CCA-101: fundamental of IT & Programming

"Do it yourself" Assignment with Solutions

JINDAL

DATE :

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 }
```

Output:

Dr Sheelesh kumar Sharma
IMS Ghaziabad.

2. Write a program in C to add two integer number

```
# Include <stdio.h>
Void main() {
    Int n1, n2, sum; // it declares three variables n1, n2 and sum as integer types
    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 display the value of sum
}
```

Output

Enter two integer numbers; 10 20
Sum= 30

Signature.....

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

3.
```
# 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 compute a quotient and remainder

#4
```
# 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 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 : 20
Enter divisor : 3
quotient = 6
Remainder = 2

JINDAL
DATE :
PAGE NO.

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

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
 printf("\n After swapping, n1 Number = %d", n1);
 printf("\n After swapping, n2 Number = %d", n2);
}
```

Output

After swapping, N1 number = 20

After swapping, n2 Number = 10

Swap numbers without using temporary variable

```
#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);
```

Signature.....

e (3)

printf("\n after swapping, n2 Number = %d", n2);
3

Output

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 = n2;
  if (n3 > = largest)
  largest = 3;
  printf (Largest number is %d", largest
}
```

Output

Enter the number : 30 20 40
Largest numbe 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 :");
  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 display table of any integer number

```
#include <stdio.h>
void main ()
{
  int 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 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

Signature.....

9 Write a program to display first ten terms to the fibonacci sequence

```
#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;
  t2 = nextTerm
  }.
```

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 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.
```

JINDAL
DATE :
PAGE NO.

n = n/10;
}
printf ("sum of the digits = %d", sum);
}

output
Enter an integer : 142
Sum of the digits = 7
The program takes an integer input from the user 142. The while loop is used until n != 0 is false. In each iteration of the loop, each digit (using 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 digits of an integers number is computed using sum = sum

11. Write a program to calculate factors of a positive num

#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

Signature.....

= 12 Write a program to calculate factors of positive integer

```
#include <stdio.h>
void main() {
  int num, i;
  printf("Enter a positive integer : ");
  scanf("%d", &num);
  printf("Enter a positive integer");
  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