

- 1) C programming for problem solving
Program to display a number if it is negative.

Aim:

To program for a number is negative.

Program:

```
#include <stdio.h>
int main()
{
    int negative number = -5;
    Printf ("Negative number: %.d\n", negative number);
    Return 0;
}
```

Input: -5

Output: -5 is negative number

- 2) check whether the given number is odd or even.

Aim:

To print the given number is odd or even

Program:

```
#include <stdio.h>
int main()
{
    int num;
    Printf ("Enter an integer:");
    scanf ("%d", &num);
    If (num % 2 == 0)
        Printf ("%d is even", num);
    else
        Printf ("%d is odd", num);
    return 0;
}
```

Input: 26

Output: 26 is even

P.B. 14/2/23

3) Program to relate two integers using $=, > \text{ or } <$.
Aim: To print the program to relate two integers using $=, > \text{ or } <$.

Program:

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

```
int main ()
```

```
{ int number 1, number 2 ;
```

```
  printf ("Enter two integers :");
```

```
  scanf ("%d %d", & num 1, & num 2);
```

```
  if ( number 1 == number 2)
```

```
{ printf ("Result : %d = %d ", num 1, num 2);
```

```
  else if (num 1 > num 2)
```

```
{ printf ("Result : %d > %d ", num 1, num 2);
```

```
}
```

```
else (num 1 < num 2)
```

```
{ printf ("Result : %d < %d ", num 1, num 2);
```

```
}
```

```
  return 0;
```

```
}
```


Program to calculate the sum of numbers (10 no.'s max)

Aim:
To print the program to calculate the sum of numbers (10 numbers max).

Program:

```
#include <stdio.h>
int main()
{
    int i;
    double number, sum = 0.0;
    for (i = 1; i <= 10; i++)
    {
        printf("Enter n-1.d : ", i);
        scanf("%lf", &number);
        if (number < 0.0)
            sum + = number;
    }
    printf("Sum = %.2lf", sum);
    return 0;
}
```

Output:

Enter n1: 2.4

Enter n2: 4.5

Enter n3: 3.4

Enter n4: -3

Sum = 10.30

4) For loop

Program to print numbers from 1 to 10.

Syntax

For initializes an internal variable, executes the body as long as the internal variable is not more than limit and at the end of each iteration, increments the internal variable.

Coding :-

// To print numbers from 1 to 10.

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

```
int main()
```

```
{ int i;
```

```
  for (i = 1; i <= 10; i++)
```

```
  { printf(".1.d \n", i);
```

```
  }
```

Program to calculate the ^{sum of} first n natural numbers

Coding :-

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

```
int main()
```

```
{ int n, sum;
```

```
  scanf(".1.d", &n);
```

```
  for (int i = 1; i <= n; i++)
```

```
  { sum = (n * (n + 1)) / 2;
```

```
  }
```

```
  printf(".1.d", sum);
```


program to find factorial of a number.

coding :

To find factorial of a number.

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

```
int main ( )
```

```
{
```

```
    int n, i, fact = 1;
```

```
    scanf ("%d", &n);
```

```
    { fact = fact * i ;
```

```
      if (n < 0)
        printf ("Enter ! Factorial doesn't exist").
```

```
    else ( for i = 1 ; i < n ; ++i )
```

```
        { fact = fact * i ;
```

```
        }
```

```
    printf ("Factorial of %d = %d", n, fact);
```

```
}
```

output :

Enter an integer = 9

Factorial of 9 = 362880.

* Programs to print pyramids & triangles.

Aim: To print pyramids & triangles using for loop.

Coding:

```
# include < std io.h >
```

```
int main()
```

```
{ int i, space, rows, k = 0;
```

```
  printf ("Enter the number of rows:");
```

```
  scanf ("%d", & rows);
```

```
  for (i = 1; i <= rows; ++i, k = 0)
```

```
  { for (space = 1; space <= rows - i; ++space)
```

```
    { printf (" ");
```

```
    }
```

```
    while (k != 2 * i - 1) {
```

```
      printf ("*");
```

```
      ++k;
```

```
    }
```

```
    printf ("\n");
```

```
  }
```

Output: Enter the number of rows

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


switch statement

Program to calculate simple calculator

Aim: To calculate simple calculator using switch case

Coding:

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

```
int main() {
```

```
    char op;
```

```
    double first, second;
```

```
    printf("Enter an operator (+, -, *, /);");
```

```
    scanf("%c", &op);
```

```
    printf("Enter two operands:");
```

```
    scanf("%lf %lf", &first, &second);
```

```
    switch (op) {
```

```
        case '+':
```

```
            printf("%lf + %lf = %lf",
```

```
                first, second, first + second);
```

```
            break;
```

```
        case '-':
```

```
            printf("%lf - %lf = %lf",
```

```
                first, second, first - second);
```

Case '*'

Printf ("%f * %f = %f" , first, second,
first * second);

break;

Case '/'

Printf ("%f / %f = %f" , first, second,
first / second);

break;

}

Output: Enter an Operator (+, -, *, /); +

Enter two operands: 3 4

$$3.0 + 4.0 = 7.0$$

while loop

Program to print numbers from 1 to 5

Aim: To print numbers from 1 to 5 using while loop.

Coding:

```
#include <stdio.h>
{
    int i = 1;
    while
    {
        printf (".?..d \n", i);
        i = i + 1;
    }
    printf ("\n");
}
```

Output :

```
1
2
3
4
5
```

do while loop

Program to add numbers until the user enters zero.

Aim: To add numbers until the user enters zero using do while loop

coding

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

```
int main ( )
```

```
{ double number, sum = 0 ;
```

```
do {
```

```
    Printf ("Enter a number: ");
```

```
    scanf ("%1.1f", & number);
```

```
    sum + = number ;
```

```
}
```

```
while ( number != 0.0 );
```

```
Printf ("sum = %1.2lf", sum);
```

```
}
```

Output :

Enter a number : 3

Enter a number : 2

Enter a number : 0

sum = 5.00