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**LAB 1**

#include <iostream>

using namespace std;

int main() {

int num = 25;

int\* ptr = &num;

cout << "Initial State:" << endl;

cout << "Number: " << num << endl;

cout << "Memory Address: " << ptr << endl;

cout << "Pointer Value: " << \*ptr << endl;

\*ptr = 75;

cout << "\nAfter Modification:" << endl;

cout << "Updated Number: " << num << endl;

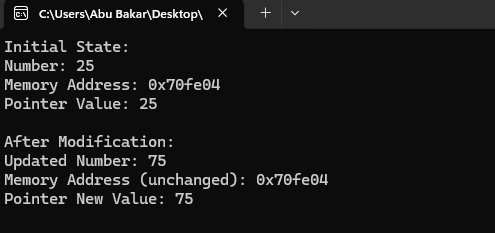
cout << "Memory Address (unchanged): " << ptr << endl;

cout << "Pointer New Value: " << \*ptr << endl;

return 0;

}

OUTPUT



**EXPLANATION**

* Declares an integer variable num and initializes it with 25.
* Declares a pointer ptr that stores the address of num.
* Prints the value of num, the memory address stored in ptr, and the value at that address (\*ptr)
* Updates num to 75 using the pointer.
* Shows that num is updated while the memory address remains the same.