

- ① write a Program in C to display your name and address on Computer Screen.

```
#include <stdio.h>
void main() {
    printf("\n Dr Sheelesh Kumar Sharma"); // it
    displays the string inside quotation on computer
    Screen
    printf("\n IMS Ghaziabad"); // it displays the
    string inside quotation on Computer Screen
}
Dr Sheelesh Kumar Sharma
IMS Ghaziabad
```

- ② write a Program in C to add two integer numbers

```
#include <stdio.h>
void main() {
    int n1, n2, sum; // it declares three variables
    n1, n2 and sum as integer type
    printf("Enter two integer numbers:");
    scanf("%d %d", &n1, &n2); // it reads two numbers
    that are stored in variables n1 and n2
    respectively
    sum = n1 + n2; // Calculating sum
    printf("Sum = %d", sum); // it displays the value of
    sum
}
printf("Sum = %d", sum); // it displays the value
of sum
```

Enter two integer numbers: 10 20

Sum = 30

③ write a Program in C to compute the value of x in this expression $x = 20 / (8 - 4) * 8 - 2$

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

```
void main() {
```

```
int x;
```

```
x = 20 / (8 - 4) * 8 - 2;
```

```
printf("x = %d", x); // it displays the value of x
```

```
}
```

```
x = 38
```

④ write a Program in C to compute a quotient and remainder.

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

```
void main() {
```

```
int dividend, divisor, quotient, remainder; // it  
declares variable as integer type printf  
("Enter dividend:");
```

```
scanf("%d", &dividend); // it reads the value  
of dividend printf("Enter divisor:");
```

```
scanf("%d", &divisor); // it reads the value of  
divisor
```

```
quotient = dividend / divisor; // it computes quotient
```

```
remainder = dividend % divisor; // it computes  
remainder
```

```
printf("Quotient = %d\n", quotient); // it displays  
the value of quotient
```

```
printf ("Quotient Remainder = %d", remainder); // it  
displays the value of remainder  
}
```

Enter dividend; 20

Enter divisor: 3

Quotient = 6

Remainder = 2

⑤ Write a Program in C to Swap the value of two integer numbers .

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

```
void main() {
```

```
    int n1, n2, temp;
```

```
    n1 = 10;
```

```
    n2 = 20;
```

```
    temp = n1; // value of n1 is assigned to temp
```

```
    n1 = n2; // value of n2 is assigned to n1
```

```
    n2 = temp; // value of temp (initial value of n1)  
is assigned to n2
```

```
    printf("\n After Swapping, n1 Number = %d", n1);
```

```
    printf("\n After Swapping, n2 Number = %d", n2);
```

```
}
```

After Swapping n1 Number = 20

After Swapping n2 Number = 10

In the above Program, the temp variable is assigned the value of the n1 variable.

Then, the value of the n1 variable is assigned to the n2 variable.

Finally, the temp (which holds the initial value

of $n1$) is assigned to $n2$. This completes the swapping process.

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

```
void main() {
```

```
    int n1, n2;
```

```
    n1 = 40;
```

```
    n2 = 10;
```

```
    // Swapping
```

```
    n1 = n1 - n2; // n1 = 40 - 10 so n1 = 30
```

```
    n2 = n1 + n2; // n2 = 30 + 10 so n2 = 40
```

```
    n1 = n2 - n1; // n1 = 40 - 30 so n1 = 10
```

```
    printf("\n After Swapping, n1 Number = %d", n1);
```

```
    printf("\n After Swapping, n2 Number = %d", n2);
```

```
}
```

```
After Swapping, n1 Number = 10
```

```
After Swapping, n2 Number = 40
```

⑥ Write a Program to find the Largest of three numbers

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

```
void main() {
```

```
    int n1, n2, n3, largest;
```

```
    printf("Enter three different numbers:");
```

```
    scanf("%d %d %d", &n1, &n2, &n3);
```

```
    if (n1 > n2)
```

```
        largest = n1;
```

```
    else
```

```
        largest = n2;
```

```
    if (n3 > largest)
```

```
largest = n3;
```

```
printf("Largest number is %d", largest);
```

```
}
```

Enter three number: 30 20 40

Largest number is 40

- ⑦ Write a Program to check whether a integer number is even or odd.

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

```
void main() {
```

```
int num;
```

```
printf("Enter a number");
```

```
else
```

```
printf("odd number");
```

```
}
```

Enter a number: 12

Even number

Enter a number: 11

odd number

- ⑧ Write a Program to display table of any integer number.

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

```
void main() {
```

```
int n, i;
```

```
printf("Enter an integer:");
```

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

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

```
printf("%d * %d = %d\n", n, i, n * i);
```

```
}
```

```
}
```

Enter an integer: 9

$$9^* 1 = 9$$

$$9^* 2 = 18$$

$$9^* 3 = 27$$

$$9^* 4 = 36$$

$$9^* 5 = 45$$

$$9^* 6 = 54$$

$$9^* 7 = 63$$

$$9^* 8 = 72$$

$$9^* 9 = 81$$

$$9^* 10 = 90$$

⑨ Write a program to display first ten terms of the Fibonacci Sequence.

The Fibonacci Sequence: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34

The Fibonacci Sequence is a sequence where the next term is the sum of the previous two terms.

The first two terms of the Fibonacci Sequence are 0 followed by 1.

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

```
void main() {
```

```
    int i, n, t1 = 0, t2 = 1, next Term;
```

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

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

```
    printf("Fibonacci Series: ");
```

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

```
        printf("%d, ", t1);
```

```
        next Term = t1 + t2;
```

```

t1 = t2;
t2 = next Term;
}
}

```

Enter the number of terms : 10
 Fibonacci series : 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,

⑩ write a Program to calculate the sum of digits of an integer number.

```

#include <stdio.h>
void main() {
    int n, sum = 0, digit;
    printf("Enter an integer :");
    scanf("%d", &n);
    while (n != 0) {
        digit = n % 10;
        sum = sum + digit;
        n = n / 10;
    }
    printf("Sum of the digits = %d", sum);
}

```

Enter an integer : 142
 Sum of the digits = 7

This Program takes an integer input from the user 142. The while loop is used until $n \neq 0$ is false. In each iteration of the loop, each digit (using $\text{digit} = n \% 10$) when n is divided by 10 is calculated and the value of n is reduced by 10 times ($n = n / 10$) inside the loop, the sum of

Q1) write a Program to reverse an integer number using digits of an integer number is computed using
 $Sum = Sum + digit$

Q2) write a Program to reverse an integer number.

```
#include <stdio.h>
void main() {
    int n, rev = 0, digit;
    printf("Enter an integer:");
    scanf("%d", &n);
    while (n != 0) {
        digit = n % 10;
        rev = rev * 10 + digit;
        n = n / 10;
    }
    printf("Reversed number = %d", rev);
}
```

Enter an integer : 345

Reversed number = 543

This Program takes an integer input from the user 345. The while loop is used until $n \neq 0$ is false. In each iteration of the loop, the digit ($digit = n \% 10$), when n is divided by 10 is calculated and the value of n is reduced by 10 times ($n = n / 10$). Inside the loop, the reversed number is computed using: $rev = rev * 10 + digit$

⑫ write a Program to calculate factors of a positive integer.

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

```
void main() {
```

```
    int sum, i;
```

```
    printf("Enter a positive integer;");
```

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

```
    printf("Factors of %d are:", sum);
```

```
    for(i = 1; i <= sum; ++i) {
```

```
        if (sum % i == 0) {
```

```
            printf("%d", i);
```

```
        }
```

```
    }
```

```
}
```

Enter a positive integer: 10

Factors of 10 are: 1 2 5 10

(12) Elaborate the process and elements of communication in detail through suitable examples.

- Sender: He is the person who sends his ideas to another person
- Message: The idea, feeling, suggestion, guidelines, order or any content which is intended to be communicated is message
- Encoding:
- Media:
- Decoding:
- Receiver:
- Feedback:
- Noise: