes. If number is 0, then break statement executes.

★ PROGRAMS OF CONDITIONAL STRUCTURES**I. Program to find whether number is odd or even**

```

#include<stdio.h>
#include<conio.h>
void main()
{
    int Num;
    clrscr();

```

```

printf("Enter the number : ");
scanf("%d" ,&Num);

if( Num % 2 == 0 )
{
    printf("\n%d is EVEN number",Num);
}
else
{
    printf("\n%d is ODD number",Num);
}

getch();

```

Output:

Enter the number : 47
47 is ODD number

2. Program to get character from user and tell that it is vowel or consonant.

```

#include< stdio.h >
#include< conio.h >
void main()
{
    char ch;
    clrscr();

    printf("Enter the character : ");
    scanf("%c" ,&ch);

    if( ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' ||
        ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch == 'U' )

    {
        printf("The character '%c' is a VOWEL.",ch);
    }
    else
    {
        printf("The character '%c' is a CONSONANT.",ch);
    }

    getch();
}

```

Output:

```

Enter the character : a
The character a is a VOVEL.
OR
Enter the character : E
The character E is a VOVEL.
OR
Enter the character : c
The character c is a CONSONANT
OR
Enter the character : S
The character S is a CONSONANT

```

3. Program to find out Simple Interest.

```

#include<stdio.h>
#include<conio.h>
void main()
{
    float p,r,n,i;

    clrscr();

    printf("Enter Principle amount : ");
    scanf("%f",&p);
    printf("Enter Rate of Interest : ");
    scanf("%f",&r);
    printf("Enter Number of Years : ");
    scanf("%f",&n);

    i = p * r * n / 100;

    printf("\n\nThe simple Interest is : %f",i);

    getch();
}

```

Output:

```

Enter Principle amount : 5000.00
Enter Rate of Interest : 12.5
Enter Number of Years : 4
The simple Interest is : 2500.000000

```

4. Program that takes input of year and Determines whether it is Leap year or not.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int YEAR;
    clrscr();

    printf("Enter year in 4 digit : ");
    scanf("%d",&YEAR);

    if( year % 4 == 0 )
    {
        printf("\n%d is Leap Year",YEAR);
    }
    else
    {
        printf("\n%d is not Leap year",YEAR);
    }

    getch();
}
```

Output:

Enter year in 4 digit : 1982

1943 is not Leap year

Enter year in 4 digit : 2000

2000 is Leap year

5. Program that takes input of 5 subject's marks and Count percentage and print result.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int SUB1,SUB2,SUB3,SUB4,SUB5;
    float PER;

    clrscr();

    printf("Enter marks of subject1 : ");
    scanf("%d",&SUB1);
    printf("Enter marks of subject2 : ");
    scanf("%d",&SUB2);
```

```

printf("Enter marks of subject3 : ");
scanf("%d",&SUB3);
printf("Enter marks of subject4 : ");
scanf("%d",&SUB4);
printf("Enter marks of subject5 : ");
scanf("%d",&SUB5);

if( SUB1>100 || SUB2>100 || SUB3>100 || SUB4>100 || SUB5>100 )
{
    printf("\nMarks should not more than 100");
}
else
{
    if( SUB1>40 && SUB2>40 && SUB3>40 && SUB4>40 && SUB5>40 )
    {
        per = ( SUB1 + SUB2 + SUB3 + SUB4 + SUB5 ) / 5;
        printf("\nPercentage: %f",PER);

        if( PER > 70 )
        {
            printf("\n DISTINCTION...!!");
        }
        if( PER > 60 && PER < 70 )
        {
            printf("\n FIRST CLASS...!!");
        }
        if( PER > 50 && PER < 60 )
        {
            printf("\n SECOND CLASS...!!");
        }
        if( PER > 40 && PER < 50 )
        {
            printf("\n pass...!!");
        }
        if( per < 40 )
        {
            printf("\n FAIL...!!");
        }
    }
    else
    {
        printf("\n FAIL...!!");
    }
}
getch();
}

```

Output

```
Enter marks of subject1 : 45
```

```
Enter marks of subject2 : 56
```

```
Enter marks of subject3 : 78
```

```
Enter marks of subject4 : 67
```

```
Enter marks of subject5 : 89
```

```
Percentage: 67.000000
```

```
FIRST CLASS
```

■ PROGRAMS OF LOOP STRUCTURES

1. Program to Demonstrate Simple for Loop

```
#include <stdio.h>
#include<conio.h>
void main()
{
int i,SUM=10;
clrscr();
for(i=0;i<=5;i++)
{
SUM=SUM+i;
printf("Sum= %d",SUM);
}
```

Output:

```
10 11 13 16 20
```

Execution of the loop in above program

Iteration	I	i<5Check Condition	SUM (SUM = SUM + i)
1 st	Initially 0	True	SUM=10+0=10
2 nd	1	True	SUM=10+1=11
3 rd	2	True	13
4 th	3	True	16
5 th	4	True	20
6 th	5	False	20

2. Program to Display Sum of first 100 Numbers.

```
#include <stdio.h>
#include<conio.h>
void main()
{
int i,SUM;
clrscr();
SUM=0;
for(i=1;i<100;i++)
{
SUM=SUM+i;
}
printf("Sum of First 100 Numbers = %d",SUM);
getch();
}
```

Output:

Sum of First 100 Numbers = 5050

3. Program to print the numbers lying between two different numbers using for loop

```
#include <stdio.h>
#include<conio.h>
void main()
{
int NUM1,NUM2,A;
clrscr();
printf("Enter 1st & 2nd Number:\n");
scanf("%d %d",&NUM1,&NUM2);
for(A=NUM1; A<=NUM2;A++)
{
printf("%d\t",A);
}
getch();
}
```

Output:

Enter 1st & 2nd Number =
35
54
35 36 37 38 39 40 41 42, 43 44
45 46 47 48 49 50 51 52 53 54

3. Decision Statements and Control Structures

4. Program to Display Factorial of given Number.

```
#include <stdio.h>
#include<conio.h>
void main()
{
int i, j, Fact=1;
clrscr();
printf("Enter Any Number:\n");
scanf("%d", &j);
for(i=j; i>=1; --i)
{
Fact = Fact * i;
}
printf("Factorial of Given Number Is= %d", Fact);
getch();
}
```

Output:

```
Enter Any Number : 4
Factorial Of Given Number Is= 24
```

5. Program that Print Alphabets from A-Z and Numbered it.

```
#include <stdio.h>
#include<conio.h>
void main()
{
int X;
char Y;
clrscr();
for(Y='A', X=1; Y<='Z';Y++, X++)
{
printf("%c - %d\t", Y, X);
}
getch();
}
```

Output:

A - 1	B - 2	C - 3	D - 4
E - 5	F - 6	G - 7	H - 8
I - 9	J - 10	K - 11	L - 12
M - 13	N - 14	O - 15	P - 16
Q - 17	R - 18	S - 19	T - 20
U - 21	V - 22	W - 23	X - 24
Y - 25	Z - 26		

6. Program to Display Multiplication Table of the Given Digit Up to Limit Entered By User.

```
#include <stdio.h>
#include<conio.h>
void main()
{
    int NUM, Limit, i;
    clrscr();
    printf("Enter Your Number:");
    Scanf("%d", &NUM);
    printf("Enter Your Limit:");
    Scanf("%d", &Limit);
    print("*----- MULTIPLICATION TABLE-----*");
    for(i=1; i<=Limit; i++)
    {
        printf("%d * %d = %d\n", NUM, i, NUM * i);
    }
    getch();
}
```

Output:

```
Enter Your Number: 5
Enter Your Limit: 10
*-----MULTIPLICATION TABLE-----*
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

■ PROGRAMS OF VARIOUS PATTERNS

1. Program to print character pyramid.

```
#include <stdio.h>
#include<conio.h>
void main()
{
    int i,j;
```

```

clrscr();
for(i=65;i<=70;i++)
{
for(j=65;j<=i;j++)
{
printf("%c",j);
}
printf("\n");
}
getch();
}

```

Output:

A
A B
A B C
A B C D
A B C D E
A B C D E F

2. Program to Display Following Pattern

\$ \$ \$ \$ \$
\$ \$ \$ \$
\$ \$ \$
\$ \$
\$

```

#include <stdio.h>
#include<conio.h>
void main()
{
    int i, n, j;
    clrscr();
    for(i=5;i>=1;i--)
    {
        for(j=i; j>=1; j--)
        {
            printf("$");
        }
        printf("\n");
    }
    getch();
}

```

3. Program to Display Following Pattern.

```

5 4 3 2 1
4 3 2 1
3 2 1
2 1
1

```

```

#include <stdio.h>
#include<conio.h>
void main()
{
    int i, j;
    clrscr();
    for(i=5;i>=1; i--)
    {
        for(j=i; j>=1; j--)
        {
            printf("%d", j);
        }
        printf("\n");
    }
    getch();
}

```

4. Program to Display Following Pattern

```

1
0 1
1 0 1
0 1 0 1
1 0 1 0 1

```

```

#include <stdio.h>
#include<conio.h>
void main()
{
    int i,j;
    clrscr();
    for(i=1; i<=5; i++)
    {
        for(j=1; j<=i; j++)
        {
            if((i + j)%2==0)
                printf("1");
            Else
                printf("0");
        }
        printf("\n");
    }
    getch();
}

```

6. Program to Display Following Pattern

```
*  
* *  
* * *  
* * * *  
* * * * *
```

```
#include <stdio.h>  
#include<conio.h>  
void main()  
{  
int i, j, NUM ;  
clrscr();  
printf("Enter your Number of Rows:");  
scanf("%d", &NUM);  
for(i=0;i<=NUM;i++)  
{  
for(j=0;j<=i;j++)  
{  
printf("*");  
}  
printf("\n");  
}  
getch();  
}
```

7. Program to Display Following Pattern

```
1  
1 2  
1 2 3  
1 2 3 4  
1 2 3 4 5
```

```
#include <stdio.h>  
#include<conio.h>  
void main()  
{  
int i, j, Num, SP=40;  
clrscr();  
printf("Enter your row:");  
scanf("%d", &Num);  
for(i=1;i<=Num;i++)  
{  
for(j=1;j<=SP;j++)
```

```

    {
        printf(" ");
    }
    for(j=1;j<=i;j++)
    {
        printf(" %od", j);
    }
    printf("\n");
    SP--;
}
getch();
}

```

■ IMPORTANT PROGRAMS

1. Program to find reverses of given number.

```

#include<stdio.h>
#include<conio.h>
void main()
{
    int num,temp;
    clrscr();
    printf("Enter number : ");
    scanf("%d",&num);
    printf("\nThe reverse of given number is : ");
    while( num > 0 )
    {
        temp = num % 10;
        printf("%d",temp);
        num = num / 10;
    }
    getch();
}

```

Output:

```

Enter number : 123
The reverse of given number is : 321

```

2. Program that accept one number from user and display sum of its digits.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int num,ans,sum = 0;
    clrscr();

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

    while( num > 0 )
    {
        ans = num % 10;
        num = num / 10;
        sum = sum + ans;
    }
    printf("Sum of given number is : %d ",sum);

    getch();
}
```

Output:

```
Enter number : 345
Sum of given number is : 12
```

3. Write a C program to Accept one number from user and find it is Armstrong or not

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int num;
    int sum = 0;
    int original,temp;

    clrscr();

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

    original = num;
```