#include <stdio.h>

#include <stdlib.h>

// prototypes

void passByValue(int a);

void passByReference(int \*a);

int main() {

int num = 10;

printf("Original number: %d\n", num);

// passing by value

printf("\nCalling passByValue function...\n");

passByValue(num);

printf("Number after passByValue: %d\n", num); // num remains unchanged

// passing by reference

printf("\nCalling passByReference function...\n");

passByReference(&num);

printf("Number after passByReference: %d\n", num); // num is modified

return 0;

}

// Function to demonstrate pass by value

void passByValue(int a) {

printf("Inside passByValue function. Received value: %d\n", a);

a = 20; // Changing the value of a (does not affect the original variable)

printf("Inside passByValue function. Modified value: %d\n", a);

}

// Function to demonstrate pass by reference

void passByReference(int \*a) {

printf("Inside passByReference function. Received value: %d\n", \*a);

\*a = 30; // Modifying the value of the original variable

printf("Inside passByReference function. Modified value: %d\n", \*a);

}