Experiment No. 2

Date :

Aim : Implement the concept of parameter passing in C++.

PART A] Write a program to implement the concept of call by value in C++

PART B] Write a program to implement the concept of call by reference in C++.

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Theory: Call by value in C++ :

In the call by value method, function arguments are passed by coping the value of the actual parameter, ensuring the original values remained unchanged. The value is copied to the formal parameter. One is the original copy and other is the function copy. Any changes made to the parameter within the function do not change the original values outside the function.

Call by Reference in C++ :

In this method, instead of passing the values of actual parameters to the formal ~~ones~~ ones the addressess of the actual parameter are passed. Thus the modification of the function is called to the formal parameters & it affects the actual parameters as well.

Code :

```
// Call by Value Method Code :
#include<iostream>
using namespace std;

void increment (int num) {
        num ++;
        cout << num << endl;
}
int main () {
    int number = 5;
    increment (number);
    cout << number << endl;
```

Output:

```
6
5
```

Code :

```
// Call by Refrence Method Code :
#include<iostream>
using namespace std;

void increment (int &num) {
        num ++;
        cout << num << endl;
}
```

Conclusion : By understanding the difference between the two methods of passing parameters that is "Call by value" & "Call by reference", we choose the appropriate parameter passing method based on the specific requirements & functionality needed in a C++ program.

```
int main () {
    int number = 5;
    increment (number);
    Cout << number << endl;
    return 0;
}
```

Output: 6
6

Conclusion: By understanding the difference between the two methods of passing parameters that is "Call by value" & "Call by reference", we choose the appropriate parameter passing method based on the specific requirements & functionality needed in a C++ program.