CCA 101 fundamentals of IT & Programing.
Do it yourself Assingmonent with solution.

6.1 Write a program in C to display your name and address on computer screen.

Solution
```
#include <stdio.h>
void main() {
    Printf("\n Dr sheelesh Kumar sharma");//
it display 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.

2. Write a program in c add two integer numbers

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

Output
Enter two integer numbers: 10 20
Sum = 30

(3) Write a program in C to computer the value of x in this expression.
$x = 20/(8-4)*8-2$

Solution
```
# include <stdio.h>
void main() {
int x;
x = 20/(8-4)* 8-2;
printf("X = %d"; X); // it displays the value of x
}
```

Output =
x = 38

(4) Write a program in c to computer a quotient and remainder.

Solution
```
# include <stdio.h>
void main() {
int dividend ; divisor , quotient , remainder; // it
declares variables as integer type printf("Enter
dividend : ");
Scanf ("%d", & dividend); // it reads the value
of divisor
```

```
quotient = dividend / divisor; // it computers
        quotient.
remainder = dividend % divisor; // it computer
        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 = 20
Enter divisor = 3
Quotient = 6
Remainder = 2

(5.) Write a program in C to swap the value of two integer numbers.

Solution Swap numbers using temporary variable.

```
# 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
```

After
printf("\n After swaping, n1 Number = %d", n1);
printf("\n After swaping, n2 Number = %d", n2);

output.
After swaping; n1 Number = 20
After swaping; n2 Number = 10

In the above program, the temp variable is assigned the value of the n1 variable. Then the value of the n1 varible 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.

Swap number without using tempoary varible.

```
#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 n1 = 40
   n3 = 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 swaping n1 Number 210.
After swapping n2 Numbers 40

6. Write a program to ~~check~~ find the largest of three numbers.

Solution:
```
# include<stdio.h>
void main() {
 int n1, n2 n3, largest;
printf("Enter three different number:");
 scanf("%d%d%d", &n1, &n2, &n3);

 if (n1>n2)
  largest = n1;
 else
  largest = n2;
in(n3 >= largest)
  largest = n3;

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

Output
Enter three numbers; 30 20 40
largest number is 40

(7.) Write a program to check whether a integer numbers is even or odd.

Solution

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

Output 1

```
Enter a number: 12
Even number
```

Output 2

```
Enter a number: 11
odd number
```

8. write a program to diplay table of any integer number:

Solution:

```
#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);
}
}
```

Output:

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.

Solution. The Fibonacci sequence is 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 term.
The first two terms of the Fibonacci sequence are 0 following by 1.

```
# include <stdio.h>
  void main() {
  int i, n, t1 = 0, t2 = 1, nextTerm;
  printf("Enter the number of terms");
  scanf("%d", &n);
  printf("Fibonacci Series:");
  for(i = 1; i <= n; ++i) {
  printf("%d", t1);
  nextTerm = t1 + t2;
  t1 = t2;
  }
 }
```

Output
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 a an integer number.

Solution
```
# 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 and integer = 142
Sum of the digits = 7

11. Write a program to reverse an integer number.

Solution
```
# incudle <stdio.h>
Void main() {
Int n, rev = 0, digit;
Printf("Enter an integer:");
Scanf("%d", &n);
while (n != 0) {
```

```
digit = rev in %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 != 0 is false. In each iteration of 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.

Solution =>

```
# 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) {
printf ("%d ", i);
}
```

```
    }
}
```

Output

```
Enter a positive integer: 10
Factors of 10 are: 1 2 5 10
```