

# List Insert Head

This is a **warmup** exercise. It is **not compulsory**, and may be completed **individually or with your lab partner**.

For this activity, you will be looking at a linked list.

Download [list.h](#), or copy it into your current directory on a CSE system by running

```
$ cp /web/cs1511/17s2/week11/files/list.h .
```

Make sure you understand the `list` and `node` data structures before beginning this task.

Create a file called `listInsertHead.c` that includes the `list.h` header file. In it, you should implement `listInsertHead`, a function which takes a linked list and an integer, and creates a new node with the specified integer value and places it at the start of the list. It should have this prototype:

```
void listInsertHead (List l, int val);
```

For example, if you had a list `l`, with the values `1 -> 2 -> 3 -> X` and you ran this snippet of code:

```
listInsertHead (l, 0);  
listPrint (l);
```

The output should be `0 -> 1 -> 2 -> 3 -> X`.

You should write your own tests in a separate file; `listInsertHead.c` should *not* contain a `main`.

To run some simple automated tests:

```
$ 1511 autotest listInsertHead
```

To run Styl-o-matic:

```
$ 1511 stylomatic listInsertHead.c  
Looks good!
```

You'll get advice if you need to make changes to your code.

Submit your work with the *give* command, like so:

```
$ give cs1511 wk11_listInsertHead
```

Or, if you are working from home, upload the relevant file(s) to the `wk11_listInsertHead` activity on [Give Online](#).