Worksheet 17: Linked List Introduction, List Stack

```
struct link {
   TYPE value;
   struct link * next;
};

struct linkedListStack {
   struct link *firstLink;
}

void linkedListStackInit (struct linkedListStack * s)
            { s->firstLink = 0; }

void linkedListStackFree (struct linkedListStack *s)
      { while (! linkedListStackIsEmpty(s)) linkedListStackPop(s); }

void linkedListStackPush (struct linkedListStack *s, TYPE d) {
   struct link * newLink = (struct link *) malloc(sizeof(struct link));
   assert (newLink != 0);

/* Fix me */
newLink -> value = d;
newLink -> next = s->firstLink;
s -> firstLink = newLink;


}

TYPE linkedListStackTop (struct linkedListStack *s) {

/* Fix me */
assert (!linkedListStackIsEmpty(s));
return s->firstLink->value;



}

void linkedListStackPop (struct linkedListStack *s) {


/* Fix me */

assert (!linkedListStackIsEmpty(s));
struct linkedListStack* temp = firstLink;
s->firstLink = (s->firstLink)->next);
free(temp);


}

int linkedListStackIsEmpty (struct linkedListStack *s) {
```

```
/* Fix me */
return s->firstLink == 0;


}
```