#11: Stack

Running times of List operations:

<table>
<thead>
<tr>
<th></th>
<th>Singly Linked List</th>
<th>Array</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert/Remove at front</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insert at given location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove at given location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insert at arbitrary location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove at arbitrary location</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stack Implementation #1: _______________

```cpp
#include "Stack.h"

void Stack::push(T & t) {
    // implementation
}

T & Stack::pop() {
    // implementation
}
```

1. A stack is a ____________ data structure.
   ...that stands for:
Stack Implementation #2: ______________

Stack.h

```cpp
#ifndef STACK_H
#define STACK_H

#include "Stack.h"

template <class T>
class Stack {
public:
    // Public methods
private:
    // Private members
};

#endif
```

T* arr: 6 5 2 2 5

Stack.cpp

```cpp
#include "Stack.h"

void Stack::push(T & t) {
    // Implementation
}

T & Stack::pop() {
    // Implementation
}
```

Resize Strategy – Details:

Strategy #1:

Strategy #2:

CS 225 – Things To Be Doing:

1. Exam #3 starts Monday
2. MP2 is due Sept. 25
3. Lab Extra Credit → Attendance in your registered lab section!
4. Daily POTDs