**Experiment :3**

SIMPLE CALCULATOR

**Algorithm:**

Step 1: Start

Step 2: Declare and define functions add, subtract, multiply and divide   
Step 3: Declare variables num1, num2, ans and c.

Step 4: Read values num1, num2 and arithmetic operation.

Step 5: Read arithmetic operation.  
 case ‘+’ – call “add” function using pointers which returns (ans=num1+num2)

case ‘-’ – call “substract” function using pointers which returns (ans=num1-num2)

case ‘\*’ – call “multiply” function using pointers which returns (ans=num1\*num2)

case ‘/’ – call “divide” function using pointers which return (ans=num1/num2)

Step 6: Display result

Step 7: Stop

**Code:-**

#include<stdio.h>

#include<stdlib.h>

void display(float s);

float add(int x,int y);

float subtract(int x,int y);

float multiply(int x,int y);

float divide(int x,int y);

int main()

{

int a,b;

float ans;

unsigned char c;

while(1)

{

printf("enter the two numbers separating with single space:");

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

printf("enter the arithmetic operation (+,-,\*,/):");

scanf(" %c",&c);

float (\*ptr\_op)(int,int);

void (\*ptr\_disp)(float);

ptr\_disp=display;

switch(c)

{

case '+':ptr\_op=add;

break;

case '-':ptr\_op=subtract;

break;

case '\*':ptr\_op=multiply;

break;

case '/':ptr\_op=divide;

break;

default:printf("invalid operator");exit(0);

}

ans=(\*ptr\_op)(a,b);

(\*ptr\_disp)(ans);

}

return 0;

}

void display(float s)

{

printf("\nAns: %f\n",s);

}

float add(int x,int y)

{

return (x+y);

}

float subtract(int x,int y)

{

return x-y;

}

float multiply (int x,int y)

{

return x\*y;

}

float divide (int x,int y)

{

if (y!=0)

return (float)x/y;

else return 0.0;

}

OUTPUT:-

