1a. Write a C program to read two whole numbers, store them in variables, and display their values with variable names. Then, swap their contents and print the updated values.

Description:

This program takes two whole numbers as input from the user and stores them in variables a and b. It first displays their values along with their variable names. Then, it swaps the contents of a and b using a temporary variable and prints the updated values after swapping.

Example:

Input:

Enter two numbers: 5 10

Output:

Before swapping: a = 5, b = 10

After swapping: a = 10, b = 5

Algorithm:

Step 1: Start

Step 2: Declare three integer variables a, b, and temp

Step 3: Prompt the user to enter two whole numbers

Step 4: Read the input values and store them in a and b

Step 5: Display the values of a and b before swapping

Step 6: Perform the swapping:
- Assign a to temp (temporary storage)
- Assign b to a
- Assign temp to b

Step 7: Display the values of a and b after swapping

Step 8: Stop

Source Code:

```c
#include <stdio.h>
int main()
{
    int x,
    y; int
    temp;

    printf("Enter Value of x: ");
    scanf("%d", &x);

    printf("\nEnter Value of y: ");
    scanf("%d", &y);

    printf ("\nBefore Swapping: x = %d, y = %d", x, y);

    /* swap using a temporary variable */
    temp = x;
    x = y;
    y = temp;

    printf ("\nAfter Swapping: x = %d, y = %d", x, y);
    return 0;
}
```

Sample Output:

```
Enter Value of x: 23

Enter Value of y: 44

Before Swapping: x = 23, y = 44

After Swapping: x = 44, y = 23
```