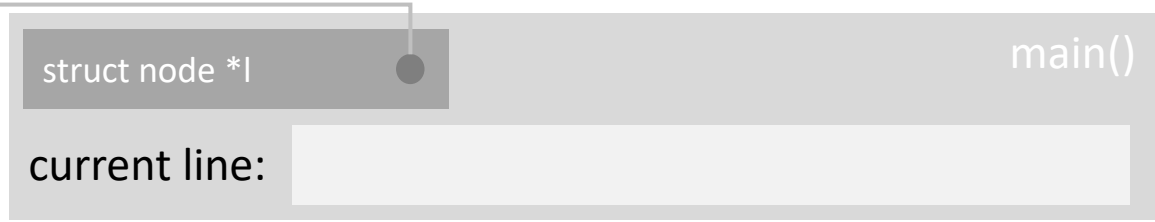
Recursion Examples

listLength

listLength


```
int main(void) {
    ...
    int length = listLength(l);
}

int listLength(struct node *l) {
    if (l == NULL) {
        return 0;
    } else {
        return 1 + listLength(l->next);
    }
}
```



listLength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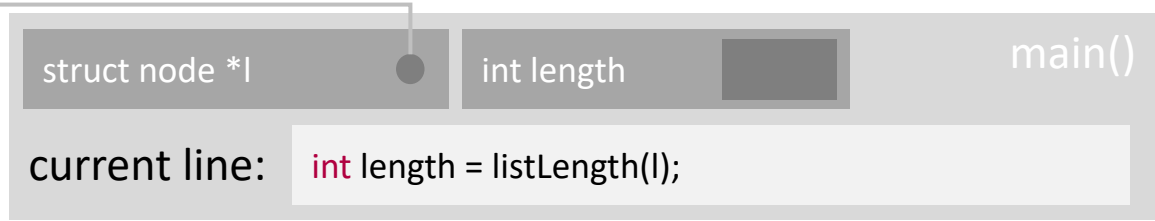

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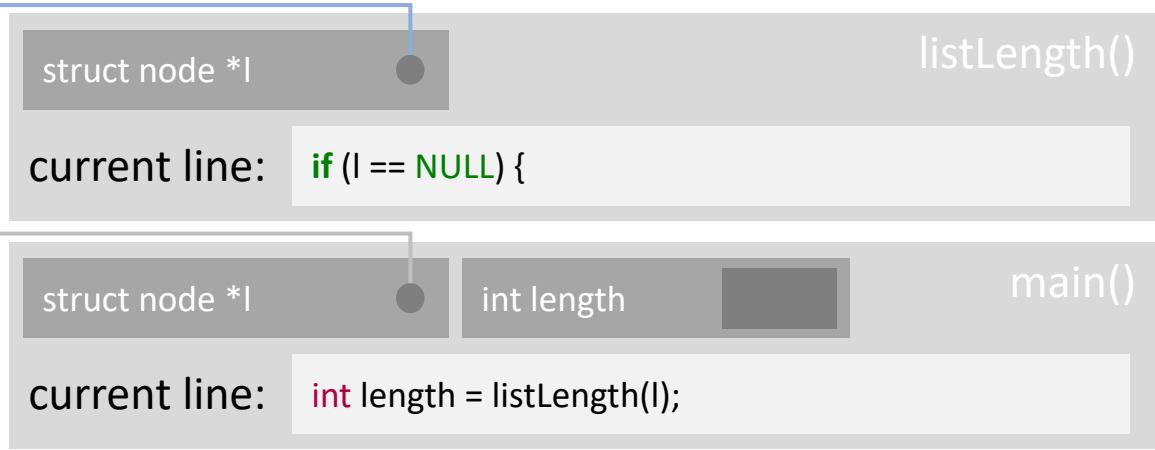

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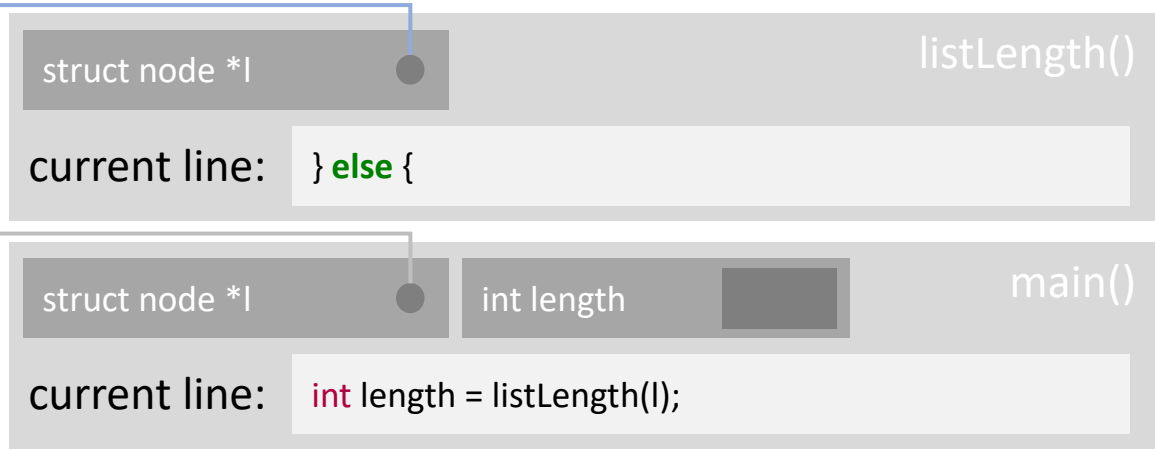

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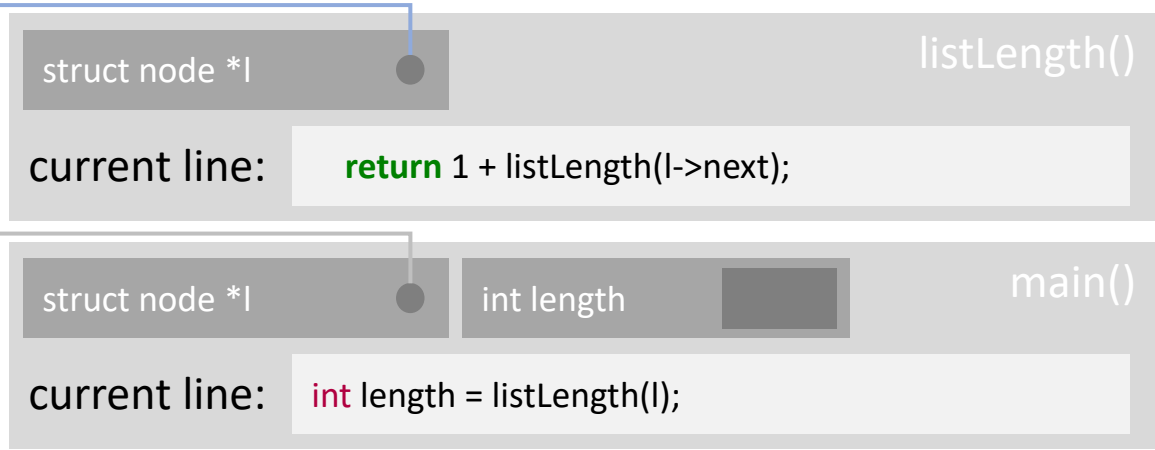

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listLength()
struct node *l
current line: if (l == NULL) {

listLength()
struct node *l
current line: return 1 + listLength(l->next);

main()
struct node *l
int length
current line: int length = listLength(l);

listLength


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listLength()
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listLength


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listLength()
struct node *l
current line: return 1 + listLength(l->next);

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main()
struct node *l
int length
current line: int length = listLength(l);

listLength


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current line: return 1 + listLength(l->next);

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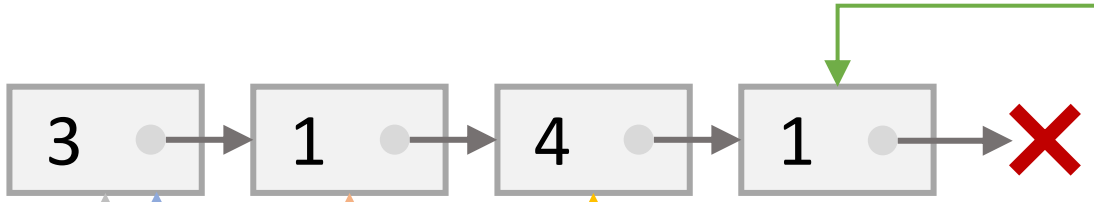
listLength

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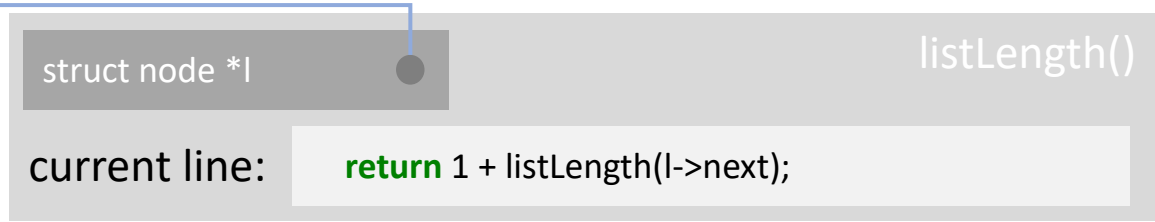
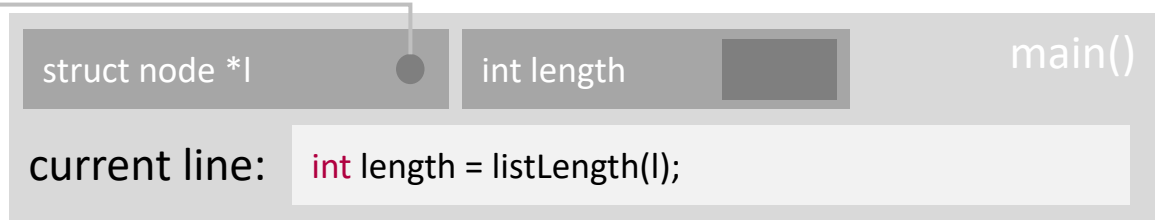
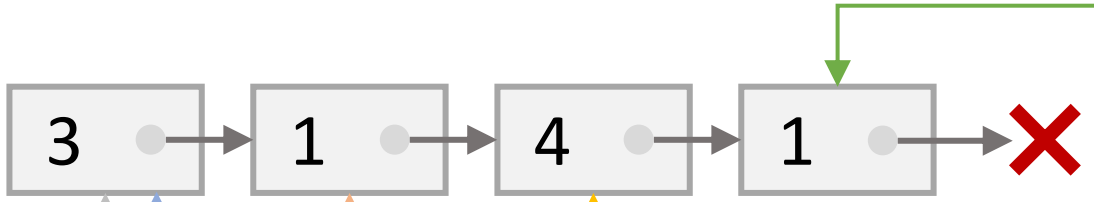




listLength

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struct node *l
current line: } else {

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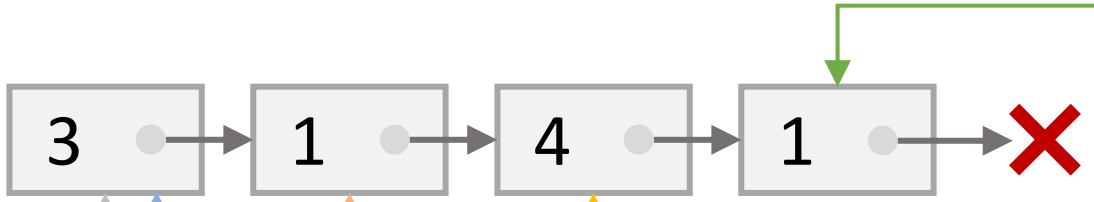
listLength

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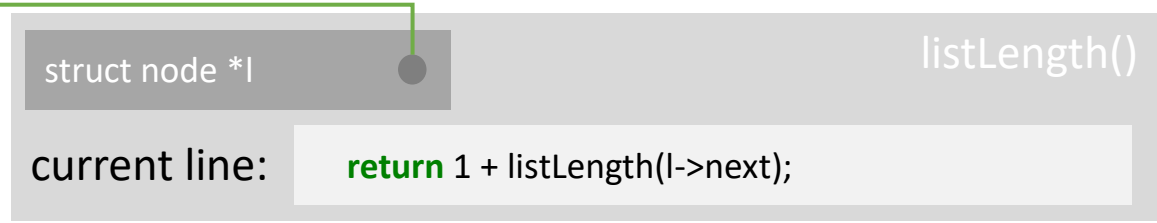

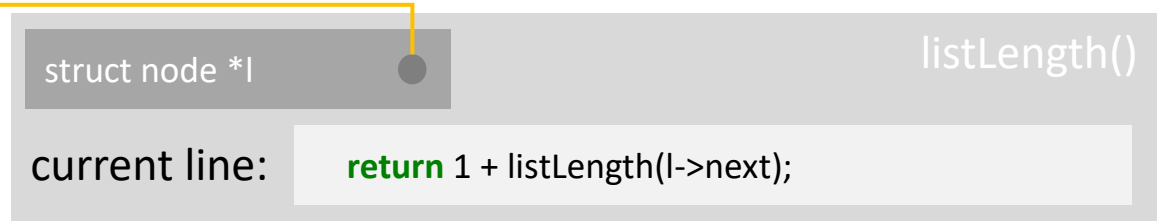

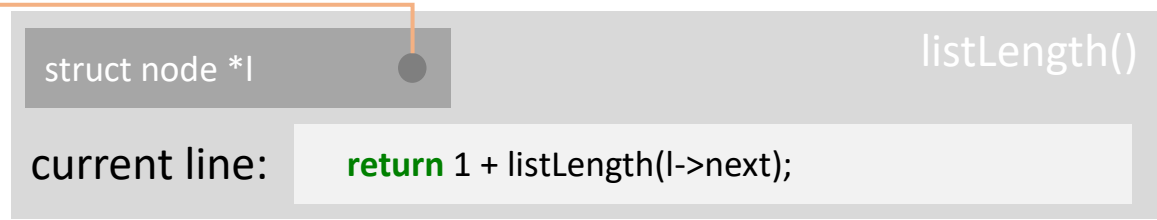

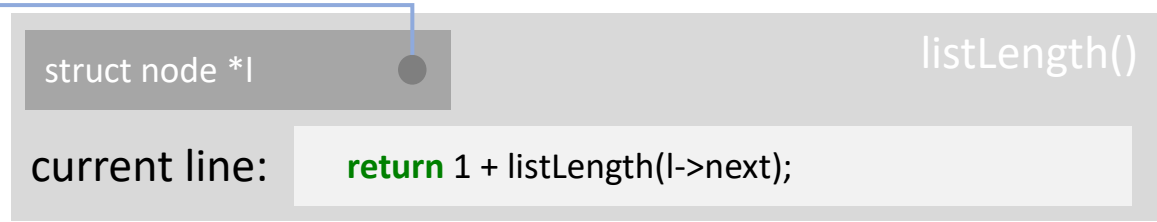

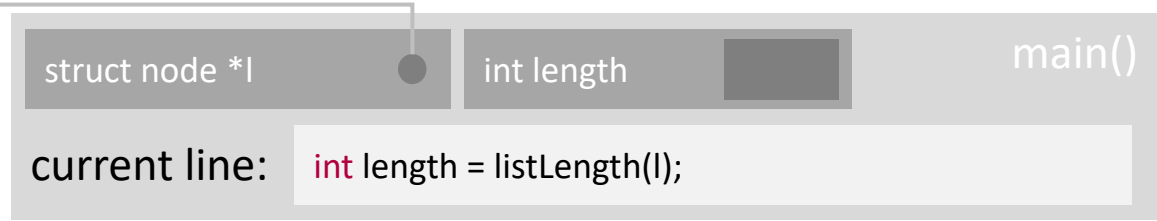

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int listLength(struct node *l) {
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struct node *l
current line: if (l == NULL) {

listLength()
struct node *l
current line: return 1 + listLength(l->next);

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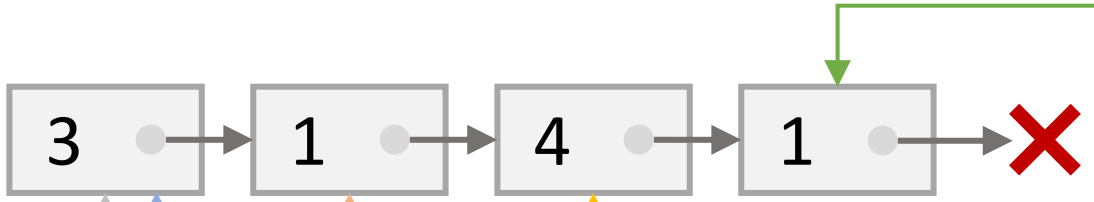


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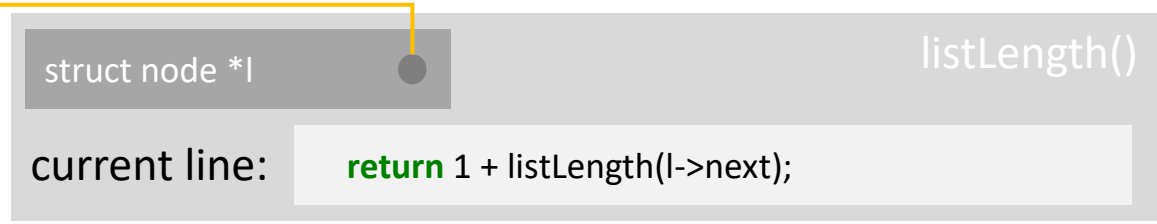

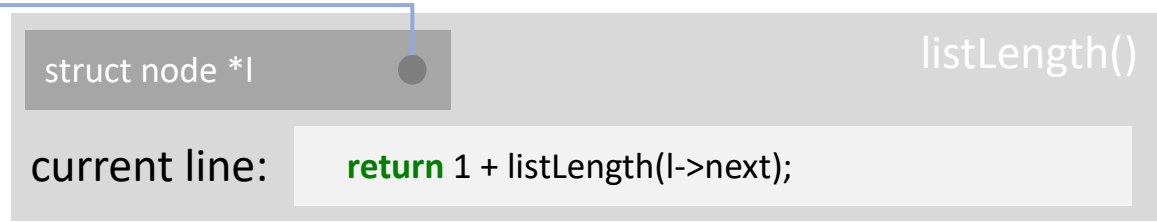

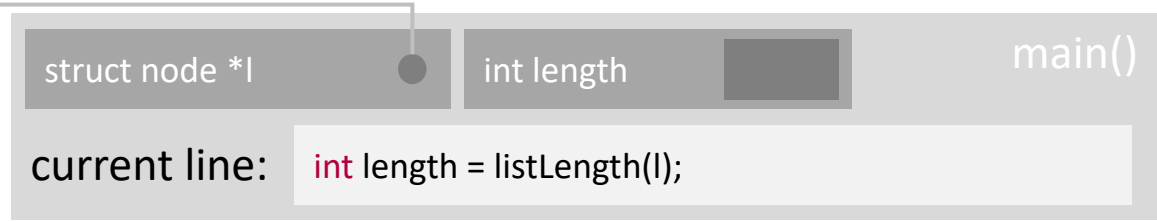

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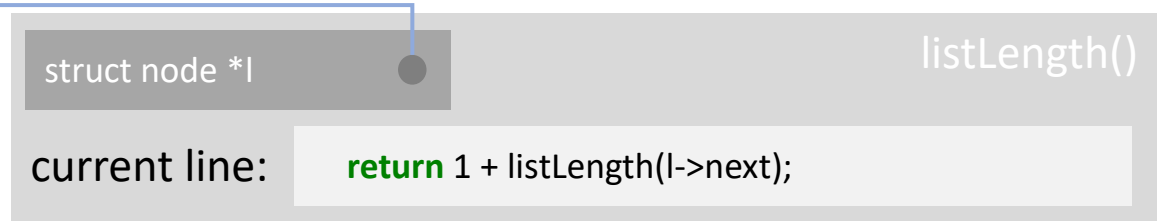

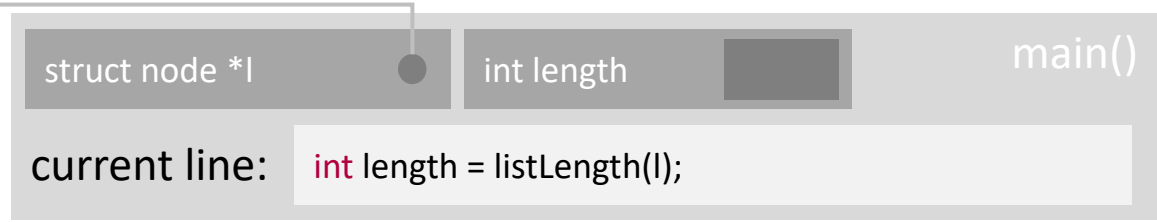

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struct node *l
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main()
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int length
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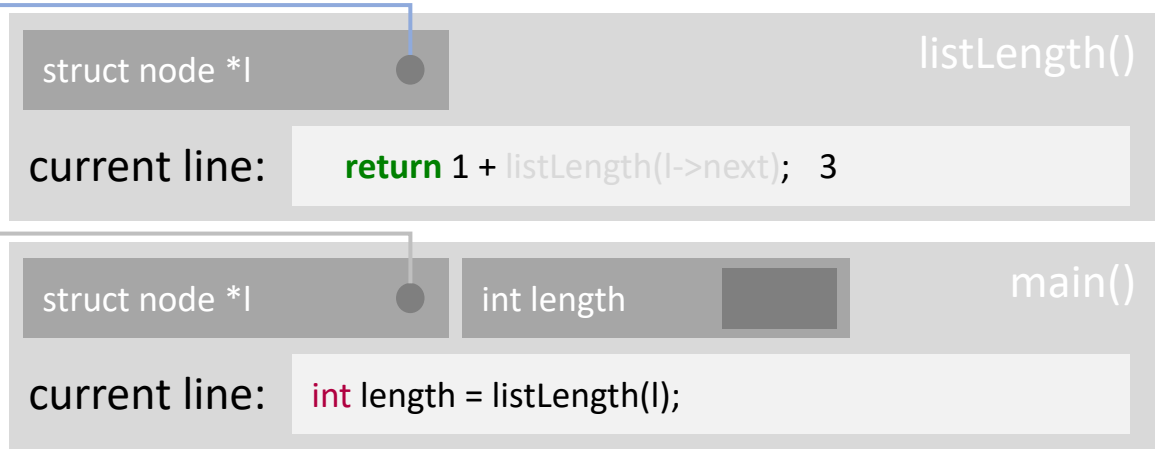

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