PRACTICAL – 1

Aim:- Write a c-program to demonstrate call by value and call by reference.

Code:-

C call_Ref_&_Val.c > main()

```c
// Devloped By Chintan Panchal
#include <stdio.h>

// Function to swap two integers by value
void ByValue(int a, int b) {
    int temp = a;
    a = b;
    b = temp;
}

// Function to swap two integers by reference (using pointers)
void ByReference(int *a, int *b) {
    int temp = *a;
    *a = *b;
    *b = temp;
}

int main() {

    int num1 = 10, num2 = 3;

    printf("Before swapping by value: num1 = %d, num2 = %d\n", num1, num2);
    ByValue(num1, num2);
    printf("After swapping by value: num1 = %d, num2 = %d\n", num1, num2);

    printf("\nBefore swapping by reference: num1 = %d, num2 = %d\n", num1, num2);
    ByReference(&num1, &num2);
    printf("After swapping by reference: num1 = %d, num2 = %d\n", num1, num2);

    return 0;
}
```

Output:-

```
┌──(chintan㉿kali)-[~/…/Subject/Data_Structures/Programm/Call-by-val_Ref]
└─$ ./call-ref-val.out
Before swapping by value: num1 = 10, num2 = 3
After swapping by value: num1 = 10, num2 = 3

Before swapping by reference: num1 = 10, num2 = 3
After swapping by reference: num1 = 3, num2 = 10
```