**Assignment 2 Data Stuctures**

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**Q)1** Singly Linked List

This project implements a **singly linked list** class (Single\_Linked\_List) in C++:  
The class supports the following operations:

* push\_front() — insert an element at the front
* push\_back() — insert an element at the back
* pop\_front() — remove an element from the front
* pop\_back() — remove an element from the back
* front() and back() — access first and last elements
* empty() — check if the list is empty
* insert(index, item) — insert at a given position
* remove(index) — remove at a given position
* find(item) — find the first occurrence of an item

The project is divided into:

1. Single\_Linked\_List.h — Header file containing the class declaration
2. Single\_Linked\_List.cpp — Implementation of all member functions
3. main.cpp — Test file that demonstrates all operations

## ****How to Compile and Run the Program****

Make sure all three files are in the same folder:

1. Single\_Linked\_List.h
2. Single\_Linked\_List.cpp
3. main.cpp

I use Visual Studio Application

* Create a new C++ Console project / copy and paste the github repository
* Add all three files (Single\_Linked\_List.h, Single\_Linked\_List.cpp, main.cpp) to the project.
* Click **Build and Run**.
* The output will appear in the console window.

