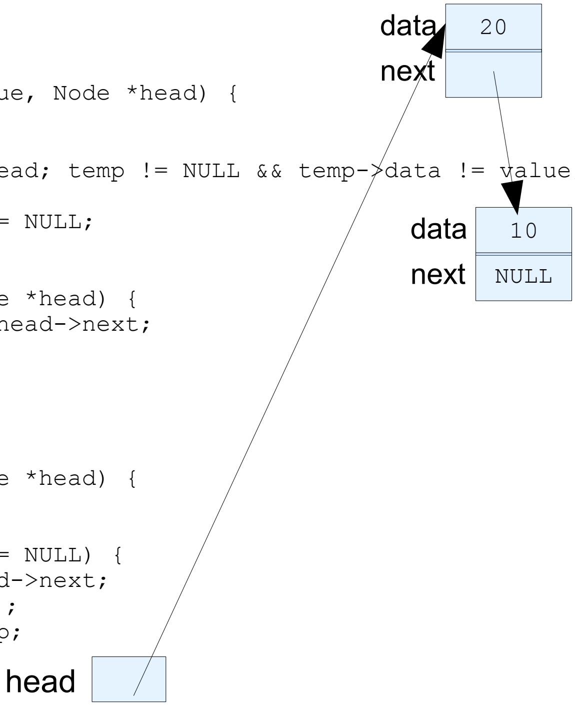
Linked Lists

```c
#include <stdio.h>
#include <stdlib.h>

typedef struct Node {
   int data;          // Could put any kind of data here
   struct Node *next; // Self-referential requires "struct"
} Node;

Node *Add(int data, Node *oldHead) {
   Node *rtn = malloc(sizeof(Node));

   rtn->data = data;
   rtn->next = oldHead;
   return rtn;
}

int IsOn(int value, Node *head) {
   Node *temp;

   for (temp = head; temp != NULL && temp->data != value; temp = temp->next)
      ;
   return temp != NULL;
}

Node *Remove(Node *head) {
   Node *temp = head->next;

   free(head);
   return temp;
}

void FreeAll(Node *head) {
   Node *temp;

   while (head != NULL) {
      temp = head->next;
       free(head);
      head = temp;
   }
}

int main() {
   Node *head = NULL;

   head = Add(10, head);
   head = Add(20, head);
   head = Add(40, Add(30, head));

   printf("First value is %d and 20 %s on the list.\n", head->data,
    IsOn(20, head) ? "is" : "is not");

   head = Remove(head);
   printf("First value is %d and 40 %s on the list.\n", head->data,
    IsOn(40, head) ? "is" : "is not");

   FreeAll(head);
}
/* Sample run:
First value is 40 and 20 is on the list.
First value is 30 and 40 is not on the list.  */
```


data
20
next
data
10
next
NULL
head