

Pass: ext. 1 day.

Handout: ADTs in C++

skeleton for a class in C++:

```
class Blah {
```

```
private:
```

```
    // inner structure
```

```
    // member variable
```

```
    // helper functions
```

```
public:
```

```
    // constructor, copy constructor, Destructor
```

```
    // member methods
```

```
    // over-loaded operators (<<, ==, =)
```

```
};
```

To build an ADT in C++ we split into two files.

file: Blah.h

class Blah {

Private:

// inner classes/structs

// member var.

// Prototypes for helper funcs

Public:

// Prototypes for:

// constructor, copy constructor, destructor

// member methods

// overloaded ops

};

namespace resolution operator.

::

file Blah.cpp

type Blah::fcn1(.. Param. list..) {

}

type Blah::fcn2(... Params. ...) {

}

type Blah::helper_fcn1(-----) {

}

Another way to implement a helper fn:
as a non-member,

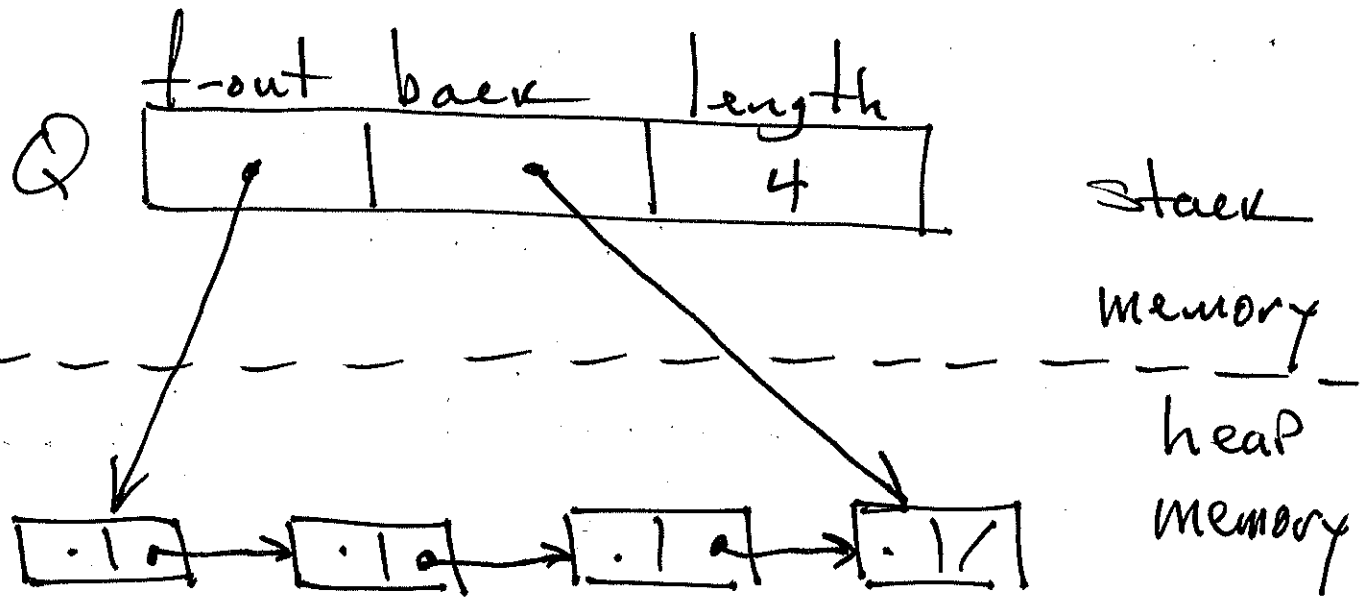
```
type helper_fn2(-----){
```

```
}
```

Ex. Queue: linked list

The "this" Pointer is a Pointer that refers to the object on the LHS of the dot.

In a constructor, this refers to the object under construction.



in C++ never use the C memory functions (malloc, calloc, realloc, free).

instead

new : allocates heap memory

delete : deallocates heap memory