Name : Nitu Devi
Reg. No : CCA/2021/14344O
Course code : CCA 101
Course Title : Fundamentals of IT & Progra

CCA-101: Fundamentals of IT and Programming.

Q1 → Write a program in C to display your name and address on Computer Screen.

Ans → #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

}

Output

Dr Sheelesh Kumar Sharma

IMS Ghaziabad.

Q2. write a Program in C to add two integer numbers.

Sol -> #include <stdio.h>
Void main() {

int n1, n2, Sum; // it declares three Variab n1, n2 and Sum as integar type

Print F("Enter two integer numbers:");

Scanf("%d", &n1, &n2); // it reads two numbers that are stored in Variables n1 n2 respectively.

Sum = n1 + n2; // calculating Sum.

Print F("Sum = %d", Sum); // it displays Value of Sum.

}

Output

Enter two integer numbers: 10 20
Sum = 30

Q3. write a Program in C to Compute the Value of x in this expression
x = 20/(8-4)*8-2

Sol -> #include <studio.h>
Void main() {

```
int x;
x= 20/(8-4)*3-2
Print F("x = %d", x); // it displays the value of x.
```

Output

x = 38

Q4. write a Program in C to Compute a quotient and remainder.

Sol->

```
#include< stdio.h>
Void main() {
  int dividend, divisor, quotient, remainder;
// it declares variables as integer type
Print f(" Enter dividend: ");
Scan f("%d", & divisor); // it reads the value of divisor.
  quotient = dividend/ divisor; // it computes quotient
  remainder = dividend % divisor; // it computer remainder
Print F("Quotient = %d\n", quotient); // it displays the value of quotient.
Print F(" Remainder = %d", remainder); // it displays the value of remainder
}
```

Output

Enter dividend : 20
Enter divisor : 3
Quotient = 6
Remainder = 2

Q5 write a Program in C to Swap The Value of two integer numbers?

Sol →
```
# include < studio.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.
Print F("\n After Swapping, n1 number = %d", n1);
Print F("\n After Swapping, n2 number = %d", n2);
}
```

Output

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. Then, the Value of the n1 Variable is assigned to the temp. Finally, the temp (which holds the invitial Value of n1) is assigned to n2. This completes the

the Swapping Process.

Swap number 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
Print F("\n After Swapping, n1 Number =%d", n1);
Print F("\n After Swapping, n2 number =%d", n2);
  }
```

Output

After Swapping n1 number = 10
After Swapping n2 number = 40

Q6. write a Program to find the Largest of three numbers?

Ans →

```
# include <Stdio.h>
 Void main(){
   int n1, n2, n3, Largest;
 Print F("Enter three different numbers:");
 SCanf F("%d %d %d", &n1, &n2, &n3);

 if (n1>n2)
 Largest = n1;
else
```

```
Largest = n2
if (n3 > = Largest)
  Largest = n3;
Print F("Largest number is %d", Largest);
}
```

Output

Enter three numbers : 30 20 40
Largest numbers is 40.

Q7. write a Program to check whether a integer number is even or odd.

Sol →

```
# include < Stdio.h >
Void main () {
int num;
Print F("Enter a number:");
Scan F ("%d", &num);
if ((num % 2) == 0) {
  Print F("Even Number");
else
  Print F("odd number");
}
```

Output 1
Enter a number 12
Even number

Output 2
Enter a number : 11
odd number.

Q8. write a program to display table of any integer number.

Ans→
```
def display_multiplication_table(number, up=10):
    print(f"Multiplication Table of {number}:")
    for i in range(1, up+1):
        print(f"{number} x {i} = {number * i}")

# Get the user input
try:
    user_input = int(input("Enter an integer number: "))
    display_multiplication_table(user_input)
except ValueError:
    print("Please enter a valid integer.")
```

Q9. write a program to display first ten terms of the Fibonacci Sequence.

Ans→
```
def Fibonacci_Sequence(n):
    Fib_Sequence = []
    a, b = 0, 1  # Starting values
    for _ in range(n):
        Fib_in range(n):
        a, b = b, a+b  # Update to the next Fibonacci numbers.
    return fib_Sequence.

# Display the first ten terms of the
```

The Fibonacci Sequence

```
first_ten_terms = Fibonacci_Sequence(10)
print("first ten terms of the Fibonacci Sequen
print(first_ten_terms)
```

Q10 → write a program to clculate the sum of digits of an integer number.

Ans →

```
def sum_of_digits(number):
    # convert number to string to iterate
over each digit
    return sum(int(digit) for digit in
str(abs(number)))
# Get user input
try:
    user_input = int(input("Enter an
integer number: "))
result = sum_of_digits(user_input)
print(f"The sum of the digits of
{user_input} is: {result}.")

except ValueError:
print("Plese enter a valid integer.")
```

Q11 write a program to reverse an integer number.

Ans→
```
def reverse_integer(number):
# Convert number to string, reverse it, and convert back to integer.
    reversed_number = int(str(abs(number))[::-1])
    return reversed_number if number >= 0 else -reversed_number
# Get user input
try:
    user_input = int(input("Enter an integer number: "))
    result = reverse_integer(user_input)
    print(f"The reverse of {user_input} is: {result}")
except ValueError:
    print("Please enter a valid integer.")
```

Q12 write a program to calculate factors of a positive integer.

Ans→
```
def calculate_factors(number):
    factors = []
    for i in range(1, number+1):
        if number % i == 0:
            factors.append(i)
```

```
    return factors
# Get user input
try:
    user_input = int(input("Enter a positive
                 integer: "))
    if user_input <= 0:
        Factors.append(i)
    return factors
# Get user input
try:
    user_input = int(input("Enter a positive
                 integer: "))
    if user_input <=0:
        print("Please enter a positive integer.")
    else:
        result = calculate_factors(user_input)
        print(f"The factors of {user_input} are:
                 {result}")
except ValueError:
    print("Please enter a value integer.")
```