

Recursion Examples

listIsSorted

Example 1

listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

main()

current line:

listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

main()

current line:

bool sorted = listIsSorted(l);

listIsSorted: Ex 1



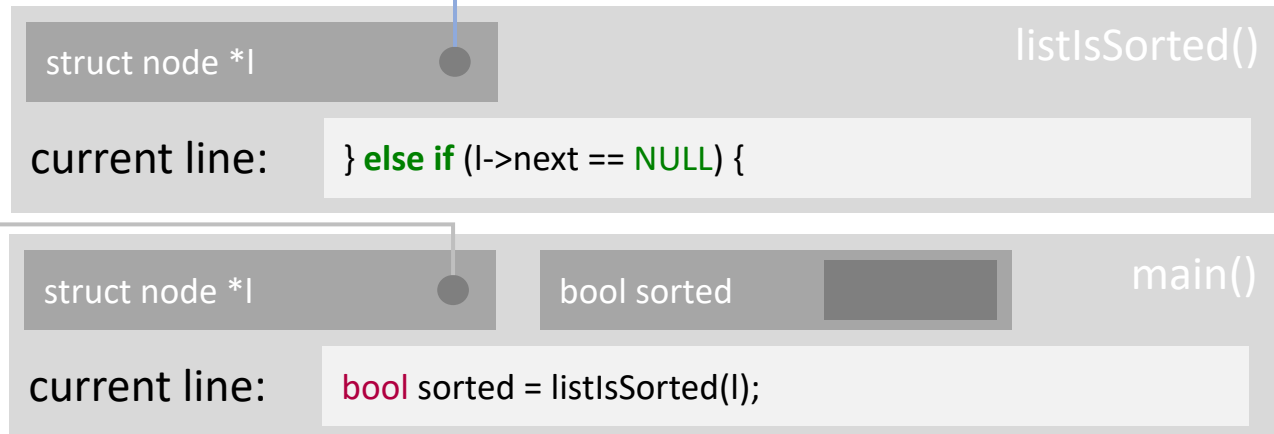
```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 1



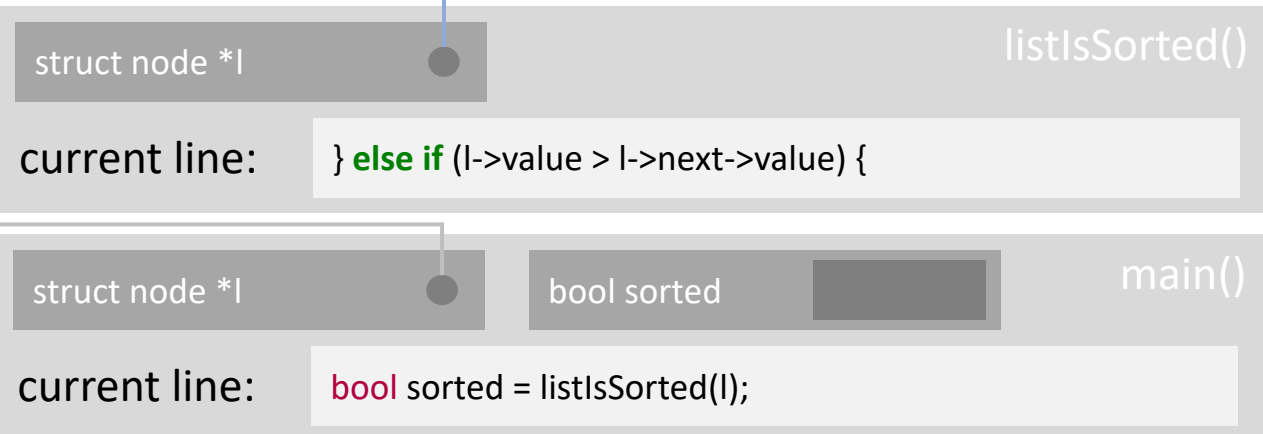
```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 1



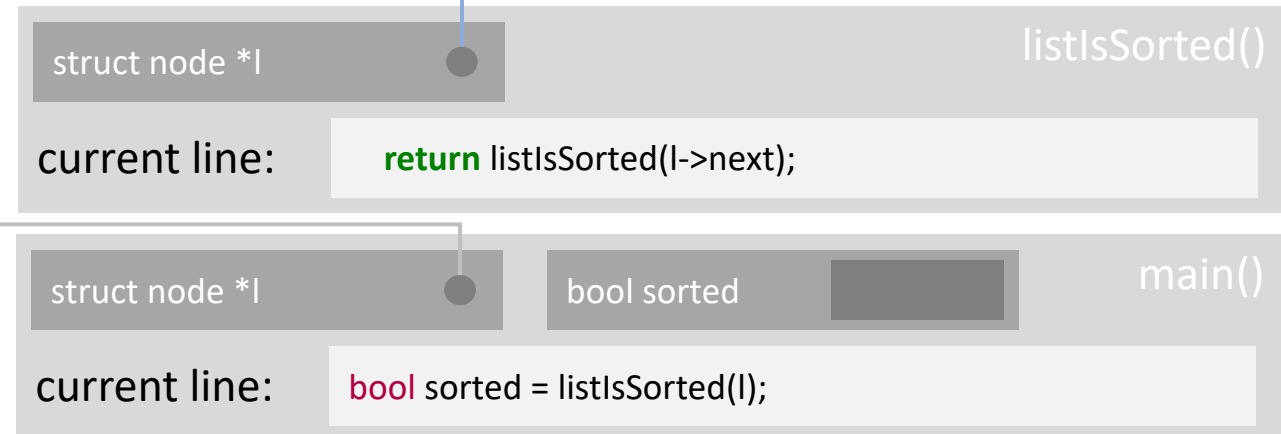
```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line: if (l == NULL) {
```

```
struct node *l
```

```
listIsSorted()
```

```
current line: return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line: bool sorted = listIsSorted(l);
```

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
} else if (l->next == NULL) {
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
} else if (l->value > l->next->value) {
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
} else {
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
if (l == NULL) {
```

```
return true;
```

```
} else if (l->next == NULL) {
```

```
return true;
```

```
} else if (l->value > l->next->value) {
```

```
return false;
```

```
} else {
```

```
return listIsSorted(l->next);
```

```
}
```

```
}
```

struct node *l

current line: `if (l == NULL) {`

listIsSorted()

struct node *l

current line: `return listIsSorted(l->next);`

listIsSorted()

struct node *l

current line: `return listIsSorted(l->next);`

listIsSorted()

struct node *l

bool sorted

main()

current line: `bool sorted = listIsSorted(l);`

listIsSorted: Ex 1



```
int main(void) {
```

```
...  
bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

current line: } else if (l->next == NULL) {

struct node *l

current line: return listIsSorted(l->next);

struct node *l

current line: return listIsSorted(l->next);

struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: } else if (l->value > l->next->value) {

struct node *l

current line: return listIsSorted(l->next);

struct node *l

current line: return listIsSorted(l->next);

struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: } else {

struct node *l

current line: return listIsSorted(l->next);

struct node *l

current line: return listIsSorted(l->next);

struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: `return listIsSorted(l->next);`

listIsSorted()

struct node *l

current line: `return listIsSorted(l->next);`

listIsSorted()

struct node *l

current line: `return listIsSorted(l->next);`

listIsSorted()

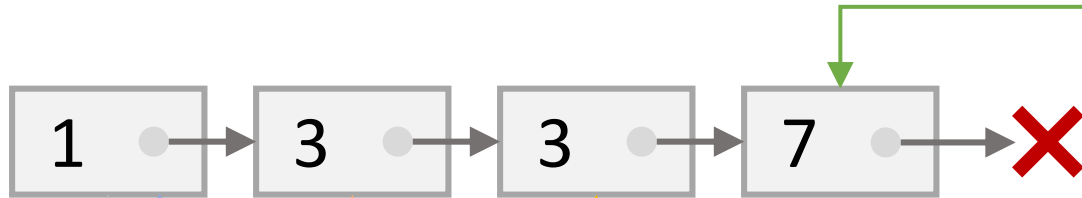
struct node *l

bool sorted

main()

current line: `bool sorted = listIsSorted(l);`

listIsSorted: Ex 1



```
int main(void) {
```

```
...  
bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

listIsSorted()

current line: if (l == NULL) {

struct node *l

listIsSorted()

current line: return listIsSorted(l->next);

struct node *l

listIsSorted()

current line: return listIsSorted(l->next);

struct node *l

listIsSorted()

current line: return listIsSorted(l->next);

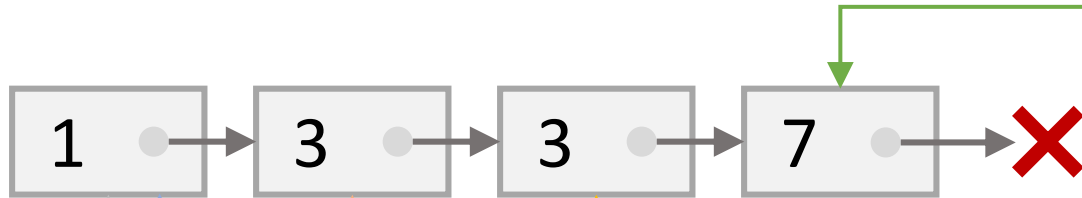
struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 1



```
int main(void) {
```

```
...  
bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

```
struct node *l  
current line: } else if (l->next == NULL) {  
listIsSorted()
```

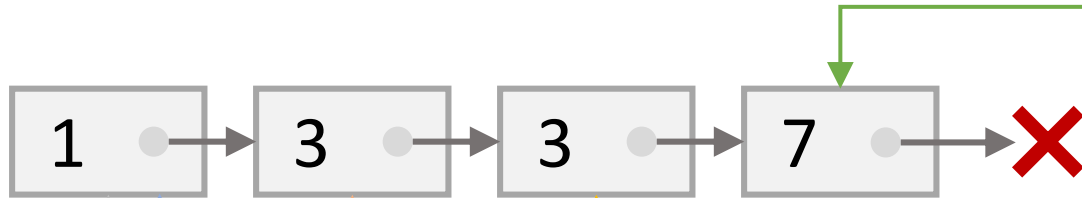
```
struct node *l  
current line: return listIsSorted(l->next);  
listIsSorted()
```

```
struct node *l  
current line: return listIsSorted(l->next);  
listIsSorted()
```

```
struct node *l  
current line: return listIsSorted(l->next);  
listIsSorted()
```

```
struct node *l    bool sorted  
current line: bool sorted = listIsSorted(l);  
main()
```

listIsSorted: Ex 1



```
int main(void) {
```

```
...  
bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

current line: **return true;**

listIsSorted()

struct node *l

current line: **return listIsSorted(l->next);**

listIsSorted()

struct node *l

current line: **return listIsSorted(l->next);**

listIsSorted()

struct node *l

current line: **return listIsSorted(l->next);**

listIsSorted()

struct node *l

bool sorted

main()

current line: **bool sorted = listIsSorted(l);**

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: `return listIsSorted(l->next); true`

struct node *l

current line: `return listIsSorted(l->next);`

struct node *l

current line: `return listIsSorted(l->next);`

struct node *l

bool sorted

main()

current line: `bool sorted = listIsSorted(l);`

listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next); true
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```


listIsSorted: Ex 1



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

listIsSorted()

current line:

```
return listIsSorted(l->next); true
```

struct node *l

bool sorted

main()

current line:

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

main()

current line:

bool sorted = listIsSorted(l); true

listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

true

main()

current line:

bool sorted = listIsSorted(l); true

listIsSorted: Ex 1



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

true

main()

current line:

Example 2

listIsSorted: Ex 2



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

main()

current line:

listIsSorted: Ex 2



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

main()

current line:

bool sorted = listIsSorted(l);

listIsSorted: Ex 2



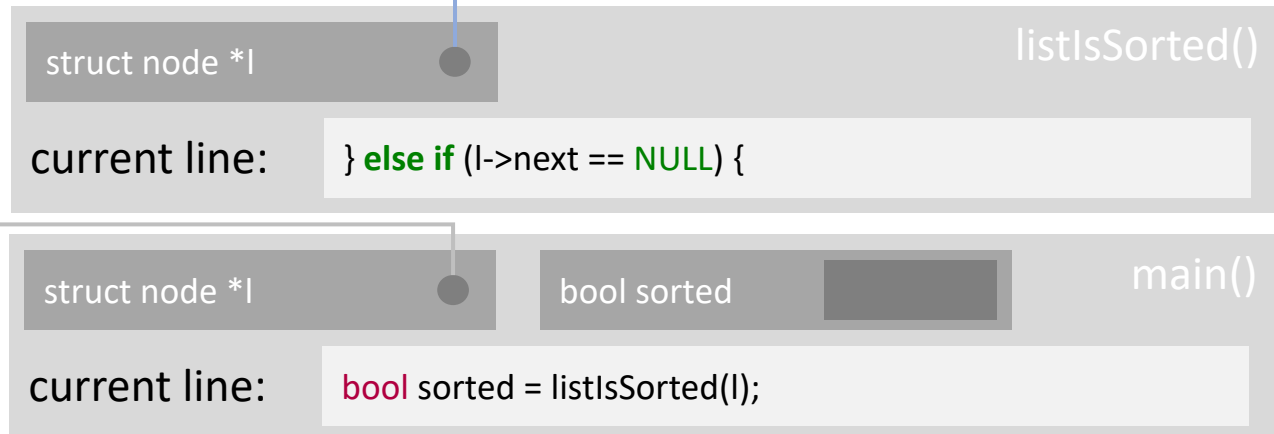
```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 2



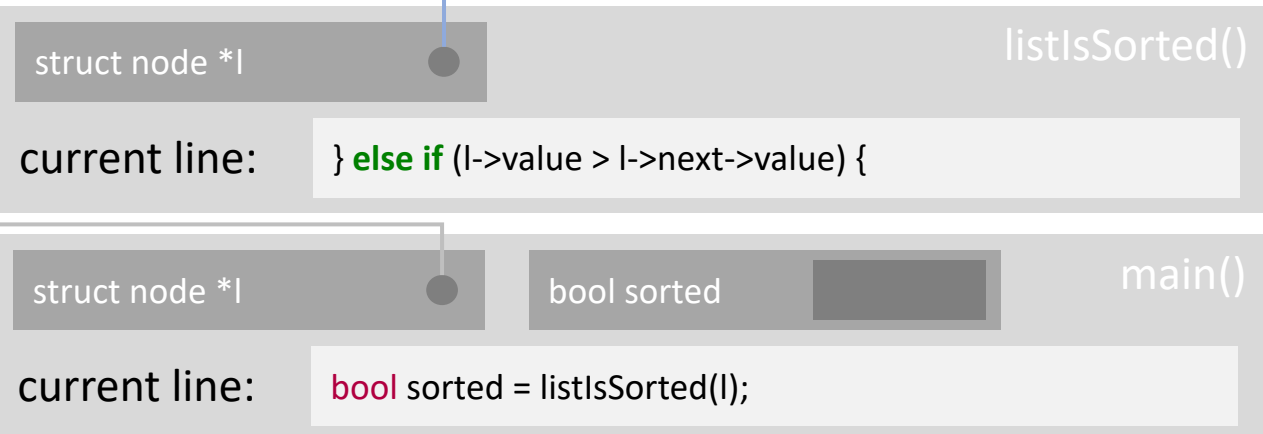
```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 2



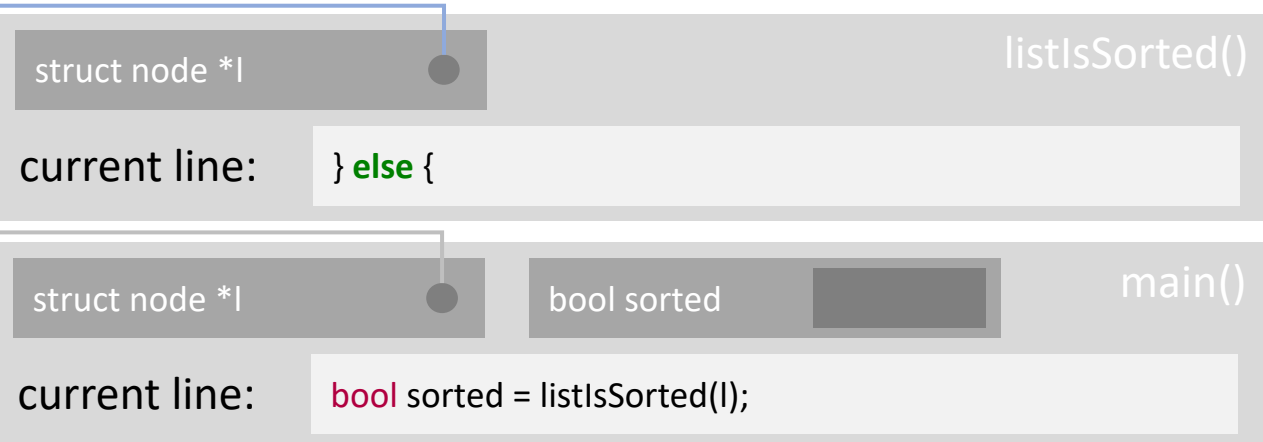
```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 2



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```



listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

listIsSorted()

current line:

```
return listIsSorted(l->next);
```

struct node *l

bool sorted

main()

current line:

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

listIsSorted()

current line: if (l == NULL) {

struct node *l

listIsSorted()

current line: return listIsSorted(l->next);

struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
if (l == NULL) {
```

```
    return true;
```

```
} else if (l->next == NULL) {
```

```
    return true;
```

```
} else if (l->value > l->next->value) {
```

```
    return false;
```

```
} else {
```

```
    return listIsSorted(l->next);
```

```
}
```

```
}
```

struct node *l

listIsSorted()

current line:

```
} else if (l->next == NULL) {
```

struct node *l

listIsSorted()

current line:

```
return listIsSorted(l->next);
```

struct node *l

bool sorted

main()

current line:

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
if (l == NULL) {
```

```
    return true;
```

```
} else if (l->next == NULL) {
```

```
    return true;
```

```
} else if (l->value > l->next->value) {
```

```
    return false;
```

```
} else {
```

```
    return listIsSorted(l->next);
```

```
}
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
} else if (l->value > l->next->value) {
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
if (l == NULL) {
```

```
    return true;
```

```
} else if (l->next == NULL) {
```

```
    return true;
```

```
} else if (l->value > l->next->value) {
```

```
    return false;
```

```
} else {
```

```
    return listIsSorted(l->next);
```

```
}
```

```
}
```

struct node *l

listIsSorted()

current line:

```
} else {
```

struct node *l

listIsSorted()

current line:

```
return listIsSorted(l->next);
```

struct node *l

bool sorted

main()

current line:

```
bool sorted = listIsSorted(l);
```


listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: `if (l == NULL) {`

struct node *l

current line: `return listIsSorted(l->next);`

struct node *l

current line: `return listIsSorted(l->next);`

struct node *l

bool sorted

main()

current line: `bool sorted = listIsSorted(l);`

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: } else if (l->next == NULL) {

struct node *l

current line: return listIsSorted(l->next);

struct node *l

current line: return listIsSorted(l->next);

struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
if (l == NULL) {
```

```
    return true;
```

```
} else if (l->next == NULL) {
```

```
    return true;
```

```
} else if (l->value > l->next->value) {
```

```
    return false;
```

```
} else {
```

```
    return listIsSorted(l->next);
```

```
}
```

```
}
```

struct node *l

current line: } else if (l->value > l->next->value) {

struct node *l

current line: return listIsSorted(l->next);

struct node *l

current line: return listIsSorted(l->next);

struct node *l

bool sorted

main()

current line: bool sorted = listIsSorted(l);

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

current line: **return false;**

listIsSorted()

struct node *l

current line: **return listIsSorted(l->next);**

listIsSorted()

struct node *l

current line: **return listIsSorted(l->next);**

listIsSorted()

struct node *l

bool sorted

main()

current line: **bool sorted = listIsSorted(l);**

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
bool sorted = listIsSorted(l);
```

```
}
```

```
bool listIsSorted(struct node *l) {
```

```
if (l == NULL) {
```

```
    return true;
```

```
} else if (l->next == NULL) {
```

```
    return true;
```

```
} else if (l->value > l->next->value) {
```

```
    return false;
```

```
} else {
```

```
    return listIsSorted(l->next);
```

```
}
```

```
}
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next); false
```

```
struct node *l
```

```
listIsSorted()
```

```
current line:
```

```
return listIsSorted(l->next);
```

```
struct node *l
```

```
bool sorted
```

```
main()
```

```
current line:
```

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 2



```
int main(void) {
```

```
...
```

```
    bool sorted = listIsSorted(l);  
}
```

```
bool listIsSorted(struct node *l) {
```

```
    if (l == NULL) {
```

```
        return true;
```

```
    } else if (l->next == NULL) {
```

```
        return true;
```

```
    } else if (l->value > l->next->value) {
```

```
        return false;
```

```
    } else {
```

```
        return listIsSorted(l->next);
```

```
    }
```

```
}
```

struct node *l

listIsSorted()

current line:

```
return listIsSorted(l->next); false
```

struct node *l

bool sorted

main()

current line:

```
bool sorted = listIsSorted(l);
```

listIsSorted: Ex 2



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

main()

current line:

`bool sorted = listIsSorted(l);` false

listIsSorted: Ex 2



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

false

main()

current line:

bool sorted = listIsSorted(l); false

listIsSorted: Ex 2



```
int main(void) {  
    ...  
    bool sorted = listIsSorted(l);  
}  
  
bool listIsSorted(struct node *l) {  
    if (l == NULL) {  
        return true;  
    } else if (l->next == NULL) {  
        return true;  
    } else if (l->value > l->next->value) {  
        return false;  
    } else {  
        return listIsSorted(l->next);  
    }  
}
```

struct node *l

bool sorted

false

main()

current line: