



### Assignment 2

1. Write a C++ program to swap two numbers using pointers.
2. In the class, we have covered a linked list whose each element contains one integer value and one pointer to the next element of the linked list.
  - a. Modify the linked list whose each element must now consist of a string variable and a pointer to the next element.
  - b. Define a function that will be given a pointer pointing to the first element of the linked list and two strings named **first\_string** and **second\_string** respectively. The function must search for the **first\_string** in the list. If the list does not contain such a string, the function leaves the list unchanged. Otherwise, the function must add a new element in the linked list with the value of **second\_string** after the first occurrence of the element containing the **first\_string**. The function prototype should look like *void add\_after(node\* , string , string)*.
  - c. Define a function that prints all the strings in the linked list. The function prototype should look like the following: *void print\_list(node \*)*.
  - d. Define a function which deletes the first node in the list which contains the string stored in **a\_word**. The function prototype should look like the following *void delete\_node(node\* , string )*. Call the function *print\_list* again to make sure that the specified string has been removed from the list.
  - e. Define a function which deletes the entire linked list. The function prototype should look like the following: *void delete\_list(node\* )*. Call the function *print\_list* again to make sure that nothing is displayed on the screen.