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1.) DRAW FLOW CHART AND ALGORITHM ON THE FOLLOWINGS:

A. ADDITION OF TWO NO.

Ans.: Algorithm to add two numbers entered by user.

Step 1: Start

Step 2: Declare variables num1, num2 and sum.

Step 3: Read values num1 and num2.

Step 4: Add num1 and num2 and assign the result to sum.

sum←num1+num2

Step 5: Display sum

Step 6: Stop

C program to demonstrate this algo.:

```
// program to get sum of two numbers

#include<stdio.h>

int main()
{
    int num1, num2, sum;

    printf("Enter the numbers you want to sum\n\n");

    printf("enter the first number:\n");
    scanf("%d",&num1);
```

```
        printf("\nenter the second number:\n");
        scanf("%d",&num2);

        sum = num1+num2;

        printf("\nsum of two numbers %d and %d is : %d",num1, num2, sum);

        return 0;
}
```

B. MULTIPLICATION OF THREE NO.

Ans.: Multiplication to add two numbers entered by user.

Step 1: Start

Step 2: Declare variables num1, num2 and product.

Step 3: Read values num1 and num2.

Step 4: Add num1 and num2 and assign the result to product.

product←num1*num2

Step 5: Display product

Step 6: Stop

C program:

```
# include<stdio.h>

int main()
{
        int num1, num2, product;
```

```
        printf("\nEnter the value of the first number: \n");
        scanf("%d", &num1);
        printf("\nEnter the value of the second number: \n");
        scanf("%d", &num2);

        product = num1*num2;

        printf("Product of the two numbers %d and %d is %d\n", num1, num2, product);

        return 0;
}
```

C. CONVERSATION OF FARENHITE TO CELCIUS.

Ans.: Algorithm:

Step 1: Read temperature in Fahrenheit,

Step 2: Calculate temperature with formula C=5/9*(F-32),

Step 3: Print C

C program:

```
#include <stdio.h>

int main()
{
        float celsius, fahrenheit;

        /* Input temperature in fahrenheit */
        printf("Enter temperature in Fahrenheit: ");
        scanf("%f", &fahrenheit);
```

```
        /* Fahrenheit to celsius conversion formula */
        celsius = (fahrenheit - 32) * 5 / 9;

        /* Print the value of celsius */
        printf("%.2f Fahrenheit = %.2f Celsius", fahrenheit, celsius);

        return 0;
    }
```

D. AREA AND PERIMETER OF RECTANGLE

Ans.: Algorithm :

Step 1: START

Step 2: ACCEPT THE LENGTH OF RECTANGLE SAY LENGTH

Step 3: ACCEPT THE BREADTH OF RECTANGLE SAY BREADTH

Step 4: COMPUTE THE PERIMETER WITH THE HELP FORMULA PERIMETER=2 * (L + B)

Step 5: DISPLAY PERIMETER

Step 6: COMPUTE THE AREA WITH THE HELP FORMULA AREA=LENGTH*BREADTH

Step 7:DISPLAY AREA

Step 8: STOP

C program:

```
#include<stdio.h>

int main()
```

```
{
        float length, breadth, perimeter ,area;

        printf("Enter the length of rectangle: ");
        scanf("%f", &length);
        printf("Enter the breadth of rectangle: ");
        scanf("%f", &breadth);

        perimeter = 2*(length+breadth);

        printf("\n\nPeremeter of rectangle is: %f ",perimeter);

        area = length*breadth;

        printf("\nArea of rectangle is: %f ",area);

        return area;

}
```

E. SWAP OF TWO NO. USING THIRD VARIABLE

Ans.: Algorithm:

step 1:Declare a variable x, y and temp as integer

step 2:Read two numbers x and y

step 3:temp = x

step 4:x=y

step 5:y=temp

step 6:Print x and y

C program:

```
#include <stdio.h>

int main()
{
    int x, y;
    printf("Enter Value of x: ");
    scanf("%d", &x);
    printf("\nEnter Value of y: ");
    scanf("%d", &y);

    int temp = x;
    x = y;
    y = temp;

    printf("\nAfter Swapping: x = %d, y = %d", x, y);
    return 0;

}
```

F. SWAP OF TWO NO WITHOUT USING THIRD VARIABLE

Ans.: Algorithm:

STEP 1: START

STEP 2: ENTER A, B

STEP 3: PRINT A, B

STEP 4: A = A + B

STEP 5: B= A - B

STEP 6: A =A - B

STEP 7: PRINT A, B

STEP 8: END

C program:

```
#include <stdio.h>
int main()
{
        int a , b;
        printf("Enter numbers to swap ");
        scanf("%d %d", &a, &b);

        printf("numbers before swap a=%d b=%d",a,b);
        a = a + b;                                          //a=30 (10+20)
        b = a - b;                                          //b=10 (30-20)
        a = a - b;                                          //a=20 (30-10)
        printf("\nNumbers after swap a=%d b=%d", a, b);
        return 0;
}
```

G. FIND LARGEST OF THREE NO.

Ans.: Using ternary operator method.

Algorithm:

step 1: Declare a variable a, b, c and largest as integer

step 2: Read the number a, b and c

step 3: max = a > b ? (a > c ? a : c) : (b > c ? b : c)

step 4: print max

C program:

```
#include<stdio.h>

    int main() {
        int a, b, c, max;
        printf("Enter three numbers:");
        printf("\n\ta:");
        scanf("%d", & a);
        printf("\tb:");
        scanf("%d", & b);
        printf("\tc:");
        scanf("%d", & c);
        // using ternary operator to evaluate
        max = a > b ? (a > b ? a : c) : (b > c ? b : c);

        printf("%d is the largest number amoung %d, %d and %d.", max, a, b, c);

    }
```

2. WHAT IS ALGORITHM?

Ans.: Algorithm:

It refers to a set of rules/instructions that step-by-step

define how a work is to be executed upon in order to get the expected results.

Advantages of Algorithms:

a. It is easy to understand.

b. Algorithm is a step-wise representation of a solution to a given problem.

c. In Algorithm the problem is broken down into smaller pieces or steps hence, it is easier for the programmer to convert it into an actual program.

3. WHAT IS FLOWCHART?

Ans.:Flowchart is a graphical representation of an algorithm.

Programmers often use it as a program-planning tool to solve a problem.

It makes use of symbols which are connected among them to indicate the flow of information and processing.