



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35.**

**An Autonomous Institution**

**COURSE NAME : 19CST101 PROGRAMMING FOR PROBLEM SOLVING**

**I YEAR/ I SEMESTER**

**UNIT-IV FUNCTIONS AND POINTERS**

**Topic: Pointers**

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## SWAP TWO NUMBERS USING FUNCTIONS

Program

```
#include<stdio.h>
#include<conio.h>
// function to swap the two numbers
void swap(int *x,int *y)
{
    int t;
    t = *x;
    *x = *y;
    *y = t;
}
int main()
{
    int num1,num2;
    printf("Enter value of num1: ");
    scanf("%d",&num1);
    printf("Enter value of num2: ");
    scanf("%d",&num2);
    printf("Before Swapping: num1 is: %d, num2 is: %d\n",num1,num2);
    swap(&num1,&num2);
    printf("After Swapping: num1 is: %d, num2 is: %d\n",num1,num2);
    return 0;
}
```



## SWAP TWO NUMBERS USING FUNCTIONS

```
Enter value of num1: 5
```

```
Enter value of num2: 6
```

```
Before Swapping: num1 is: 5, num2 is: 6
```

```
After Swapping: num1 is: 6, num2 is: 5
```



## SWAP TWO NUMBERS USING FUNCTIONS

## ARITHMETIC CALCULATOR USING FUNCTIONS

### **PROGRAM :**

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a,b,n;
clrscr();
printf("Enter Two Values :");
scanf("%d%d",&a,&b);
printf("\n Enter your Choice from the given below:");
printf("\n 1.Addition 2. Subtraction 3.Multiplication 4.Division 5.Modulus 6.Average 7.Power);
printf("\n Choice :");
scanf("%d",&n);
```



```
switch(n)
{
case 1:
    sum(a,b);
    break;
case 2:
    dif(a,b);
    break;
case 3:
    mult(a,b);
    break;
case 4:
    div(a,b);
    break;
case 5:
    mod(a,b);
    break;
case 6:
    avg(a,b);
    break;
case 7:
    pow(a,b);
    break;
}
getch();
}
```

```
int sum(int x,int y)
{
    int z;
    z=x+y;
    printf("Addtion : %d\n",z);
    return 0;
    getch();
}
int dif(int x,int y)
{
    int z;
    z=x-y;
    printf("Difference : %d\n",z);
    getch();
    return 0;
}
int mult(int x,int y)
{
    int z;
    z=x*y;
    printf("Multiply : %d\n",z);
    getch();
    return 0;
}
```



```
int div(int x,int y)
{
int z;
z=x/y;
printf("Div : %d\n",z);
getch();
return 0;
}
int mod(int x,int y)
{
int z;
z=x%y;
printf("Modulo : %d\n",z);
getch();
return 0;
}
```

```
int avg(int x,int y)
{
float z;
z=(x+y)/2;
printf("Average : %f\n",z);
getch();
return 0;
}
int pow(int x,int y)
{
int z;
z=x^y;
printf("power : %d\n",z);
getch();
return 0;
}
```



## OUTPUT

```
Enter Two Values :5
6
Enter your Choice from the given below:
1.Addition
2. Subtraction
3.Multiplication
4.Division
5.Modulus
6.Average
7.Power
Choice :3
Multiply : 30
-
```



## Program to calculate the sum of array elements by passing to a function



```
#include <stdio.h>
float calculateSum(float num[]);

int main() {
    float result, num[] = {23.4, 55, 22.6, 3, 40.5, 18};

    // num array is passed to calculateSum()
    result = calculateSum(num);
    printf("Result = %.2f", result);
    return 0;
}

float calculateSum(float num[]) {
    float sum = 0.0;

    for (int i = 0; i < 6; ++i) {
        sum += num[i];
    }

    return sum;
}
```

Output

Result = 162.50



