

Structured Programming Language

Lab Report

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Dept: CSE

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Course-Code: CSE-135

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|  | 1/12+2/22+3/32+4/42+ …+N/N2 | | | |  |
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|  |  | 0 |  |  |  |
|  |  | 1 | 1 |  |  |
|  | 2 | 2 | 2 |  |  |
|  | 3 | 3 | 3 | 3 |  |
|  |  | | | |  |
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**Problem No:** 1

**Problem Name:** Write a C program that finds the Sum and Average of three integers.

**Algorithm:**

Step 1: Start

Step 2: Input a,b,c

Step 3: Calculate Sum=a+b+c

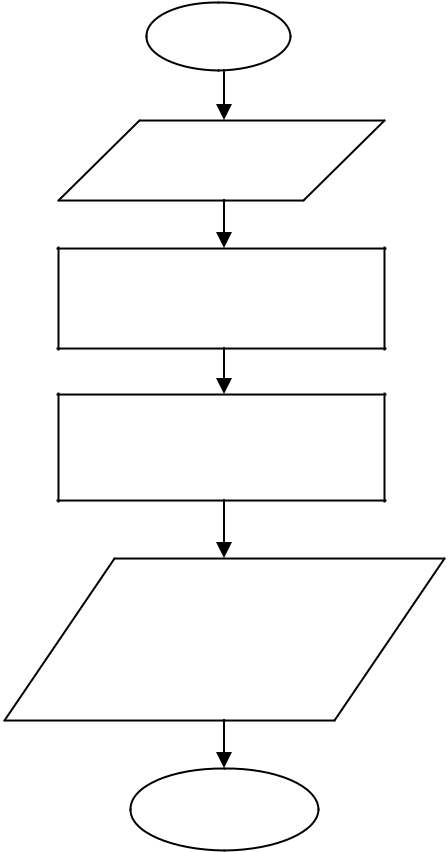
Step 4: Show the Sum

Step 5: Calculate Average=Sum/3.0

Step 6: Show the Average

Step 7: End

**Flow Chart:**

****

Start

Input a,b,c

Sum = a+b+c

Average = Sum/3.0

Show the sum

Show the average

End

**Program:**

#include<stdio.h>

int main()

{

int a,b,c,sum;

float avg;

printf("\nInput three integer: ");

scanf("%d%d%d",&a,&b,&c);

sum=a+b+c;

printf("\nSum=%d",sum);

avg=(a+b+c)/3.0;

printf("\nAvg = %.2f",avg);

return 0;

}

**Input:** Input three integer: 4 5 6

**Output:**

Sum = 15

Avg = 5.00

**Problem No:** 2

**Problem Name:** Write a C program that convert given temperature in Fahrenheit to Celsius.

**Algorithm:**

Step 1: Start.

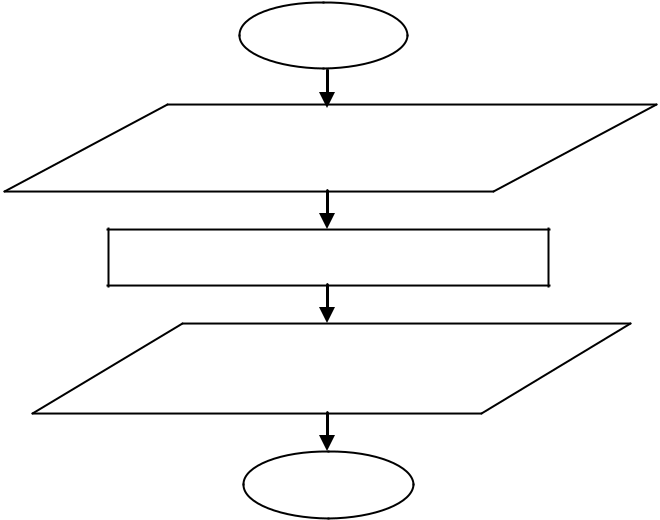
Step 2: Input temperature in Fahrenheit.

Step 3: Calculate Celsius C= (Fahrenheit - 32) \* 5 / 9 **or** C = (Fahrenheit - 32) / 1.8.

Step 4: Show temperature in Celsius.

Step 5: End.

**Flowchart:**

****

Start

Temperature in Fahrenheit

Celsius= (f - 32) \* 5 / 9

Temperature in Celsius

End

**C-Code:**

#include<stdio.h>

void main(){

float f, c;

printf("Enter temperature in Fahrenheit: ");

scanf("%f",&f);

c= (f - 32) \* 5 / 9;

printf("Result in Celsius is: %f",c);

}

**Problem No:** 3

**Problem Name:** Write a C program that determine an integer number is Even or Odd.

**Algorithm:**

Step 1: Start.

Step 2: Input A number.

Step 3: Is number mod by 2 is Zero,

1. Yes, Print Even Number.
2. No, Print Odd Number.

Step 4: End

**Flowchart:**

Input A number

Odd Number

Even Number

If Number % 2 is 0

**C-Code:**

void main(){

int n;

printf("Enter The number : ");

scanf("%d",&n);

if(n%2==0)

printf("Even number");

else

printf("Odd Number"); }

**Problem No:** 4

**Problem Name:** Write a C program to find the largest value among 3 numbers.

**Algorithm:**

Step 1: Start.

Step 2: Input Three Number a b c.

Step 3: Is Number

1. a > b and a > c, Print a
2. b > a and b > c, Print b
3. c >a and c > b, Print c

Step 4: End.

If Number

Print a

**Flowchart:**

Enter three number a,b,c

Print b

a > b and a > c b > a and b > c

Print c

**C-Code:**

#include<stdio.h>

int main(){

int a,b,c;

printf("Enter Three number : ");

scanf("%d%d%d",&a,&b,&c);

if(a>=b && a>=c){

printf("%d",a);

} else if(b>=a && b>=c){

printf("%d",b);

}else{

printf("%d",c);

}

return 0;

}

**Problem No:** 5

**Problem Name:** Write a C program that finds the grade of the given number:

**Algorithm :**

Step 1 : Start

Step 2 : Read marks or Percentage

Step 3 : if marks >= 80 then grade =A, go to step 7

Step 4 : if marks >= 60 and marks <=80 then grade = B, go to step 7

Step 5 : if marks >=40 and marks <=60 then grade = C go to step 7

Step 6 : display failed

Step 7 : stop.

**Flowchart:**

Read Marks

Marks >= 60 and <= 80

Marks >= 60 and <= 80

Marks > 80

Display Fail

Display grade = C

Display grade = B

Display grade = A

**C-Code:**

#include <stdio.h>

int main(void)

{

int num;

printf("Enter your mark ");

scanf("%d",&num);

if(num >= 80){

printf(" You got A ");

}

else if ( num >=60){

printf(" You got B");

}

else if ( num >=40){

printf(" You got C");

}

else if ( num < 40){

printf(" You Failed in this exam n");

}

return 0;

}

**Problem No:** 6

**Problem Name:** Write a C program that find the Factorial of a given integer number.

**Algorithm :**

**Step 1**: Start   
**Step 2**: Read a number n  
**Step 2**: Initialize variables: i = 1, fact = 1   
**Step 3**:  if i <= n go to step 4 otherwise go to step 7  
**Step 4**: Calculate fact = fact \* i  
**Step 5:** Increment the i by 1 (i=i+1) and go to step 3  
**Step 6:** Print fact  
**Step 7:** Stop

**Flowchart:**

Face = fact \* i

Print fact

i = I + 1

Is i<=n

i = 1

fact = 1

Read n

**C-Code:**