

I N D E X

Sr. No.	Experiment Description	Experiment Date	Sub
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COURSE TITLE:	Fundamental of IT Programming		
COURSE CODE:	CCA 101		
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CCA-101: FUNDAMENTALS OF IT PROGRAMMING

Ques: Write a Programme in C To display your name and address on Computer Screen.

Ans: #include <stdio.h>

void main () {

Print ("In 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

Output

Dr Sheelesh Kumar Sharma

Ims Ghaziabad.

Ques: Write a Programme in C add two integer numbers.

Ans: #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

Output

Enter two integer numbers 10 20

Sum = 30

(2)

Ques:- Write a Programme in C to Computer The value of x in This expression $x = 20 / (8-4)^{8-8}$

Ans # include < Stdio .h >

void main () {

int x;

$x = 20 / (8-4)^{8-8};$

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

Output

x = 30

Ques:- Write a Program in C To Computer a quotient and remainder .

Ans # include < Stdio .h >

void main () {

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

scanf("%d", ÷nd); // 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("Remainder = %d", remainder); // it displays the value of remainder.

Output

Enter dividend : 50

(3)

Enter divisor : 3

Quotient = 6

Remainder = 2

Ques. write a Program in C to Swap The value of Two integer number.

Ans. Swap numbers using the temporary variables.

```
#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("After swapping, n1 number = %d", n1);
```

```
printf("After swapping, n2 number = %d", n2);
```

```
}
```

Output

After swapping, n1 Number = 20

After swapping, n2 Number = 10

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.

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Swap numbers without using Temporary variables -

```
#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);
```

```
}
```

output

After Swapping, n1 Number = 10

After Swapping, n2 Number = 40

Ques write a Program to find the largest of Three numbers?

Ans #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;
```

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

```
}
```

Output

Enter three numbers = 30 20 40

largest number is 40.

Ques 7 write a Program to check whether a integer number is even or odd?

Ans

```
#include <stdio.h>
void main () {
    int num;
    printf("Enter a number :");
    scanf("%d", &num);
    if (num % 2 == 0) {
        printf("Even number");
    }
```

Output 1

Enter a number : 12

Even number

Output 2

Enter a number : 11 odd number.

Ques 8 write a Program to display Table of any integer number?

Ans

```
#include <stdio.h>
void main () {
    int n, i;
    printf("Enter an integer :");
    scanf("%d", &n);
    for (i=1; i<=10; ++i) {
```

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

Output

Enter an integer : 9

$9 \times 1 = 9$

$9 \times 2 = 18$

$9 \times 3 = 27$

$9 \times 4 = 36$

$9 \times 5 = 45$

$9 \times 6 = 54$

$9 \times 7 = 63$

$9 \times 8 = 72$

$9 \times 9 = 81$

$9 \times 10 = 90$

Ques 7 write a Program to display first Ten Terms of Fibonacci Sequence?

Ans The Fibonacci Sequence: 0, 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:");

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```
for (i = 1, c = n; i++) {  
    printf ("%d", t1);  
    next term = t1 + t2;  
    t1 = t2;  
    t2 = next term;  
}
```

Output

Enter The number of term : 10

Fibonacci Series : 0, 1, 1, 2, 3, 5, 8, 13, 21, 34.

Queso write a Program to calculate the Sum of digits of an Integer numbers.

Ans # 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);

}

Output

Enter an integer : 249

Sum of the digits = 7

This program takes an integer input from the user.

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. Integer number is computed using $30n + \text{digit}$.

Q.10.11 Write a Program to reverse an integer no?

Ans # 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);
}
```

Output

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 ($\text{digit} = n \% 10$), 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 reversed number is computed using: $\text{rev} = \text{rev} * 10 + \text{digit}$.

Q.10.12 Write a Program to calculate factors of a

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Positive integer?

```
Ans # include <stdio.h>
void main () {
    int num, i;
    Printf ("Enter a Positive integer;");
    scanf ("%d", &num);
    Printf ("Factors of %d are ", num);
    for (i = 1; i <= num; ++i) {
        if (num % i == 0) {
            Printf ("%d ", i);
        }
    }
}
```

Output

Enter a Positive integer : 10

Factors of 10 are : 1 2 5 10