King Abdulaziz University
Faculty of Engineering
Electrical & Computer Eng
Department

LAB #4

Operating Systems– EE463
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3rd Semester Spring 2023

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1- The memory leak is in the remove() function. When an element is removed from the beginning of the list, the head_ pointer is reassigned to a new node, but the old node is never deleted. The fix is to add a delete statement:

```
if (marker->next() == 0) {
 head_ = 0;
 delete marker;  // ADD THIS LINE
 marker = 0;
} else {
 head_ = new Node(marker->value(), marker->next());
 delete marker;
 marker = 0;
}
```

2- The other bug is that when removing an element, the next pointer of the previous node is not updated. The fix is to add:

```
temp->next(marker->next());
```

after deleting the node, both when removing from the beginning and middle of the list:

```
if (marker->next() == 0) {
 head_ = 0;
 delete marker;
 marker = 0;
} else {
 head_ = new Node(marker->value(), marker->next());
 delete marker;
 temp->next(marker->next());
 marker = 0;
}
temp->next (marker->next());
delete temp;
temp->next(marker->next());  // ADD THIS LINE
temp = 0;
```